

HIV/AIDS EPIDEMIOLOGY REPORT AND COMMUNITY PROFILE



2020

**WASHINGTON STATE &
KING COUNTY**

Contents

EXECUTIVE SUMMARY	2
PUBLIC HEALTH - SEATTLE & KING COUNTY HIV/STD PROGRAM HIV GOALS AND EVALUATION METRICS (DASHBOARD)	5
HIV/AIDS DATA IN WASHINGTON STATE	7
COVID AND HIV	19
HIV/AIDS DATA IN KING COUNTY	23
ENDING THE HIV EPIDEMIC (EHE)	30
EHE Overview	31
EHE Pillar 1: Diagnose	39
EHE Pillar 2: Treat	49
EHE Pillar 3: Prevent	54
EHE Pillar 4: Respond	67
POPULATIONS OF SPECIAL INTEREST IN KING COUNTY (FACT SHEETS)	74
American Indian/Alaskan Native Populations	75
Black and African American Populations	78
Latinx Populations	82
Men Who Have Sex with Men (MSM)	86
People Who Inject Drugs (PWID)	91
Transgender and Non-binary Populations	95
Women	102
LOCAL CLINICAL TRIALS	106
What's New at the UW ACTU?	107
AIDS Malignancy Trials	110
Studies Enrolling at the Office of Dr. Peter Shalit & Associates	112

Acknowledgements

This 89th edition of the HIV/AIDS Epidemiology Report and Community Profile includes data available through July 2020. Public Health – Seattle & King County and the Infectious Disease Assessment Unit at the 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 PhD Student, for putting together this issue.

Public Health
Seattle & King County



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, HIV/AIDS Epidemiology and Affiliate Assistant Professor, University of Washington

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

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

Jennifer Reuer, MPH, Acting Section Manager/Senior Epidemiologist

Contributors

WA State Department of Health
Jennifer Reuer, MPH
Kelly Naismth, MPH
Steven Erly, PhDc

Public Health – Seattle & King County
Amy Bennett, MPH
Anna Berzkalns, MPH
Audrey Brezak, MPH
Christina Thibault, MPH
Courtney Moreno
Francesca Collins, MPH
Francis Slaughter, MPHc
Joe Tinsley
Jsani Henry, MPH, MSW
Julia Hood, PhD, MPH
Richard Lechtenberg, MPH
Susan Buskin, PhD, MPH

University of Washington (UW)
Darcy Rao, MPH, PhD
Julie Dombrowski, MD, MPH
Matthew Golden, MD, MPH
Michael Louella
Rachel Bender Ignacio, MD, MPH
Sara Glick, PhD, MPH
Solomon Golden

Other Affiliations and UW
David Aboulafia, MD
Peter Shalit, MD, PhD

Photo Credit

Sara Glick

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 (e.g. CD4 counts) performed due to HIV versus other diseases (e.g., cancer), the tests should be reported and the health department will investigate. However, laboratory reporting does not relieve health care providers of their duty to report, as most of the 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.

Suggested Citation

HIV/AIDS Epidemiology Unit, Public Health – Seattle & King County and the Infectious Disease Assessment Unit, Washington State Department of Health. HIV/AIDS Epidemiology Report 2020, Volume 89.

Alternate Formats

HIV/AIDS Epidemiology publications are online at:
www.kingcounty.gov/hivepi

Alternate formats provided upon request.

To be included on the mailing list or for address corrections, please call 206-263-2000

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. These changes can affect current calculations of estimates from prior years. Thus, differences between Epi Reports for estimates for a given year are expected.

Definitions & Technical Notes

- ACUTE HIV INFECTION:** The earliest stage of HIV infection during which many people experience a flu-like illness occurring within 2 to 4 weeks of HIV infection. People 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 bloodstream, the normal range of which is between 500-1,500 CD4+ T-cells per cubic millimeter 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/mm³ 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 and including the socially established categories of male and female.
- 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.
- HIV VIRAL LOAD:** The amount of HIV viral RNA 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.
- 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. The exact time of acquisition of HIV is often unknown, so incident diagnoses are a proxy. In **WA State**, incident cases are defined as people whose first HIV-indicated laboratory results or first diagnosis by a healthcare provider occurred while living in Washington. Cases with a self-reported positive test more than 6-months prior to the diagnosis date recorded by the Department of Health are not considered incident cases. Incident diagnoses in **King County** exclude individuals first diagnosed with HIV outside WA State, even if they lack documentation of that earlier diagnosis. Additionally, new HIV diagnoses in King County exclude people who report an initial HIV diagnosis one year or more before an initial documented diagnosis.
- LATINX** is used to describe Hispanic/Latino/a populations in this issue as we have in prior ones; we plan to collect stakeholder and community input prior to the 2021 report to use the terminology most preferred locally.
- 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.
- PLWH (PEOPLE LIVING WITH HIV), PWH (PEOPLE WITH HIV), OR PLWdH (PEOPLE WITH DIAGNOSED HIV):** These are different terms used to refer to HIV-positive people presumed to be living in a jurisdiction at a certain point or period of time. They exclude individuals lost to follow up (i.e., no reported laboratory test results for 10 or more years). To increase the precision of the King County care continuum we further exclude individuals who have no HIV-related laboratory results reported for 18 months or more and for whom we have some evidence of a relocation, but the relocation has not been 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. Through 2013, BRFSS suggested 5.7% of adult males were MSM. Starting in 2014, we used the mean of the prior 2 years and estimate that the proportion of adolescent and adult males who are MSM increased to 6.7% in 2018 and remained stable in 2019.
- 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.

Executive Summary

BACKGROUND

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 (EHE) plan, which includes jurisdictions most impacted by HIV, including King County. The primary objective of EHE is to reduce the number of new HIV infections by 75% in 2025 and by 90% in 2030. This 2020 report – which includes data through the end of 2019 – is the first to be structured according to each of the four pillars of EHE: 1) Diagnose, 2) Treat, 3) Prevent, and 4) Respond. Each article includes data documenting progress toward meeting an EHE objective, including descriptions of ongoing local prevention activities. Our dashboard of key indicators continues to reflect the goals of the 2020 End

AIDS Washington initiative, established in 2014. Next year's report will include data through 2020 and the final assessment of the End AIDS Washington goals.

Over the past decade, Washington State and King County have met numerous goals related to HIV prevention, treatment, and care. To our knowledge, 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 people living with HIV (PLWH) know of their infection, 90% of diagnosed people receive medical care, and that 90% of those in care are virally suppressed. In 2018, an increase in new HIV diagnoses among people who inject drugs (PWID) highlighted gaps in public health prevention efforts and threatened our momentum toward reaching several key goals. Thankfully, the number of new HIV cases among PWID declined in 2019, although the total number of new cases did increase at the state level among men who have sex with men (MSM). PHSKC and WS DOH remain committed to maintaining and improving existing HIV prevention and care interventions, while also establishing new focused interventions to ensure that HIV incidence remains low among all populations at increased risk of HIV.

EHE PILLAR 1: DIAGNOSE

Following an increase in newly diagnosed HIV cases in 2018 – in large part driven by an increase in new cases

among PWID – new HIV cases declined in 2019 to 183 cases (vs. 217 cases in 2018) in King County. The number of new HIV cases remained stable in Washington State, with 405 diagnoses in 2018 and 410 in 2019. In both King County and Washington State, the majority of new HIV cases were among MSM or MSM-PWID (67% and 64%, respectively), while 9% and 10%, respectively, were among non-MSM PWID. New HIV diagnoses in both King County and Washington State were also disproportionately high among Black (22% and 17%, respectively) and Latinx (22% and 24%, respectively) people, especially among people who were not born in the United States. For reference, in King County and Washington State, only 7% and 4% of residents, respectively, are Black, and 10% and 13%, respectively, are Latinx.

In King County, we estimate that 94% of residents with HIV are aware of their status, which surpasses the national goal of 90% and approaches the local goal of 95%. The proportion of new HIV diagnoses that are identified “late” – defined within one year of an AIDS diagnosis – is 26%, which is higher than the PHSKC goal of <20%. Although PHSKC recommends annual HIV testing for sexually active MSM who are not in a long-term, mutually monogamous, HIV concordant relationship, over 30% of MSM newly diagnosed with HIV report not testing in the prior two years. To improve access to HIV testing for MSM and other populations at increased risk for HIV, PHSKC and WA DOH currently provide HIV testing at the King County Sexual Health Clinic, community-based organizations, through syringe service outreach, and in the King County Jail.

EHE PILLAR 2: TREAT

PLWH who initiate and sustain treatment with antiretroviral therapy improve their own health outcomes and, if virally suppressed, cannot transmit HIV to their partners. Both King County and Washington State have made tremendous progress toward meeting and exceeding ambitious goals related to HIV treatment and viral suppression. At the state level, 89% of people diagnosed with HIV are in care and 82% are virally suppressed. These estimates either meet or are very close to meeting national goals. King County has met all of the national goals related to treatment and viral suppression: 90% of people newly diagnosed with HIV were linked to care within one month (95% within 3 months), 91% of people diagnosed with HIV are in care, and 85% are virally suppressed. We continue to observe disparities in viral suppression with lower rates among

people of color – particularly U.S.-born Black individuals – and PWID.

EHE PILLAR 3: PREVENT

The EHE initiative promotes two highly effective HIV prevention strategies: pre-exposure prophylaxis (PrEP) and syringe services programs (SSPs). King County’s PrEP implementation guidelines recommend PrEP use among MSM and transgender people who have sex with men based on specific criteria that identify people at elevated risk for HIV acquisition. Approximately 47% of MSM at elevated risk for HIV are currently on PrEP, which is just shy of King County’s goal of 50%. PrEP use data for transgender populations at higher risk for HIV is limited, but we estimate that 20-50% of transgender people at elevated risk for HIV are currently on PrEP. PrEP use among PWID is very low (<1%). King County supports several ongoing efforts to promote PrEP use, including running a large PrEP program at the PHSKC Sexual Health Clinic, offering PrEP to people receiving sexually transmitted infections (STI) partner services, partnering with community-based PrEP programs, and providing online resources. SSPs provide PWID with sterile syringes to reduce the risk of infectious disease (HIV and hepatitis C) transmission, as well as overdose prevention services (naloxone), wound care, and linkages to treatment for substance use disorder. To our knowledge, the PHSKC SSP is the highest volume SSP in the United States and distributed 7.5 million syringes in 2019. We estimate that this equates to 258 syringes per PWID per year, which is higher than the current World Health Organization goal of 200, but below King County’s goal of 365. Naloxone distribution increased by 20% in the past year. In response to the 2018 HIV outbreak among PWID, PHSKC has expanded SSP efforts in north Seattle, including HIV testing. Finally, condoms are not included in the EHE Prevent pillar but remain an important component of the PHSKC HIV/STI prevention toolkit. In 2019, PHSKC launched several condom distribution efforts to increase condom use among the populations with the highest incidence of HIV and other STI, including MSM and sexually active youth.

EHE PILLAR 4: RESPOND

Pillar 4 of EHE promotes a rapid response to HIV outbreaks to get prevention and treatment services to infected people who are part of clusters of linked infections, as well as the sex and needle sharing partners of these people and other people thought to be part of cases’ risk networks. King County response efforts blend traditional epidemiologic and partner services

investigations with molecular cluster identification using viral genetic sequencing techniques. When clusters are identified, PHSKC can employ focused interventions to expand HIV testing efforts, prevention messages, and linkage to HIV care for people newly diagnosed with HIV. Cluster identification has been used by PHSKC for many years, including the identification of the 2018 HIV outbreak among PWID in north Seattle. Current clusters are largely comprised of MSM. The EHE initiative will permit us to develop additional services to help meet the needs of underserved populations in both north Seattle and south King County.

HIV AND COVID-19

While this report focuses on 2019, it is impossible to not acknowledge the ongoing COVID-19 pandemic and its potential impact on both PLWH and populations at increased risk for HIV. This report includes an evaluation from WA DOH describing COVID-19 diagnosis rates and testing patterns among PLWH to date. While the COVID-19 diagnosis rate among PLWH in Washington State was 30% higher than in the general population, PLWH were also 60% more likely to receive COVID-19 testing. Moreover, the COVID-19 mortality rate among PLWH was not significantly higher than among the general population. These findings suggest that PLWH are not at higher risk of COVID-19 infection and COVID-19-related mortality. In the coming year, we will be reviewing data from 2020 to evaluate the impact of COVID-19 on HIV diagnoses, retention in care, and the use of HIV preventive services like PrEP and SSPs.

REFLECTION AND CONCLUSION

We are writing this report in the midst of an unprecedented pandemic, which has resulted in the deaths of hundreds of thousands of people nationally and affected the day-to-day lives of nearly every American. We are concerned about the potential impact this will have on the populations we serve and the community partners we support. In addition, many public health HIV staff have been deployed to work on COVID-19 response, so our programs' resources are also stretched thin. However, we still think it is critical to reflect on the successes and challenges of 2019, which was a year in which there was much to celebrate with respect to progress made toward eliminating the HIV epidemic in Washington State and King County. In the coming years, EHE funding will be used to support an array of expanded services to diagnose, treat, prevent, and respond to the HIV epidemic. This will not be easy – particularly in the context of COVID-19 – but we are

optimistic that the immense progress that our community has made toward reducing HIV incidence and improving the lives and well-being of PLWH will continue.

WA State and King County HIV Goals and Evaluation Metrics: 2020 Dashboard

Washington State	2020 END AIDS WASHINGTON GOALS ¹		WA STATE DATA, 2014-2019		CURRENT TREND (SEE KEY BELOW)
			2014	2019	
DIAGNOSE					
New HIV diagnoses, rate	↓50%		5.3/100,000	5.4/100,000	
TREAT					
In HIV care among PLWDH ²	90%		86%	89%	
Viral suppression among PLWDH	80%		73%	82%	
Disparities in viral suppression					
All PLWDH	Reference group		77%	82%	—
Non-Latinx Black PLWDH	Difference ≤ 4.0%		69%	78%	
Foreign-born Latinx PLWDH	Difference ≤ 5.2%		70%	81%	
HIV/AIDS mortality ³	↓25% (1.6/100,000)		2.3/100,000 1.4/100 PWDH	2.8/100,000 1.5/100 PWDH	

King County	2020 GOALS ¹		KING COUNTY DATA, 2014-2018		CURRENT TREND (SEE KEY BELOW)
	NATIONAL	KING COUNTY	2014 ⁴	2019	
DIAGNOSE					
New HIV diagnoses, rate	↓25%	↓25% ⁵	11.0/100,000	8.2/100,000	
Know HIV status ⁶	90%	95%	92%	94%	
Late HIV diagnosis ⁷	--	<20%	24%	26%	
Recent HIV testing ⁸ , MSM	--	75%	73%	69%	
TREAT					
Linked to care in 1 month ⁹	85%	90%	88%	90%	
Linked to care in 3 months ⁹	--	95% ¹³	92%	95%	
In HIV care ²	90%	95%	89%	91%	
Viral suppression	80%	90%	79%	85%	
Viral suppression in 4 months ^{9, 11}	--	75%	51%	69%	

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

Key:

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

HIV/AIDS mortality ^{12, 13}	↓33%	↓33% (0.8/100)	1.2/100 PWDH	1.2/100 PWDH	
Homelessness among PLWDH ¹⁴	<5%	<5%	14%	11%	
Disparities in viral suppression among PLWDH ¹⁵					
Non-Hispanic White			81%	87%	—
Non-Hispanic Black, foreign-born			84%	86%	
Non-Hispanic Black, U.S.-born			77%	77%	
Hispanic/Latinx, foreign-born	--	No difference between groups	85%	87%	
Hispanic/Latinx, U.S.-born			81%	83%	
Transgender			71%	88%	
People who inject drugs			78%	77%	
PREVENT					
PrEP use, high-risk MSM ¹⁶	--	50%	9%	47%	
Syringe coverage ¹⁷	200/PWID	365/PWID	258/PWID	283/PWID	 

Abbreviations: PrEP, pre-exposure prophylaxis for HIV; PLWDH, 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 Treat 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 people 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 Treat article).
- ⁷ AIDS within 1 year of HIV diagnosis, among people diagnosed in 2018.
- ⁸ Among MSM with new HIV diagnoses in 2018-2019 and a known testing history, last HIV test within prior 2 years (see Diagnose article).
- ⁹ Among people with a new HIV diagnosis (see Treat article).
- ¹⁰ The original King County goal of 85% was increased to 95% due to early achievement of this objective.
- ¹¹ Goal established in 2017.
- ¹² Age- and lag-adjusted mortality rates per 100 people living with HIV/AIDS (see Treat article).
- ¹³ 2018 mortality data are used as 2019 data are incomplete; it generally takes 21 months for 95% of deaths to be reported.
- ¹⁴ 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; the 2019 estimate includes data from 2018-2019 and is not weighted.
- ¹⁵ Among HIV-infected people with diagnosed HIV infections (see Treat article).
- ¹⁶ In King County, "MSM at high risk for HIV" 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 2019 estimate of PrEP use among high-risk MSM is an average across multiple contemporaneous surveys (see Prevention article).
- ¹⁷ 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.



HIV/AIDS DATA IN WASHINGTON STATE

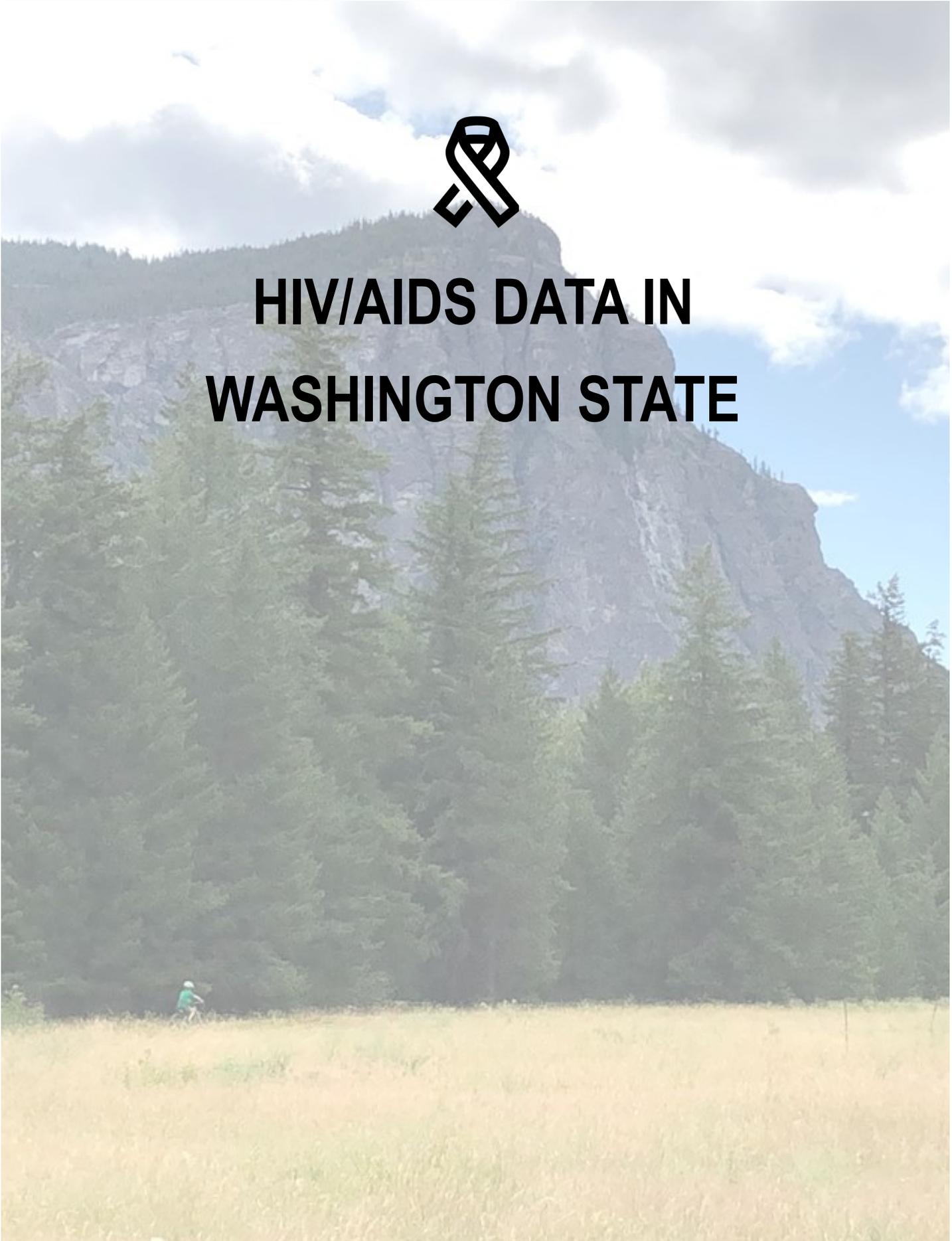


TABLE 1-1. NEW HIV AND AIDS CASES, LATE HIV DIAGNOSES, AND LINKAGE TO CARE, BY DEMOGRAPHIC AND RISK CHARACTERISTICS, WA STATE, 2019

	New HIV Cases Column			New AIDS Cases Column			Late HIV Diagnoses ^A		Initial Linkage to HIV Care ^B	
	No.	%	Rate	No.	%	Rate	No.	Row %	No.	Row %
Total	410	100%	5.4	184	100%	2.4	100	24%	338	82%
Gender										
Cisgender men	339	83%	9.0	32	17%	0.8	83	24%	279	82%
Cisgender women	63	15%	1.7	152	83%	4.0	16	25%	54	86%
Transgender women	7	2%	n/a	0	0%	n/a	--	--	--	--
Transgender men	1	0%	n/a	0	0%	n/a	--	--	--	--
Age at HIV Diagnosis										
< 13	0	0%	0.0	0	0%	0.0	--	--	--	--
13-24	62	15%	5.4	7	4%	0.6	7	11%	43	69%
25-34	167	41%	15.7	51	28%	4.8	33	20%	143	86%
35-44	75	18%	7.6	44	24%	4.5	20	27%	61	81%
45-54	64	16%	6.9	41	22%	4.4	19	30%	54	84%
55-64	31	8%	3.2	31	17%	3.2	16	52%	27	87%
65+	11	3%	0.9	10	5%	0.8	5	45%	10	91%
Race/Ethnicity										
American Indian/Alaska Native	3	1%	3.2	1	0%	1.1	--	--	--	--
Asian	19	5%	2.8	10	4%	1.5	9	47%	17	89%
Black	71	17%	24.4	42	28%	14.4	20	28%	59	83%
Foreign-born ^{C,D}	30	7%	43.4	22	16%	31.8	11	37%	25	83%
U.S.-born ^{C,D}	33	8%	14.6	19	12%	8.4	8	24%	27	82%
Hispanic	97	24%	9.8	36	18%	3.6	22	23%	72	74%
Foreign-born ^{C,D}	50	12%	16.1	22	10%	7.1	17	34%	39	78%
U.S.-born ^{C,D}	28	7%	4.1	9	4%	1.3	2	7%	22	79%
Native Hawaiian/ other Pacific Islander	3	1%	5.6	3	2%	5.6	--	--	--	--
White	201	49%	3.9	81	42%	1.6	45	22%	171	85%
Multiple	16	4%	4.9	11	6%	3.3	3	19%	15	94%
Mode of Exposure										
Male / Male Sex (MSM)	242	59%	n/a	88	48%	n/a	50	21%	200	83%
Injecting Drug Use (IDU)	42	10%	n/a	19	10%	n/a	11	26%	33	79%
MSM and IDU	22	5%	n/a	15	8%	n/a	3	14%	17	77%
Heterosexual	38	9%	n/a	27	15%	n/a	12	32%	35	92%
Blood/pediatric	2	0%	n/a	3	2%	n/a	--	--	--	--
No Identified Risk	64	16%	n/a	33	18%	n/a	22	34%	51	80%

Table based on HIV surveillance data reported to the WA State Department of Health as of June 30, 2020.

n/a Rate cannot be calculated due to no available population estimate.

-- Due to the small number of HIV cases the count and percentage based on the count is not shown.

^{NR} Not reliable, RSE ≥25.

^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 5% and 11% of newly diagnosed cases among Black and Hispanics, respectively.

^D Population estimate for 2019 was extrapolated using previous estimates from years 2010-2018.

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, 2019

County or Health District or Residence	New HIV Cases			Late HIV Diagnoses ^A		Initial Linkage to HIV Care ^B	
	No.	%	Rate	No.	Row %	No.	Row %
Adams Co.	2	0%	9.9	--	--	--	--
Asotin Co.	0	0%	0.0	--	--	--	--
Benton Co.	13	3%	6.4	--	--	10	77%
Benton-Franklin HD	18	4%	6.1	2	11%	12	77%
Chelan Co.	2	0%	2.6	--	--	--	--
Chelan-Douglas HD	4	1%	3.3	--	--	--	--
Clallam Co.	2	0%	2.6	--	--	--	--
Clark Co.	29	7%	5.9	7	24%	21	72%
Columbia Co.	0	0%	0.0	--	--	--	--
Cowlitz Co.	2	0%	1.8	--	--	--	--
Douglas Co.	2	0%	4.7	--	--	--	--
Ferry Co.	0	0%	0.0	--	--	--	--
Franklin Co.	5	1%	5.3	2	40%	--	--
Garfield Co.	0	0%	0.0	--	--	--	--
Grant Co.	2	0%	2.0	1	50%	--	--
Grays Harbor Co.	2	0%	2.7	--	--	--	--
Island Co.	5	1%	5.9	2	40%	--	--
Jefferson Co.	0	0%	0.0	--	--	--	--
King Co.	195	48%	8.8	41	21%	166	85%
Kitsap Co.	9	2%	3.3	5	56%	--	--
Kittitas Co.	3	1%	6.4	1	33%	--	--
Klickitat Co.	0	0%	0.0	--	--	--	--
Lewis Co.	2	0%	2.5	--	--	--	--
Lincoln Co.	0	0%	0.0	--	--	--	--
Mason Co.	6	1%	9.2	3	50%	--	--
Ne Tri-County HD	1	0%	1.5	0	--	--	--
Okanogan Co.	0	0%	0.0	--	--	--	--
Pacific Co.	0	0%	0.0	--	--	--	--
Pend Oreille Co.	1	0%	7.3	--	--	1	100%
Pierce Co.	52	13%	5.9	14	27%	39	75%
San Juan Co.	0	0%	0.0	--	--	--	--
Skagit Co.	4	1%	3.1	--	--	3	75%
Skamania Co.	0	0%	0.0	--	--	--	--
Snohomish Co.	29	7%	3.5	9	31%	24	83%
Spokane Co.	26	6%	5.0	6	23%	26	100%
Stevens Co.	0	0%	0.0	--	--	--	--
Thurston Co.	6	1%	2.1	3	50%	5	83%
Wahkiakum Co.	0	0%	0.0	--	--	--	--
Walla Walla Co.	0	0%	0.0	--	--	--	--
Whatcom Co.	4	1%	1.8	2	50%	4	100%
Whitman Co.	0	0%	0.0	--	--	--	--
Yakima Co.	7	2%	2.7	3	43%	6	86%
Total	410	100%	5.4	100	24%	335	82%

Table based on HIV surveillance data reported to the WA State Department of Health as of June 30, 2020.

n/a: Rate cannot be calculated due to no available population estimate.

-- Due to the small number of HIV cases the count and percentage based on the count is not shown.

^{NR} Not reliable, RSE ≥ 25 .

^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.

TABLE 1-3. NEW HIV CASE COUNTS OVER TIME, BY DEMOGRAPHIC AND RISK CHARACTERISTICS, WA STATE, 2015-2019

	2015	2016	2017	2018	2019	2015-2019			
	No.	No.	No.	No.	No.	Total No.	Avg. No.	%	Rate
Total	403	370	374	405	410	1962	392	100%	5.4
Gender									
Cisgender men	339	290	301	313	339	1582	316	81%	8.7
Cisgender women	60	75	67	89	63	354	71	18%	1.9
Transgender women	4	5	5	3	7	24	5	1%	n/a
Transgender men	0	0	1	0	1	2	0	0%	n/a
Age at HIV Diagnosis									
< 13	4	2	3	0	0	9	2	0%	0.2
13-24	64	63	59	54	62	302	60	15%	5.4
25-34	150	116	144	141	167	718	144	37%	14.1
35-44	84	78	62	94	75	393	79	20%	8.3
45-54	67	63	63	67	64	324	65	17%	6.9
55-64	28	36	34	41	31	170	34	9%	3.6
65+	6	12	9	8	11	46	9	2%	0.8
Race/Ethnicity									
American Indian/Alaska Native	4	9	5	3	3	24	5	1%	5.2
Asian	25	27	24	16	19	111	22	6%	3.7
Black	71	65	72	85	71	364	73	19%	26.9
Foreign-born ^{A,B}	25	28	36	44	30	163	33	8%	52.6
U.S.-born ^{A,B}	40	32	31	34	33	170	34	9%	6.0
Hispanic	81	62	79	72	97	391	78	20%	8.4
Foreign-born ^{A,B}	44	31	38	30	50	193	39	10%	12.9
U.S.-born ^{A,B}	23	26	34	29	28	140	28	7%	4.4
Native Hawaiian/other Pacific Islander	3	4	3	5	3	18	4	1%	7.2
White	207	184	178	203	201	973	195	50%	3.9
Multiple	12	19	13	21	16	81	16	4%	5.2
Mode of Exposure									
Male / Male Sex (MSM)	249	193	209	200	242	1093	219	56%	n/a
Injecting Drug Use (IDU)	31	28	19	44	42	164	33	8%	n/a
MSM and IDU	27	27	27	39	22	142	28	7%	n/a
Heterosexual	29	53	37	51	38	218	44	11%	n/a
Blood/pediatric	4	1	5	0	2	12	2	1%	n/a
No identified risk	53	68	77	71	64	333	67	17%	n/a

Table based on HIV surveillance data reported to the WA State Department of Health as of June, 30 2020.

n/a Rate cannot be calculated due to no available population estimate .

^{NR} Not reliable, RSE ≥ 25 .

^A Country of origin data are missing for approximately 11% and 20% of newly diagnosed cases among Black and Hispanics, respectively.

^B Population estimate for 2019 was extrapolated using previous estimates from years 2010-2018.

TABLE 1-4. NEW HIV CASE COUNTS OVER TIME, BY COUNTY AND HEALTH DISTRICT (HD) OF RESIDENCE AT HIV DIAGNOSIS, WA STATE, 2015-2019

County and Health District of Residence	2015	2016	2017	2018	2019	2015-2019			
	No.	No.	No.	No.	No.	Total No.	Avg. No.	%	Rate
Adams Co.	1	0	0	0	2	3	1	0%	3.0
Asotin Co.	1	0	0	0	0	1	0	0%	0.9
Benton Co.	0	7	2	0	13	22	4	1%	2.3
Benton-Franklin Hd	5	10	3	5	18	41	8	2%	2.9
Chelan Co.	5	6	1	3	2	17	3	1%	4.4
Chelan-Douglas Hd	8	6	2	4	4	24	5	1%	4.1
Clallam Co.	4	2	2	5	2	15	3	1%	4.0
Clark Co.	17	18	24	21	29	109	22	6%	4.6
Columbia Co.	0	0	1	0	0	1	0	0%	4.9
Cowlitz Co.	2	2	4	1	2	11	2	1%	2.1
Douglas Co.	3	0	1	1	2	7	1	0%	3.4
Ferry Co.	0	0	0	0	0	0	0	0%	0.0
Franklin Co.	5	3	1	5	5	19	4	1%	4.2
Garfield Co.	0	0	0	0	0	0	0	0%	0.0
Grant Co.	0	0	0	4	2	6	1	0%	1.2
Grays Harbor Co.	4	1	4	0	2	11	2	1%	3.0
Island Co.	1	2	3	2	5	13	3	1%	3.1
Jefferson Co.	1	2	0	1	0	4	1	0%	2.6
King Co.	203	181	177	230	195	986	197	50%	9.2
Kitsap Co.	10	7	9	9	9	44	9	2%	3.3
Kittitas Co.	1	1	0	3	3	8	2	0%	3.6
Klickitat Co.	0	0	1	0	0	1	0	0%	0.9
Lewis Co.	1	0	0	1	2	4	1	0%	1.0
Lincoln Co.	0	1	1	0	0	2	0	0%	3.7
Mason Co.	5	3	4	5	6	23	5	1%	7.3
Ne Tri-County Hd	1	1	0	0	1	3	1	0%	0.9
Okanogan Co.	0	1	0	0	0	1	0	0%	0.5
Pacific Co.	0	0	0	1	0	1	0	0%	0.9
Pend Oreille Co.	1	0	0	0	1	2	0	0%	3.0
Pierce Co.	64	42	41	50	52	249	50	13%	5.8
San Juan Co.	0	0	0	0	0	0	0	0%	0.0
Skagit Co.	1	7	4	3	4	19	4	1%	3.1
Skamania Co.	1	0	0	0	0	1	0	0%	1.7
Snohomish Co.	34	36	27	20	29	146	29	7%	3.7
Spokane Co.	19	26	21	17	26	109	22	6%	4.4
Stevens Co.	0	1	0	0	0	1	0	0%	0.4
Thurston Co.	7	8	10	8	6	39	8	2%	2.8
Wahkiakum Co.	0	0	0	0	0	0	0	0%	0.0
Walla Walla Co.	0	1	2	1	0	4	1	0%	1.3
Whatcom Co.	5	2	8	3	4	22	4	1%	2.0
Whitman Co.	1	0	0	3	0	4	1	0%	1.6
Yakima Co.	6	10	26	10	7	59	12	3%	4.7
Total	403	370	374	407	410	1964	393	100%	5.4

Table based on HIV surveillance data reported to the WA State Department of Health as of June 30, 2020.

^{NR} Not reliable, RSE ≥25.

TABLE 1-5. NEW CASES OF HIV INFECTION, BY CURRENT GENDER^A, RACE/ETHNICITY, AND HIV EXPOSURE CATEGORY, WA STATE, 2015-2019

Gender	Exposure Category	Asian		Black		Hispanic		Other		White	
		No.	%	No.	%	No.	%	No.	%	No.	%
Cisgender Men	Male / Male Sex (MSM)	73	82%	127	57%	264	76%	65	69%	547	66%
	Injecting Drug Use (IDU)	1	1%	8	4%	8	2%	5	5%	67	8%
	MSM and IDU	0	0%	10	4%	16	5%	9	10%	101	12%
	Heterosexual Contact	1	1%	12	5%	14	4%	1	1%	17	2%
	Blood/Pediatric	0	0%	4	2%	0	0%	0	0%	3	0%
	No Identified Risk	14	16%	63	28%	44	13%	14	15%	94	11%
	Total Men	89	100%	224	100%	346	100%	94	100%	829	100%
Cisgender Women	Injecting Drug Use (IDU)	1	5%	3	2%	5	13%	8	32%	58	43%
	Heterosexual Contact	5	25%	20	15%	10	26%	5	20%	22	16%
	Blood/Pediatric	1	5%	7	5%	0	0%	0	0%	0	0%
	No Identified Risk	13	65%	106	78%	23	61%	12	48%	55	41%
	Total Women	20	100%	136	100%	38	100%	25	100%	135	100%
Transgender Women		Total									
		No.	%								
	Male Sex Partner	17	71%	-	-	-	-	-	-	-	-
	Male Sex Partner and IDU	6	25%	-	-	-	-	-	-	-	-
	Other	0	0%	-	-	-	-	-	-	-	-
No Identified Risk	1	4%	-	-	-	-	-	-	-	-	
Total Transgender Women	24	100%	-	-	-	-	-	-	-	-	

Table based on HIV surveillance data reported to the WA State Department of Health as of June 30, 2020.

^ADue to the small number of HIV cases reported as transgender 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, 2019

	Living Cases of HIV Infection Column			Engaged in Care ^A		Suppressed Viral Load ^B	
	No.	%	Rate	No.	Row %	No.	Row %
Total	13,710	100%	181.7	12,199	89%	11,274	82%
Gender							
Cisgender men	11,454	84%	304.1	10,195	89%	9,466	83%
Cisgender women	2,130	16%	56.3	1,894	89%	1,708	80%
Transgender women	113	1%	n/a	100	88%	92	81%
Transgender men	13	0%	n/a	10	77%	8	62%
Current Age							
< 13	30	0%	2.5	29	97%	29	97%
13-24	302	2%	26.3	266	88%	222	74%
25-34	1,806	13%	170.0	1,538	85%	1,344	74%
35-44	2,708	20%	274.5	2,334	86%	2,114	78%
45-54	3,863	28%	414.6	3,421	89%	3,144	81%
55-64	3,644	27%	373.8	3,348	92%	3,196	88%
65+	1,357	10%	110.6	1,263	93%	1,225	90%
Race/Ethnicity							
American Indian/Alaska Native	135	1%	143.6	117	87%	105	78%
Asian	485	4%	71.5	434	89%	417	86%
Black	2,359	17%	810.8	2,049	87%	1,849	78%
Foreign-born ^{C,D}	1,008	7%	1,457.2	899	89%	846	84%
U.S.-born ^{C,D}	1,255	9%	556.4	1,070	85%	931	74%
Hispanic	2,030	15%	204.1	1,758	87%	1,624	80%
Foreign-born ^{C,D}	1,013	7%	326.8	878	87%	825	81%
U.S.-born ^{C,D}	850	6%	125.2	747	88%	681	80%
Native Hawaiian/other Pacific Islander	62	0%	115.6	52	84%	44	71%
White	7,766	57%	152.1	6,995	90%	6,518	84%
Multiple	867	6%	263.3	788	91%	711	82%
Mode of Exposure							
Male / Male Sex (MSM)	8,425	61%	n/a	7,556	90%	7,100	84%
Injecting Drug Use (IDU)	796	6%	n/a	689	87%	597	75%
MSM and IDU	1,235	9%	n/a	1,123	91%	982	80%
Heterosexual	1,718	13%	n/a	1,514	88%	1,391	81%
Blood/pediatric	189	1%	n/a	175	93%	159	84%
No Identified Risk	1,347	10%	n/a	1,142	85%	1,045	78%

Table based on HIV surveillance data reported to the WA State Department of Health as of June 30, 2020.

n/a Rate cannot be calculated due to no available population estimate.

^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 4% and 8% of living cases among Black and Hispanics, respectively.

^D Population estimate for 2019 was extrapolated using previous estimates from years 2010-2018.

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, 2019

County or Health District of Residence	Living Cases of HIV Infection, 2019			Engaged in Care ^A		Suppressed Viral Load ^B	
	No.	Column %	Rate	No.	Row %	No.	Row %
Adams Co.	13	0%	64.5	13	100%	10	77%
Asotin Co.	18	0%	79.9	15	83%	14	78%
Benton Co.	175	1%	86.7	154	88%	134	77%
Benton-Franklin Hd	254	2%	85.7	169	67%	147	58%
Chelan Co.	61	0%	77.8	49	80%	47	77%
Chelan-Douglas Hd	80	1%	66.0	64	80%	60	75%
Clallam Co.	80	1%	105.2	71	89%	63	79%
Clark Co.	752	5%	153.9	625	83%	575	76%
Columbia Co.	3	0%	72.1	--	--	--	--
Cowlitz Co.	140	1%	128.5	122	87%	105	75%
Douglas Co.	19	0%	44.4	15	79%	13	68%
Ferry Co.	5	0%	63.9	--	--	--	--
Franklin Co.	79	1%	83.4	68	86%	61	77%
Garfield Co.	2	0%	90.1	--	--	--	--
Grant Co.	48	0%	48.6	43	90%	40	83%
Grays Harbor Co.	90	1%	121.4	74	82%	68	76%
Island Co.	95	1%	112.0	77	81%	73	77%
Jefferson Co.	45	0%	141.1	42	93%	38	84%
King Co.	7,056	51%	316.9	6,390	91%	5,952	84%
Kitsap Co.	335	2%	124.0	294	88%	279	83%
Kittitas Co.	30	0%	64.4	29	97%	26	87%
Klickitat Co.	17	0%	75.8	17	100%	15	88%
Lewis Co.	65	0%	81.8	56	86%	51	78%
Lincoln Co.	7	0%	63.9	--	--	--	--
Mason Co.	66	0%	101.6	59	89%	55	83%
Ne Tri-County Hd	41	0%	61.1	36	88%	36	88%
Okanogan Co.	22	0%	51.5	16	73%	16	73%
Pacific Co.	32	0%	147.9	25	78%	24	75%
Pend Oreille Co.	11	0%	80.1	10	91%	10	91%
Pierce Co.	1,534	11%	172.7	1,308	85%	1,182	77%
San Juan Co.	21	0%	122.4	19	90%	18	86%
Skagit Co.	94	1%	72.8	84	89%	80	85%
Skamania Co.	6	0%	49.8	--	--	--	--
Snohomish Co.	1,196	9%	146.1	1,079	90%	1,017	85%
Spokane Co.	668	5%	129.6	597	89%	528	79%
Stevens Co.	25	0%	54.9	22	88%	22	88%
Thurston Co.	322	2%	112.7	282	88%	256	80%
Wahkiakum Co.	3	0%	71.6	--	--	--	--
Walla Walla Co.	53	0%	85.2	44	83%	41	77%
Whatcom Co.	246	2%	109.2	224	91%	207	84%
Whitman Co.	27	0%	53.9	25	93%	24	89%
Yakima Co.	247	2%	96.5	230	93%	211	85%
Unknown	2	0%	n/a	2	100%	2	100%
Total	13,710	100%	1817.7	12,199	89%	11,274	82%

Table based on HIV surveillance data reported to the WA State Department of Health as of June 30, 2020.

n/a Rate cannot be calculated due to no available population estimate.

-- Due to the small number of HIV cases the count and percentage based on the count is not shown.

^{NR} Not reliable, RSE ≥ 25 .

^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.

TABLE 1-8. LIVING CASES OF HIV INFECTION, BY CURRENT GENDER^A, RACE/ETHNICITY, AND HIV EXPOSURE CATEGORY, WA STATE, 2019

Gender	Exposure Category	Asian		Black		Hispanic		Other		White	
		No.	%	No.	%	No.	%	No.	%	No.	%
Cisgender Men	Male / Male Sex (MSM)	292	74%	776	53%	1,319	75%	604	69%	5,345	77%
	Injecting Drug Use (IDU)	6	2%	75	5%	45	3%	44	5%	298	4%
	MSM and IDU	9	2%	94	6%	142	8%	131	15%	834	12%
	Heterosexual Contact	13	3%	172	12%	70	4%	37	4%	116	2%
	Blood/Pediatric	3	1%	40	3%	9	1%	5	1%	40	1%
	No Identified Risk	74	19%	298	20%	164	9%	57	6%	337	5%
	Total Female	397	100%	1455	100%	1,749	100%	878	100%	6,970	100%
Cisgender Women	Injecting Drug Use (IDU)	2	2%	39	4%	28	11%	44	27%	212	28%
	Heterosexual Contact	59	71%	542	61%	172	70%	99	60%	434	58%
	Blood/Pediatric	3	4%	55	6%	7	3%	4	2%	22	3%
	No Identified Risk	19	23%	249	28%	40	16%	19	11%	80	11%
	Total Male	83	100%	885	100%	247	100%	166	100%	748	100%
Transgender Women	Male sex partner	25	64%	16	94%	24	71%	5	100%	13	72%
	Male sex partner and IDU	11	28%	1	6%	8	24%	0	0%	5	28%
	Other	0	0%	0	0%	1	3%	0	0%	0	0%
	No Identified Risk	3	8%	0	0%	1	3%	0	0%	0	0%
	Total Transgender Female	39	100%	17	100%	34	100%	5	100%	18	100%

Table based on HIV surveillance data reported to the WA State Department of Health as of June 30, 2020.

^A Due to the small number of HIV cases reported as transgender male, further stratification is not possible.

TABLE 1-9. CHARACTERISTICS AND CARE OUTCOMES OF CASES AND LIVING CASES OF HIV REPORTING ANY AMERICAN INDIAN OR ALASKA NATIVE RACE, 2015-2019

	New HIV Cases		Living Cases	
	No.	Column %	No.	Column %
Total	63	2% ^A	551	4% ^A
Gender				
Cisgender men	43	68%	434	79%
Cisgender women	19	30%	106	19%
Transgender women	1	2%	9	2%
Transgender men	0	0%	2	0%
Mode of Exposure				
Male / Male Sex (MSM)	27	43%	288	52%
Injecting Drug Use (IDU)	12	19%	69	13%
MSM and IDU	7	11%	82	15%
Heterosexual	7	11%	78	14%
No Identified Risk/Other	10	16%	34	6%
Geography				
King County	30	48%	263	48%
Other Western Washington	18	29%	214	39%
Eastern Washington	15	24%	74	13%
Care Metrics				
Initial Linkage to HIV Care ^B	48	76%	N/A	N/A
Engaged in Care ^C	N/A	N/A	501	91%
Viral Suppression ^D	N/A	N/A	444	81%

Table based on HIV surveillance data reported to the WA State Department of Health as of June 30, 2020.

^A Percentage of total Washington cases.

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

^C Engaged in care = at least one reported CD4 or VL result within calendar year.

^D Suppressed viral load = last reported viral load result in calendar year was < 200 copies/mL.

TABLE 1-10. DEATHS AMONG CASES OF HIV INFECTION, BY DEMOGRAPHIC AND RISK CHARACTERISTICS, WA STATE, 1982-2018

	Deaths among Cases of HIV Infection						1983-2018	
	2018						No.	Column %
	No.	Column %	Age-adjusted Rate (per 100,000)	Case Fatality Rate (per 1,000)	Standard Mortality Ratio			
Total	205	100%	2.8	15.0	2.1	8,414	100%	
Gender								
Cisgender men	169	82%	4.6	14.8	1.9	7,657	91%	
Cisgender women	33	16%	0.9	15.5	3.2	737	9%	
Transgender women	3	1%	n/a	26.5	n/a	20	0%	
Transgender men	0	0%	n/a	0.0	n/a	0	0%	
Current Age								
< 13	0	0%	0.0	0.0	0.0	19	0%	
13-24	0	0%	0.0	0.0	0.0	100	1%	
25-34	10	5%	1.0	5.5	4.5	1,741	21%	
35-44	20	10%	2.1	7.4	3.6	3,039	36%	
45-54	54	26%	5.7	14.0	3.8	2,038	24%	
55-64	66	32%	6.8	18.1	2.1	1,018	12%	
65+	55	27%	4.7	40.5	1.2	459	5%	
Race/Ethnicity								
American Indian / Alaska Native	6	3%	6.4	44.4	n/a	133	2%	
Asian	1	0%	0.2	2.1	n/a	96	1%	
Black	29	14%	10.5	12.3	n/a	808	10%	
Foreign-born ^A	8	4%	10.6	7.9	n/a	77	1%	
U.S.-born ^A	21	10%	10.2	16.7	n/a	717	9%	
Hispanic	24	12%	2.5	11.8	n/a	553	7%	
Foreign-born ^A	6	3%	1.9	5.9	n/a	193	2%	
U.S.-born ^A	18	9%	2.7	21.2	n/a	330	4%	
Native Hawaiian/other Pacific Islander	1	0%	1.9	16.1	n/a	18	0%	
White	124	60%	2.4	16.0	n/a	6,509	77%	
Multiple	20	10%	6.2	23.1	n/a	296	4%	
Mode of Exposure								
Male / Male Sex (MSM)	105	51%	n/a	12.5	n/a	5,378	64%	
Injecting Drug Use (IDU)	24	12%	n/a	30.2	n/a	943	11%	
MSM and IDU	26	13%	n/a	21.1	n/a	926	11%	
Heterosexual	25	12%	n/a	14.6	n/a	496	6%	
Blood/pediatric	1	0%	n/a	5.3	n/a	185	2%	
No identified risk	24	12%	n/a	17.8	n/a	486	6%	

Table based on HIV surveillance data reported to the WA State Department of Health as of June 30, 2020.

Standard mortality ratio compares the actual numbers of deaths to the expected number using data from the WA Department of Health Statistics Office.

n/a Rate cannot be calculated due to no available population estimate.

^A Country of origin data are missing for approximately 4% and 8% of living cases among Black and Hispanics, respectively.

FIGURE 1-1. 2019 WASHINGTON STATE CARE CONTINUUM AS OF JULY 2020

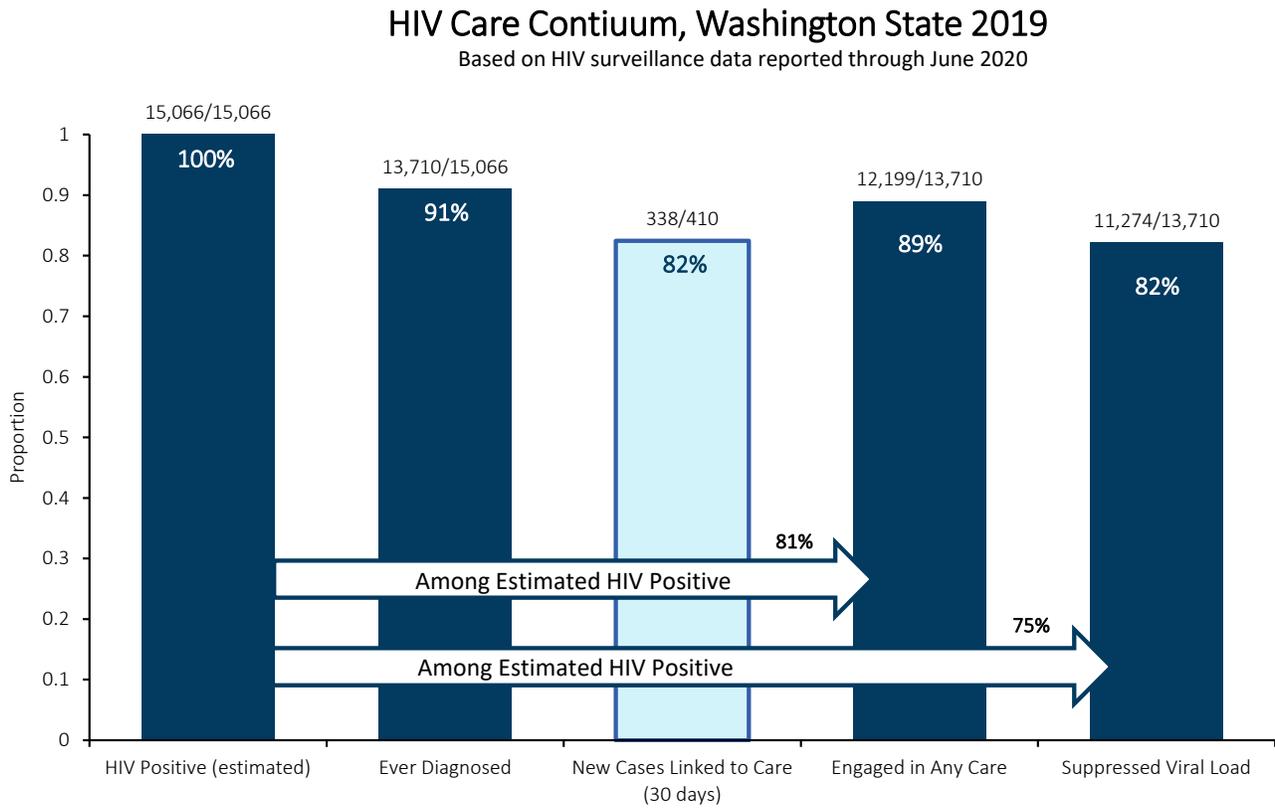
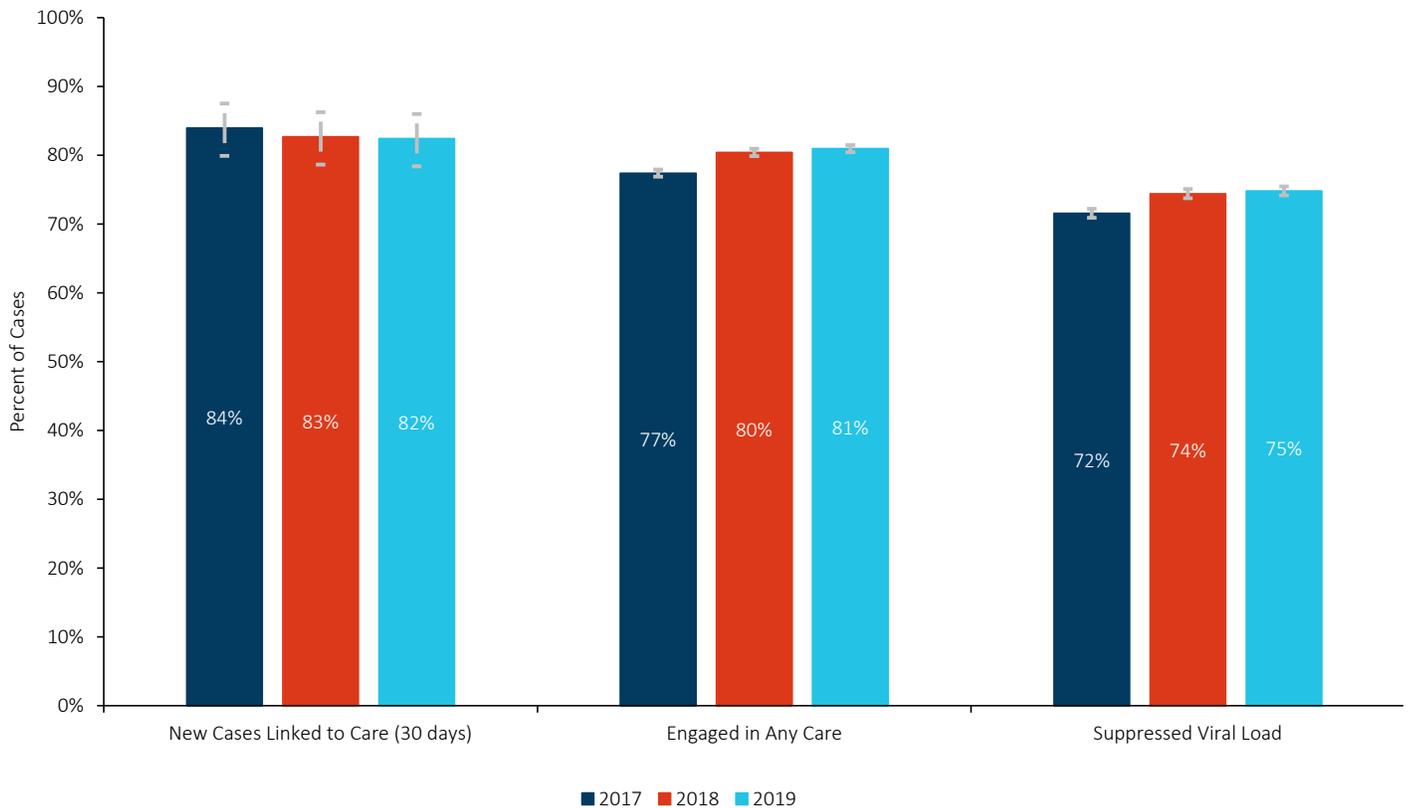


FIGURE 1-2. 2017-2019 THREE-YEAR TRENDS, WASHINGTON STATE CARE CONTINUUM AS OF JULY 2020



COVID-19/HIV Coinfection

SUMMARY

COVID-19 testing rates are higher among people living with HIV (PLWH) relative to the general public

PLWH also have COVID-19 diagnosis rates which are higher than those of the general public, and this may be due to higher testing rates.

The death rate among PLWH diagnosed with COVID is higher than that among all residents, but the difference is not currently statistically significant.

Background and Aims

The Center for Disease Control and Prevention has highlighted people living with HIV (PLWH) as a population of heightened risk from coronavirus disease 2019 (COVID-19).¹ This concern is predicated on several factors: increased immunosuppression, interaction with HIV, a high prevalence of risk factors for COVID-19 complications, interference with HIV care and treatment, and a high degree of social burden that may reduce the ability of PLWH to protect themselves from COVID-19 and access care.

Preliminary reports in the United States suggest that PLWH who are diagnosed or hospitalized with COVID-19 do not have worse clinical outcomes than the general population, though a large study from South Africa found that PLWH had more severe COVID-19.^{2,3} And another recent report found an excess mortality risk for PLWH.⁴ However, there is a lack of information on the overall burden of COVID-19 on PLWH relative to the general population, including in Washington State. Additionally, the burden across population subgroups has not been explored.

Washington State has names-based HIV and COVID-19 surveillance systems that are well-suited to examine the interaction between these two diseases. Reporting laws and public health infrastructure in Washington State

allow a population-level view of the two diseases and can utilize the demographic information and clinical history contained in the HIV surveillance database. Additionally, the negative COVID-19 test data collected as part of the COVID-19 surveillance program can be used to characterize differences in disease detection between populations, which is not possible in evaluations of only COVID-19 cases.

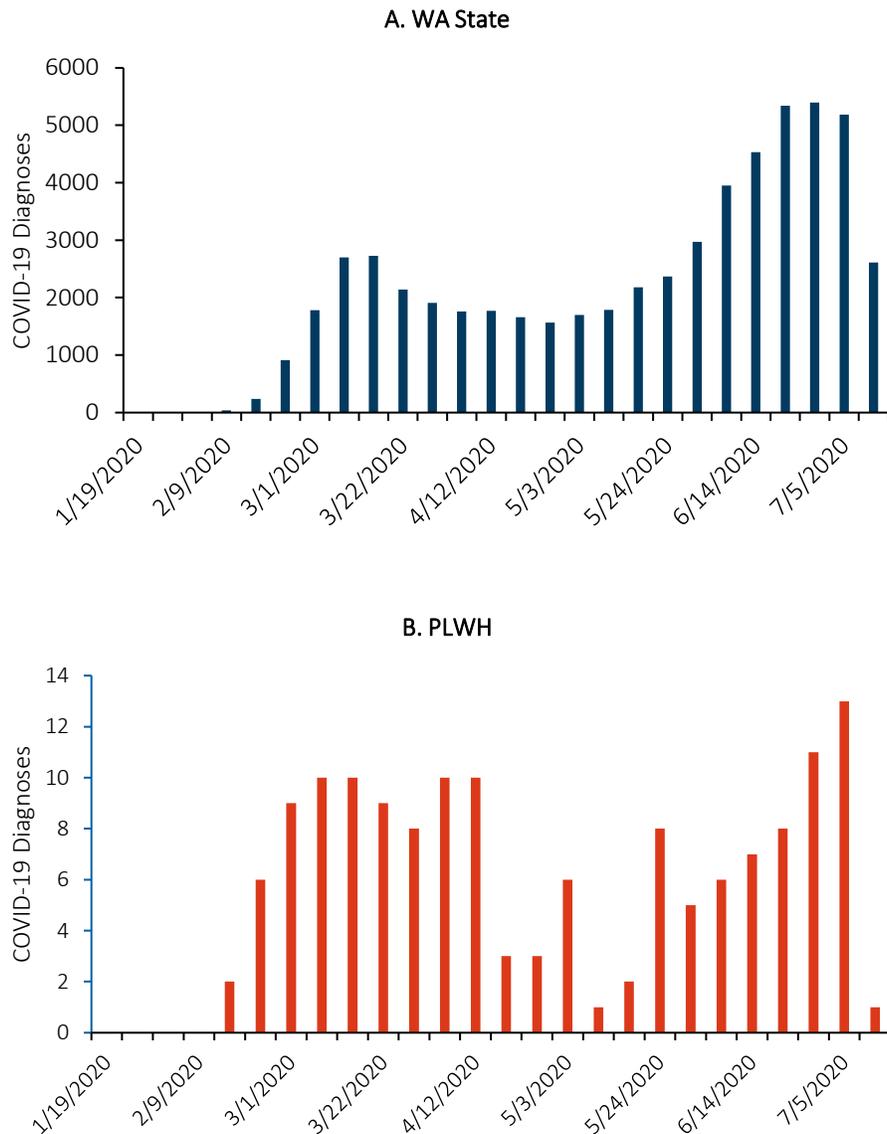
The purpose of this article is to compare the rate of COVID-19 infection and mortality among PLWH in Washington to the general population, identify subgroups of PLWH disproportionately affected by COVID-19, and estimate the proportion of the population of PLWH who have been tested.

Methods

The COVID-19 PCR test results, vital status, cause of death, and identifiers were extracted from the Washington State Department of Health's Disease Reporting System for all individuals who received a COVID-19 PCR test from the beginning of the epidemic in Washington (1/21/2020) through 7/31/2020. Cases were manually matched to identifiers from HIV surveillance data using LinkPlus software.

The number of cases and cases per 10,000 population were tabulated for all PLWH and for sex, age, race/ethnicity, transmission category, and geographic subgroups and across viral suppression status. The rate of cases per 10,000 population was calculated using HIV

Figure 2-1: Cases of COVID-19 in (A) Washington State in Total and (B) Among PLWH through 7/31/2020



surveillance estimates from the Washington State Department of Health and denominators from United States Census estimates. A Poisson model was used to estimate risk ratios and confidence intervals (CI). In addition to crude ratios, we also calculated a risk ratio for COVID-19 diagnosis with respect to HIV status that was adjusted for county of residence. We calculated the number of deaths from COVID-19 (case mortality) and mortality per 10,000 population.

We performed a second match between the HIV database and all COVID-19 PCR tests based on ten pre-specified combinations of first name, last name, middle initial, date of birth, and social security number matches. This information was used to estimate the number of tests received by PLWH and the proportion of PLWH who have been tested. For the purpose of this match, COVID-19 PCR tests were considered to have been performed on the same person if the tests were associated with the same first name, last name, and date of birth or if the two tests were merged to one case during case

investigation.

Results

From 1/21/2020 to 7/31/2020, there were 57,552 cases of COVID-19 reported in Washington State representing 77.5 cases per 10,000 population. Among PLWH, there were 140 cases, representing of 102.1 cases per 10,000 population (risk ratio 1.3, 95% CI 1.1-1.6). Adjusted for county of residence, the risk ratio of COVID-19 infection among PLWH relative to the general population was 1.4 (1.2-1.7) (**Figure 2-1**)

The risk of COVID-19 infection was highest among female (168.1 cases per 10,000, 95% CI 121.2-233.0), Hispanic (187.2 cases per 10,000, 95% CI 136.2-257.3), and Black (148.4 cases per 10,000, 95% CI 106.5-206.6) PLWH, along with PLWH between the ages of 20 and 40 (150.5 cases per 10,000, 95% CI 87.4-259.1). There was no suggestion that viral suppression or transmission

TABLE 2-1: CASES OF COVID-19-HIV COINFECTION IN WASHINGTON STATE, 1/21/2020-7/31/2020

Attribute	Value	COVID-19 Cases	All PLWH	Cases Per 10,000 (95% CI) ^A	P-value ^A
Total	-	140	13,708	102.1 (86.5-120.5)	
Sex at Birth	Male	104	11,568	89.9 (74.2-109.0)	0.01
	Female	36	2,142	168.1 (121.2-233.0)	
Race/Ethnicity	NH Black	35	2,359	148.4 (106.5-206.6)	<0.01
	Hispanic	38	2,030	187.2 (136.2-257.3)	
	NH White	45	7,766	57.9 (43.3-77.6)	
	NH Other	32	2,065	141.5 (93.2-214.9)	
Age	0-20	0	11	0 (NA-NA)	0.02
	21-40	13	879	150.5 (87.4-259.1)	
	41-60	70	5,531	128.9 (102.0-163.0)	
	61-80	50	6,816	74.0 (56.1-97.7)	
	>80	7	644	107.2 (51.1-224.9)	
Transmission Category	MSM	75	8,425	89.0 (71.0-111.6)	0.19
	IDU	7	796	87.9 (41.9-184.5)	
	MSM+IDU	12	1,235	97.2 (55.2-171.1)	
	Heterosexual	17	1,253	144.5 (100.7-208.6)	
	Other	29	2,001	135.7 (84.3-218.2)	
Geography	King County	90	6,966	127.6 (103.7-156.8)	<0.01
	Other	50	6,604	75.1 (57.0-99.1)	
HIV Viral Suppression	Suppressed	123	11,274	109.1 (91.4-130.2)	0.08
	Not Suppressed	17	2,436	69.7 (43.3-112.3)	

Abbreviations: PLWH, people living with HIV; NH Non-Hispanic; MSM, men who have sex with men; IDU, injection drug use.

^A P-values and confidence intervals from Poisson distribution.

category were associated with risk of COVID-19 infection. Full results can be found in **Table 2-1**.

Of the 140 PLWH diagnosed with COVID-19, 5 died, which represented a case mortality of 3.6% (95% CI 1.1%-8.1%). This was not significantly higher than those without HIV (2.8%, 95% CI 2.6-2.9%, $p=0.59$). The population mortality among PLWH was 3.7 per 10,000 (95% CI 1.5-8.7), which was not significantly higher than those without HIV (2.2 per 10,000, 95% CI 2.0-2.2, $p=0.24$).

The algorithmic matching process yielded an estimate of 2,609 PLWH who had been tested for COVID-19, which represented 19.0% of PLWH (95% CI 18.3-19.7%). The remaining 880,168 people tested in Washington State represented 11.5% of the remaining state population (95% CI 11.5-11.6%). The rate ratio for COVID-19 testing among PLWH was 1.64 (95% CI 1.59-1.70).

Conclusions

During the first 6 months of the COVID-19 pandemic, PLWH were 60% more likely to be tested and 30% more likely to be diagnosed with COVID-19 than people who were HIV negative. The case and population mortality among PLWH were higher than those who did not have HIV, but the difference was not statistically significant.

We interpret this data to suggest that PLWH are not at higher risk of COVID-19 infection than the general population. While PLWH are more likely to be diagnosed with COVID-19, antibody surveys of the general population suggest that a large proportion of COVID-19 cases are undiagnosed and unreported.⁵ In this context, a larger proportion of individuals being tested may lead to a larger number of diagnoses independent of the underlying incidence. This pattern was observed among this population of PLWH, including the trend toward a higher COVID-19 diagnosis rate among PLWH who were virally suppressed. Presumably these individuals were more likely to receive routine care and be tested for COVID-19.

The subgroups of PLWH who were at highest risk of COVID-19 largely match trends seen in the general population, where Black and Hispanic populations are disproportionately affected. The high number of cases among female PLWH is an exception and is distinct from the demographics of COVID-19 cases in Washington State as a whole. This difference may explain some of the

disparities in COVID-19 diagnoses across transmission category (e.g., higher risk in the heterosexual category vs. MSM). The differences we observe in cases per 10,000 population across viral suppression status may reflect underlying differences in access to care and COVID-19 testing.

The small number of COVID-19 related deaths among PLWH make drawing conclusions difficult. The case mortality and population mortality from COVID-19 were higher among PLWH than those who did not have HIV, but the differences were not significant. In addition, the relationship was likely confounded by age; PLWH in Washington are older on average than the general population and COVID-19 morbidity increases greatly with age.⁶

In summary, the results of our evaluation suggest that HIV status is not a major risk factor for COVID-19 acquisition and does not provide evidence that PLWH are at greater risk of death from COVID-19 than the general population.

Contributed by Steven Ery and Jennifer Reuer

References

1. Center for Disease Control and Prevention. What to Know About HIV and COVID-19. *Coronavirus Disease 2019 (COVID-19)* <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/hiv.html> (2020).
2. Cooper T et al. Coronavirus disease 2019 (COVID-19) outcomes in HIV/AIDS patients: a systematic review. *HIV Med* hiv.12911 (2020) doi:10.1111/hiv.12911.
3. Boulle, Andrew et al. Risk Factors for COVID-19 Death in a Population Cohort Study from the Western Cape Province, South Africa. *Clin Infect Dis* (2020) doi:10.1093/cid/ciaa1198
4. Geretti AM, et al. Outcomes of COVID-19 related hospitalization among people with HIV in the ISARIC WHO Clinical Characterization Protocol (UK): a prospective observational study. *Clin Infect Dis*. 2020 Oct 23; Epub ahead of print.
5. Bendavid E et al. COVID-19 Antibody Seroprevalence in Santa Clara County, California. <http://medrxiv.org/lookup/doi/10.1101/2020.04.14.20062463> (2020) doi:10.1101/2020.04.14.20062463.
6. Washington State Department of Health. COVID-19 Data Dashboard. <https://www.doh.wa.gov/Emergencies/COVID19/DataDashboard> (2020).



HIV/AIDS DATA IN KING COUNTY

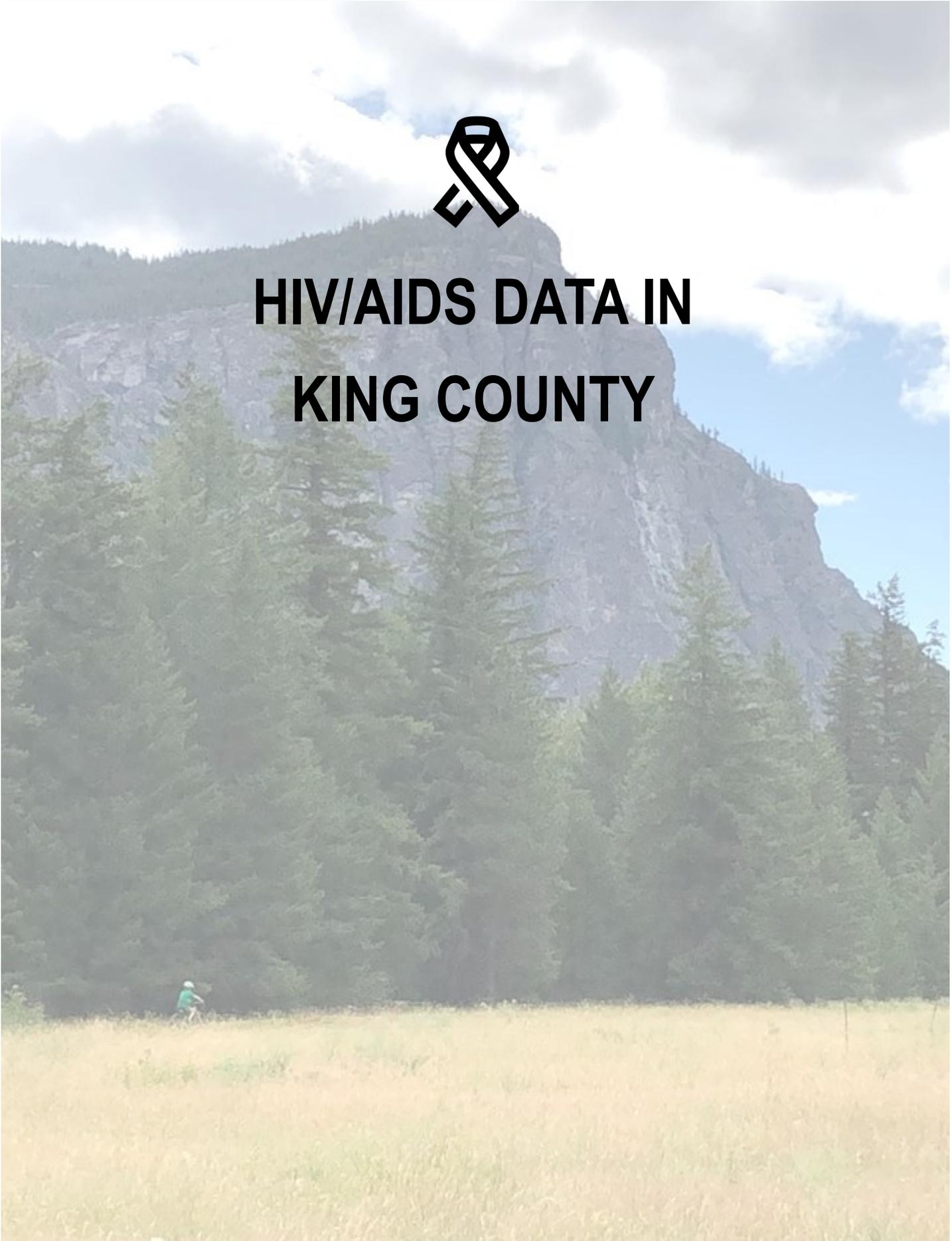


TABLE 3-1. PEOPLE LIVING WITH HIV BY RESIDENCE STATUS, KING COUNTY, WA, AS OF DECEMBER 31, 2019

	All Cases of HIV 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		Out of Jurisdiction Resident at Time of Diagnosis		No.	%
	No.	%	No.	%	No.	%		
Total	7,056	100%	4,706	100%	2,350	100%	3,368	100%
Gender								
Cisgender men	6,067	86%	3,993	85%	2,074	88%	3,000	89%
Cisgender women	922	13%	670	14%	252	11%	340	10%
Transgender men	5	0%	3	0%	2	0%	3	0%
Transgender women	62	1%	40	1%	22	1%	25	1%
Current Age								
< 13	8	0%	8	0%	0	0%	1	0%
13 - 24	134	2%	92	2%	42	2%	40	1%
25 - 34	948	13%	559	12%	389	17%	274	8%
35 - 44	1,477	21%	893	19%	584	25%	585	17%
45 - 54	2,006	28%	1,339	28%	667	28%	1,058	31%
55+	2,483	35%	1,815	39%	668	28%	1,410	42%
Race and Hispanic/Latinx Origin								
American Indian / Alaska Native	44	1%	30	1%	14	1%	23	1%
Asian	305	4%	229	5%	76	3%	110	3%
Black	1,442	20%	928	20%	514	22%	506	15%
- U.S.-Born Black	764	11%	418	9%	346	15%	255	8%
- Foreign-Born Black	641	9%	485	10%	156	7%	240	7%
Hispanic/Latinx (all races)	1,046	15%	671	14%	375	16%	442	13%
- U.S.-Born Latinx	472	7%	255	5%	217	9%	187	6%
- Foreign-Born Latinx	530	8%	386	8%	144	6%	225	7%
Native Hawaiian / Pacific Islander	26	0%	23	0%	3	0%	3	0%
White	3,730	53%	2,541	54%	1,189	51%	2,083	62%
Multiple Races	463	7%	284	6%	179	8%	201	6%
Transmission Category by Gender								
Men (cisgender and transgender)								
- Male / Male Sex (MSM)	4,647	66%	3,073	65%	1,574	67%	2,334	69%
- Injecting Drug Use (IDU)	176	2%	109	2%	67	3%	78	2%
- MSM and IDU	626	9%	360	8%	266	11%	327	10%
- Heterosexual Contact	191	3%	134	3%	57	2%	77	2%
- Pediatric	21	0%	11	0%	10	0%	7	0%
- Transfusion / Hemophiliac	13	0%	10	0%	3	0%	4	0%
- No Identified Risk	393	6%	296	6%	97	4%	173	5%
Cisgender Women								
- Injecting Drug Use	114	2%	82	2%	32	1%	46	1%
- Heterosexual Contact	588	8%	442	9%	146	6%	222	7%
- Pediatric	36	1%	20	0%	16	1%	8	0%
- Transfusion / Hemophiliac	10	0%	8	0%	2	0%	4	0%
- No Identified Risk	179	3%	121	3%	58	2%	63	2%
Transgender Women (all transmission categories)	62	1%	40	1%	22	1%	25	1%

All HIV/AIDS surveillance data reported to the Washington State Department of Health as of June 30, 2020.

TABLE 3-2. NEWLY DIAGNOSED CASES OF HIV INFECTION, KING COUNTY, WA, 2014-2019

Year of HIV Diagnosis:	Newly Diagnosed Cases of HIV Disease								Late HIV Diagnoses	
	2014	2015	2016	2017	2018	2019	2018-2019	Annual Rate 2018-2019	2014-2018 ^A	
	No.	No.	No.	No.	No.	No.	No.	%	Rate	%
Total	224	206	178	162	217	183	400	100%	9.1	25%
Gender										
Cisgender men	197	181	148	135	170	150	320	80%	14.6	23%
Cisgender women	23	23	27	24	47	30	77	19%	3.5	33%
Transgender men	1	0	0	1	0	0	0	0%	---	0%
Transgender women	3	2	3	2	0	3	3	1%	---	20%
Age at HIV Diagnosis										
< 13	0	0	0	0	0	0	0	0%	0.0	0%
13 - 24	40	29	34	25	26	25	51	13%	8.0	10%
25 - 34	74	72	64	64	81	73	154	39%	18.9	17%
35 - 44	50	49	38	24	51	40	91	23%	13.7	30%
45 - 54	38	37	20	33	31	29	60	15%	10.8	38%
55+	22	19	22	16	28	16	44	11%	4.1	40%
Race and Hispanic Origin										
American Indian / Alaska Native	4	0	3	2	1	1	2	1%	10.2	40% ^B
Asian	20	18	17	11	10	9	19	5%	2.4	28%
Black	45	43	33	34	48	40	88	22%	30.6	36%
- U.S.-Born Black	24	27	19	19	21	20	41	10%	19.2	21%
- Foreign-Born Black	21	13	14	13	27	16	43	11%	60.9	55%
Hispanic/Latinx (all races)	28	37	39	34	40	40	80	20%	17.7	22%
- U.S.-Born Latinx	8	14	22	13	24	13	37	9%	13.3	12%
- Foreign-Born Latinx	20	20	16	21	15	25	40	10%	23.4	32%
Native Hawaiian / Pacific Islander	2	1	0	3	3	3	6	2%	15.9	44% ^B
White	114	104	76	73	106	81	187	47%	7.1	19%
Multiple Race	11	3	10	5	9	9	18	5%	8.7	21%
Transmission Category by Gender										
Men (cisgender and transgender)										
- Male / Male Sex (MSM)	154	146	109	101	106	111	217	54%	---	20%
- People Who Inject Drugs (PWID)	2	4	8	4	15	8	23	6%	---	24%
- MSM and PWID	18	11	14	13	24	12	36	9%	---	23%
- Heterosexual Contact	2	2	6	2	5	5	10	3%	---	29%
- Pediatric	0	0	0	0	0	0	0	0%	---	---
- Transfusion / Hemophiliac	0	0	0	0	0	0	0	0%	---	---
- No Identified Risk	21	18	11	15	20	14	34	9%	---	47%
Cisgender Women										
- People Who Inject Drugs (PWID)	5	3	4	3	16	9	25	6%	---	13%
- Heterosexual Contact	13	17	19	15	25	16	41	10%	---	37%
- Pediatric	0	0	0	0	0	0	0	0%	---	---
- Transfusion / Hemophiliac	0	0	1	0	0	0	0	0%	---	---
- No Identified Risk	6	3	3	7	6	5	11	3%	---	44%
Transgender Women (all transmission categories)										
	3	2	3	2	0	3	3	1%	---	20%

All HIV/AIDS surveillance data reported to the Washington State Department of Health as of June 30, 2020. Rates are per 100,000 residents.

Rates assume 25% of Black and 38% of Hispanic/Latinx residents are foreign born.

^A Late HIV diagnoses based on new HIV cases diagnosed between 2014 and 2018.

^B Based on very small numbers.

TABLE 3-3. AIDS CASES AND CUMULATIVE DEATHS, KING COUNTY, WA, 1981-2019

	Recent AIDS Cases			Current AIDS Cases Living in King County			Cumulative AIDS Cases		Cumulative Deaths	
	2018-2019			2019			1981-2019		1981-2019	
	No.	%	Rate	No.	%	Rate	No.	%	No.	%
Total	189	100%	4.3	3,466	100%	155.7	9,206	100%	5,538	100%
Gender										
Cisgender men	152	80%	6.9	2,978	86%	267.4	8,405	91%	5,209	94%
Cisgender women	36	19%	1.6	457	13%	41.1	758	8%	316	6%
Transgender men	1	1%	---	0	0%	---	1	0%	1	0%
Transgender women	0	0%	---	31	1%	---	42	0%	12	0%
Age at AIDS Diagnosis										
				Current Age					Age at Death	
< 13	0	0%	0.0	0	0%	0.0	14	0%	8	0%
13 - 24	8	4%	1.3	27	1%	8.4	304	3%	39	1%
25 - 34	51	27%	6.2	225	6%	54.2	3,116	34%	1,161	21%
35 - 44	47	25%	7.1	547	16%	161.5	3,595	39%	2,118	38%
45 - 54	42	22%	7.5	1,077	31%	385.6	1,604	17%	1,297	23%
55+	41	22%	3.8	1,590	46%	294.7	573	6%	915	17%
Race and Hispanic Origin										
American Indian / Alaska Native	0	0%	0.0	27	1%	199.3	98	1%	68	1%
Asian	7	4%	0.9	139	4%	34.2	209	2%	74	1%
Black	55	29%	19.2	721	21%	489.4	1,302	14%	613	11%
Hispanic/Latinx (all races)	41	22%	9.1	516	15%	225.7	875	10%	336	6%
Native Hawaiian / Pacific Islander	3	2%	8.0	14	0%	73.8	24	0%	11	0%
White	69	37%	2.6	1,792	52%	137.1	6,260	68%	4,278	77%
Multiple Race	14	7%	6.7	257	7%	244.2	438	5%	158	3%
Transmission Category by Gender										
Men (cisgender and transgender)										
- Male / Male Sex (MSM)	98	52%	---	2,151	62%	---	6,335	69%	3,947	71%
- Injecting Drug Use (IDU)	9	5%	---	110	3%	---	378	4%	283	5%
- MSM and IDU	20	11%	---	345	10%	---	978	11%	639	12%
- Heterosexual Contact	6	3%	---	127	4%	---	199	2%	64	1%
- Pediatric	1	1%	---	9	0%	---	8	0%	5	0%
- Transfusion / Hemophiliac	0	0%	---	11	0%	---	65	1%	55	1%
- No Identified Risk	18	10%	---	225	6%	---	442	5%	216	4%
Cisgender Women										
- Injecting Drug Use	5	3%	---	63	2%	---	170	2%	125	2%
- Heterosexual Contact	19	10%	---	310	9%	---	484	5%	147	3%
- Pediatric	0	0%	---	13	0%	---	12	0%	5	0%
- Transfusion / Hemophiliac	0	0%	---	7	0%	---	23	0%	18	0%
- No Identified Risk	13	7%	---	64	2%	---	70	1%	22	0%
Transgender Women (all transmission categories)										
	0	0%	---	31	1%	---	42	0%	12	0%

All HIV/AIDS surveillance data reported to the Washington State Department of Health as of June 30, 2020.

Rates are per 100,000 residents.

TABLE 3-4. LIVING CASES OF HIV INFECTION BY CURRENT GENDER, RACE/ETHNICITY^A, AND TRANSMISSION CATEGORY, KING COUNTY, WA, AS OF DECEMBER 31, 2019

Transmission Category	American Indian / Alaska Native		Asian		Black		Hispanic/Latinx		White	
	No.	%	No.	%	No.	%	No.	%	No.	%
Men (cisgender and transgender)										
Male / Male Sex (MSM)	16	59%	205	77%	500	55%	752	81%	2,854	82%
People Who Inject Drugs (PWID)	5	19%	4	2%	47	5%	17	2%	87	2%
MSM and PWID	6	22%	7	3%	63	7%	76	8%	408	12%
Heterosexual Contact	0	0%	7	3%	111	12%	30	3%	36	1%
- U.S.-Born	0	0%	0	0%	31	3%	3	0%	27	1%
- Foreign-Born	0	0%	7	3%	79	9%	27	3%	7	0%
Pediatric	0	0%	0	0%	16	2%	2	0%	2	0%
Transfusion / Hemophiliac	0	0%	0	0%	2	0%	1	0%	10	0%
No Identified Risk	0	0%	42	16%	175	19%	53	6%	102	3%
Total Men	27	100%	265	100%	914	100%	931	100%	3,499	100%
Cisgender Women										
People Who Inject Drugs (PWID)	7	41%	1	3%	22	4%	8	9%	63	30%
Heterosexual Contact	9	53%	27	73%	327	63%	71	76%	123	59%
- U.S.-Born	8	47%	2	5%	87	17%	17	18%	108	52%
- Foreign-Born	1	6%	25	68%	235	45%	53	56%	10	5%
Pediatric	0	0%	1	3%	26	5%	2	2%	4	2%
Transfusion / Hemophiliac	0	0%	0	0%	6	1%	1	1%	3	1%
No Identified Risk	1	6%	8	22%	138	27%	12	13%	14	7%
Total Cisgender Women	17	100%	37	100%	519	100%	94	100%	207	100%
Transgender Women:										
Male Sex Partner	0	0%	3	1%	8	1%	15	2%	13	0%
Male Sex Partner & PWID	0	0%	0	0%	0	0%	6	1%	6	0%
No Identified Risk	0	0%	0	0%	0	0%	0	0%	1	0%
Total Transgender Women	0	0%	3	1%	8	1%	21	2%	20	1%

All HIV/AIDS surveillance data reported to the Washington State Department of Health as of June 30, 2020.

^ATable excludes 26 Native Hawaiian and Pacific Islander cases due to small numbers. Also excluded are 463 cases reported as belonging to more than one racial or ethnic group.

TABLE 3-5. CASES OF HIV INFECTION AMONG TRANSGENDER PEOPLE, KING COUNTY, WA, 2014-2019

	New HIV Diagnoses (2014-2019)				Transgender HIV Cases Pre- sumed Living in King County at the end of 2019	
	Transgender ^A HIV Cases		All HIV Cases			
	No.	%	No.	%		
Total^B	15	100%	1,170	100%	67	100%
Race and Hispanic Origin						
Asian	2	13%	85	7%	3	4%
Black	0	0%	243	21%	9	13%
Hispanic/Latinx	4	27%	218	19%	21	31%
White	8	53%	554	47%	24	36%
Other/Unknown	1	7%	70	6%	10	15%
Injection Drug Use						
Yes	4	27%	182	16%	17	25%
No	6	40%	728	62%	29	43%
Unknown	5	33%	260	22%	21	31%
Age at HIV Diagnosis					Age at end of 2019	
< 13	0	0%	0	0%	0	0%
13 - 24	6	40%	179	15%	4	6%
25 - 34	5	33%	428	37%	17	25%
35 - 44	2	13%	252	22%	20	30%
45 - 54	2	13%	188	16%	16	24%
55+	0	0%	123	11%	10	15%

All HIV/AIDS surveillance data reported to the Washington State Department of Health as of June 30, 2020.

^A Identification of people who 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, 87% of HIV cases diagnosed 2014-2019 and 93% of persons presumed to be living in King County at the end of 2019 were assigned male at birth.

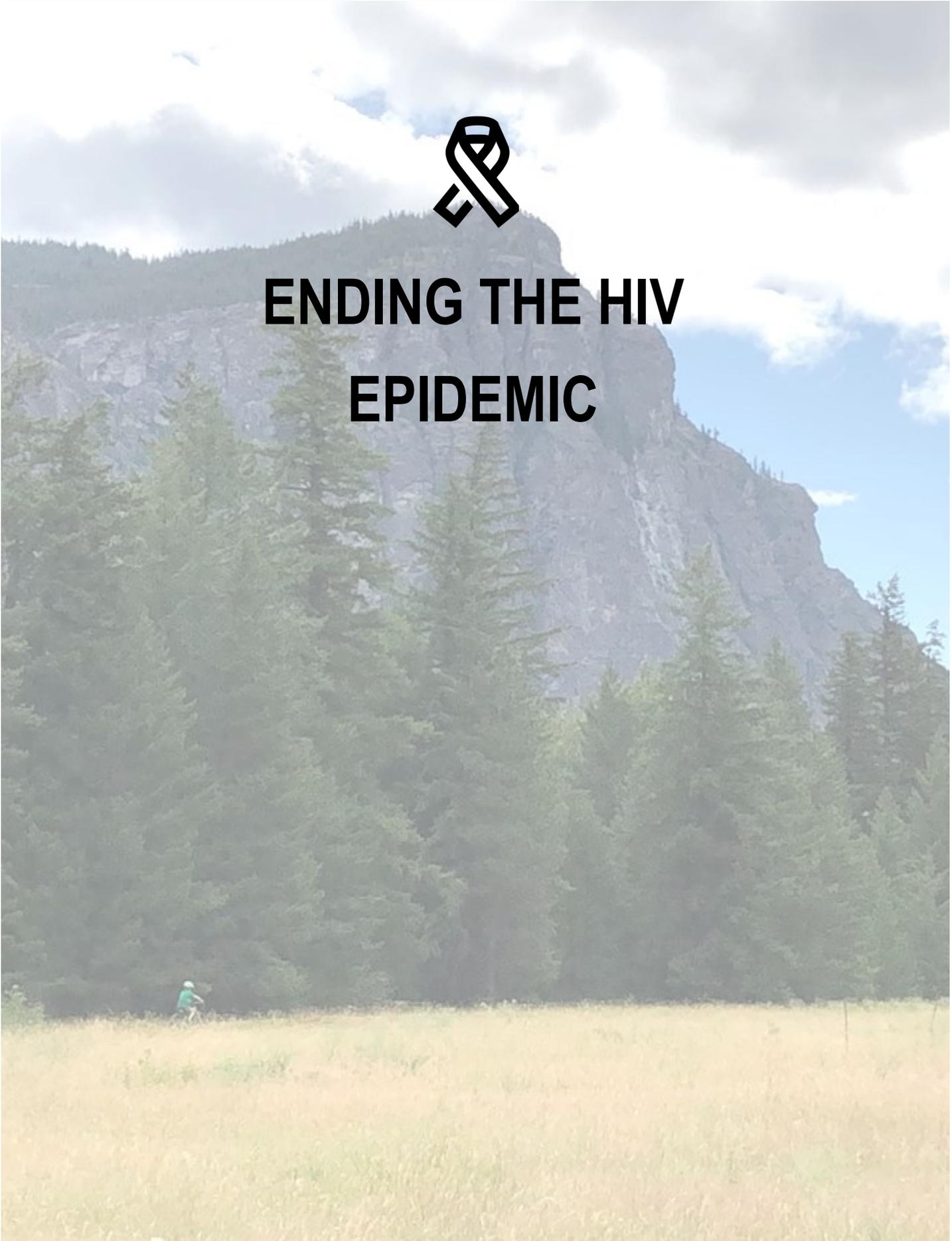
TABLE 3-6. CASES OF HIV INFECTION AMONG MEN WHO HAVE SEX WITH MEN (MSM), KING COUNTY, WA, 2018-2019

	New HIV Diagnoses (2018-2019)				MSM HIV Cases Presumed Living in King County at the End of 2019	
	MSM HIV Cases		All HIV Cases		No.	%
	No.	%	No.	%		
Total	253	100%	400	100%	5,273	100%
Race and Hispanic Origin						
American Indian / Alaska Native	1	0%	2	1%	22	0%
Asian	14	6%	19	5%	212	4%
Black	32	13%	88	22%	563	11%
Hispanic/Latinx (all races)	62	25%	80	20%	828	16%
Native Hawaiian / other Pacific Islander	4	2%	6	2%	20	0%
White	130	51%	187	47%	3,262	62%
Other/Unknown	10	4%	18	5%	366	7%
Injection Drug Use						
Yes	37	15%	85	21%	635	12%
No	149	59%	210	53%	2,776	53%
Unknown	67	26%	105	26%	1,862	35%
Age at HIV Diagnosis					Age at end of 2019	
< 13	0	0%	0	0%	0	0%
13 - 24	36	14%	51	13%	80	2%
25 - 34	116	46%	154	39%	767	15%
35 - 44	51	20%	91	23%	1,063	20%
45 - 54	30	12%	60	15%	1,471	28%
55+	20	8%	44	11%	1,892	36%
Foreign-born Status						
U.S.-born	181	72%	260	65%	4,322	82%
Foreign-born	55	22%	111	28%	723	14%
Unknown	17	7%	29	7%	228	4%

All HIV/AIDS surveillance data reported to the Washington State Department of Health as of June 30, 2020.



ENDING THE HIV EPIDEMIC



Ending the HIV Epidemic (EHE) Overview

Background

In February 2019, the U.S. federal government announced a new initiative – Ending the Epidemic: A Plan for America (EHE) - to decrease new HIV infections in the U.S. by 75% by 2025, and by 90% by 2030¹. The initiative seeks to capitalize on scientific advances in HIV diagnosis, treatment, and prevention to accelerate national progress in controlling the almost 40 year old HIV epidemic. The first 5-year phase of EHE focuses on the 57 geographic areas with the largest number of HIV cases and includes \$716 million in new funding for 2021. (The U.S. government spends approximately \$20 billion on HIV prevention and care annually, so EHE represents a 3.6% increase in federal funding related to HIV.) King County, WA, but not WA State as a whole, is part of the first phase of EHE. In this article, we describe the current status of the EHE initiative in King County.

EHE STRATEGIES AND LOCAL FUNDING

EHE focuses on four strategies or pillars: 1) Diagnose, 2) Treat, 3) Prevent, and 4) Respond (**Table 4-1**), and the federal government requires that jurisdictions receiving EHE funds concentrate on activities aligned with those strategies. In October 2019, Public Health – Seattle & King County (PHSKC) received a 1-year \$350,000 CDC grant to work with community and key collaborators to develop a plan that will guide distribution of EHE

resources, and inform HIV prevention and care activities funded through other, non-EHE mechanisms. In 2020, PHSKC and the WA State Department of Health received two additional EHE grants, one from the Centers for Disease Control and Prevention (CDC) providing \$2.1 million annually for 5 years to increase HIV diagnosis and prevention, and one from the Health Resources Services Administration (HRSA) providing \$850,000 annually for five years to increase HIV treatment and outbreak response. Healthcare for the Homeless (a PHSKC program) and Country Doctor Community Health Center each received additional \$250,000 annual grants to increase the use of HIV pre-exposure prophylaxis (PrEP).

EHE PLANNING

To date, local EHE work has primarily focused on planning. PHSKC's goal in developing the EHE plan was to engage a wide range of stakeholders, work with them to review existing data and identify the need for additional data, and then collaborate to develop a plan that is responsive to federal requirements and local needs. The EHE planning structure includes an overall EHE Planning Committee (EPC) composed of representatives from government, community, and healthcare and social service organizations, and four advisory groups (**Figure 4-1**). Two of these groups – the Seattle Transitional Grant Area Ryan White Planning Council and the WA State HIV Planning Steering Group (HPSG) – existed prior to EHE;

TABLE 4-1: EHE STRATEGIES

Strategy	
Diagnose	Ensure that people with HIV are diagnosed as soon as possible following infection
Treat	Treat people with HIV right away after they are diagnosed, and ensure that all people with HIV are effectively treated, achieving sustained viral suppression
Prevent	Prevent new HIV infections using proven interventions, including pre-exposure prophylaxis (PrEP) and syringe service programs (SSP)
Respond	Respond quickly to potential HIV outbreaks to get prevention and treatment services to people who need them

inclusion of these groups in the planning process helps ensure that EHE is coordinated with other, ongoing HIV prevention and treatment work while capitalizing on these groups' expertise. EHE planning also includes a Prevention and Care Advisory Group composed of King County social service providers, representatives of community-based organizations (CBOs) and community members, and a Healthcare Advisory Group composed of local medical providers and representatives from healthcare organizations (HCOs), pharmacies, and payers. These additional groups broaden the diversity of input included in the plan and help lay the foundation for EHE implementation by engaging a wide cross section of stakeholders early in the process. PHSKC's original EHE planning process had to be scaled back somewhat in response to the COVID-19 epidemic, but a final EHE plan will be complete and submitted to CDC by the end of 2020. Although PHSKC developed the planning infrastructure described above to produce an EHE plan, we anticipate that existing EHE planning bodies will continue to support the initiative as it progresses.

Major Factors Influencing the EHE Plan

In developing the EHE plan, PHSKC and its collaborators sought to identify where our current system of prevention and care falls short. King County has been very successful in the fight against HIV. To our knowledge, it was the first urban area in the US to achieve the World Health Organization 90-90-90 objective (i.e. >90% of infected people diagnosed, >90% of diagnosed people on HIV medication (or in care), and >90% of those on HIV medication virally suppressed). The

county currently has one of the highest levels of viral suppression in the U.S., and is the only urban area in the US to meet the World Health Organization (WHO) target for syringe distribution (see EHE Pillar 3: Prevent article). New HIV diagnoses in King County declined 44% between 2010 and 2019 (**Figure 4-2**), and the county has made important progress in diminishing some measures of disparity related to HIV (see WA State and King County HIV Goals and Evaluation Metrics: 2019 Dashboard). Despite these achievements, epidemiologic data and situational analyses identified four key interrelated deficiencies in the area's approach to preventing and treating HIV.

HIV PREVENTION AND CARE SERVICES ARE TOO CONCENTRATED IN THE SEATTLE CITY CENTER, WITH INADEQUATE PREVENTION AND TREATMENT CAPACITY IN NORTH SEATTLE AND SOUTH KING COUNTY. The HIV clinical and prevention infrastructure in King County developed in response to an epidemic that was concentrated among men who have sex with men (MSM), many of whom lived in central Seattle (e.g., Capitol Hill). As recently as 2010, 40% of all new HIV diagnoses occurred among people living in central Seattle (**Figure 4-3**). However, where people with HIV and at risk for HIV live has shifted. In 2019, the largest proportion of new HIV diagnoses occurred among people living in south King County (33%), and 35% of all virally unsuppressed people live in that region. Meanwhile, the 2018 north Seattle outbreak highlighted the paucity of prevention and care services in that area. These epidemiologic shifts suggest the need to create new clinical and prevention infrastructure to meet the needs of a more dispersed population.

THE CURRENT SYSTEM DOES NOT CONSISTENTLY MEET THE

FIGURE 4-1: ORGANIZATION OF EHE PLANNING

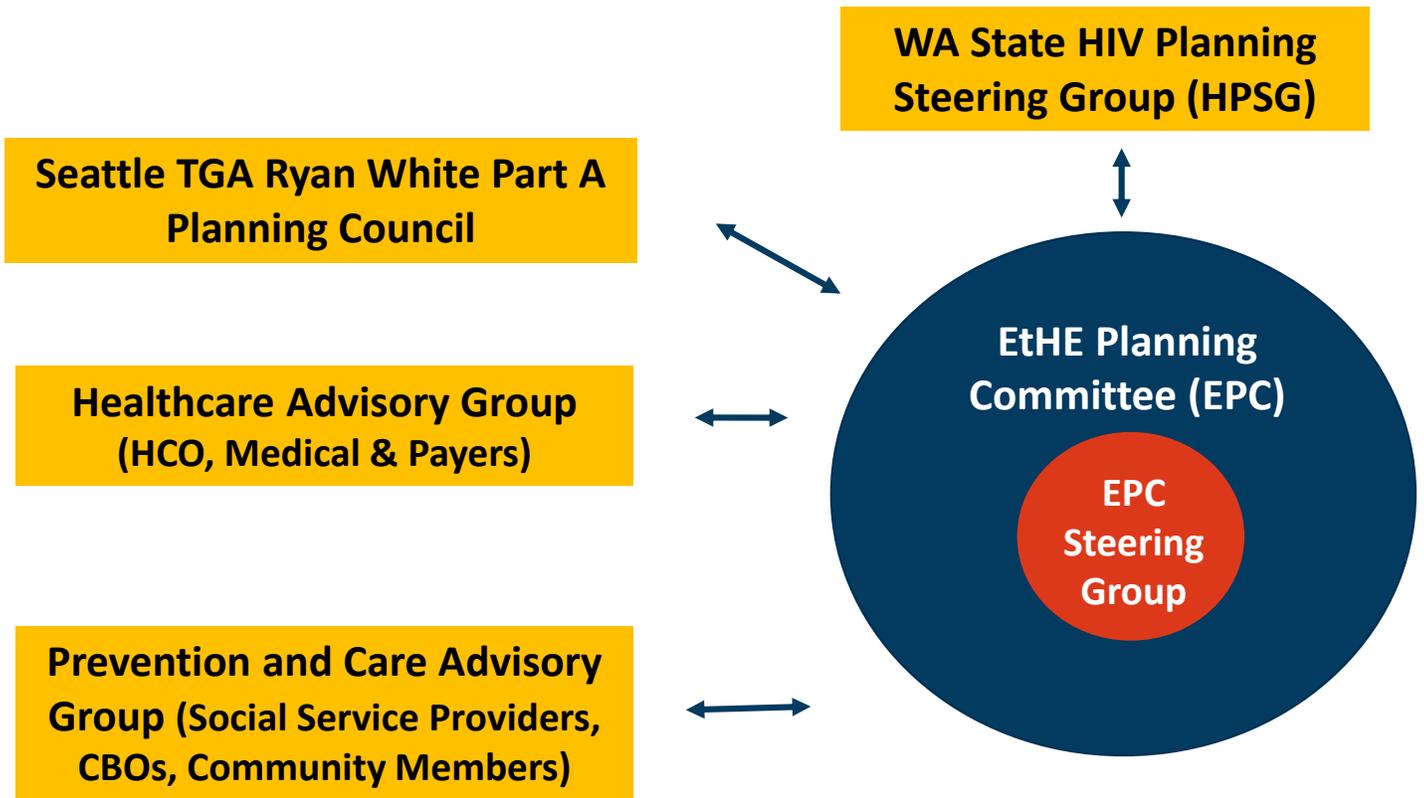


FIGURE 4-2: RATE OF NEW HIV DIAGNOSIS AND NUMBER OF PEOPLE LIVING WITH HIV IN KING COUNTY, 2002-2019

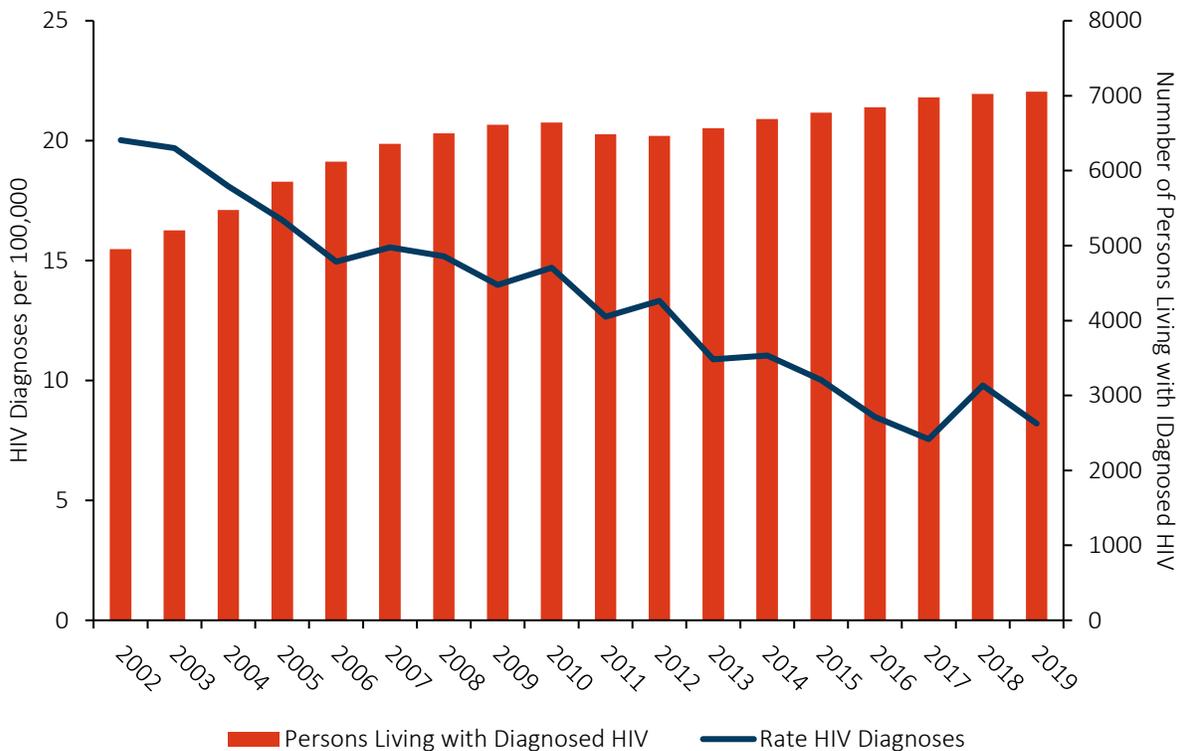


FIGURE 4-3: TRENDS IN REGION OF RESIDENCE AMONG PEOPLE DIAGNOSED WITH HIV IN KING COUNTY, 2010-2019

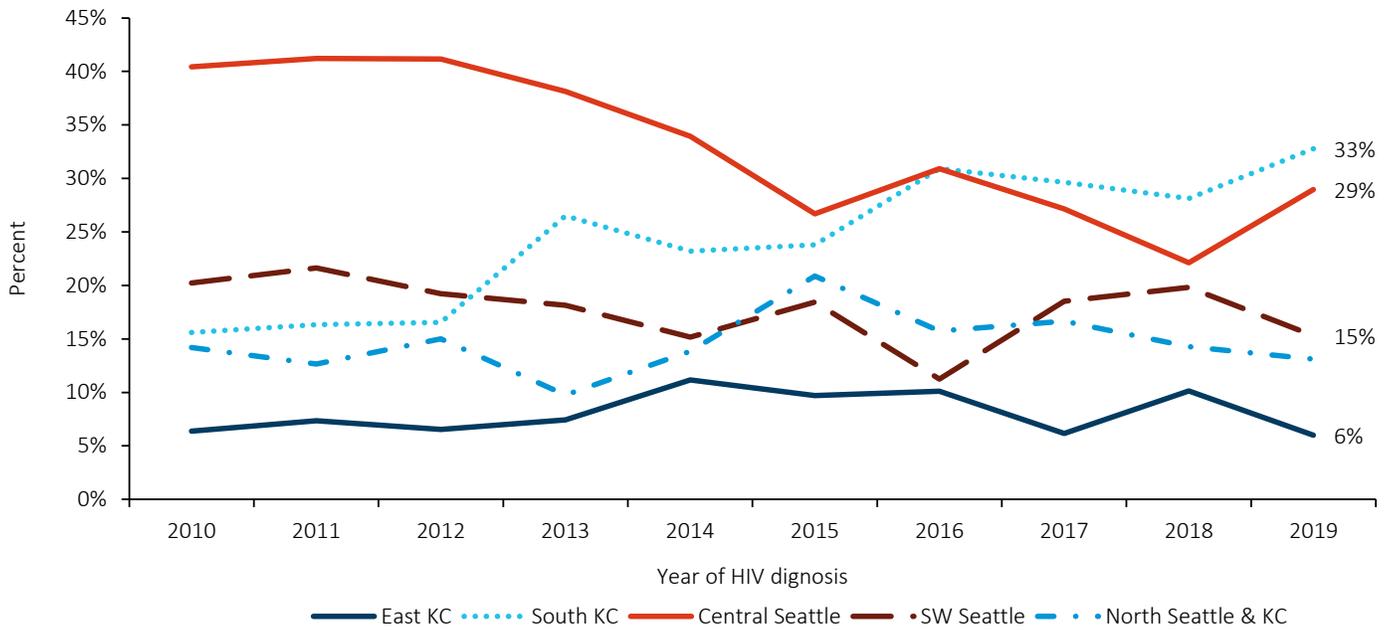
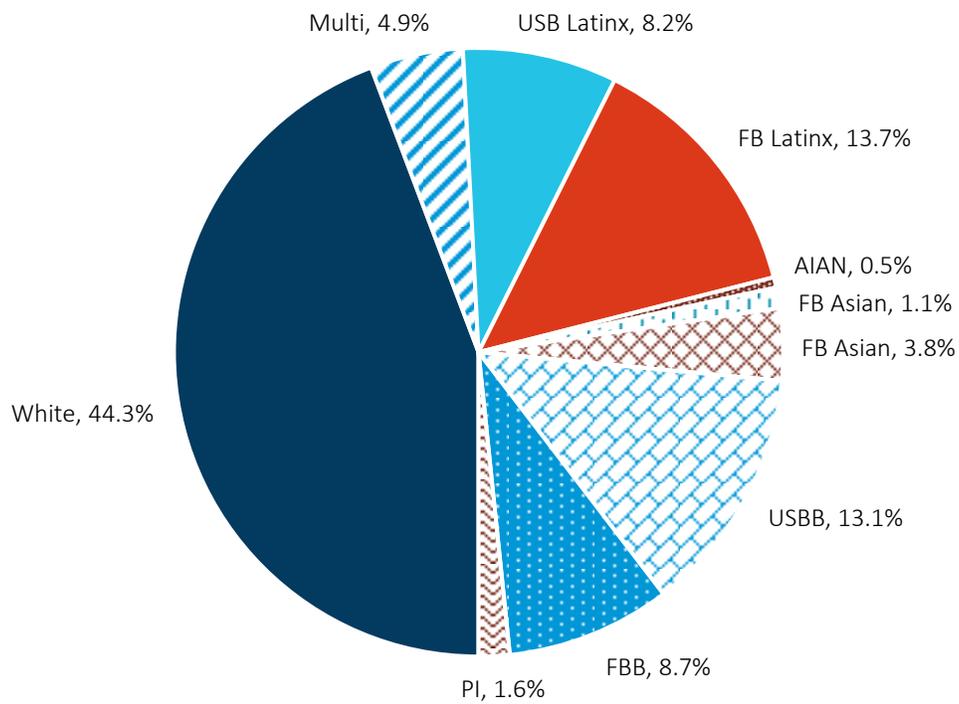
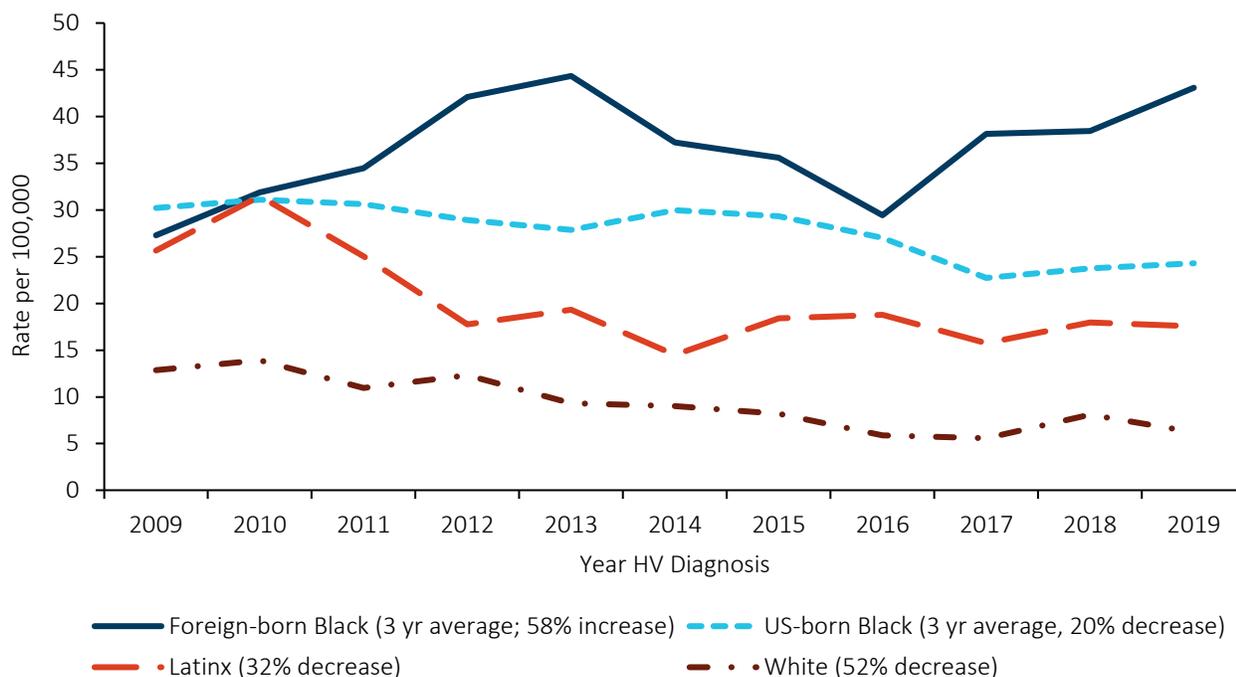


FIGURE 4-4: RACE AND ETHNICITY OF PEOPLE DIAGNOSED WITH HIV IN KING COUNTY, 2019



AI/AN = American Indian / Alaska Native, PI: Pacific Islander, USB = United States-born, FB = Foreign-born, B = Black.

FIGURE 4-5: TRENDS IN RATES OF HIV BY RACE/ETHNICITY AND NATIVITY, 2009-2019



NEEDS OF THE MOST DISADVANTAGED PEOPLE WITH HIV, PARTICULARLY PEOPLE WHO ARE LIVING HOMELESS AND/OR WHO USE INJECTION DRUGS. As HIV transmission in King County has declined and the percentage of people who are virally suppressed has increased, the epidemic has become increasingly concentrated among people who are living homeless and who use substances. Over the two-year period from 2018-19, an estimated 19% of people diagnosed with HIV were living homeless, 21% were PWID, and 28% were either PWID and/or living homeless. An additional 5% of newly diagnosed people use methamphetamine or opiates but do not inject drugs.

Among all King County residents living with diagnosed HIV in 2019, we estimate that 9% are living homeless, 13% have a history of injection drug use, and 19% are either living homeless and/or have a history of injection drug use. Homelessness and substance use are more common still among people who are not virally suppressed, an estimated 15-25% of whom were living homeless in 2019; 18% of unsuppressed people in King County are PWID. King County’s inter-related epidemics of homelessness and substance use and its success in preventing and treating HIV in more advantaged populations necessitates a shift in the public health and clinical approach to HIV: the area needs to focus more on the most disadvantaged populations.

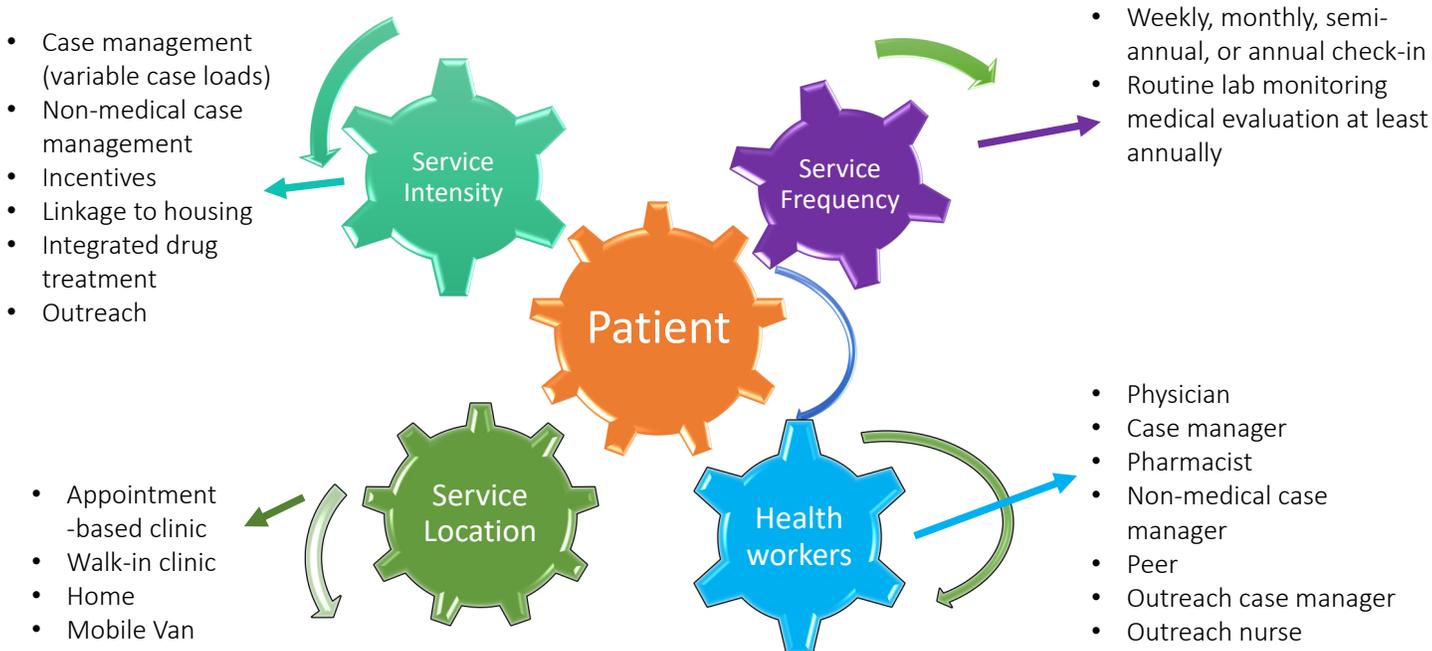
SIGNIFICANT RACIAL/ETHNIC DISPARITIES IN HIV CARE AND PREVENTION PERSIST, AND EFFORTS TO ADDRESS THESE DISPARITIES HAVE BEEN INADEQUATE. The HIV epidemic in King County is extremely diverse and disproportionately affects racial and ethnic minorities. Over time, the percentage of new HIV diagnoses occurring in White people has declined, and in 2019 only 44% of new diagnoses occurred in non-Latinx White people, while approximately 22% occurred in Latinx people and 22% in Black people (Figure 4-4). (Ten percent and 7% of King County residents are Latinx and Black, respectively.) Although race/ethnicity group-specific rates of infection have varied somewhat over time, profound disparities have been a constant feature of the King County HIV epidemic (Figure 4-5). In 2019, the rate of HIV among Latinx and U.S. born Black (USBB) people in King County were 2.8 and 4.1 times higher, respectively, than that observed among White people. Many factors contribute to these disparities, including the lower level of viral suppression observed among USBB people compared to White people and the lower level of PrEP use among Black people compared to White people. Efforts to end the HIV epidemic cannot be successful if they do not address these profound, longstanding and persistent disparities.

THERE IS A PERSISTENT NEED TO INTEGRATE HIV TESTING AND

TABLE 4-2: CORE ELEMENTS OF THE KING COUNTY EHE PLAN

Strategy	Activity
Diagnose	<p>Increase routine testing in clinical settings</p> <p>Increase HIV testing in non-clinical settings (e.g. CBOs, shelters, jails, outreach sites)</p> <p>Increase partner notification services</p> <p>Develop and implement health education-related strategies to increase HIV testing among Black, Latinx and Native American/Alaska Native populations</p>
Treat	<p>Expand low barrier care to reduce structural barriers to care with collocated adherence and psychosocial support services – focus on north Seattle and south King County</p> <p>Enhance linkage to care for people with newly diagnosed HIV infection</p> <p>Expand real-time data to care to re-engage people who are not virally suppressed –focus on emergency rooms, inpatient hospitals, jails, pharmacies</p> <p>Increase HIV clinical capacity among existing primary care providers in South King County and foster lower barrier services among traditional HIV care sites throughout King County</p>
Prevent	<p>Expand PrEP access – focus on north Seattle and south King County and healthcare system-level interventions</p> <p>Conduct PrEP education among Black, Latinx and Native American/Alaska Native populations</p> <p>Expand condom access – focus on north Seattle and south King County</p> <p>Expand syringe services programs – focus on north Seattle and south King County</p> <p>Expand availability and accessibility of medications for opiate use disorder</p> <p>Improve delivery of whole-person care to LGBTQ people by medical providers</p>
Respond	<p>Community engagement for increased transparency and acceptance of cluster investigations and molecular surveillance</p> <p>Conduct molecular surveillance - identify and investigate HIV outbreaks using molecular laboratory and other data</p> <p>Provide outreach to people identified through outbreak investigations – focus on virally unsuppressed people</p>

FIGURE 4-6: KEY FACTORS IN DIFFERENTIATED APPROACHES TO HIV CARE (ADAPTED FROM THE WORLD HEALTH ORGANIZATION)



PREVENTION INTO THE WIDER HEALTHCARE SYSTEM. Success in preventing and treating HIV using biomedical interventions (e.g., testing, PrEP, antiretroviral treatment) depends on the existence and success of the HIV clinical infrastructure. King County has a robust specialized clinical infrastructure related to HIV and other sexually transmitted infections that plays a central role in HIV prevention; this includes the PHSKC Sexual Health Clinic, the Gay City Wellness Center, Madison Clinic, Max Clinic, SHE Clinic, Planned Parenthood and other family planning clinics, and numerous private medical practices that serve large numbers of MSM. However, this specialized system of care has limited capacity and is highly concentrated in central Seattle. Moreover, a successful system cannot rely on specialized clinical infrastructure alone. Success ending the HIV epidemic will require that the entire medical system implement recommended HIV testing and provide PrEP according to local and national guidelines. This reality was an important impetus for the BREE Collaborative LGBTQ Health Care Report and Recommendations (<http://www.breecollaborative.org/wp-content/uploads/LGBTQ-health-care-recommendations-Final-20-06.pdf>), and is a critical factor shaping the King County EHE plan.

Current Status of the King County EHE Plan

PHSKC and its collaborators are making final revisions to the EHE plan. At present, the plan includes the following core EHE activities (Table 4-2).

Based on feedback from the advisory committees, EHE will encourage partnerships between organizations serving people living with HIV and at risk for HIV, encourage the use of peer models in EHE activities, and promote efforts to address the role of stigma in impeding efforts to prevent and treat HIV.

PHSKC will make a detailed plan available to the public by the end of 2020. Here we outline a few of the key aspects of King County's approach to EHE.

DIFFERENTIATED MODELS OF CARE. As indicated above, the current healthcare system does not adequately meet the needs of the most disadvantaged people living with HIV and at risk for HIV. To address this, King County will develop an expanded system of differentiated care. The central idea behind differentiated care is that healthcare can be improved by altering its organization to increase

efficiency and tailor services to meet the needs of specific populations^{2,3}. Differentiated care models vary in service intensity, frequency, staffing and location (Figure 4-6). Over the last several years, the Max Clinic, the Mod Clinic and the SHE Clinic in Seattle have developed new, low-barrier models of care designed to serve patients for whom traditional models of healthcare have proven ineffective⁴⁻⁶. These clinics provide walk-in clinical care integrated with support services and the provision of incentives to promote successful engagement with care. This approach has proven highly effective, but existing clinics cannot meet the needs of all people who might benefit from low-barrier care. In particular, the current system is highly concentrated in central Seattle and does not adequately serve HIV-negative people at elevated risk for HIV. Under the auspices of EHE, King County will expand its system of differentiated care, establishing new sources of low barrier care in north Seattle and south King County. These new sources of care will serve both HIV-positive and HIV-negative people and will integrate the work of medical and social service providers with community to meet the needs of populations that are not currently served.

PROMOTION OF HEALTHCARE SYSTEM CHANGE THROUGH A HEALTHCARE ORGANIZATION COLLABORATIVE. Success ending the HIV epidemic will require widespread changes throughout the healthcare system to promote recommended HIV testing and the increased use of PrEP. Ideally, these changes should be part of a broader effort to improve the medical care of diverse populations, particularly LGBTQ people. With that objective in mind and guided by BREE Collaborative recommendations, PHSKC will convene a healthcare organization collaborative to define and implement healthcare system changes that increase HIV testing, PrEP use, and whole person health.

EXPANDED OUTREACH. Increasing engagement with testing, PrEP, and HIV care – particularly for the most vulnerable populations – will require a more robust system of outreach and care linkage. With that objective in mind, PHSKC will implement a new system of outbreak response and an intensified system of linkage and relinkage to care. Outbreak response will use HIV epidemiologic data to rapidly identify outbreaks, and promote HIV testing, PrEP use, and linkage to HIV care among affected populations. An expanded system of real-time data to care will utilize a data information exchange and expand collaborations with diverse partners to identify HIV-positive people who are out of

TABLE 4-3: PROPOSED KING COUNTY EHE 2025 GOALS

	2025 Goal
Diagnose	
New diagnoses	↓ 75% (vs. 2019)
Knowledge of HIV status	>95% of HIV positive people know their status
Late diagnosis	≤10% late diagnosis
Disparities	Elimination of racial/ethnic disparities in new HIV diagnoses*
Treat	
Linked to care in 1 month	≥95%
In HIV care	≥95%
Viral suppression	≥95%
Viral suppression in 4 months	≥95%
Disparities	Elimination of disparities in viral suppression based on racial/ethnicity, gender, or HIV risk factor
Prevent	
PrEP use, high-risk MSM	70%
Syringe coverage	365/PWID/year
Homelessness among PLWH	<5%
Disparities	Elimination of racial/ethnic disparities in PrEP use Elimination of racial/ethnic disparities in homelessness among people living with HIV

care and promote their relinkage to HIV care. This effort will include emergency rooms, hospitals, jails and pharmacies, and will integrate the work of PHSKC outreach staff with the work of low barrier clinics to improve HIV treatment and link people with HIV to social and medical services, including treatment for substance use disorders.

EHE Outcomes

In **Table 4-3** we present preliminary goals for EHE outcomes. These include both national and locally defined goals.

Contributed by Matthew Golden

References

1. Fauci AS, et al. Ending the HIV Epidemic: A Plan for the United States. *JAMA*. 2019.
2. Grimsrud A, et al. Reimagining HIV service delivery: the role of differentiated care from prevention to suppression. *Journal of the International AIDS Society*. 2016;19(1):21484.
3. World Health Organization. HIV treatment and care: what's new in service delivery fact sheet. In. Geneva, Switzerland 2015: https://apps.who.int/iris/bitstream/handle/10665/204461/WHO_HIV_202015.204446_eng.pdf;jsessionid=547263ECD204461B204247F204918A236533EA204469A204483BF?sequence=204461.
4. Dombrowski JC, et al. The Max Clinic: Medical Care Designed to Engage the Hardest-to-Reach People Living with HIV in Seattle and King County, Washington. *AIDS Patient Care STDS*. 2018;32(4):149-156.
5. Dombrowski JC, et al. A Cluster Randomized Evaluation of a Health Department Data to Care Intervention Designed to Increase Engagement in HIV Care and Antiretroviral Use. *Sex Transm Dis*. 2018;45(6):361-367.
6. Stewart J, et al. A Co-Located Continuity Clinic Model to Address Healthcare Needs of Women Living Unhoused With Opioid Use Disorder, Who Engage in Transactional Sex in North Seattle. *Sex Transm Dis*. 2020;47(1):e5-e7.

Ending the HIV Epidemic

Pillar 1: Diagnose

SUMMARY

An estimated 94% of people living with HIV (PLWH) in King County have been diagnosed with HIV.

Roughly half (52%) 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 – Seattle & King County provided 18,886 HIV tests in 2019, and 26-32% of all newly identified cases in King County were diagnosed through publicly funded HIV testing.

Despite the success of testing, 24% of people with newly diagnosed HIV infection were concurrently diagnosed with AIDS, suggesting that they likely had longstanding infections. This was particularly common among HIV-positive heterosexuals born outside of the U.S.

Introduction

HIV testing is a cornerstone of HIV prevention and plays a critical role in advancing both of Public Health – Seattle & King County’s (PHSKC) primary objectives related to HIV: preventing HIV transmission and averting the morbidity and mortality associated with HIV infection. The goal of HIV testing is to ensure that persons who acquire HIV are diagnosed as soon as possible following infection. Early and frequent HIV testing among people at risk for HIV prevents HIV-related morbidity and mortality by identifying those

KEY HIV GOALS	2014	2019	2020 GOAL
Know HIV status	92%	94%	≥95%
Late HIV diagnosis	24%	26%	≤20%
Recent testing for MSM only (of newly HIV diagnosed, negative test within 2 yrs)	73%	69%	≥75% tested in prior 2 years
Disparities in recent testing among all newly-diagnosed U.S.-born PLWH by race/ethnicity	White : 71% Black : 55% Latinx : 86%	White : 67% Black : 50% Latinx : 89%	Eliminate disparities by race/ethnicities (i.e., no difference)

Please refer to the Technical Notes on the Dashboard on page 6 for more information on how each indicator was defined. MSM = Men who have sex with men.

living with HIV, the first step in their accessing life-saving medical care. It also prevents HIV transmission as most people who learn they are HIV-positive change their behavior to prevent transmission to partners and initiate antiretroviral therapy which renders them noninfectious.¹⁻⁴ 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 testing for people at higher risk for HIV. WA State HIV Testing Guidelines are shown in **Table 5-1**. Men who have sex with men (MSM) can also determine their recommended HIV testing frequency using a calculator at <http://www.findyourfrequency.com/>.

PHSKC monitors the success of HIV diagnosis and case-finding at the population level. Key metrics for monitoring case-finding evaluate whether people are diagnosed as soon as possible following infection. Key indicators of the success of HIV testing efforts include: the percentage of people living with HIV (PLWH) who know their HIV status (or the inverse, the undiagnosed fraction of infections); the proportion of people 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 people with newly diagnosed HIV who are concurrently diagnosed with HIV and AIDS (or who develop AIDS within six months or one year); and measures of CD4+ lymphocyte counts at time of HIV diagnosis. AIDS is a clinical and laboratory diagnosis related to advanced immunosuppression typically observed in people with long-standing HIV infection.

Data Sources

The data presented in this report draw from several ongoing, robust King County data sources:

- **HIV Core Surveillance:** Data are collected as part of investigations of people with newly diagnosed HIV or AIDS. These investigations are informed and augmented by HIV-related test results reported to PHSKC by laboratories, including HIV screening and diagnostic tests and CD4 counts.
- **HIV Partner Services:** When people are newly diagnosed with HIV, health department staff contact them to offer them assistance notifying their sex and needle-sharing partners, and to help link them to medical care. This activity is called partner services and is an integral part of public health efforts to control HIV. Partner services investigations also allow PHSKC staff to collect information about people with

newly diagnosed HIV infection, including their reason for HIV testing and their testing history.

- **National HIV Behavioral Surveillance (NHBS):** 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 people at increased risk for HIV and rotate each year between MSM, people who inject drugs (PWID), and heterosexually-active people. Recent surveys have also included transgender women and women who exchange sex for money or drugs.
- **PHSKC medical and laboratory records:** Data from HIV testing conducted at jails and at clinics operated by PHSKC are extracted from the PHSKC medical record system, and HIV testing data from teen health centers and the juvenile detention center are provided by the PHSKC public health laboratory.
- **Evaluation Web:** Data from HIV testing funded by the WA DOH and conducted at agencies within King County are captured in WA DOH’s Evaluation Web data system and shared with PHSKC.

TABLE 5-1: PHSKC & WA DOH HIV SCREENING GUIDELINES

ALL WA STATE RESIDENTS
<ul style="list-style-type: none"> • Test at least once between the ages of 18 and 64.⁸ • 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 trimester.
MEN WHO HAVE SEX WITH MEN (MSM) AND TRANSGENDER PEOPLE WHO HAVE SEX WITH MEN*
<p>Indications for testing every 3 months (any of below risks in the prior year)*:</p> <ul style="list-style-type: none"> • 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 people who have sex with men without the above risks should HIV test annually[†]
PEOPLE WHO INJECT DRUGS (PWID)*
<ul style="list-style-type: none"> • Annual HIV testing all PWID • Every 3 months in PWID who exchange sex for money or drugs or who are pregnant
<p>* People should also be tested for syphilis and for gonorrhea and chlamydia at all exposed anatomical sites [†] People 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.</p>

Data

UNDIAGNOSED FRACTION ESTIMATION

PHSKC uses a tool developed by the University of Washington (UW) that uses HIV testing history to estimate the proportion of HIV-infected people who are unaware of their status (i.e., the undiagnosed fraction).⁷ Between 2015 and 2019, we estimated that the undiagnosed fraction among King County PLWH remained stable at just over 6% (6.2% - 6.5%), but declined from 4.7% to 4.1% among MSM.

HIV TESTING IN POPULATIONS AT ELEVATED RISK FOR HIV

Figure 5-1 presents HIV testing summaries from the five most recent NHBS surveys, including MSM, PWID, heterosexually-active people, transgender women, and women who exchange sex (WES). Of the five populations, MSM and transgender women were the most likely to have had a recent HIV test, and MSM were least likely to have never had an HIV test.

HIV TESTING HISTORY IN PEOPLE 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 people with newly diagnosed

HIV infection minimizes the amount of time infected people go without treatment and may be unknowingly exposing others to HIV. PHSKC’s goal is promote widespread and frequent testing in populations at elevated risk for HIV, thereby shortening the ITI and ensuring that all people diagnosed with HIV have tested HIV negative in the 24 months prior to their diagnosis.

Because new HIV diagnoses are most prevalent among MSM, monitoring focuses on that group. Since 2010, 90% of MSM diagnosed with HIV have had a known testing history (i.e., either reported the date of their last negative test, or stated that their initial diagnostic test was their first HIV test). The median ITI remained relatively stable between 6 and 10 months for MSM diagnosed with HIV between 2010 and 2019 (**Figure 5-2**). Throughout this period, 8.5% (range: 5% to 11%) of MSM with a known testing history reported never testing negative for HIV prior to an initial HIV diagnosis (**Figure 5-3**). In 2019, 12% of MSM diagnosed with HIV had never HIV tested, and 69% had tested HIV negative within the past 24 months. Of note, similar proportions of Black, Latino, and White MSM had never tested for HIV (7%, 7%, and 9%, respectively), and Black MSM were more likely than Latino and White MSM to have tested in the

FIGURE 5-1. HIV TESTING HISTORY (TIME SINCE LAST HIV TEST) AMONG TRANSGENDER WOMEN (TRANS), HETEROSEXUALLY-ACTIVE PEOPLE (HET), PEOPLE WHO INJECT DRUGS (PWID), MEN WHO HAVE SEX WITH MEN (MSM), AND WOMEN WHO EXCHANGE SEX FOR DRUGS OR MONEY (WES), SEATTLE AREA NATIONAL HIV BEHAVIORAL SURVEILLANCE SYSTEM, 2016-2020

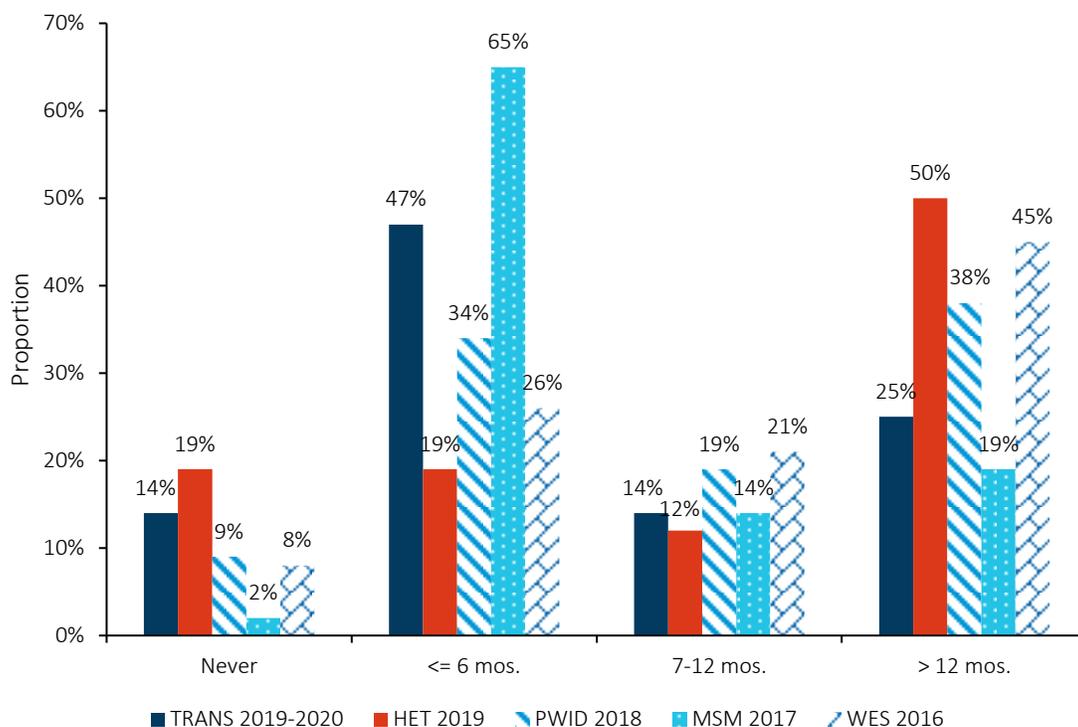


FIGURE 5-2: MEDIAN AND INTER-QUARTILE RANGE (IQR) OF INTERTEST INTERVALS (MONTHS BETWEEN LAST NEGATIVE AND FIRST POSITIVE TEST) OF NEWLY HIV DIAGNOSED MSM, KING COUNTY, 2010-2019

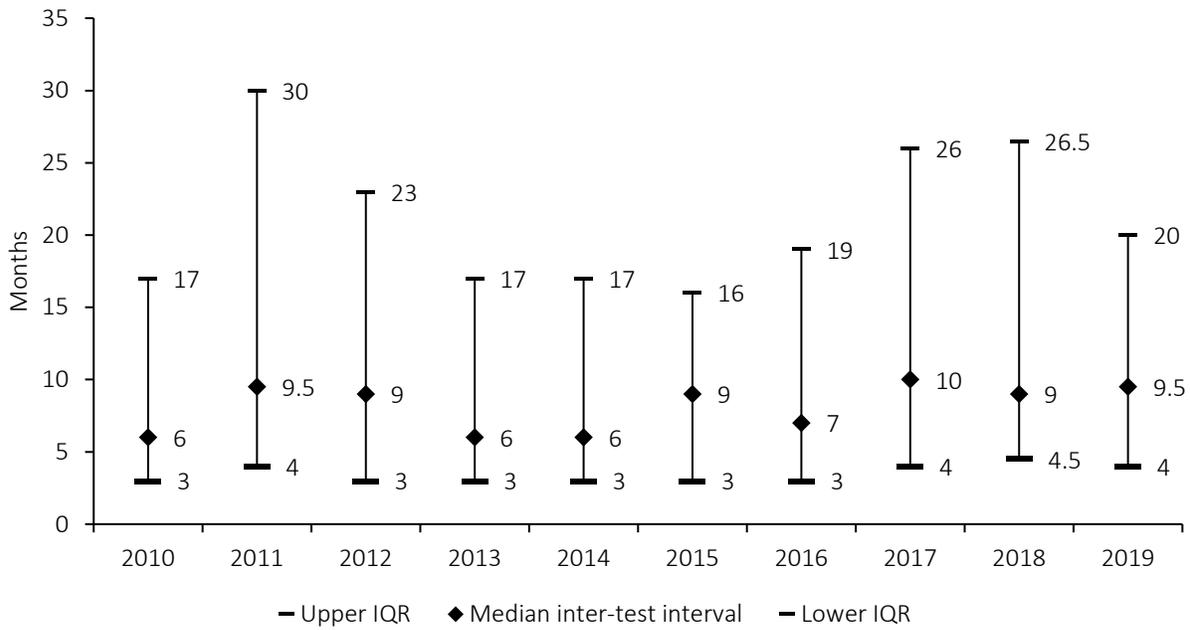


FIGURE 5-3: HIV TESTING HISTORY AMONG MEN WHO HAVE SEX WITH MEN WITH NEWLY DIAGNOSED HIV, KING COUNTY, 2010-2019

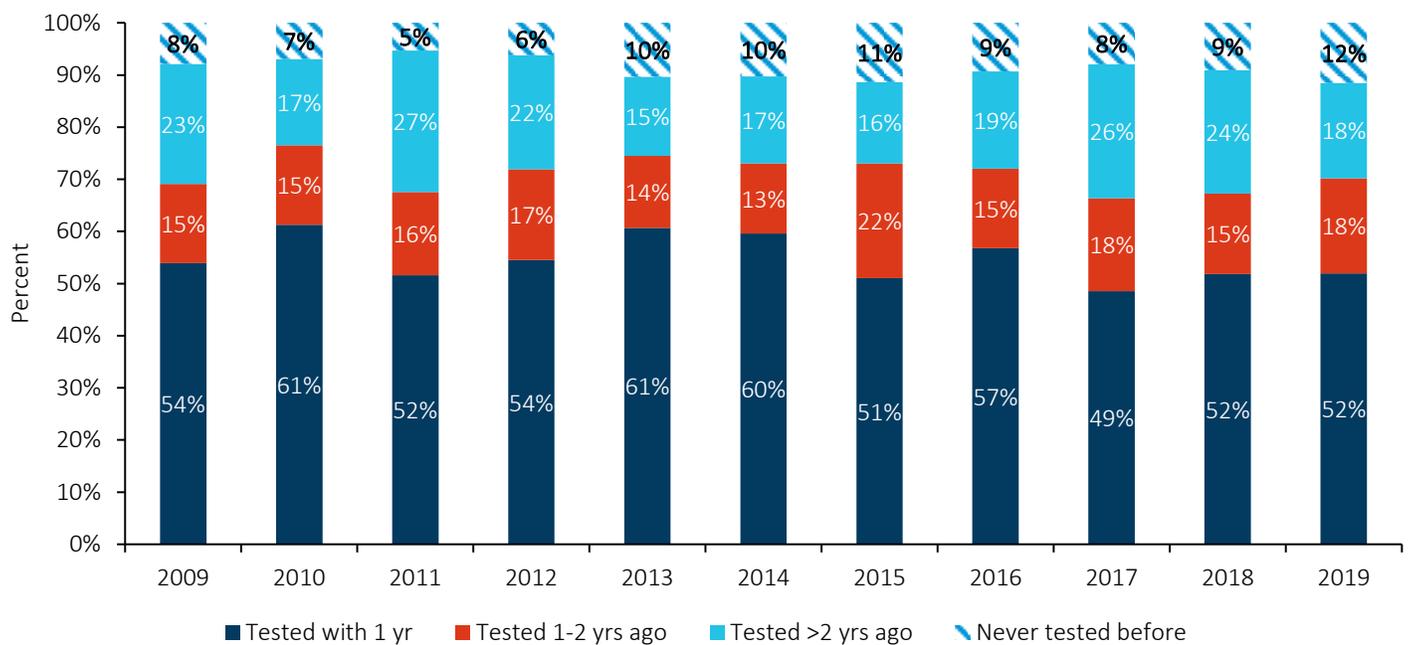


TABLE 5-2. KEY HIV TESTING METRICS AMONG INDIVIDUALS NEWLY DIAGNOSED WITH HIV INFECTION IN 2018 AND 2019, KING COUNTY

	Never Previously HIV Tested ^A	Median In-tertest Interval (ITI) (IQR) ^A	Percent HIV 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=400)	18%	11 (4, 29)	45%	59%	390 (211, 598)	24%
MSM (N=256)	10%	9 (4, 23)	52%	69%	396 (230, 597)	21%
White MSM (N=180) ^C	9%	10 (4, 24)	50%	68%	435.5 (230, 604)	19%
Black MSM (N=41) ^C	7%	8.5 (4, 18.5)	67%	73%	412 (251, 613)	15%
Latinx MSM (N=63) ^C	7%	7.5 (4, 23)	57%	74%	301 (180, 435)	32%
Other MSM (N=31) ^C	15%	9.5 (6, 35)	46%	62%	301.5 (211, 526)	26%
Transgender people (N=30) ^D	10%	7 (4, 15)	57%	78%	456 (256, 582)	23%
PWID, non-MSM (N=48)	20%	10 (5, 30)	41%	54%	483 (391, 644)	17%
All non-MSM, non-PWID (N=96)	43%	27 (7.5, 67.5)	20%	25%	309 (143, 566)	36%
U.S.-born non-MSM non-PWID (N=45)	32%	21.5 (6, 49)	18%	20%	388.5 (278.5, 640.5)	20%
Foreign-born non-MSM non-PWID (N=51)	51%	43 (11, 83)	8%	12%	218 (83, 385)	51%

^A Among those with a known HIV test history.

^B CD4 at diagnosis are limited to those within a 6-month window.

^C Race and Latinx ethnicity categories are not mutually exclusive

^D Due to small numbers in 2018-2019, the time interval was expanded to 2010–2019 for transgender people; most of the 30 transgender people diagnosed in the 10-year period were transgender women (26 of 30, 87%).

prior year (67%, 57%, and 50%, respectively; **Table 5-2**). Because prior HIV screening is more likely to be missing for foreign-born individuals, overall rates of recent testing are presented for Black, Latinx, and White persons newly diagnosed in the “**Key HIV Goals**” table, comparing 2014 and 2019. Black PLWH have consistently lower rates of HIV testing in the two years before an HIV diagnosis relative to White and Latinx PLWH.

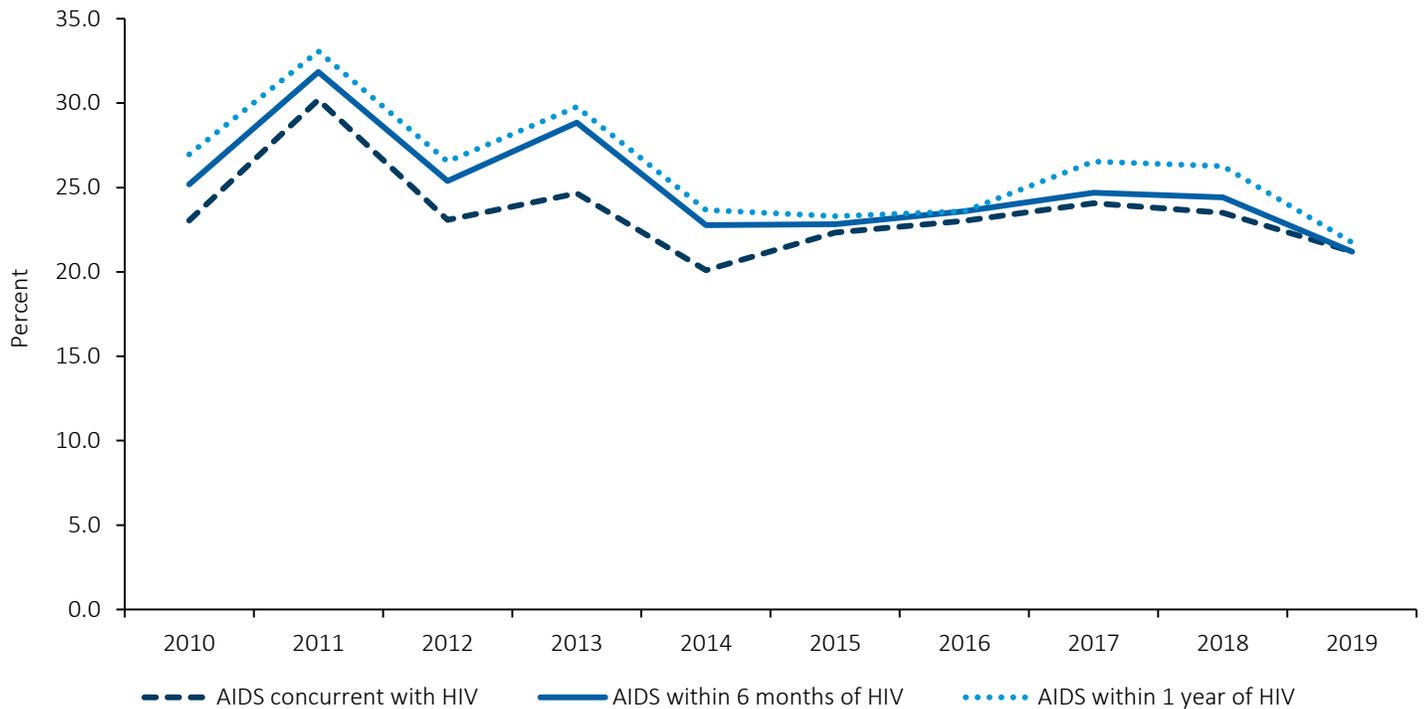
AIDS AT TIME OF HIV DIAGNOSIS AND OTHER TESTING METRICS

Testing histories in non-MSM were substantially different from those observed in MSM (**Table 5-2**). (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 48 non-MSM PWID diagnosed in 2018-19, 80% had ever HIV tested, though only 54% had tested in the prior two years. Despite this, relatively few (17%) were diagnosed with AIDS within 12 months of HIV diagnosis and the median CD4 count at time of diagnosis

was high relative to other groups, suggesting that most PWID diagnosed with HIV in 2018-19 did not have long-standing, undiagnosed infections. The recent pattern among 45 U.S. born non-MSM, non-PWID diagnosed with HIV in 2018-2019 - a population largely presumed to have acquired HIV through heterosexual sex - 32% had never previously HIV tested and only 20% had HIV tested in the past two years. However, like non-MSM PWID, relatively few (20%) developed AIDS within 12 months of HIV. In contrast, among 51 foreign-born non-MSM non-PWID, 51% were diagnosed with AIDS within 12 months of HIV diagnosis. Among the 26 foreign-born people diagnosed with AIDS within 1 year of HIV diagnosis, 22 have a known immigration date. Their median time since immigration to the US was 4 years; 41% had been in the U.S. for two years or less prior to being diagnosed with HIV.

As shown in **Figure 5-4**, the percentage of individuals with newly diagnosed HIV who were diagnosed with AIDS concurrent with, within six months of, or within one year

FIGURE 5-4: LATE HIV DIAGNOSES DEFINED BY AN AIDS DIAGNOSIS CONCURRENT, WITHIN SIX MONTHS, OR WITHIN ONE YEAR OF HIV DIAGNOSIS, KING COUNTY 2010-2019



of first testing HIV positive declined between 2011 and 2014 and has been relatively stable since 2014. In 2018 (the most recent year with a full year of follow-up available), 26% of all people diagnosed with HIV, including 21% of MSM, 13% of PWID, and 46% of non-PWID heterosexuals, were diagnosed with AIDS within 1 year of HIV diagnosis. Although AIDS within a short period of HIV diagnosis is used as a proxy for a late HIV diagnosis, not all people who develop AIDS in the year following diagnosis are true late diagnoses. Some people progress to AIDS as part of a seroconversion syndrome or within one or two years of HIV infection. Over the past 5 years, there were 216 people with concurrent HIV and AIDS diagnoses. Of these, 157 (73%) had a known HIV testing history (either a last negative HIV date or indication the HIV diagnosis was their first HIV test), and of these 47 (30%) had a negative HIV test in the two years prior to their HIV diagnosis. This indicates that close to one-third 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 2010, between 356 and 411 among individuals with a CD4 count within half a year of

their HIV diagnosis (**Figure 5-5**). 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).

PLACE OF HIV DIAGNOSIS AND REASON FOR HIV TESTING

Figure 5-6 presents information on the facilities where people with newly diagnosed HIV infection in 2019 were diagnosed (n = 184). Facilities of HIV diagnoses were diverse, with 52 different various outpatient clinics responsible for 31% of all new diagnoses (excluding health department, community clinic, and specialty HIV or MSM medical practices), none of which diagnosed more than three cases. The PHSKC Sexual Health Clinic (formerly the STD Clinic), including outreach testing, was the largest single diagnosing site for HIV infection, identifying 13% (n=24) of all newly diagnosed people in 2019. The second largest diagnosing facility was Gay City with 7% of 2019 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. Overall 32% of new diagnoses were diagnosed at facilities that received public health funding for HIV testing in 2019. Inpatient diagnoses and diagnoses made in emergency department/urgent care facilities made 9% and 8% of the

FIGURE 5-5: MEDIAN AND INTER-QUARTILE RANGE (IQR) OF FIRST CD4 COUNTS AMONG PEOPLE NEWLY DIAGNOSED WITH HIV, KING COUNTY, 2010-2019

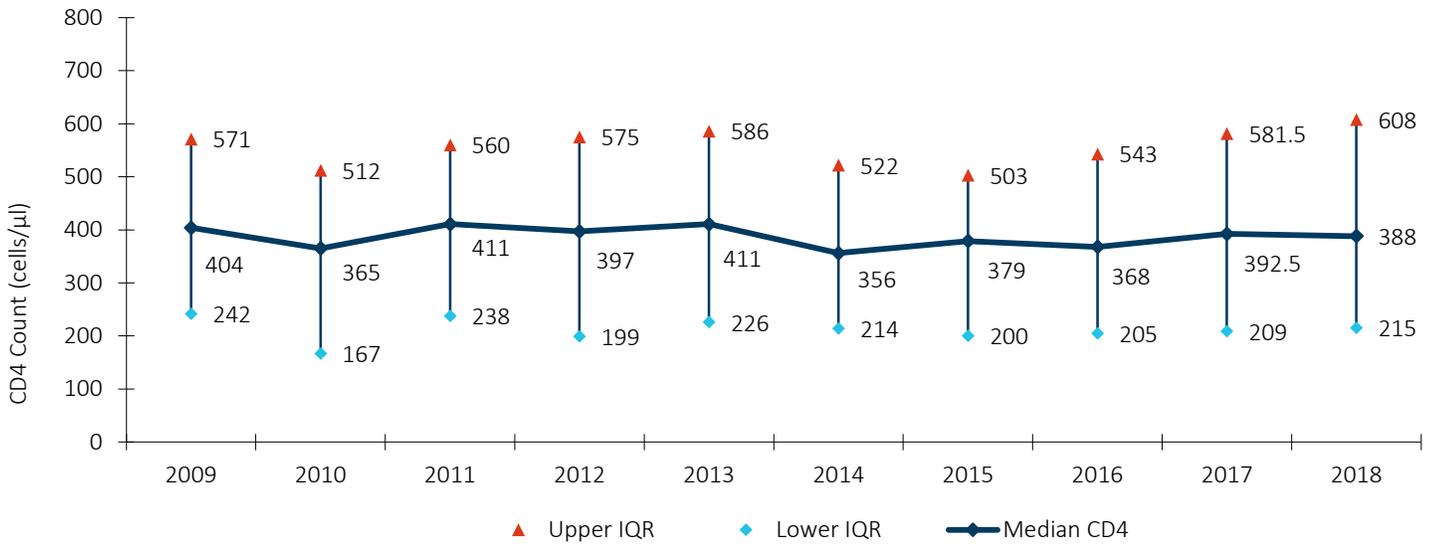


FIGURE 5-6: HIV DIAGNOSIS FACILITIES, KING COUNTY, 2010-2019

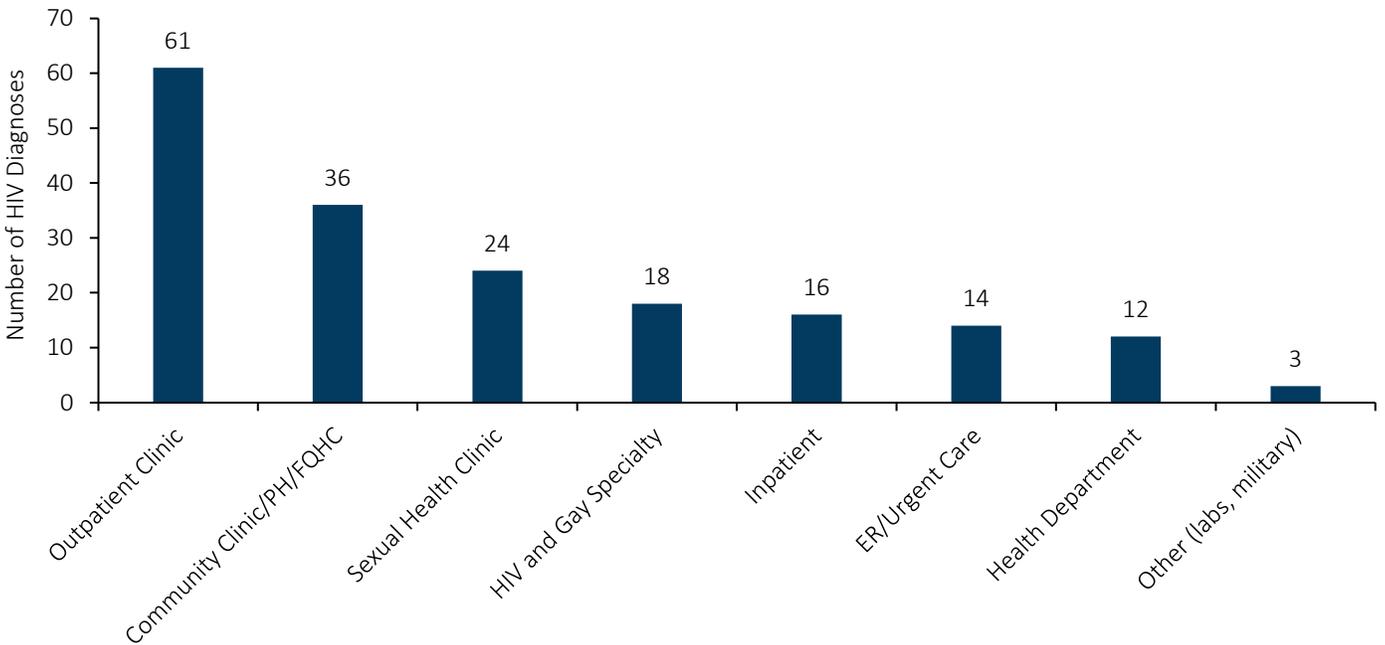


TABLE 5-3: REASON FOR HIV TESTING AMONG PEOPLE DIAGNOSED WITH HIV, KING COUNTY PARTNER SERVICES DATA, 2019

	N	%
Patient initiated regular or risk-based testing, including plasma and blood donations	41	35%
Symptoms of sexually transmitted infection (STI) or STI partner notification ^A	23	20%
Symptoms of HIV/AIDS	17	15%
Medical provider-initiated testing ^B	13	11%
Symptoms of acute HIV infection	10	9%
PrEP screening or prenatal testing	7	6%
HIV partner notification ^a	6	5%
TOTAL	117	100%

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

^B Routine testing or testing occurring in the absence of symptoms attributable to HIV

diagnoses, respectively, in King County in 2019.

Table 5-3 presents data on why patients were tested when they were diagnosed with HIV. Ideally, people 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. People diagnosed because of symptoms of HIV/AIDS represent a failure of the public health and medical systems to diagnose people with HIV before they become ill. Among 117 people diagnosed with HIV in 2019 who provided data on their reason for testing, most were tested because of testing they initiated themselves (35%), because of symptoms of a sexually transmitted infection (STI) or through partner notification for HIV or STIs (20%), due to symptoms of acute HIV (9%), or because of testing recommended by a medical provider (11%). (Partner notification includes both people notified by their partners and people notified by public health staff as a result of partner notification interventions.) Fifteen percent were diagnosed after presenting with symptoms related to HIV or AIDS, excluding symptoms of acute HIV.

Public Health Interventions that Support this Pillar

PUBLICLY FUNDED HIV TESTING

The WA DOH and PHSKC fund HIV testing, primarily for people at higher risk for HIV infection, at the PHSKC

Sexual Health Clinic, through several community-based organizations, and in the King County Jail. **Figure 5-7** shows trends in the number of HIV tests performed overall and for MSM using public health funds between 2012 and 2019. Over that period, the total number of tests performed increased by 49%, while the number of tests performed among MSM increased by at least 30%. (Because the risk information required to identify MSM in the testing data have been less complete in recent years, the true increase in tests performed among MSM may be higher.) These increases reflect a concerted effort to focus HIV testing resources on the populations at greatest risk for HIV infection. This group has traditionally been MSM, though recent changes in the HIV epidemic in King County has prompted PHSKC to expand efforts to test PWID, particularly those who are living homeless or exchanging sex. (Please refer to the article in the 2019 HIV/AIDS Epidemiology Report on the 2018-2019 outbreak among PWID for data on increases in HIV testing in that population.)

Between 2012 and 2019, the percentage of MSM testing HIV-positive at publicly funded testing sites declined from 1.4% to 0.5% (**Figure 5-8**), a 66% reduction, while non-MSM test positivity remained more stable around 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 from 2009 to 2017. HIV positivity among MSM increased in 2018 concurrent with the outbreak of HIV among PWID, and declined in 2019. HIV testing locations are posted on the PHSKC web site

FIGURE 5-7: PUBLICLY FUNDED HIV TESTS IN KING COUNTY OVERALL AND AMONG MEN WHO HAVE SEX WITH MEN (MSM), 2012-2019

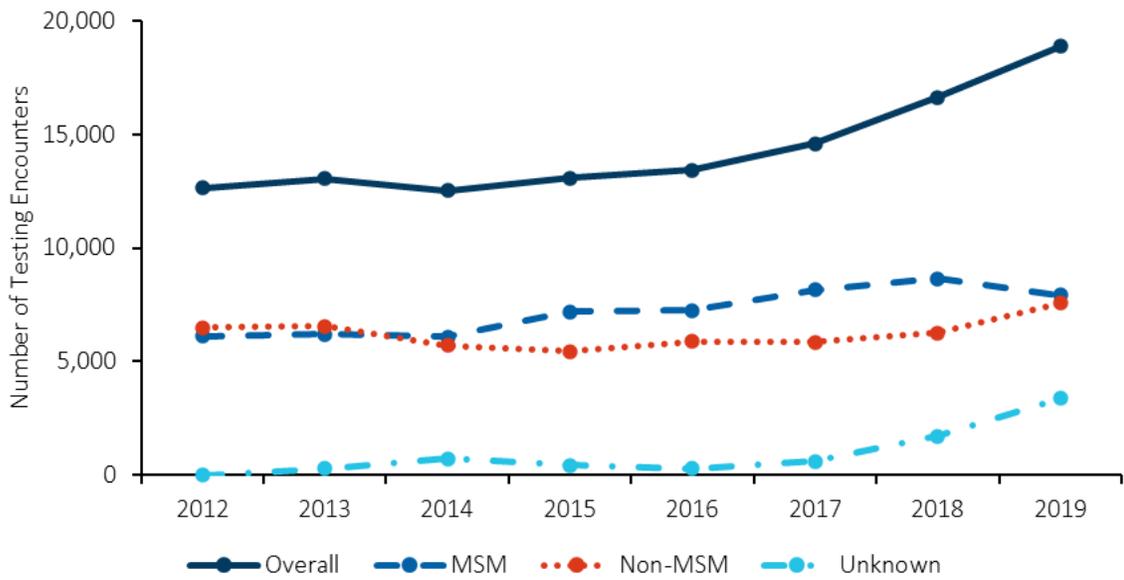
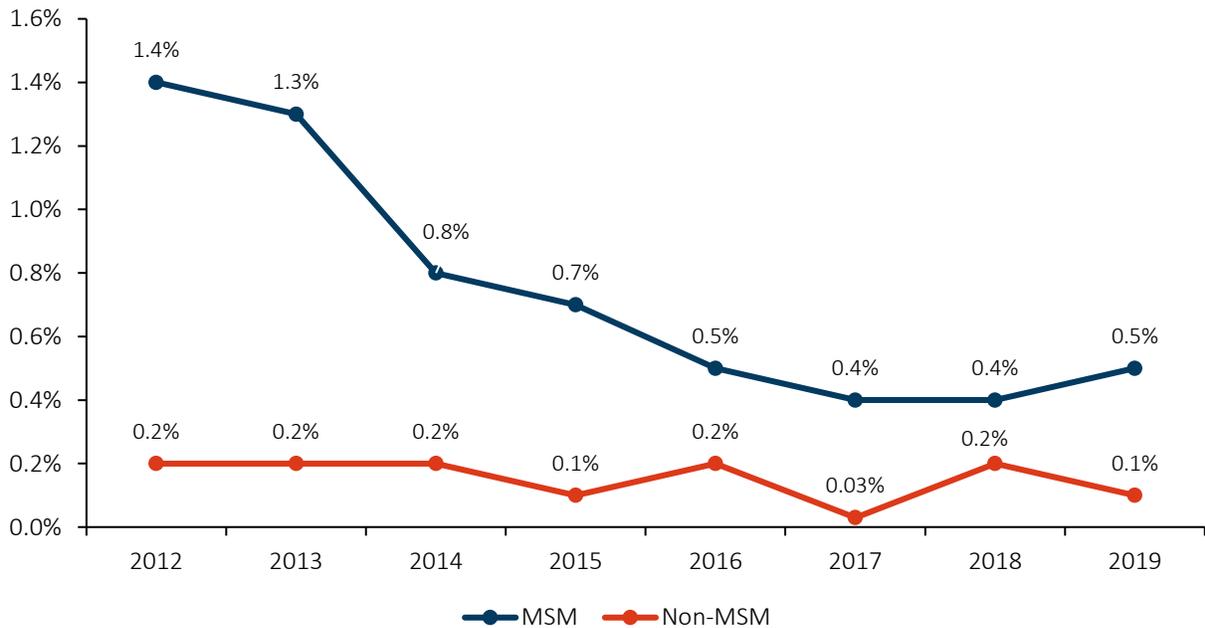


FIGURE 5-8. POSITIVITY RATE FOR MEN WHO HAVE SEX WITH MEN (MSM) AND NON-MSM AT PUBLICLY FUNDED TESTING SITES, KING COUNTY, 2012-2019



(<http://www.kingcounty.gov/depts/health/communicable-diseases/hiv-std/patients/testing.aspx>). The largest PHSKC HIV testing site in King County is the Sexual Health Clinic at Harborview, which is a walk-in clinic open 7:30-5:00 five days a week. The Sexual Health Clinic provides care on sliding fee scale and no one is turned away due to an inability to pay. Testing is also available at community-based organizations, some of which is funded by WA DOH, either directly (WA DOH pays the agency to perform testing) or indirectly (the agency receives free test kits from WA DOH).

Successes and Challenges

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. As of 2019, an estimated 93% of people living with HIV have been diagnosed. Among MSM diagnosed with HIV in 2019, over half (58%) had tested HIV negative in the prior 2 years and only 9% reported never having tested for HIV previously. Despite these successes, 24% of people diagnosed with HIV in 2018 and 2019 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. (Although around one-third of these may be misclassified as late diagnoses.) Our findings highlight the need for sustained, focused efforts to test people at high risk, while expanding HIV testing as part of routine medical care, particularly among PWID and people from countries where HIV is highly prevalent.

Contributed by Christina Thibault and Richard Lechtenberg

References

1. Khosropour CM, *et al.* Changes in Condomless Sex and Serosorting Among Men Who Have Sex With Men After HIV Diagnosis. *J Acquir Immune Defic Syndr.* 2016 Dec 1;73:475-81.
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.
3. Fox J, *et al.* Reductions in HIV transmission risk behaviour following diagnosis of primary HIV infection: a cohort of high-risk men who have sex with men. *HIV Med.* 2009 Aug;10(7):432-8
4. Cleary PD, *et al.* Behavior changes after notification of HIV infection. *Am J Public Health.* 1991 Dec;81(12):1586-90.
5. Grigoryan A, *et al.* Late HIV diagnosis and determinants of progression to AIDS or death after HIV diagnosis among injection drug users, 33 US States, 1996-2004. *PLoS One.* 2009;4(2):e4445. doi: 10.1371/journal.pone.0004445. Epub 2009 Feb 13.
6. Chen L, *et al.* Rates and risk factors associated with the progression of HIV to AIDS among HIV patients from Zhejiang,

China between 2008 and 2012. *AIDS Res Ther.* 2015 Sep 25;12:32.

7. Fellows IE, *et al.* A New Method for Estimating the Number of Undiagnosed HIV Infected Based on HIV Testing History, with an Application to Men Who Have Sex with Men in Seattle/King County, WA. *PLoS One.* 2015 Jul 21;10(7):e0129551. Erratum in: *PLoS One.* 2015;10(8):e0135878

Ending the HIV Epidemic

Pillar 2: Treat

SUMMARY

The majority (85%) of King County residents who have been diagnosed with HIV were virally suppressed in 2019, reflecting the success of HIV treatment.

Disparities in HIV outcomes persist. Viral suppression is <80% among U.S. born Black people (77%), Black men who have sex with men (MSM; 78%), U.S.-born people who acquired HIV through heterosexual sex (79%), people who inject drugs (PWID; 77%) and people who use methamphetamine (76%). The lower level of viral suppression among Black people reflects persistent social and structural factors that disproportionately impact the lives of Black people in the U.S.

An evaluation of individuals who were not known to be virally suppressed as of the last annual report demonstrated some degree of misclassification with roughly one in four no longer in the jurisdiction and half having evidence of viral suppression in the following year.

Background

The goal for Pillar 2 (Treat) of the Ending the HIV Epidemic (EHE) initiative is to reduce HIV incidence by 75% by 2025 and by 90% by 2030. To achieve this, HIV diagnosed individuals should rapidly initiate and sustain antiretroviral therapy. Universal and sustained use of antiretrovirals starting as soon as possible after diagnosis enables people living with HIV (PLWH) to live long, healthy lives without the risk of HIV transmission to a sexual partner. King County's goals are to ensure that 90% of people living with diagnosed HIV reach viral suppression within four months of diagnosis, 90% of diagnosed PLWH are virally suppressed, and racial and ethnic disparities in viral suppression are eliminated. In this section we examine the HIV care continuum (**Figure 6-1**) in King County with a focus

KEY HIV GOALS	2014	2019	2020 GOAL
Linked to care in 1 month	88%	90%	90%
Virally suppressed within 4 months of HIV diagnosis	51%	69%	90%
Received HIV medical care in 2019	89%	91%	95%
Viral suppression	79%	85%	90%

Please refer to the Technical Notes on the Dashboard on page 6 for more information on how each indicator was defined.

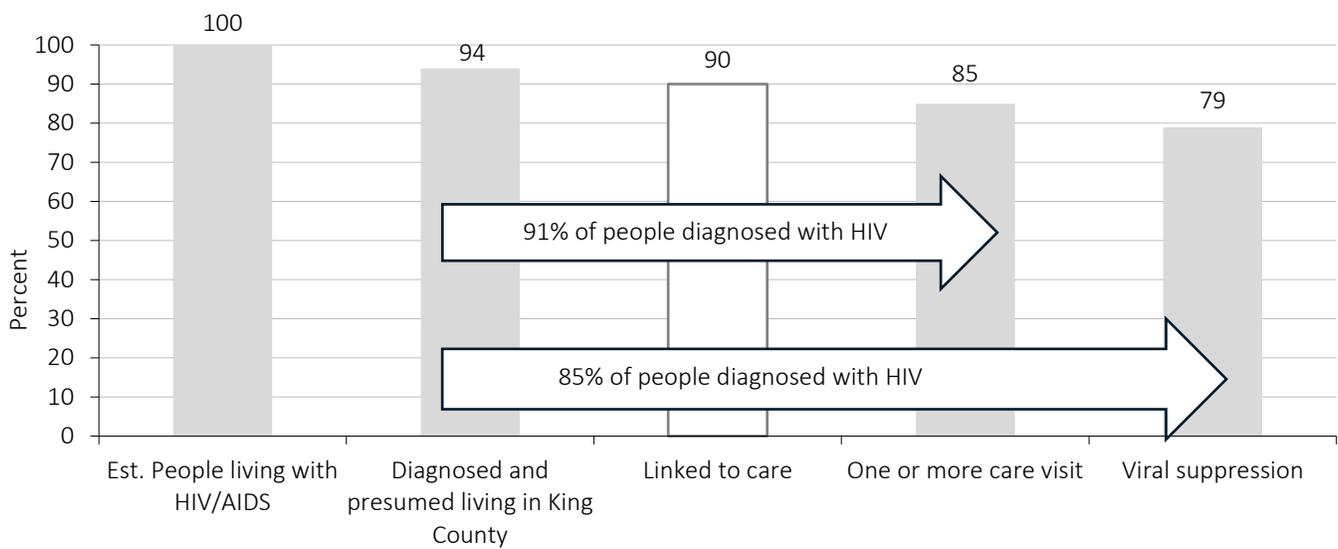
on three hallmarks of HIV treatment: linkage to care, ongoing engagement in care, and viral suppression. (See the previous article (Diagnose) for more data on the second bar of the care continuum, the proportion of people living with HIV who have been diagnosed.¹⁾

Linkage to Care

After an HIV diagnosis, public health outreach staff try to ensure that each newly diagnosed person successfully

links to HIV-related medical care. Generally, these staff keep cases open until an initial HIV medical care visit has been completed. 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 2019, 90% of newly diagnosed individuals linked to care within

FIGURE 6-1. HIV CARE CONTINUUM, KING COUNTY, 2019



	ESTIMATED PEOPLE LIVING WITH HIV/AIDS ^A	DIAGNOSED AND PRE-SUMED LIVING IN KING COUNTY ^B	LINKED TO CARE IN 2019 ^C	ONE OR MORE CARE VISITS	VIRAL SUPPRESSION ^E
Number of People	7,476	6,990	165/183	6,348	5,938

^A Percent undiagnosed was calculated as 6% for King County², 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 .935.

^B Diagnosed cases are those presumed living in King County at the end of 2019. Individuals with no contact for ten or more years were presumed to have relocated or died. 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 for ≥ 18 months were also excluded. These criteria led to exclusion of 66 people, reducing the 7,056 prevalent cases reported elsewhere 6,990 here).

^C Linked to care in 2019 is not a subset of earlier data (hence different color in the graph) and is based on the percent diagnosed in 2019 with a CD4 or viral load test within one month of diagnosis. The percent linked in the figure, 90%, is the percent of diagnosed cases in 2019 who linked within one month of diagnosis: 165/183. Three-month linkage to care occurred for 95% of PLWdH (173/183).

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

one month of diagnosis.

Receipt of Care and Retention in Care

In 2019, 91% of King County residents with diagnosed HIV infection received HIV medical care during the year. This was defined by having at least one HIV-associated laboratory test result (CD4 count or viral load) reported to the health department in 2019. (See Definitions page for more detail about laboratory reporting). Another measure used by CDC to gauge ongoing engagement in HIV care (i.e., retention in care) is having had at least two visits at least three months apart in the calendar year. According to this definition, 59% of people with diagnosed HIV were retained in care in 2019.

Viral Suppression

In 2019, 85% of people diagnosed with HIV had a suppressed or undetectable viral load at their last viral load test. Some PLWH who have been stably virally suppressed do not have a viral load checked every year. If we assume that all people who were virally suppressed at their last viral load test within the past two years were suppressed in 2019, 92% of people with diagnosed HIV had a suppressed or undetectable viral load.

Table 6-1 summarizes viral suppression and care among people with HIV in King County, stratified by sex at birth, gender, race/ethnicity, HIV transmission risk category, and nativity status. Viral suppression was above 80% in most subpopulations presented in the table but was below this threshold in five subpopulations: U.S.-born Black people (77%), Black MSM (78%), U.S.-born people who acquired HIV through heterosexual sex (79%), PWID (77%), and people who use methamphetamine (76%). The association between race and viral suppression reflects persistent social and structural factors that disproportionately impact the lives of Black people in the U.S. and highlights the importance of efforts to improve health equity.

VIRAL SUPPRESSION AFTER A NEW DIAGNOSIS OF HIV:

Decreasing the time to viral suppression is a related goal, which reflects the combined functioning of public health and clinical infrastructure in King County across the HIV care continuum. In 2019, the median time to documented viral suppression after an HIV diagnosis was 54 days, (interquartile range [IQR]: 39 to 84 days), which was a substantial decrease from a median of 110 days in 2014 [IQR: 73 to 174 days]. In 2019, 69% had a

suppressed viral load reported within four months after a new diagnosis.

Outcomes among People who Were Not Virally Suppressed in 2018

In our last HIV surveillance report, we reported HIV care continuum outcomes among people with diagnosed HIV in King County based on data accumulated through the end of 2018. An estimated 1,122 people were presumed to be virally unsuppressed or out of care based on having no laboratory result reported to PHSKC during 2018.

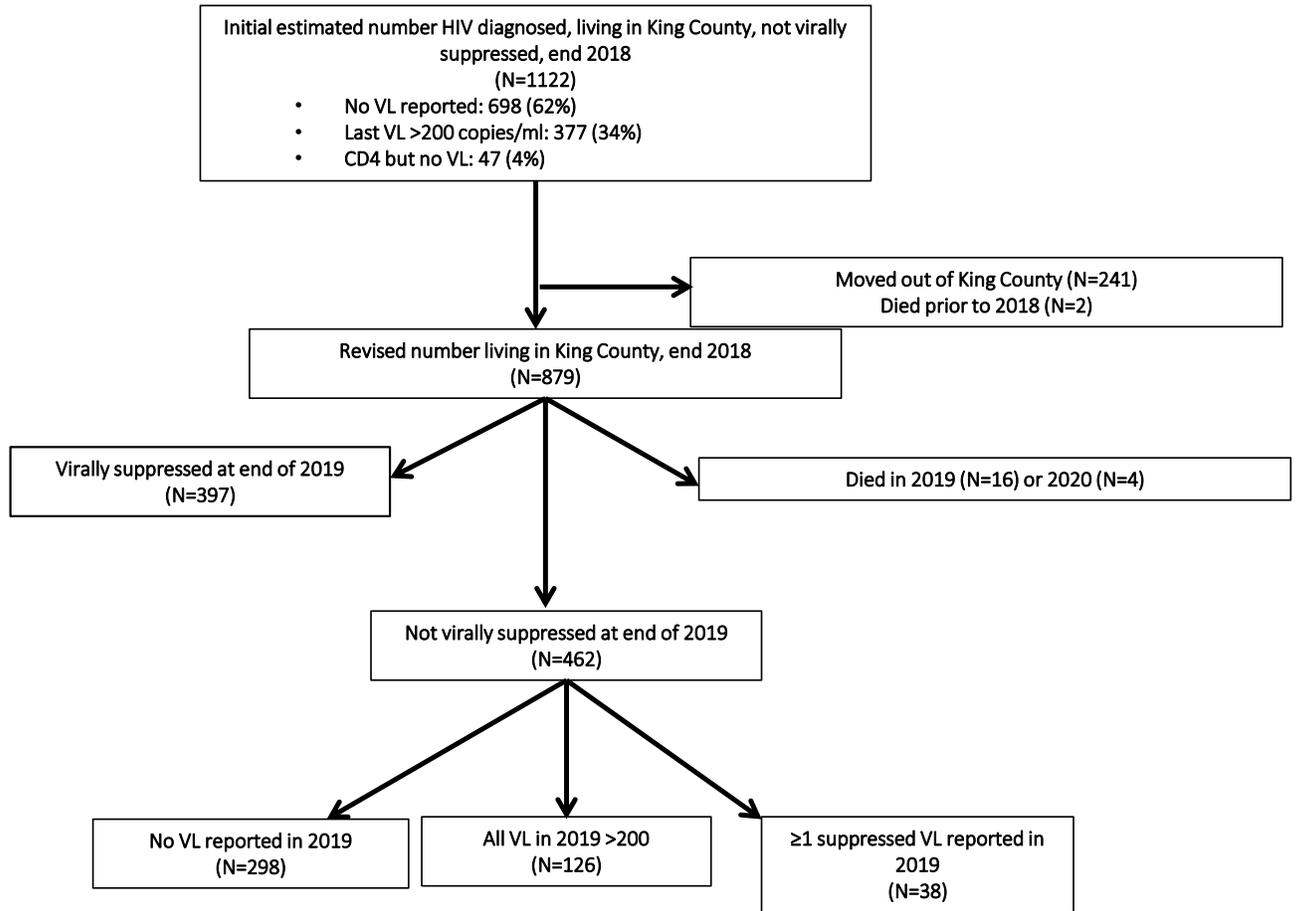
Figure 6-2 shows the status of those individuals as of mid-2020. Because 241 people were ultimately found to have moved away (21%), they likely were not living in King County at the end of 2018. This is consistent with previous years, in which approximately 15-20% of people who appear to be out of care or virally unsuppressed are no longer living in King County.

Of the revised estimate of 879 people out of care or virally unsuppressed in King County at the end of 2018, 20 (2%) died in 2019 or 2020. Of the remaining 859 people, 397 (45%) were virally suppressed at the end of 2019 and 462 (53%) were not. Based on past investigations, the individuals who had no labs reported in either 2018 or 2019 (N=298) have likely moved away, but PHSKC has been unable to confirm relocation. In summary, of the 1,122 out of care/virally unsuppressed people at the end of 2018, 21% are confirmed to have moved away, 41% remained out of care/virally unsuppressed in 2019, 35% were virally suppressed at the end of 2018, and 2% died in 2019 to mid-2020. Incorporating this information into 2018 data would lead to a change in the estimated level of viral suppression from 84% to 87% of people living with diagnosed HIV.

PHSKC conducts several activities to identify people who are out of care in order to re-engage them in care and services (“Data to Care”). The PHSKC Data to Care team receives information from several different sources to guide re-engagement activities. After case investigation and contact with individual clients, Disease Research & Intervention Specialists (DRIS) assess each individual’s needs and provide services ranging from appointment scheduling assistance (low intensity) to health systems navigation, brief counseling, and referral to support services (medium intensity) to recruitment into the Max Clinic (high intensity).

FIGURE 6-2. CURRENT STATUS OF HIV CASES IDENTIFIED AS VIRALLY UNSUPPRESSED AT THE END OF 2018

Status (as of mid 2020) of virally unsuppressed cases at the end of 2018, initially analyzed in mid 2019



*≥1 viral load reported, last VL at end 2019 >200

Contributed by Julie Dombrowski, Richard Lechtenberg, Matthew Golden, and Susan Buskin

Reference

1. CDC. Understanding the HIV Care Continuum. Available at: <https://www.cdc.gov/hiv/pdf/library/factsheets/cdc-hiv-care-continuum.pdf>. Accessed October 5, 2020.

TABLE 8-1: VIRAL SUPPRESSION AND CARE RECEIPT AMONG PEOPLE LIVING WITH HIV STRATIFIED BY SUB-POPULATION CHARACTERISTICS, KING COUNTY, 2019

	Percent of people living with diagnosed HIV in King County in 2019 who:			
	People Living with Diagnosed HIV in 2019 (N)	Had a Suppressed Viral Load at the Time of Last Report (in 2019)	Had a Non-Suppressed Viral Load at the Time of Last Report (in 2019)	Had No Viral Load Reported in 2019
TOTAL	6,990	85%	5%	10%
Male (sex assigned at birth)	6,013	85%	5%	10%
Female (sex assigned at birth)	911	83%	7%	10%
Transgender ^A	66	88%	6%	6%
White	3,703	87%	4%	9%
Black	1,419	81%	7%	12%
Foreign-born	635	86%	4%	11%
U.S.-born ^B	784	77%	10%	13%
Latinx	1,035	85%	5%	10%
Foreign-born	545	87%	4%	9%
U.S.-born ^B	490	83%	6%	12%
Asian	300	89%	2%	8%
Pacific Islander ^C	89	82%	12%	+
Native American/Alaska Native ^C	262	80%	11%	10%
Men who have sex with men (MSM)	4,662	81%	4%	8%
People who inject drugs (PWID)	286	77%	11%	12%
MSM-PWID	637	80%	11%	9%
Heterosexual	771	81%	6%	11%
Foreign-born	458	87%	3%	10%
U.S.-born ^B	313	79%	9%	12%
Foreign-born	1,651	87%	4%	9%
Meth use (collected since 2009)	388	76%	12%	12%
White MSM	3,261	87%	4%	9%
Black MSM	564	78%	9%	13%
Latinx MSM	842	86%	4%	10%
Foreign-born	401	88%	4%	8%
U.S.-born ^B	441	84%	5%	11%

^A The transgender category includes transgender women (92%) and transgender men (8%).

^B U.S.-born includes unknown country of birth.

^C Native Americans and Pacific Islanders include people who are multiracial, and Latinx people are included if they are also Native American or Pacific Islander.

Ending the HIV Epidemic

Pillar 3: Prevention

SUMMARY

Approximately one in four local men who have sex with men (MSM) are currently on pre-exposure prophylaxis (PrEP) for HIV.

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

In 2019, the Public Health – Seattle & King County (PHSKC) syringe services program (SSP) sites exchanged nearly 7.5 million syringes.

Naloxone distribution at PHSKC SSP sites increased by 20% in the past year.

In 2019, PHSKC launched several condom distribution efforts to increase condom use among MSM and sexually active youth.

Introduction

The United States' Ending the HIV Epidemic (EHE) initiative's prevention pillar focuses on two highly effective, evidence-based HIV prevention approaches: pre-exposure prophylaxis (PrEP) and syringe services programs (SSP). The first approach, PrEP, consists of taking a medication (e.g., emtricitabine/tenofovir disoproxil fumarate) to prevent HIV acquisition, and the EHE initiative aims to increase the use of PrEP among populations at elevated risk for HIV. In King County, efforts to expand PrEP use have focused on men who have sex with men (MSM), transgender individuals who have sex with men, and people who inject drugs (PWID) with additional indications for PrEP (e.g., women who exchange sex). The second approach, SSPs, seeks to provide harm reduction services to reduce the risk of infectious diseases and other outcomes, including overdose, among people who use drugs. Services offered at SSPs typically include syringe exchange, naloxone distribution and training, treatment for substance use

KEY HIV GOALS	2014	2019	2020
PrEP use, high-risk MSM	9%	47%	50%
Syringe coverage	258/PWID	283/PWID	365/ PWID

Please refer to the Technical Notes on the Dashboard on page 6 for more information on how each indicator was defined.

disorders, HIV and hepatitis C testing and linkage to care, and wound care. The goal of EHE is to increase access to, and the quality of, SSPs among people who use drugs. A third HIV prevention approach – condom use – is not included in EHE but remains an important component of prevention efforts for both HIV and other sexually transmitted infections (STIs). In this article, we highlight progress that King County has made toward increasing access to, and use of, each of these interventions to reduce the risk of HIV.

Pre-Exposure Prophylaxis (PrEP)

BACKGROUND

People who are at risk for HIV can take a daily pill to reduce their risk of acquiring HIV. This prevention strategy, PrEP, usually involves taking two medications used to treat HIV, tenofovir and emtricitabine, which are sold as a single pill. 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/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 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-positive 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 a long-term (1 year), mutually monogamous relationship with a partner 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. PHSKC and the WA State DOH recommend that providers use emtricitabine/tenofovir disoproxil fumarate for PrEP in most patients with normal kidney function and avoid using tenofovir alafenamide/emtricitabine, which is more expensive and not known to be effective in cisgender women. This recommendation is in accord with recent expert opinion related to PrEP.¹

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.** Local data from the King County Pride surveys, conducted during June Pride events, provide insight into PrEP use and sexual behavior (including condom use) among MSM, transgender, and non-binary individuals. Although the Pride surveys are typically administered in-person, the 2020 survey was administered anonymously online between June and August 2020 to 1,610 Washington residents who were recruited virtually during Seattle Pride events and identified as being “transgender, non-binary, bisexual, queer, gay, and/or lesbian”. A total of 454 participants lived in King County and identified as a man (cis or trans) who ever had sex with another man; 45 of these MSM reported being transgender. Overall, 364 participants lived in King County and identified as transgender and/or non-binary.
- **National HIV Behavioral Surveillance (NHBS).** Data on PrEP use among populations at elevated risk for HIV come from the NHBS survey, which has recently surveyed cisgender MSM (2017), PWID (2018), and transgender women (2019-2020). To be eligible for the MSM survey, participants must have reported sex with another man in the past year, while being sexually active was not a requirement for the other populations.
- **Washington HIV/STI Prevention Project (WHSP).** 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, and the data are limited to sexually active MSM.

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, 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 MSM and transgender people at higher risk for HIV come from:

- Individuals with diagnosed STIs receiving public health **partner services** who were asked if they were currently using PrEP.
- Harborview **Sexual Health Clinic (SHC) patients** who were MSM and reported at least one sex partner in the last year were asked if they were currently taking PrEP.

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

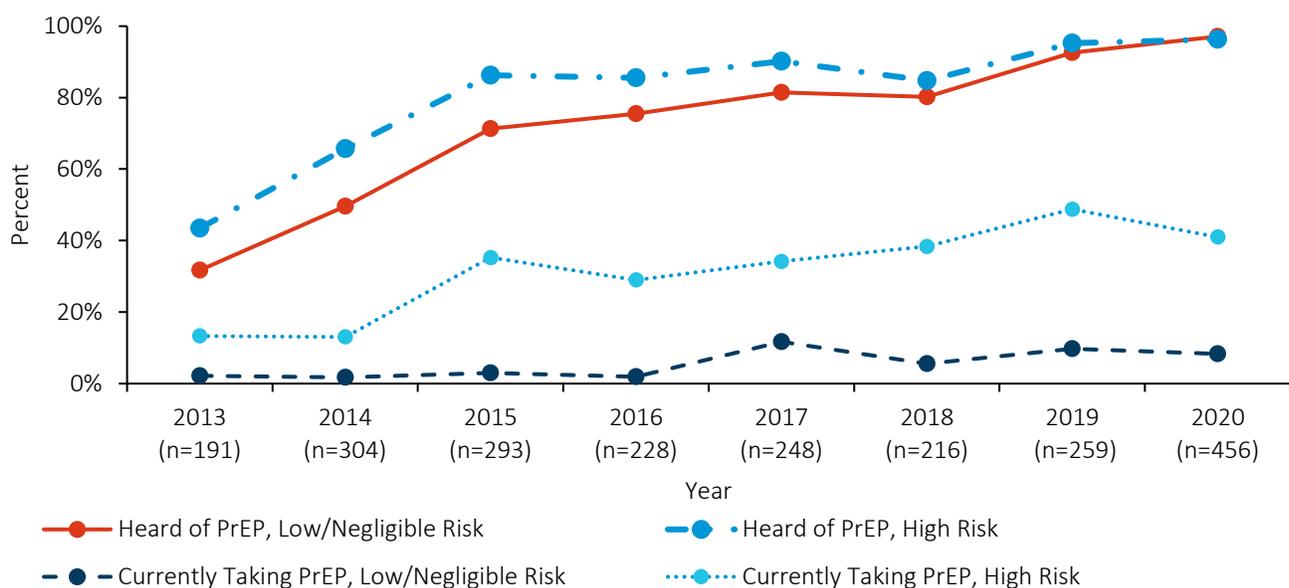
- **STI Provider Survey.** This 2018 survey included Washington State medical providers who reported one or more case of syphilis or three or more cases of gonorrhea to the health department in 2017. The data presented here are limited to sexually active MSM.

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 used criteria defined through a local analysis of risk factors associated with HIV seroconversion among MSM patients at the PHSKC SHC. 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. MSM with “negligible risk” for HIV were defined as MSM with zero sex partners or one HIV-negative mutually monogamous partner in the past year. MSM with “lower risk” of HIV included all other MSM.

PREP AWARENESS

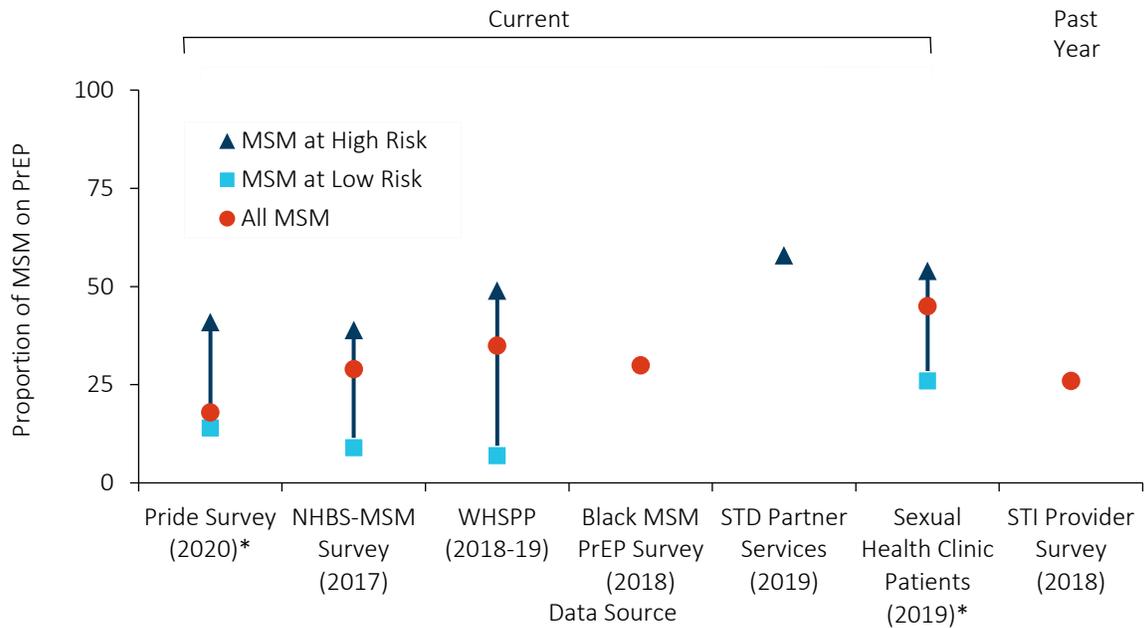
The annual Pride survey has collected data on PrEP awareness among MSM since 2009. **Figure 7-1** illustrates how awareness of PrEP has grown rapidly and is nearly universal among MSM at both higher and lower risk of HIV. Although not shown in **Figure 7-1**, data from the 2017 NHBS-MSM survey are similar with 92% of low-risk and 97% of high-risk MSM reporting being aware of PrEP.

FIGURE 7-1. PREP AWARENESS AND USE AMONG MSM IN KING COUNTY, SEATTLE AREA PRIDE SURVEY, 2013-2020



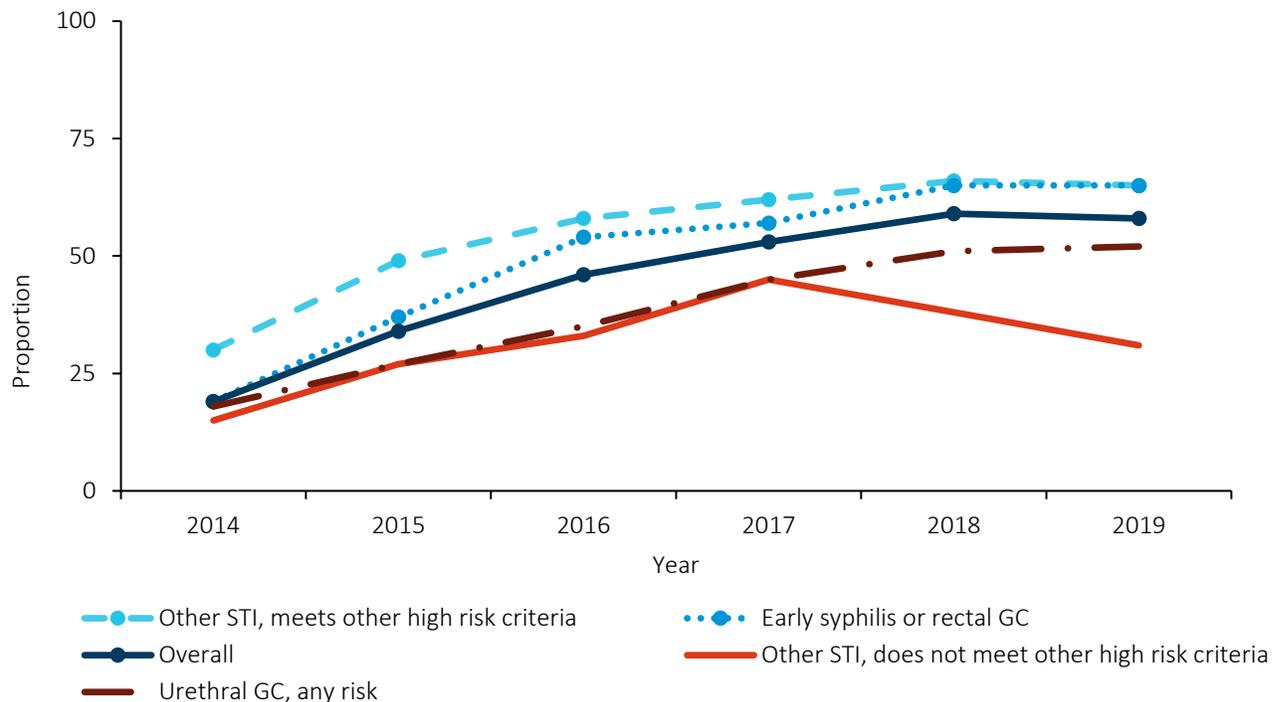
Prior to 2015, respondents were asked if they had ever used PrEP.

FIGURE 7-2. PREP USE AMONG SEATTLE MSM BY RISK CRITERIA, 2017-2019



*MSM at “negligible risk” for HIV (no sex partners or one HIV-negative mutually monogamous partner in the past year) were not included in the “low risk” category.

FIGURE 7-3. CURRENT PREP USAGE AMONG MSM DIAGNOSED WITH A BACTERIAL SEXUALLY TRANSMITTED INFECTION (STI) IN KING COUNTY COMPLETING A PARTNER SERVICES INTERVIEW, 2014-2019



Other STI includes MSM diagnosed with chlamydia, late syphilis, or pharyngeal gonorrhea. Other high-risk criteria is defined as 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.

Respondents to the PrEP survey among Black MSM reported a lower awareness of PrEP. Only 84% of the Black respondents reported they had heard of PrEP before the survey compared to over 90% of Black Pride survey respondents.

PREP USE

PrEP Use among MSM. Since the first licensure of antiretroviral therapy for PrEP in 2012, PrEP use has rapidly expanded among King County MSM (**Figure 7-1**). In 2019, approximately 28% (range: 20-35%) of all MSM in King County were on PrEP, including approximately 47% (range 39-58%) of MSM at higher risk for HIV (**Figure 7-2**). These percentages were calculated based on the average of the Pride Survey, NHBS-MSM survey, WHSPP survey, and STD partner services data, which are the data sources most representative of the entire population of MSM. (This estimate excludes the Black MSM survey since not all race/ethnicities were represented.) 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 7-2**, 2017-2020 estimates of current PrEP use for MSM at higher and lower risk of HIV were similar across the three general surveys of MSM: NHBS, Pride, and 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 to 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 SHC in 2019, 54% of MSM at higher risk, 26% of MSM at intermediate/lower risk, and 14% of MSM with negligible HIV risk reported currently using PrEP. Overall, 45% of all MSM SHC patients were currently taking PrEP 2019.

PrEP Use among MSM during the COVID-19 Pandemic:

While this report focuses on PrEP use in 2019, we included data from the 2020 Pride survey, which was conducted remotely during the COVID-19 pandemic in summer 2020. Current PrEP use among MSM at higher risk for HIV in that survey was 43%, which is six percentage points lower than the estimate from the 2019 Pride survey. This decline was likely due, at least in part, to MSM stopping using PrEP due to changes in sexual behavior (i.e., less risk) following social distancing guidelines. The survey methodologies in 2019 and 2020 were also different – in-person vs. online – so that may have accounted for some of the observed difference.

PrEP Use among MSM Receiving STI Partner Services:

Partner services (PS) are an integral part of public health efforts to control HIV and bacterial STIs. 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 PHSKC SHC attempt to provide PS to all individuals with HIV and selected patients with gonorrhea and early syphilis. PS also present an opportunity to monitor PrEP use among a population at high risk for HIV acquisition. PHSKC staff who provide PS 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 PS interview met the criteria for being at higher risk for HIV; 58% 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 between 2014-2019 who were using PrEP is shown in **Figure 7-3**. The percent of cases reporting already taking PrEP increased from 19% in 2014 to 65% in 2019 among MSM with early syphilis and rectal gonorrhea ($p<0.0001$), from 30% to 65% among other MSM at high risk ($p<0.0001$), and from 15% to 31% among MSM at lower risk ($p<0.0001$). Because urethral gonorrhea is usually symptomatic, it provides 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 52% in 2019 ($p<0.0001$).

PrEP Use 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 four data sources. Among 2020 Pride Survey participants who identified as transgender or non-binary/genderqueer and reported male or transgender women sex partners ($n=187$), 7% reported currently being on PrEP and 18% reported ever using PrEP. At the PHSKC SHC, 31% of all clinic patients who were transgender, non-binary, or genderqueer and reported sex with men were currently taking PrEP in 2019. Among transgender and non-binary/genderqueer clinic patients who met the HIV/STD Program criteria for being at higher risk for HIV ($n=71$),

51% were currently on PrEP. Data from the 2019-2020 NHBS survey of transgender women found that 19% of HIV-negative participants had used PrEP in the past year, including 21% of participants who met the criteria for being at higher risk for HIV. In 2018 and 2019, 107 cases of gonorrhea, chlamydia, or syphilis were diagnosed and reported among HIV-negative transgender, non-binary, and genderqueer people who have sex with men, of which 54 were interviewed for partner services. Of interviewed cases, 39% (n=21) reported currently being on PrEP, including 40% of transgender women, 40% of transgender men, and 38% of non-binary/genderqueer people.

People Who Inject Drugs (PWID) and Women who Exchange Sex for Money or Drugs:

PrEP awareness and use remain very low among local populations of PWID and women who exchange sex, including women who both exchange sex and inject drugs. Data from the 2018 NHBS survey of PWID (N=466) showed 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 women who exchange sex, 16% had heard of PrEP and 1% had used PrEP in the last year. Among the subset of women who exchange sex from the 2018 NHBS survey of PWID, 29% had heard of PrEP and 3% had used PrEP in the last year.

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, 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 SEXUAL HEALTH CLINIC

The PHSKC SHC 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 patients 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 SHC 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 2019, 1,388 patients had completed an initial intake for PrEP in the SHC. As of December 31, 2019, 667 of these patients were currently receiving PrEP through the SHC. A majority of clinic patients on PrEP at the end of 2019 were MSM (95%).

In 2019, 351 patients completed an initial intake for PrEP in the SHC, of whom 91% (n=321) were MSM. Compared to the 126 MSM diagnosed with HIV in King County in 2019, MSM evaluated for PrEP in the SHC in 2019 were as likely to be Latinx (23% of PrEP patients vs 26% of MSM diagnosed with HIV in King County; $P=0.53$) and to be Black, non-Latinx (10% of PrEP patients vs 12% of MSM diagnosed with HIV in King County; $P=0.48$), but were more likely to be aged 15-24 (24% of PrEP patients vs 14% of MSM diagnosed with HIV in King County; $P<0.05$). As of July 31, 2020, 26 (8%) of 321 MSM patients evaluated to initiate PrEP in 2019 never filled a PrEP prescription, 44 (14%) have moved or transferred care, and 97 (30%) were lost to follow-up or stopped PrEP for other reasons. The remaining 154 (48%) patients have been on PrEP for a median of 12 months (interquartile range [IQR]: 9-16 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 SHC or with community medical providers.

PrEP Referrals among MSM:

In 2019, medical providers reported 2,074 cases of early syphilis, gonorrhea, or chlamydial infection among HIV-uninfected MSM in King County, 859 of whom received PS. Of these people, 654 (76%) were eligible to receive PrEP at the SHC; 400 (61%) of these 654 people were already using PrEP at the time of their PS interview. Among 254 MSM not currently on PrEP and eligible to receive it from the SHC, 227 (89%) were offered a referral, of whom 134 (59%) accepted. Among the 205 PS recipients who were not eligible to receive ongoing PrEP care at the SHC, 115 (56%) were already using PrEP. Public health outreach staff offered 41 PS recipients assistance linking to PrEP, of whom 36 (88%) accepted referrals to community providers.

PrEP DISCONTINUATION

Increases in PrEP awareness and PrEP use 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 1,388 patients who enrolled in the SHC PrEP program from October 2014 to December 2019, 438 (32%) patients were retained on PrEP at the clinic from their initial start date until July 31, 2020, 172 (12%) patients did not fill their first prescription, 209 (15%) moved or transferred care, six (<1%) tested positive for HIV at their initial visit, and the remaining 563 (41%) patients discontinued PrEP at the SHC at least once between their initial start date until July 31, 2020. The reason for PrEP discontinuation was available for only 162 (29%) of the patients as the majority were lost to follow-up or the reason was unknown (401, 71%). Reasons for discontinuation among those with a documented reason included that the patient reporting being in a monogamous relationship (40%), the patient reported they were no longer at risk for HIV (26%), side effects (19%), or another reason (16%). The WHSPP survey also assessed the reasons for discontinuing PrEP among respondents who had taken in 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 newly diagnosed with HIV receiving HIV PS in King County, WA between 2014 and June 2019 included similar common discontinuation reasons: changing insurance (19%), side-effects (19%), moving (14%), homelessness (14%), perception of low risk (9%).

The median time from PrEP initiation to PrEP discontinuation was similar among SHC PrEP patients, WHSPP survey respondents, and MSM receiving HIV PS. The median time to first PrEP discontinuation for SHC patients was six months (IQR: 2-13 months), for survey respondents the median time since most recently starting PrEP was seven months (IQR: 2.5-18 months), 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 SHC

PrEP patients. The median time to first PrEP discontinuation for Black patients was four months (IQR: 1-11 months) compared to six months (IQR: 2-13 months) for Latinx patients, seven months (IQR: 3-14 months) for White patients, and eight months (IQR: 3-14 months) for Asian and Pacific Islander patients.

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 counsel clients about PrEP, help clients obtain health insurance and funding for PrEP and associated medical services, and increase client persistence on PrEP through reminders and ongoing support.

PrEP Navigators currently operate at four (4) agencies in King County: Center for Multicultural Health, Entre Hermanos, Harborview Madison Clinic, and Lifelong. In 2019, these agencies provided PrEP Navigation services to 844 people. Gay City also operates a weekly PrEP Clinic that provides integrated PrEP navigation and clinical services. In 2019, they supported 71 people in initiating PrEP through their PrEP Clinic.

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>.

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 3,590 people enrolled in Prep DAP between January 1, 2014 and July 31, 2020, of whom 2,847 were King County residents; 79% of these enrollees had medical insurance. Since expanding in November 2017, PrEP DAP has processed 22,257 medical and lab claims and has contracts with 539 medical providers and 289 laboratory locations across the state. In July 2020, 82 enrollees received any services paid for through PrEP DAP, including 59 people in King County. Statewide, this included 66 enrollees with and 16 without insurance who filled their tenofovir/emtricitabine prescription through PrEP DAP. The extent to which people who were previously enrolled in PrEP DAP remain on PrEP is unknown.

SUCSESSES

Washington State and King County have robust systems for promoting PrEP use and access, including a state-funded PrEP drug assistance program and the integration of PrEP into STI medical care and partner services. In 2019, approximately 28% of all MSM in King County were on PrEP, including an estimated 47% of MSM at high risk for HIV. 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, but as of 2019, the county was slightly short of the goal of having 50% of MSM at higher risk for HIV on PrEP by 2020. 2018-2019 data suggest that this goal is

within reach, but challenges remain in improving PrEP awareness in selected populations (e.g. PWID), PrEP uptake, and PrEP retention. Potential disruptions in PrEP use due to the COVID-19 pandemic are a concern. 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 SHC PrEP patients have lower rates of PrEP retention with over half of those initiating PrEP at the clinic discontinuing use within 12 months. 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.

Syringe Service Programs (SSPs)

BACKGROUND

SSPs are public health programs for PWID. An important component of PHSKC SSPs is the distribution of new, sterile syringes and other injection equipment, which reduces the spread of HIV and other blood-borne infections among PWID. 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 and hepatitis; 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 needles, syringes, and other injection equipment. PHSKC's program began operating in 1989. Currently, PHSKC operates four exchange programs: fixed sites in downtown Seattle and Capitol Hill, a mobile program in South Seattle/South King County, and a mobile program in North Seattle. (The North Seattle mobile program was established in 2018 following an increase in the number of new HIV infections among PWID in this area.) The People's Harm Reduction Alliance (PHRA) provides exchange services in the University District and other parts of the city.

FIGURE 7-4. PUBLIC HEALTH – SEATTLE & KING COUNTY (PHSKC) SYRINGE DISTRIBUTION VOLUMES, 1989-2019

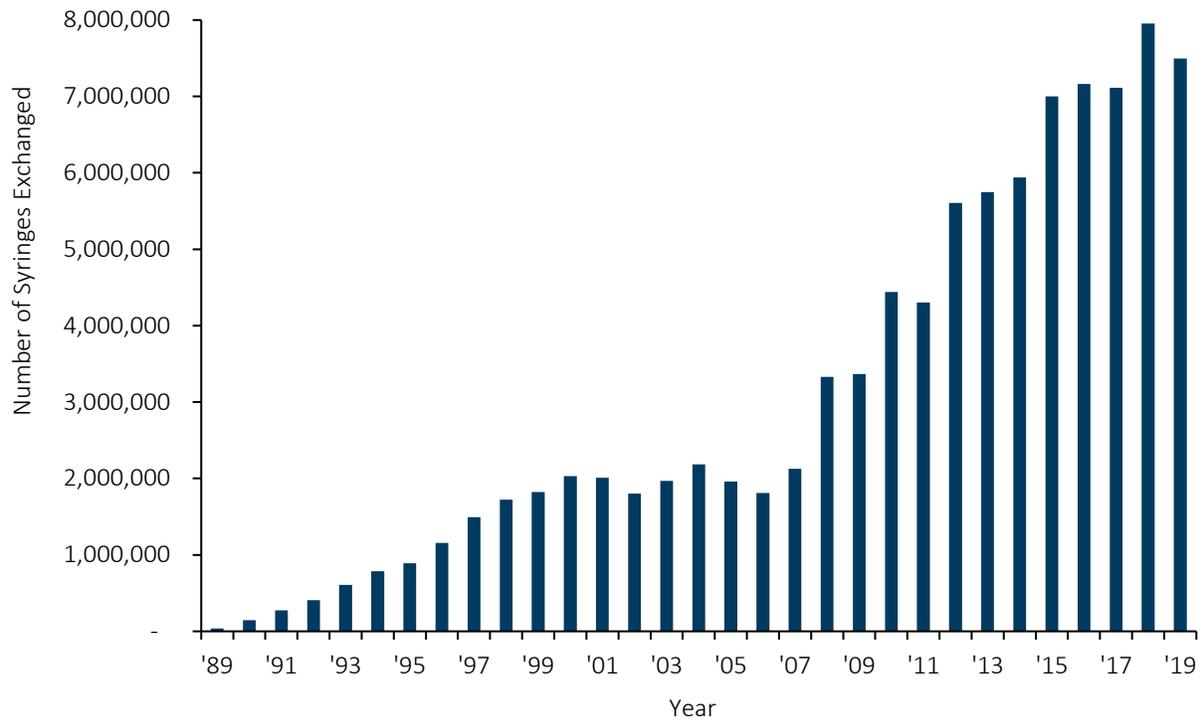
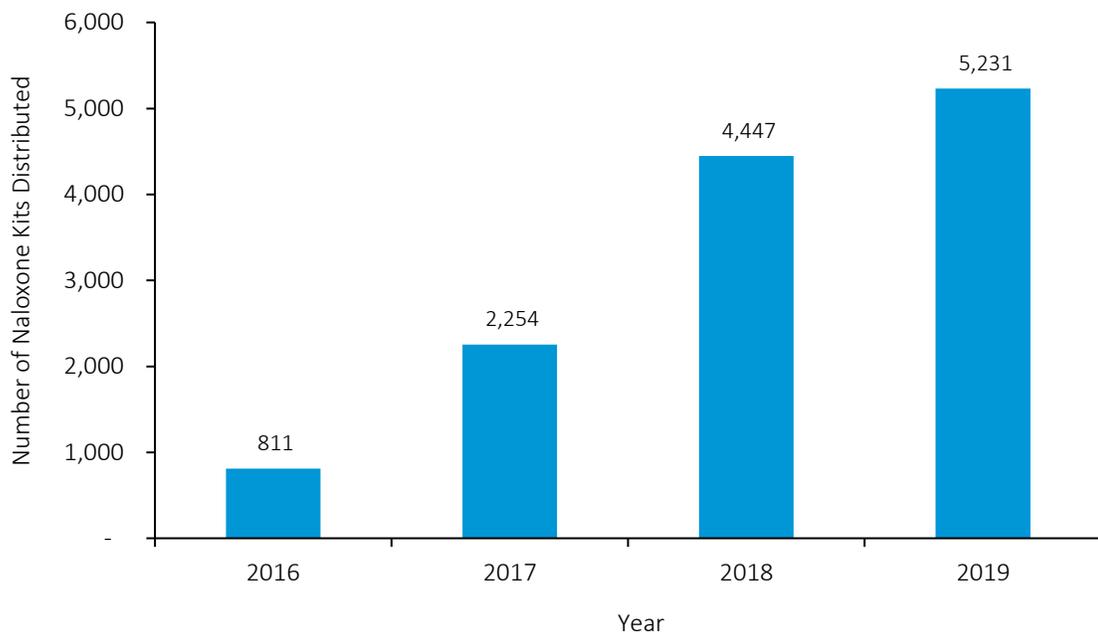


FIGURE 7-5. PUBLIC HEALTH – SEATTLE & KING COUNTY (PHSKC) NALOXONE DISTRIBUTION VOLUMES, 2016-2019



SUBSTANCE USE PATTERNS

The PHSKC SSP conducts a biennial survey to monitor trends in substance use, injection risk behaviors, access to healthcare and prevention services, and substance use treatment utilization among clients. The 2019 survey noted high levels of polysubstance use among SSP clients, including heroin (85% ever used in the past 3 months), methamphetamine (79%), and goofball (combination of heroin and methamphetamine, 56%). Fifteen percent of PWID reported recent syringe sharing (down from 22% in 2017). On average, PWID report visiting an SSP between 3-4 times per month.

NUMBER OF SYRINGES EXCHANGED AND SYRINGE COVERAGE

In 2019, across all affiliated SSPs within Seattle and King County, the program exchanged 7,496,256 syringes, a 6% decrease from 2018 (**Figure 7-4**). This included 4,227,820 syringes at one of four PHSKC SSP sites (a 20% increase from 2018) and 3,268,436 syringes through partnership with PHRA (a 26% decrease from 2018). These syringes were exchanged during 43,347 exchange encounters: 24,168 at a PHSKC SSP site and 19,179 at PHRA.

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 1,600,003 syringes (a 25% increase from 2018) during 2,869 encounters in 2019, largely due to secondary exchange (i.e., obtaining syringes for others). Because of the increase in HIV cases among PWID in 2018, PHSKC expanded its SSP to include the North Seattle Outreach Referral and Exchange (NORE). NORE 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. Following a pilot period, NORE began using a dedicated van in late 2019. In 2019, NORE exchanged 76,657 syringes (a 135% increase from 2018) during 758 encounters, completed 259 HIV tests (which identified 3 new cases of HIV), and distributed 301 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. In its 2020 targets, the World Health Organization (WHO) recommends that SSPs provide ≥ 200 sterile syringes per PWID per year to control HIV infection in the population. (The target for

2030 will increase to 300.²) Based on a CDC analysis of 2015 data from 20 urban areas, Seattle was the only city to have achieved the 2020 goal (209 syringes per PWID in 2015).³ 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 2019 estimates of distributed syringes (7,496,256) and the PWID population size estimate for King County (26,500), syringe coverage in King County in 2019 was 283 syringes per PWID, which surpasses the 2020 WHO goal. The PHSKC HIV/STD Program 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 2019, 5,231 naloxone kits were distributed at PHSKC SSP sites, which is an 18% increase from the 4,447 kits distributed in 2018. As shown in **Figure 7-5**, naloxone distribution at PHSKC sites has continued to increase over the past four years. In 2019, 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. 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 SSP 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 offer support and encouragement. In 2019 social workers provided services to 380 unique clients, averaging 1.5 contacts per client (range=1-15 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.⁴ Bupe Pathways is in the same building as the Downtown PHSKC SSP and is staffed by an interdisciplinary team, including a board-certified addiction 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 2019, 513 people had ever enrolled in Bupe Pathways. A total of 335 clients received buprenorphine through the program at any point in 2019. The program had 1,829 client visits during the year with an average of 152 visits per month.

In addition to Bupe Pathways, SSP social workers provided referrals to 282 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 282.)

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 2019, 778 clients at the downtown SSP were seen for medical care, with most being seen for wound care services and follow-up. PHSKC non-SSP staff also provided HIV and hepatitis C virus (HCV) testing, including 76 HIV tests and 51 HCV tests. There were no positive HIV tests. Among the HCV tests, 26 were HCV antibody positive and 19 had a positive confirmatory test. In response to the 2018 HIV cluster among PWID, all SSP staff were subsequently trained to do HIV testing. Due to staffing issues SSP staff were unable to start providing HIV testing, but PHSKC non-SSP staff were able to increase testing days to meet the need.

Data from other local surveys have shown that HIV prevalence among PWID who are not MSM is relatively low (1-3%). HIV prevalence among PWID-MSM is higher (15-22%), particularly among PWID-MSM who inject meth (40-45%). Among HIV-positive PWID, 74% of non-MSM and 79% of MSM were virally suppressed. Data from a 2019 SSP survey found that 66% of PWID reported an HIV test in the past year, which was up from 57% in 2017. Local survey data have also shown that the prevalence of HCV antibodies remains very high

(approximately 70%) among PWID in King County, and relatively few local PWID have benefitted from current, highly effective HCV treatments.⁵

SUCCESSSES

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 WHO's benchmark for syringe coverage (200+ syringes per PWID per year). In 2019, the program continued to report very high levels of syringe exchange and naloxone distribution, with a 20% increase in syringe distribution and 18% increase in naloxone distribution among four PHSKC SSP sites between 2018 and 2019. In response to rising numbers of HIV diagnoses among PWID in 2018, the HIV/STD program has increased outreach HIV testing, although HIV testing volume and case finding at the SSP have been low. 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 2018 increase in HIV cases among PWID, including both MSM and non-MSM, in King County remains a tremendous concern. This increase in HIV cases 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. 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. Unfortunately, there are very few widely available evidence-based treatment options for people who use methamphetamine, and those that do exist are resource intensive (e.g., cognitive behavioral therapy and contingency management) or

have only been evaluated in restricted samples (e.g., mirtazapine among MSM and transgender people who use methamphetamine). In the absence of robust 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.

Condom Use

BACKGROUND

When used correctly and consistently, condoms are a highly effective in preventing HIV, a wide spectrum for other sexually transmitted infections (e.g. syphilis, gonorrhea, chlamydia, genital herpes, and human papillomavirus) and unwanted pregnancies.⁶⁻⁹ Although many people 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 PHSKC and WA DOH's HIV/STI prevention strategy.

CONDOM USE AMONG MSM

MSM are the population most impacted by HIV in King County and Washington State. Local data from the King County Pride survey conducted in June-August 2020 provide insight into condom use among MSM. A total of 439 participants identified as a man (cis or trans) who had sex with at least one man in the last year. Overall, 12% of these MSM reported always using condoms, 44% sometimes used condoms, and 44% never used condoms. Among MSM who were HIV-negative or did not know their status and were at higher risk of HIV (e.g., reported in the past year: serodiscordant condomless anal sex, 10 or more anal sex partners, methamphetamine or popper use, or an STI diagnosis), most (61%) used condoms at least some of the time. Only 8% of these MSM reported using condoms all the time. Among MSM who sometimes used condoms, 50% reported using them with non-primary partners and 55% reported using them with partners they did not know well (55%). Less than one-quarter (22%) of MSM reported that they had received free condoms in the past 3 months. Among sexually active MSM who reported any condom use, about half (31%) reported that they had paid for the last condom they used.

IMPACT OF PREP ON CONDOM USE

In the 2020 Pride survey referenced above, 96 MSM who were currently using PrEP answered questions about

behavioral changes since initiating PrEP. Of these, 62% reported they were more likely to have condomless sex since starting PrEP.

CONDOM DISTRIBUTION

In 2019, state and local public health authorities distributed 539,039 condoms in King County. PHSKC distributed approximately 177,000 external (male) condoms in King County through community partners, special events, and public health clinics, including the PHSKC Sexual Health Clinic at Harborview Medical Center. WA DOH provided an additional 276,359 condoms to HIV Community Services contractors in King County including Center for MultiCultural Health, Lifelong, Gay City, Seattle Counseling Service, and Entre Hermanos. WA DOH also provided 85,680 condoms to other sites in King County including safety net clinics, teen health centers, school-based clinics, and other community-based organizations.

CONDOM DISTRIBUTION PROJECTS

To improve condom usage and reduce rates of HIV and STIs, 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 widgets that allow it to 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](#).¹ In 2019, the condom map had 3,481 total page views (approximately 10 per day). Google Analytics data showed that 36.5% of viewers used a mobile device to view the map.

Second, in 2019, PHSKC launched a Condom Distribution Project (CDP). This project aims to increase the availability, accessibility, and acceptability of free condoms to increase condom use and decrease HIV/STI transmission. The CDP prioritizes zip codes with high rates of bacterial STI and HIV and where free condoms were not previously available. The project places Condom Cubes – custom acrylic open-top boxes that hold 500 free condoms of 20 different types – in a variety of public venues that are easily accessible, particularly for

youth. To date in 2020, the project has distributed 364,000 condoms through 70 Condom Cubes in eight South King County zip codes and four Condom Cubes in the City of Seattle. The project will expand as we stabilize our partnerships with local venues post COVID-19 closures and recruit new sites to participate.

A third condom distribution project involves providing PHSKC Sexual Health Clinic patients with a condom and lube variety pack known as the “Tool Kit”. 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 people to find the condom that fits them the best and maximizes their pleasure with the goal of increasing condom use. To date in 2020, the Sexual Health Clinic has distributed 870 Tool Kits (14,790 condoms and 2,610 packets of lube).

SUCCESSES AND CHALLENGES

PHSKC and the WA DOH remain committed to condoms as part of a balanced, broad-based prevention program to control HIV and other STIs. Although some evidence suggests that condom use among MSM is declining – a trend that is likely due in part, but not completely, to PrEP - most sexually active MSM (56%) continue to use condoms at least some of the time. Meanwhile, based on previously reported data, condom use remains suboptimal among heterosexual youth, a population at high risk for bacterial STIs. In both populations, inadequate access to free condoms appears to be a barrier to condom use. New public health initiatives promote condom use by expanding access to free condoms with methods that are acceptable to the populations affected by HIV/STI.

Contributed by Anna Berzkalns and Sara Glick

References

1. Krakower DS, et al. Tenofovir Alafenamide for HIV Preexposure Prophylaxis — What Can We DISCOVER About Its True Value? *Ann Intern Med* 2020 Feb 18;172(4):281-282.
2. World Health Organization. Global health sector strategy on viral hepatitis: 2016-2021. <https://apps.who.int/iris/bitstream/handle/10665/246177/WHO-HIV-2016.06-eng.pdf?sequence=1&ua=1>
3. Broz, D., et al., for the NHBS Study Group. Syringe services program coverage, HIV risk behaviors, and prevention services among persons who inject drugs, 20 cities in the United States. *APHA Annual Meeting*, November 8, 2017.
4. Hood, J., 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]
5. 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 Alcohol Depend* 2019 Feb 1;195:114-120. doi: 10.1016/j.drugalcdep.2018.11.026. Epub 2018 Dec 26
6. Giannou FK, et al. Condom effectiveness in reducing heterosexual HIV transmission: a systematic review and meta-analysis of studies on HIV serodiscordant couples. *Expert Rev Pharmacoecon Outcomes Res*. 2016 Aug;16(4):489-99.
7. Smith DK, et al. Estimating HIV protective effects of method adherence with combinations of preexposure prophylaxis and condom use among African American men who have sex with men. *Sex Transm Dis*. 2015 Feb;42(2):88-92.
8. Zhou Y, et al. Effect of condom-use measures in predicting sexually transmitted diseases: variation by individual and contextual factors of sexual risk. *Int J STD AIDS*. 2012 Sep;23(9):e27-34.
9. ESHRI Capri Workshop Group. Simultaneous prevention of unintended pregnancy and STIs: a challenging compromise. *Hum Reprod Update*. 2014 Nov-Dec;20(6):952-63.

Ending the HIV Epidemic

Pillar 4: Respond

SUMMARY

King County has a long history of HIV cluster investigations.

In 2018-19, a large cluster investigation integrated traditional epidemiologic investigation with molecular surveillance to identify an outbreak of HIV among mostly heterosexual people who inject drugs (PWID) living homeless in north Seattle. The investigation led to a number of interventions to control the outbreak, and played an important role in shaping King County's End the Epidemic plan.

Most recent clusters have been comprised primarily of men who have sex with men (MSM).

As part of the national End the HIV Epidemic initiative, we are planning to expand cluster identification and response activities, including community engagement.

Introduction

Pillar 4 of the Ending the HIV Epidemic Initiative (EHE) promotes a rapid response to HIV outbreaks to get needed prevention and treatment to cluster members and their risk networks. For more than a decade, Public Health—Seattle & King County (PHSKC) has sought to identify clusters of related infections and intervene to prevent ongoing transmission. Thus, the new focus on cluster investigations and response represents a shift to place greater emphasis on this approach, a change prompted by advent of new prevention interventions and technology (e.g. pre-exposure prophylaxis [PrEP], molecular analytics); our success decreasing HIV transmission and the resultant need for a more honed focus on where HIV transmission is growing; and the EHE mandate to accelerate progress in the fight against HIV.

Pillar 4 uses both older and newer methodologies to identify and respond to clusters of HIV with the goal of reducing further transmissions. Public health efforts include the long-standing use of partner services where disease investigators identify clusters, promote HIV testing among partners, and facilitate treatment of infected cluster members. PHSKC and other outreach workers offer HIV-negative risk network members newer interventions, including PrEP, and older prevention strategies, including condoms. Time and space cluster identification and molecular cluster identification are newer methods which

facilitate more comprehensive cluster identification.

HIV cluster identification and intervention in King County has previously focused on clusters of drug resistant HIV (both multi-class drug resistance and resistance to the components of PrEP). In 2018 King County's epidemic response shifted to focus on a cluster among homeless PWID in north Seattle. PHSKC is now poised to initiate an expanded effort to identify clusters of related infections and intervene to increase treatment and prevention among affected people with the goal of decreasing HIV transmission.

Methods

Methods for cluster identification include insight from partner services, other field staff, and medical providers; molecular linkages of HIV genetic sequences; and time-space cluster analyses. Medical providers have been the source of cluster identification in other jurisdictions and providers may be the first to see an unusual pattern of HIV diagnoses. Time-space cluster analyses are conducted by the Washington State Department of Health (WA DOH) and can identify new patterns of HIV transmission, especially when occurring in non-urban areas or crossing jurisdictional boundaries. In short, a time-space cluster occurs when, based on historical data, significantly more diagnoses of HIV occur for residents of a geographic unit (e.g., one zip code) and time period (e.g., six months) than would have been predicted based on the number of diagnoses among residents of that zip code over the last several years. We identify molecular linkages by use of specialized software to compare the similarities of HIV genomic sequences from drug resistance tests submitted to the health department. Regardless of the method of identification, once a cluster is identified, PHSKC responds to clusters by ensuring that cluster members and their risk networks all receive medical and preventive services.

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 help them to link to medical care. This activity, called partner services, also allows PHSKC staff to collect information about people with newly diagnosed HIV and their partners (e.g., geography, HIV risk, substance use, reason for HIV testing), which may facilitate cluster identification.

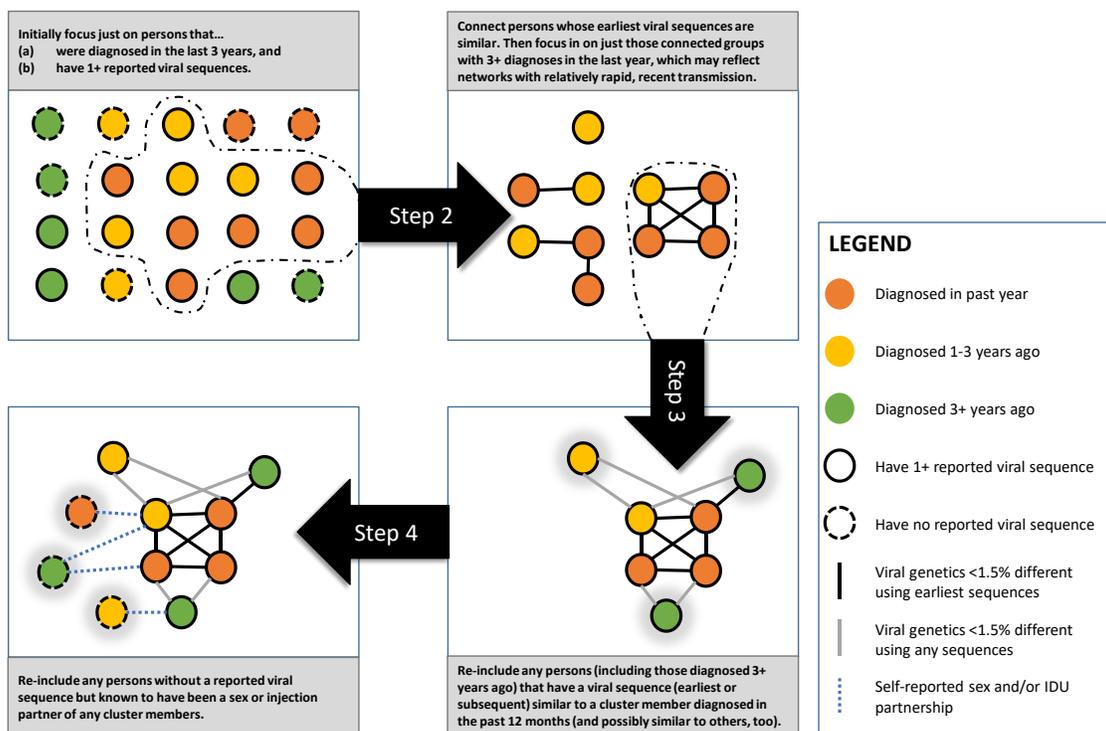
Partner services staff are trained to be alert to unusual patterns of HIV transmission. In a moderate incidence jurisdiction like King County, having a smaller number of partner services staff may also allow for the more rapid identification of unusual patterns of transmission.

MOLECULAR CLUSTER IDENTIFICATION

PHSKC also uses data reported by laboratories to identify HIV outbreaks. Health care providers typically order drug resistance tests for patients with newly diagnosed HIV 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 been used to monitor the prevalence of resistance to ART and also examine circulating viral subtypes. 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 the inference that infections with highly similar viral sequences (also called linked) are likely to be related to one another. 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 sharing injection drug use equipment. 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, and that an outbreak may be ongoing.

PHSKC uses two tools to identify molecular clusters. The first is the CDC-sponsored Secure HIV TRACE (HIV TRANsmiSSion Cluster Engine) which was created by the University of California - San Diego and Temple University and led by Dr. Joel Wertham. The second is DIVEIN, a University of Washington created tool developed by Dr. Josh Herbeck. TRACE is used by HIV surveillance groups for cluster identification across the nation. TRACE can identify and visualize clusters and has the advantage of a consistent cluster-naming convention (e.g., "cluster number 132"). TRACE functions better for the entire state, relative to the county level, as the state can better visualize clusters that cross county lines. DIVEIN provides King County additional capacity relative to TRACE,

FIGURE 8-1: DEFINING CLUSTERS OF CONCERN AND TOTAL MEMBERS OF THESE CLUSTERS, KING COUNTY, WA



including that we can more rapidly import new sequences, modify the genetic distance threshold as desired, export genetic distances for analyses, and combine additional sequences (other than a first sequence reported for an individual). We merge the findings of the two programs, in part to use TRACE’s naming convention.

The CDC periodically seeks molecular clusters which are of national priority, and expects all HIV surveillance jurisdictions to also identify local clusters monthly. The CDC is able to identify inter-jurisdictional clusters which may not be visible to individual jurisdictions. National priority clusters are limited to those that are “recent and rapid”, defined as three to five linked new diagnoses in the past year. In this report we use the terms “priority clusters” and “clusters of concern” interchangeably. For the level of HIV morbidity King County experiences, the CDC definition employs a threshold of five new diagnoses in a year. We have elected to use a lower threshold of three members for King County (i.e., casting a wider net) to more quickly identify and intervene in new populations with HIV transmission. In a similar vein, King County also casts a wider net with the genetic cluster distance of 1.5% (versus 0.5%) which may result in more distal and indirect linkages being included in King County clusters. The 1.5% threshold may also result in larger cluster sizes and importantly, clusters being identified

sooner. Two more additions are included in local cluster identification. The first is the addition of more recent genetic sequences – in addition to the initial, earliest sequence of an individual — which may add other cluster members who may be important to the transmission network. The second addition is to use partner services data to add sexual and injection drug equipment sharing partners when there is no sequence available for this partner. **Figure 8-1** shows the steps of cluster identification.

The Clusters

MULTI-CLASS RESISTANCE

Cluster investigations have been ongoing in King County for 15 years. The first cluster we investigated occurred in 2006-2007 when we identified seven newly HIV diagnosed ART-naïve individuals and two treatment-experienced individuals with similar patterns of multi-class drug resistance. All nine were MSM and all reported recent use of methamphetamine and sex with multiple, mostly anonymous sex partners. All had multiclass ART resistance with similar genetic profiles. The interventions employed included issuing a press release emphasizing HIV prevention and to convene the involved medical providers to promote optimal treatment discussions.

NNRTI RESISTANCE

In 2008 we identified a large non-nucleoside reverse transcriptase inhibitor (NNRTI) resistant cluster characterized by the Y181C mutation. Between 2006 and 2020, a total of 108 King County residents – based on residence at the time of HIV diagnosis – were linked to this cluster. A smaller sub-cluster with a tighter genetic link requirement remains ongoing, and PHSKC monitors this sub-cluster as part of an effort to prevent transmission of resistant HIV. Of the 73 members of this subcluster, all report being MSM, two also report being PWID, three have died, 25 have moved out of jurisdiction, and 45 continue to reside in King County. Of the 45, four were virally unsuppressed at their most recent viral load (viral load ≥ 200 copies/mL), including two with substantial viremia (viral load $>10,000$ copies/mL). These individuals have all been referred to the PHSKC relinkage team, including referral for some individuals to our low barrier clinic which provides incentives for viral load testing and suppression.

PREP RESISTANCE

In April 2016, PHSKC became aware of a case of possible transmission of PrEP-resistant HIV in an individual reporting high PrEP adherence. This prompted PHSKC to look for clusters of Truvada (tenofovir with emtricitabine or TDF/FTC) resistance among all King County residents living with HIV infection. Our goals also included finding

Truvada-resistant individuals with substantial viremia (our definition has changed from viral load >500 to 1,000 copies/mL) – whether in a cluster or not – as such people could transmit PrEP resistant HIV. We defined PrEP resistance as one or more genotypic test (at any time) with intermediate to high level resistance to both TDF and FTC as interpreted by the Stanford genotypic resistance algorithm (<https://hivdb.stanford.edu/hivdb/by-mutations/>). Between November 2018 and May 2020, 29 individuals with PrEP resistance and viremia were referred to the relinkage team. Of these, nine have relocated and three died. Of the remaining 17, most (14) have achieved viral suppression or a viral load < 500 , and the relinkage team members have reached out to the others with a variety of methods, including calls to the individuals and their medical providers, home visits, and referral to our low barrier clinic.

PRIORITY CLUSTERS

As we assess the importance of linked HIV diagnoses and look for opportunities to mitigate the impact of clusters, we are first measuring the extent of clustering and the characteristics of people in linked clusters among people with new diagnoses of HIV in King County. Between March 2019 and August 2020, PHSKC identified priority clusters with DIVEIN and overlaid this with Secure HIV TRACE data to provide consistent cluster enumeration

FIGURE 8-2: NUMBERS OF CLUSTERS AND MEMBERS OF THESE CLUSTERS, KING COUNTY, WA, MARCH 2019-AUGUST 2020



over an 18-month period. This effort identified 33 distinct clusters, with a mean of eight clusters where there were at least three new diagnoses within a year at each monthly timepoint. The 33 clusters included approximately 200 total people (mean=197) diagnosed with HIV at any time and linked to those recently diagnosed people (Figure 8-2). Note that the increase in cluster members in late 2019 to early 2020 was the result of a change in cluster definition to a broader inclusion criteria. We are in the process of hiring additional staff to increase outreach to these cluster members and their sexual and drug equipment sharing partners.

NORTH SEATTLE CLUSTER

A cluster of largely homeless PWID living in North Seattle was identified in 2018. This cluster illustrated some of the value added by molecular cluster analyses beyond other disease investigation methods. Molecular analysis identified 26 of the 31 members of this cluster as having related virus, while direct and indirect linkages from partner services interviews only found linkages for 12 cluster members. This cluster is represented in Figure 8-3 as cluster 132 and stood out for its members’ relatively uncommon risk profile (mostly PWID or non-injecting drug users) and their geographic concentration (north Seattle). This cluster primarily affected heterosexual

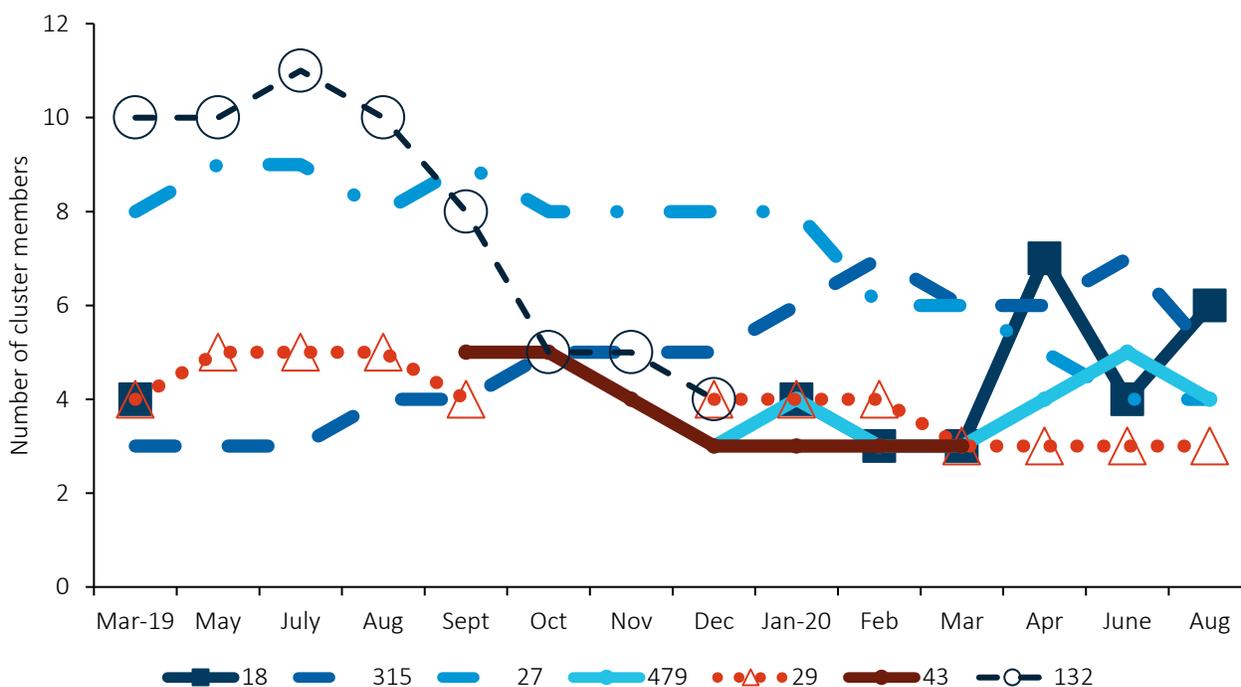
PWID, a population that has not traditionally experienced a high rate of HIV in King County. Because it was unusual, the cluster was originally identified through partner services. However, partner services did not identify the true scale of the outbreak which required molecular analysis. PHSKC would likely have not rapidly identified the outbreak had it occurred in MSM since it would not have appeared to be out of the ordinary.

Figure 8-3 illustrates the changes – growth and shrinkage – in the size of local priority clusters. The sizes of the seven largest priority clusters are shown and limited to clusters with 5 or more HIV diagnoses in any month over the past 18 months. There are four distinct patterns: (1) continuous inclusion as priority clusters (e.g., clusters 315 and 27); (2) a cluster which originally was high priority, but in which transmission appears to have stopped (e.g., cluster 132, the north Seattle cluster); (3) newly emerging clusters (e.g., clusters 479 and 43, with the latter not remaining at the end of the observation period); and (4) on-again-off again status (e.g., clusters 29 and 18).

CHARACTERISTICS OF CURRENT CLUSTER MEMBERS

As of August 2020, King County had seven clusters of three to six linked cluster members diagnosed with HIV in the past year. The total counts of members range from

FIGURE 8-3: CHANGES IN CLUSTER SIZE AMONG OF SEVEN LARGER HIV CLUSTERS, KING COUNTY, WA, MARCH 2019-AUGUST 2020



three to 106, which includes people diagnosed at any time since the 1980’s and also includes people regardless of their vital status, thus both living and dead. All seven clusters include members who are not currently King County residents. HIV transmission risk categories for the seven clusters are illustrated in **Figure 8-4**.

Public Health Interventions that Support this Pillar

Cluster response includes the same interventions described in EHE Pillars 1-3: diagnosis, treatment and prevention. Cluster interventions for HIV-infected people include rapid diagnosis, HIV care linkage, antiretroviral initiation, and retention in care to promote sustained viral suppression. Interventions for risk networks include educational campaigns, frequent HIV screening, condom use, and PrEP.

The north Seattle Cluster prompted the largest HIV cluster response and intervention King County has launched to date. The response included multiple partnerships within and outside of PHSKC, including the University of Washington’s SHE Clinic, the People’s Harm Reduction Alliance, and HEP, a hepatitis-focused community organization. In 2018 and 2019, field workers and other PHSKC staff conducted 2,394 HIV screening

tests in over 80 locations specifically focused on homeless individuals, PWID, and cluster risk networks. This included 1,229 HIV screening tests conducted at the downtown Seattle jail at time of prisoner intake. Additional services integrated into the cluster response included hepatitis screening, increased syringe services in north Seattle, and care linkage to low barrier clinics.

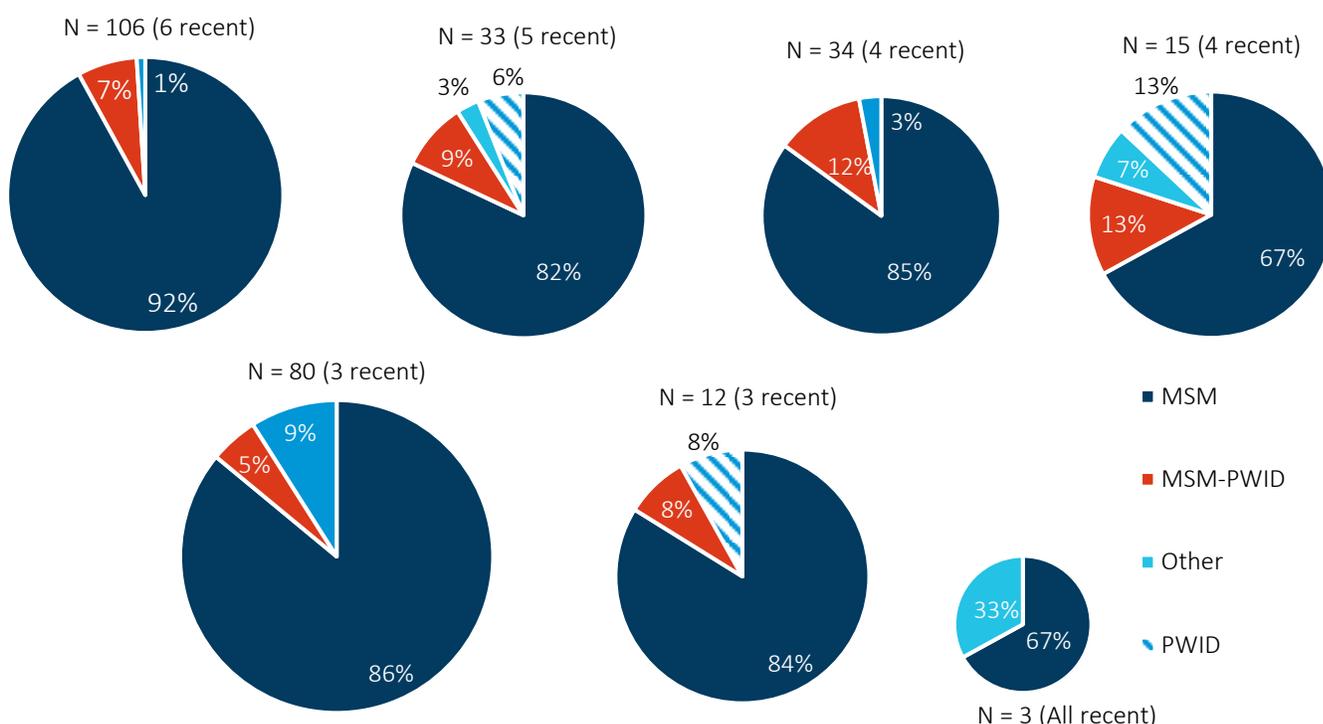
Successes and Challenges

CHALLENGES

How PHSKC uses molecular data for cluster identification is not yet widely understood and some community members have expressed concern about the confidentiality of the data, that genetic sequences are part of a person’s genetic code, and that data might be used to identify people who transmit HIV or in legal proceeding. For these reasons, we have launched new community engagement activities to publicize how Public Health plans to use molecular analyzes and address the public’s concerns. Dr. Roxanne Kerani and colleagues have conducted focus groups to better understand community perspectives, and we will be launching a community education campaign to better promote all of the EHE pillars, including Response.

Currently, molecular cluster analyses are limited by the

FIGURE 8-4: RELATIVE SIZES AND HIV TRANSMISSION RISK CATEGORIES OF SEVEN CURRENT CLUSTERS, KING COUNTY, WA, AUGUST 2020



incomplete reporting of viral sequences and reporting delays. PHSKC received sequences for roughly three quarters of King County residents newly diagnosed with HIV in 2018. Only half of viral sequences are received within 50 days of specimen collection, while 95% are received within about 3 months. We are working to address these issues so we can identify clusters as effectively and quickly as possible.

SUCCESSSES

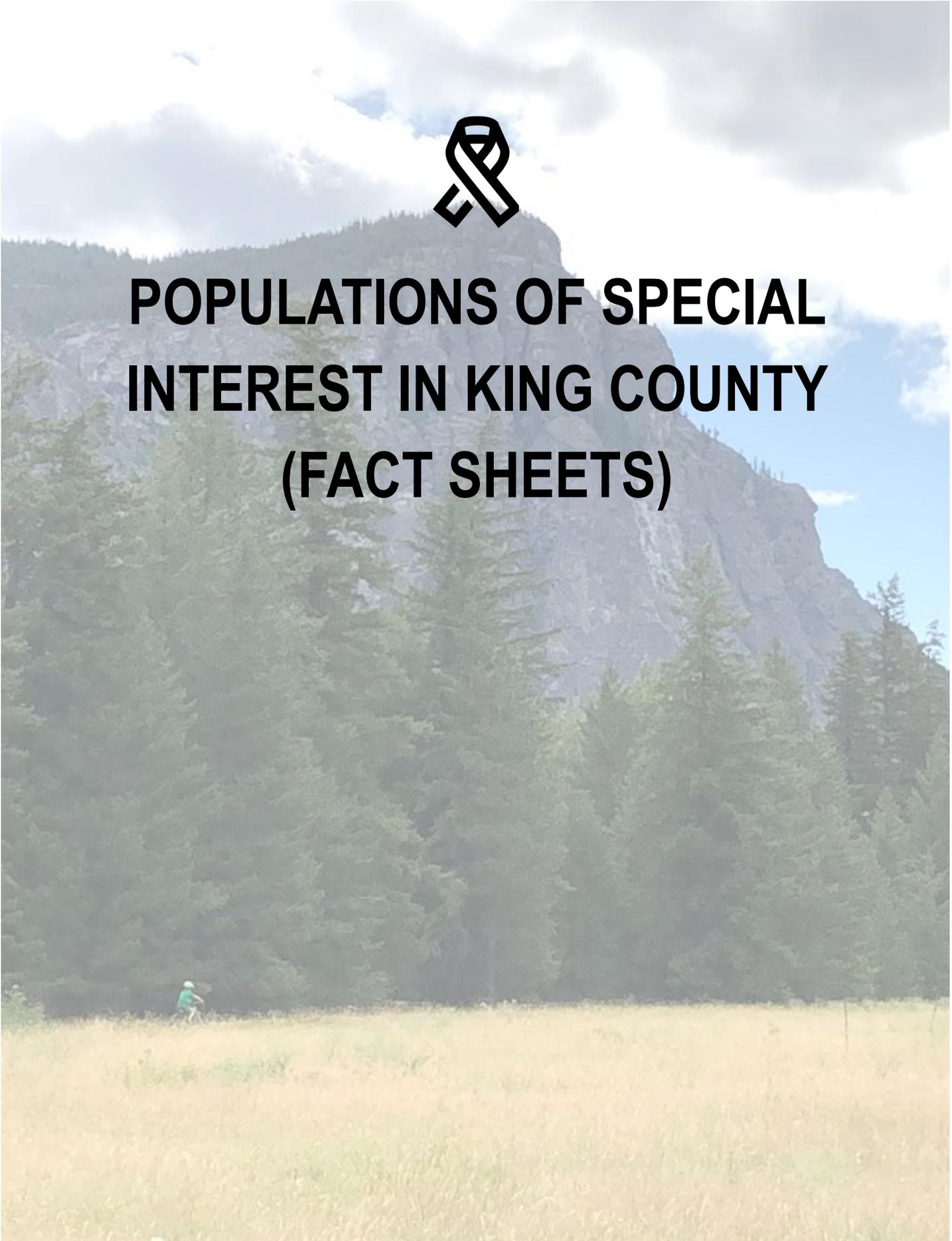
In 2018 and 2019, PHSKC launched a major public health effort to test and refer PWID who were potentially networked with a north Seattle cluster of HIV cases. These efforts included widespread HIV testing of homeless PWID risk network members and care linkages for HIV-positive individuals. The lower numbers of HIV diagnoses in 2019 are likely due, at least in part, to these efforts.

The EHE initiative will permit us to develop additional services to help meet the needs of underserved populations in north and south King County. Through partnerships with multiple agencies, social service providers, and medical providers, we are optimistic that cluster identification and response will be tools that provide additional information to inform efforts to reduce HIV incidence and increase HIV care retention.

Contributed by Susan Buskin and Richard Lechtenberg

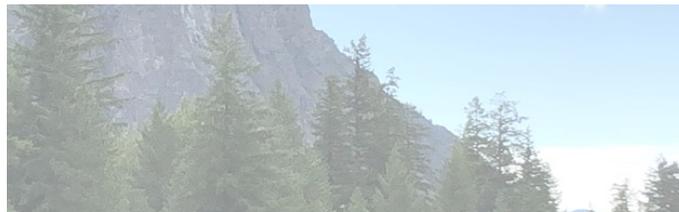


POPULATIONS OF SPECIAL INTEREST IN KING COUNTY (FACT SHEETS)



HIV/AIDS Fact Sheet

American Indian/Alaska Native Populations



KEY POINTS

Approximately 262 American Indian Alaska Native (AI/AN) people were living with diagnosed HIV in King County in 2019. The prevalence of diagnosed HIV among AI/AN people is higher than that of the overall population of King County (488 vs. 314 per 100,000).

Between 2015 and 2019, the HIV diagnosis rate among AI/AN people declined 48% relative to an 18% decline in the overall population.

In 2019, 80% of AI/AN people living with HIV were virally suppressed.

DEFINING THE POPULATION

The Public Health – Seattle & King County (PHSKC) HIV/STD Program has adjusted its methods for how American Indian/Alaska Native (AI/AN) people are defined in our HIV epidemiology estimates. Historically, the majority of individuals who reported AI/AN race were classified as multiracial, while the minority who selected only AI/AN race were classified as AI/AN. For example, in 2019, U.S. Census and American Community Survey data indicate there were 53,737 total AI/AN people living in King County, of whom 13,545 (25%) reported AI/AN as their only race. Most individuals (58%) who reported AI/AN race were classified as multiracial, and an additional 17% were also Latinx. Due to these differences in how AI/AN race can be defined, HIV surveillance estimates for AI/AN people are substantially lower when limited to HIV cases in people who identify AI/AN as their only race compared to when estimates include all people who include AI/AN as part of their identity. In the past, our annual HIV epidemiology reports have limited the AI/AN population to people who report that group as their only race/ethnicity. In this report, we first present data for the various categories defining AI/AN to describe the key metrics regarding HIV-infected AI/AN people (**Table 9-1**). Thereafter we present additional data regarding everyone who reports AI/AN part of their racial identity.

OVERVIEW OF HIV EPIDEMIOLOGY

Table 9-1 illustrates key metrics regarding AI/AN people residing in King County in 2019. Both the underlying population numbers and the numbers of people living with HIV (PLWH) demonstrate the impact of excluding multiracial and Hispanic/Latinx AI/AN people from overall counts of AI/AN. Single race AI/AN people have a lower prevalence of HIV diagnosis than those who are multiracial AI/AN, and the prevalence of HIV is twice as high among Hispanic/Latinx AI/AN people relative to those who are single race AI/AN. For comparison, the overall prevalence of HIV in KC is 314 per 100,000 population relative to 488 among AI/AN people; the overall diagnosis incidence is 8 per 100,000 relative to 11 in AI/AN people.

AGE AND GENDER

Of the 262 AI/AN people living with HIV in King County in 2019, 82% were men. (None were known to be transgender men.) Of the 47 AI/AN women living with HIV in 2019 in the county, 6 were known to be transgender women. Of the 29 AI/AN people diagnosed with HIV in the past 5 years, 80% were men, and none were known to be transgender men. Of the 7 AI/AN women diagnosed with HIV in the past 5 years, none were known to be transgender women. The age distribution of AI/AN people was highly similar to that among all PLWH, with 50% age 50 and higher, 34% age 35-49, and 15% under age 35 years.

TABLE 9-1: KEY HIV METRICS FOR AMERICAN INDIAN/ALASKA NATIVE PEOPLE, KING COUNTY, WA, 2019

Key Metrics	Single race AI/ AN (non-Latinx)	Latinx AI/AN	Multiracial AI/ AN (non- Latinx)	Total AI/AN
King County population 2019	13,545	9,159	31,033	53,737
HIV Prevalence in 2019				
Number living with HIV	44	67	151	262
Prevalence per 100,000	325	732	487	488
Percent of all prevalent cases AI/AN	0.8%	6.5%	32.6%	3.7%
HIV Incidence (new diagnoses)				
5-year number of new diagnoses	7	12	10	29
Diagnoses per 100,000 per year	10	26	6	11
Viral suppression in 2019	80%	84%	78%	80%

HIV RISK CATEGORY

Figure 9-2 shows both AI/AN people living with HIV in 2019 (prevalent cases) and AI/AN people diagnosed with HIV from 2015 through 2019 (incident diagnoses) by HIV risk categories. Similar to all PLWH, most AI/AN PLWH are men who have sex with men (MSM), including 76% of prevalent cases and 72% of incident diagnoses; 17% of these were both MSM and people who used injection drugs.

VIRAL SUPPRESSION

The percent of AI/AN PLWH who were virally suppressed in 2019 (80%, Table 9-1) was lower than that for all PLWH in King County (85%). MSM who were not PWID were most likely to be virally suppressed (83%). Other AI/AN PLWH had lower levels of viral suppression: 77% for PWID and 71% for heterosexuals and MSM-PWID. Although based on small numbers, viral suppression was lower among AI/AN people in their 20s (11 of 19, 57%), among AI/AN women (73%), and AI/AN who had used meth around the time of diagnosis (17 of 25, 68%) compared to all AI/AN PLWH.

TIMING OF HIV DIAGNOSES AND CARE LINKAGE

Of the 29 AI/AN people diagnosed with HIV in the past 5 years (2015-2019), 4 (19%) had an AIDS diagnosis within one year of HIV diagnosis, which is often used to classify people as having a late diagnosis of HIV. However, one of these four people had a negative HIV test within one year of their initial positive diagnosis, showing the inaccuracy of this measure in designating truly late HIV diagnoses. Most (79%) of the 29 AI/AN people diagnosed with HIV linked to care within 30 days of their HIV diagnosis and

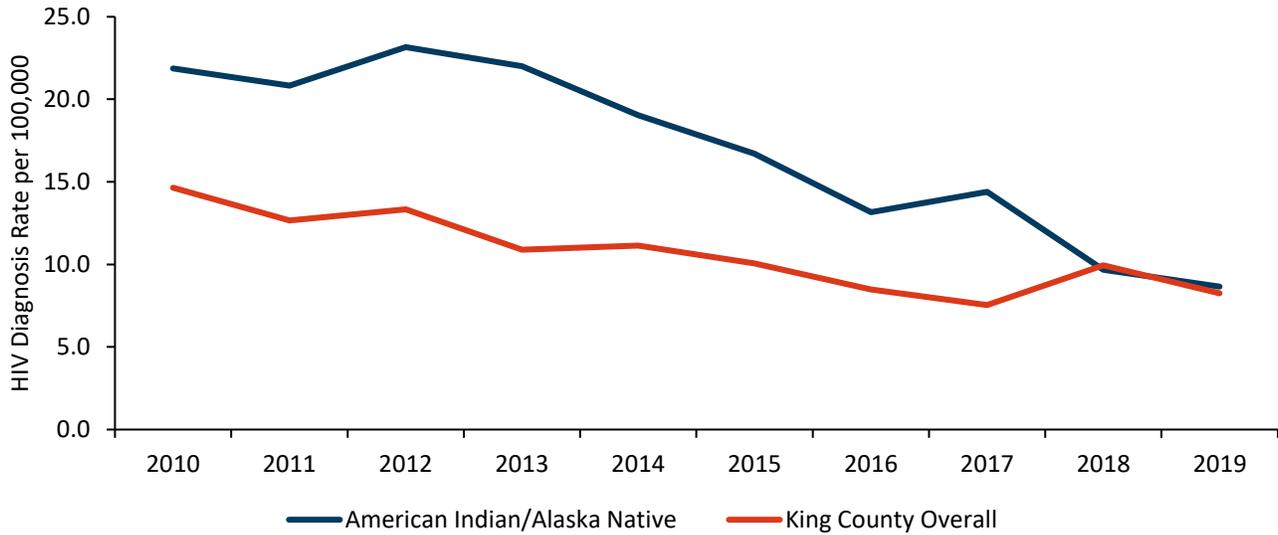
79% linked to care within 90 days.

HIV PREVENTION AND CARE INTERVENTIONS

With the Ending the HIV Epidemic initiative, PHSKC encourages all people with any HIV risk - including AI/AN people - to be screened for HIV. Individuals with higher HIV risks should be offered pre-exposure prophylaxis (PrEP). Although AI/AN MSM had relatively high levels of viral suppression, culturally appropriate interventions may be needed for other AI/AN PLWH - including PWID, women, and those with younger ages -- to sustain viral suppression.

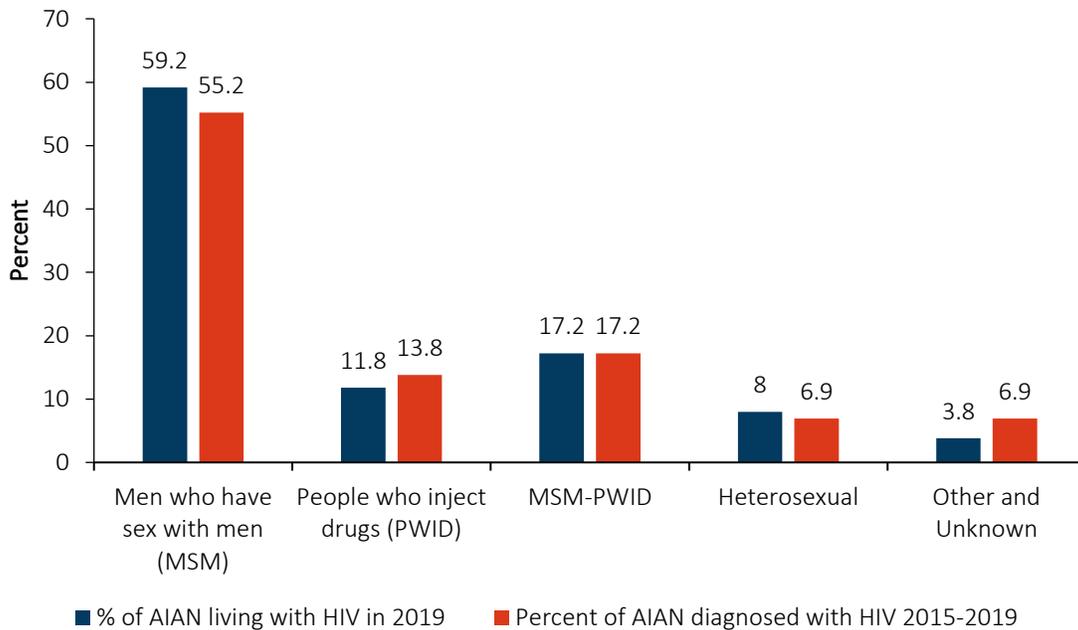
Contributed by Audrey Brezak, Francis Slaughter, and Susan Buskin

FIGURE 9-1 RATES OF HIV DIAGNOSES PER 100,000 AMONG ALL RESIDENTS AND AMONG AMERICAN INDIAN/ALASKA NATIVE (AI/AN) PEOPLE, KING COUNTY, WA, 2010-2019



Rates are presented per 100,000 population and for American Indians/Alaska Natives as three-year rolling averages to minimize random changes. American Indian/Alaska Natives (AI/AN) include multiracial and Latinx people who are also AI/AN.

FIGURE 9-2. AMERICAN INDIAN/ALASKA NATIVE (AI/AN) PEOPLE DIAGNOSED WITH HIV IN 2015-2019 BY HIV RISK CATEGORIES (N = 29) AND TOTAL AI/AN LIVING WITH HIV IN 2019 (N = 262), KING COUNTY, WA



HIV/AIDS Fact Sheet

Black and African-American Populations



KEY POINTS

HIV diagnosis rates are high among Black and African American people in King County relative to overall King County rates (27 vs. 8 per 100,000).

In 2019, the rate of new HIV diagnosis among U.S.-born Black residents was four times that among White resident (25 vs. 6 per 100,000). The rate of new HIV diagnosis among foreign-born Black residents was 31 per 100,000.

In 2019, 86% of foreign-born and 77% of U.S.-born Black people living with HIV were virally suppressed.

OVERVIEW OF HIV EPIDEMIOLOGY

In 2019, there were 40 new diagnoses of HIV among Black and African American people living in King County, or 27 cases per 100,000 (Table 10-1). The diagnosis incidence rate was 23% higher among foreign-born compared to U.S.-born Black people in 2019 (31 vs. 25 per 100,000). This compares to an overall diagnosis incidence of 6 per 100,000 for non-Latinx White people and 8 per 100,000 residents of all races/ethnicities in King County in 2019.

POPULATION SIZE

In 2019, U.S. Census and American Community Survey data estimate that there were 147,330 non-Hispanic/Latinx Black people living in King County, of which 95,384 (65%) were U.S.-born (Table 10-1). For the remainder of this fact sheet, we excluded Latinx Black people and those reporting multiple races from our estimates. (Note: Including these groups would increase new diagnoses in 2019 among Black people by 17% and increase the number of Black people living with HIV by 24%.) Additional methods for this fact sheet include: (1) people living with HIV (PLWH) were excluded if they had no laboratory results for 18 months or longer with any evidence of a relocation; and (2) when monitoring viral suppression in 2019, we included viral suppression achieved in the first quarter of 2020 if a PLWH was diagnosed in the last quarter of 2019.

BIRTH COUNTRY

Of 1,419 Black PLWH in King County in 2019, 635 (45%) were foreign-born, including 43% born in Africa. Of the foreign-born Black PLWH, birth countries include Ethiopia (36%), Kenya (21%), Eritrea (5%), Zambia (4%), and Somalia (3%). Five percent were born in other areas of the world, including 3% from the Caribbean.

Figure 10-1 shows changes in HIV diagnosis rates per 100,000 as three-year rolling averages by nativity for Black people. HIV diagnosis rates decreased among U.S.-born and all Black people by 22% and 2%, respectively, and increased 35% among foreign-born Black people over 10 years (2010-2019). This compares to an overall reduction of 44% of the rate of new diagnoses among all King County residents in the same period.

HIV RISK CATEGORY

Figure 10-2 shows the distribution of HIV risk categories among U.S.-born and foreign-born Black people living in King County in 2019. Heterosexual risk is the predominant risk factor for foreign-born Black people (78%), while men who have sex with men (MSM) is the predominant risk group for U.S.-born Black people (72%, including 8% MSM who also have a history of injection drug use). Of note, individuals with an unknown risk factor are excluded from the figure and comprised 37% of foreign-born Black and 8% of U.S.-born Black PLWH. The high proportion of foreign-born Black people with an unknown

TABLE 10-1: KEY HIV METRICS FOR BLACK AND AFRICAN AMERICAN PEOPLE, KING COUNTY, WA, 2019

Key Metrics	U.S.-born ^A	Foreign-born	Total
Estimated Number of Black People in King County (2019)	95,384	51,946	147,330
HIV Prevalence in 2019			
Number of Black people living with HIV	784	635	1419
Prevalence (%)	0.8%	1.2%	1.0%
Percent of prevalent HIV cases who are Black among all U.S. born, foreign-born, or overall HIV cases	15%	39%	20%
HIV Incidence (New Diagnoses) ^B			
2019 number new diagnoses	24	16	40
2019 incidence rate per 100,000	25.4	31.2	27.4
5-year trend (2015-2019)	29% decrease	17% decrease	18% decrease
Viral Suppression among HIV+ Black People ^C			
	77%	86%	81%

^A U.S.-Born includes those of unknown nativity.

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

^C Among all Black people with diagnosed HIV infection. Viral suppression defined as plasma HIV RNA < 200 copies/mL. Among those with ≥1 viral load reported in 2019, 89%, 96%, and 92% of U.S.-born, foreign-born, and all Black people, respectively, were suppressed.

HIV risk is mostly due to limitations in the definition of the heterosexual risk category. To meet the definition of heterosexual risk, a partner’s HIV-positive status and/or risk factors (such as injection drug use) must be known. For people who are missing this information, some are presumed to be in the heterosexual category, but this is limited to women who have: (1) been asked and deny injection drug use, and (2) have had sex with men. These questions are often not asked to people newly diagnosed with HIV, and thus the presumptive heterosexual category cannot be used. Furthermore, there is no equivalent presumptive category for men, even if they come from a geographic area where heterosexual transmission is common.

AGE AND GENDER

Overall, 36% of Black PLWH were assigned female sex at birth, including 18% of U.S.-born Black and 50% of foreign-born Black people. Among people diagnosed between 2015 and 2019, U.S.-born Black people were younger than foreign-born Black people at the time of HIV diagnosis; 39% and 18%, respectively, were less than 30 years old when they first tested HIV positive.

VIRAL SUPPRESSION

Viral suppression levels for Black PLWH increased over the past 5 years, from 76% in 2015 to 81% in 2019. (Figure 11-3). U.S.-born Black people consistently had

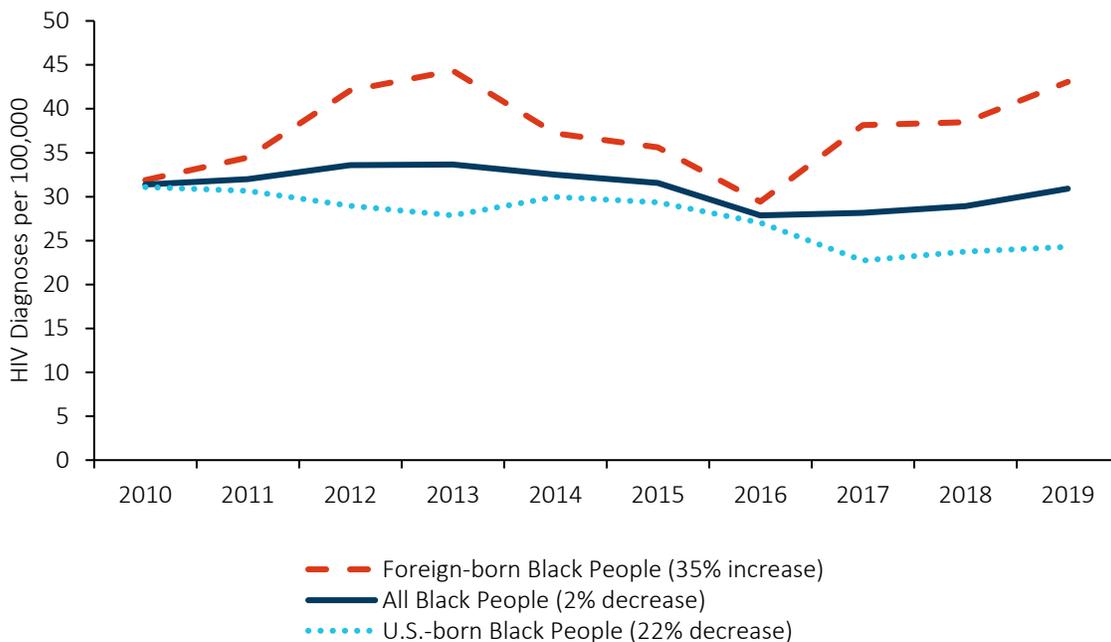
lower levels of viral suppression relative to foreign-born Black PLWH with 77% versus 86% virally suppressed, respectively. This compares to 85% viral suppression for all PLWH and 87% for White PLWH in 2019.

TIMING OF HIV DIAGNOSES

Among 198 Black King County residents diagnosed with HIV in the past five years (2015 - 2019), 64% provided information about prior HIV testing. Of these, 46 (37%) had a negative HIV test documented within the prior year. This intertest interval – defined as the time between a person’s last negative and first positive HIV test – is a measure of how well HIV testing is reaching the population at risk for HIV. Among Black people diagnosed with HIV between 2015 and 2019, 21% of foreign-born Black and 45% of U.S.-born Black people had an HIV-negative test in the prior year

Late HIV diagnosis is sometimes defined as an AIDS diagnosis within one year of an HIV diagnosis. By this definition, 36% of Black people diagnosed with HIV between 2015 and 2019 were diagnosed late, including 61% of foreign-born and 39% of U.S.-born Black people. However, many of the foreign-born individuals may have had unreported earlier HIV diagnoses and were misclassified as late diagnoses. Others were unlikely to have acquired HIV locally and may be misclassified when we include them among people diagnosed with HIV as a

FIGURE 10-1: RATES OF HIV DIAGNOSES PER 100,000* AMONG BLACK PEOPLE BY NATIVITY, KING COUNTY, WA, 2010 - 2019



King County resident, as residence at diagnosis is generally assumed a proxy of residence at time of infection. When we look at the date of immigration to the U.S. relative to HIV diagnosis date, we found 32% of the 41 foreign-born Black people who had this information documented (49% of 84 total) were diagnosed with HIV within one year of their move to the U.S. Among U.S.-born Black people, 22% of 73 MSM and 29% of 41 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) Sexual Health Clinic offers prescriptions for PrEP to all Black MSM with the goal of improving health equity.¹ PrEP has been shown to be highly effective at preventing HIV, reducing the risk of infection among MSM by >95% when taken as directed.²

Finally, 2019 data from the PHSKC Sexual Health Clinic showed that 36% of Black MSM clinic patients were currently using PrEP, and 41% of Black MSM diagnosed with a bacterial STI and interviewed for partner services were using PrEP. In comparison, 44% of White MSM patients and 62% of White MSM with interviews were

currently using PrEP. The 2020 Seattle Pride Survey, which was conducted as an internet survey due to the COVID-19 pandemic, found that 5 of 8 Black MSM participants (62%) at higher-risk for HIV were currently using PrEP. Although small numbers of Black MSM (8) limit the robustness of this comparison, 42% of 110 higher-risk White MSM reported current PrEP use in the Pride survey.

Other Interventions: The PHSKC Sexual Health 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 HIV, 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 puts on events to build community among queer Black men, including quarterly educational forums and its annual Emerald City Black Pride event.⁴

FIGURE 10-2. HIV RISK CATEGORIES AMONG BLACK PEOPLE LIVING WITH HIV BY NATIVITY, KING COUNTY, WA, 2019

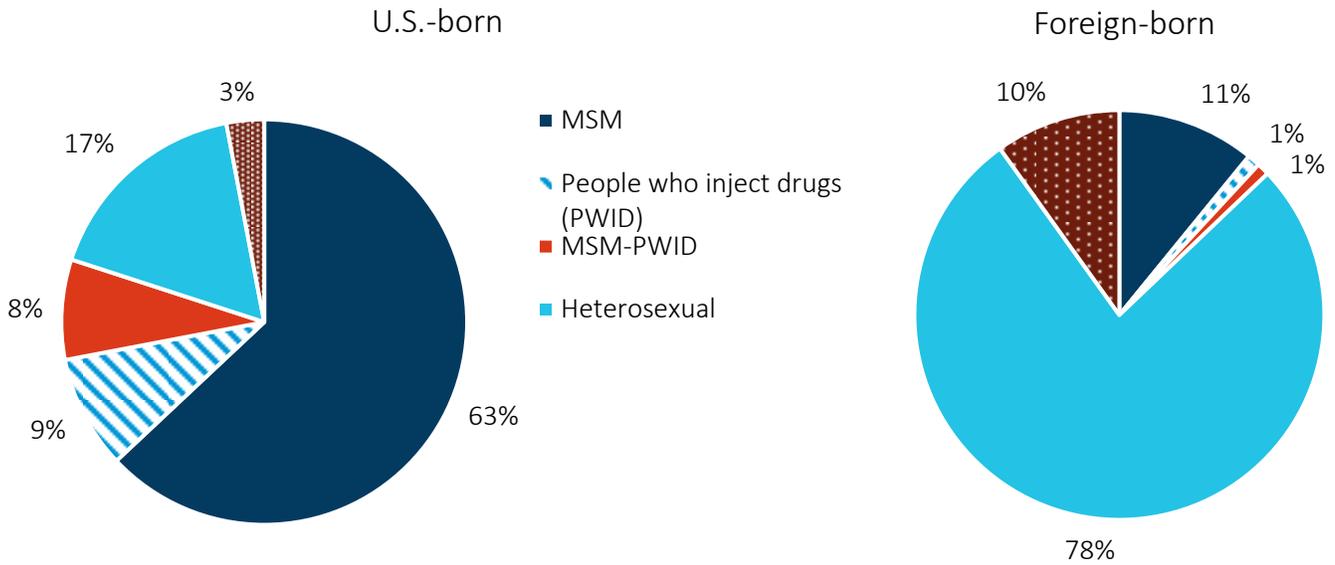
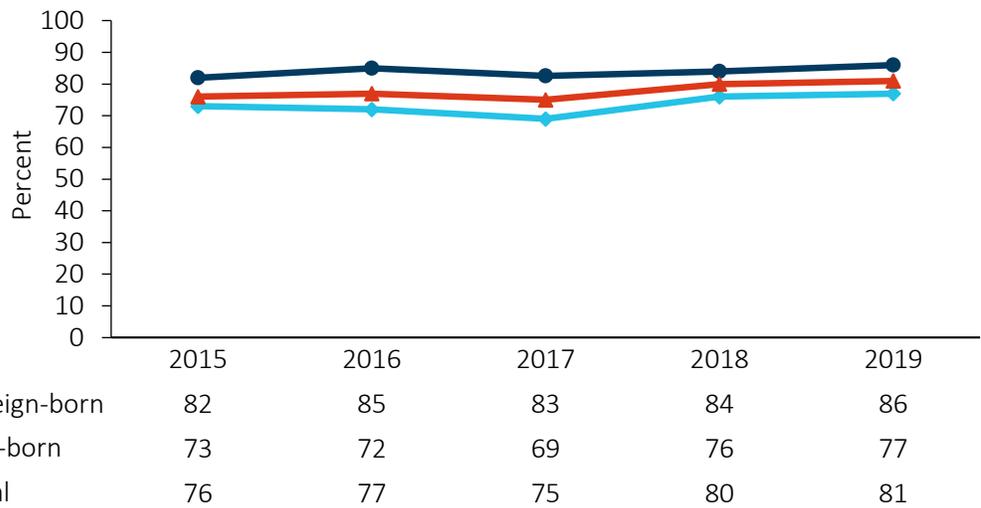


FIGURE 10-3: VIRAL SUPPRESSION AMONG BLACK PEOPLE LIVING WITH HIV BY NATIVITY, KING COUNTY, WA 2015-2019



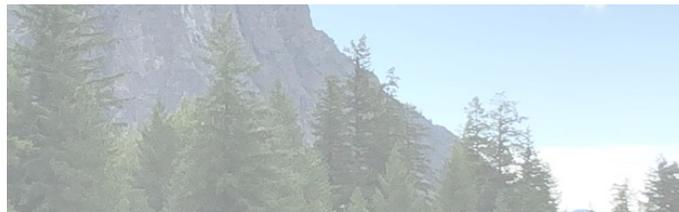
Contributed by Francis Slaughter, Audrey Brezak, and Susan Buskin

References

- Public Health Sexual Health Clinic at Harborview. Available at <http://www.kingcounty.gov/depts/health/communicable-diseases/hiv-std/patients/clinic.aspx> Accessed 10/12/2020.
- 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.
- POCAAN. Available at <http://pocaan.org/POCAAN/> Accessed 10/12/2020.
- Center for MultiCultural Health. HIV/STD Prevention and Education for African-American Men. Available at http://multiculturalhealth.org/programs_svcs/aatpbrotherslink.htm Accessed 10/12/2020

HIV/AIDS Fact Sheet

Latinx Populations



KEY POINTS

HIV diagnosis rates are higher among Latinx people relative to overall King County rates, 18 versus 8 per 100,000.

From 2015 to 2019, HIV diagnosis rates decreased 17% among U.S.-born Latinx people and increased 5% among foreign-born Latinx people

In 2019, over 84% of Latinx people living with HIV were virally suppressed.

OVERVIEW OF HIV EPIDEMIOLOGY

In 2019, there were 228,662 Latinx people living in King County, of whom approximately 60% were U.S.-born (**Table 11-1**). At the end of 2019, there were 1,046 Latinx people living with diagnosed HIV (PLWH), which equals a prevalence of 0.45%. In comparison, the overall population HIV prevalence is 0.32% and 0.29% among non-Latinx White county residents. The prevalence of HIV was more than 1.8 times higher in foreign-born Latinx people compared to Latinx people born in the U.S. (0.36% vs 0.60%, respectively). Among the 549 foreign-born PLWH residing in King County, 60% were born in Mexico, 16% in Central America, 16% in South America, and 8% were born elsewhere (**Figure 11-1**).

In 2019, there were 40 new diagnoses of HIV among Latinx people in King County (17.6 per 100,000). The diagnosis incidence was 75% higher among foreign-born relative to U.S.-born Latinx people (27.7 vs. 10.9 per 100,000). Latinx diagnoses rates were substantially higher than the overall diagnosis rate for King County residents of all races/ethnicities in 2019 (8.2 per 100,000) and non-Latinx White people (6.2 per 100,000). The rate of new HIV diagnoses among Latinx people declined 5% between 2015 and 2019, with the largest decline observed among U.S.-born Latinx (17%) with a 5% increase among foreign-born Latinx (**Figure 11-2**). For comparison, the diagnosis rate in King County overall decreased by 18% and a 24% among non-Latinx White people over this same time period. Over these same five years (2015-2019), the percent of new diagnoses occurring among Latinx people increased from 18 to 22%.

AGE AND GENDER

Overall, 9% of Latinx PLWH in King County were assigned female sex at birth, including 6% of U.S.-born Latinx people and 12% of foreign-born Latinx people. For Latinx people diagnosed between 2015 and 2019, U.S.-born Latinx people were younger than foreign-born Latinx people at the time of diagnosis; 42% and 22%, respectively, were under age 30. Twelve percent of foreign-born Latinx people diagnosed with HIV between 2015 and 2019 were age 50 or older relative to 4% of U.S.-born Latinx people.

HIV RISK CATEGORY

Figure 11-3 shows the distribution of HIV risk categories among U.S.-born and foreign-born Latinx people living in King County in 2019. Men who have sex with men (MSM) comprise the majority of new HIV infections among both U.S.-born and foreign-born Latinx people. Latinx MSM account for 10% of the estimated King County MSM population but account for 26% of all new diagnoses among MSM. Heterosexual risk is almost four times as common among foreign-born Latinx people (16%) as among those born in the U.S. (4%), and being an MSM-PWID was more than twice as common among U.S.-born compared to foreign-born PLWH (12% vs. 5%). Individuals with an

TABLE 11-1: KEY HIV METRICS FOR LATINX PEOPLE, KING COUNTY, WA, 2019

Key Metrics	U.S.-born Latinx People ^A	Foreign-born Latinx People	Total Latinx People
Estimated Number of Latinx people in King County (2019) ^B	137,909	90,753	228,662
HIV Prevalence in 2019			
Number of Latinx people Living with HIV	497	549	1,046
Prevalence (%)	0.36%	0.60%	0.46%
Percent of all Prevalent Cases who are Latinx	9%	33%	15%
HIV Incidence (New Diagnoses) ^C			
2019 Number of New Diagnoses	15	25	40
2019 Incidence Rate per 100,000 ^D	10.9	27.7	17.6
5-year Trend (2015-2019)	17.3% decline	5.1% increase	4.6% decline
Viral suppression among HIV+ Latinx people ^E	81%	86%	84%

^A U.S.-born includes those of unknown nativity.

^B Population estimates derived from the U.S. Census Bureau and American Community Survey.

^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 2019 in Figure 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 2019, 94% of U.S.-born, 95% of foreign-born, and 95% of all Latinx people were suppressed.

unknown risk factor comprised 9% of foreign-born Latinx people and 2% of U.S.-born Latinx people and are excluded from the figure.

VIRAL SUPPRESSION

Among Latinx people living with diagnosed HIV, the proportion with documented viral suppression increased over the past five years, from 78% in 2015 to 84% in 2019. Eighty-six percent of foreign-born Latinx people were virally suppressed in 2019, relative to 81% of U.S.-born Latinx people. This compares to 84% of all PLWH and 86% of White PLWH being virally suppressed in 2019.

TIMING OF HIV DIAGNOSES

Among 190 Latinx King County residents diagnosed with HIV in the past five years (2015-2019), 147 (77%) had a known HIV testing history. Of the 147, 74 (50%) had a negative HIV test within the prior year. This intertest interval – defined as the time between a person’s last negative and first positive HIV test – is a measure of how well HIV testing is reaching the population at risk for HIV. U.S.-born Latinx people were more likely than foreign-born Latinx people to have a negative HIV test within a year of diagnosis (61% vs. 40%, respectively). Overall 46% of Latinx people had a negative HIV screening test within a year of diagnosis relative to 47% of non-Latinx White PLWH. Late HIV diagnosis is sometimes defined as an

AIDS diagnosis within one year of an HIV diagnosis. By this definition, 25% of 190 Latinx people diagnosed with HIV between 2015 and 2019 were diagnosed late, including 35% of foreign-born Latinx people and 13% of U.S.-born Latinx people. This compares to 18% of White PLWH and 24% of all PLWH diagnosed in the same time period.

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) Sexual Health Clinic offers prescription of PrEP to interested Latinx people 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, reducing the risk of HIV infection among MSM by >90% when taken as directed.²

Finally, 2019 data from the PHSKC Sexual Health Clinic showed that 58% of Latinx MSM clinic patients were currently using PrEP, and 62% of Latinx MSM diagnosed with a bacterial STI and interviewed for partner services were using PrEP. The 2020 Seattle Pride Survey, which was conducted as an internet survey due to the COVID-19 pandemic, found that 26% of Latinx MSM at higher-

FIGURE 11-1: COUNTRY OR REGION OF BIRTH AMONG FOREIGN-BORN LATINX PEOPLE LIVING WITH HIV, KING COUNTY, WA, 2019

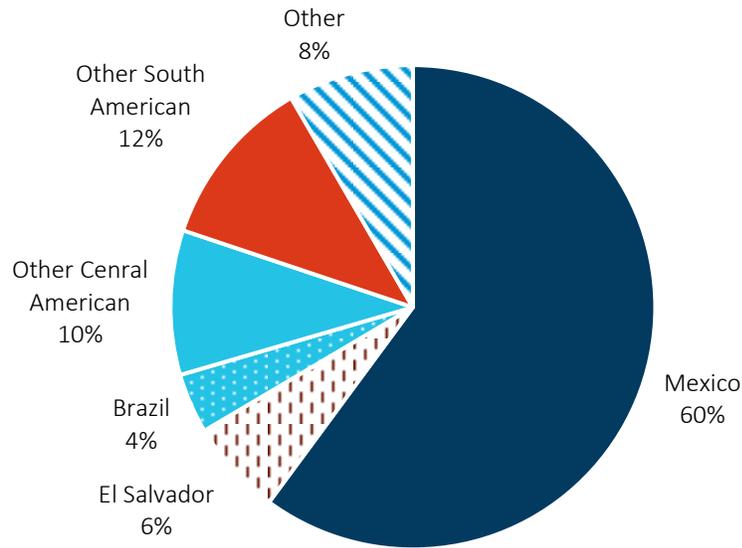
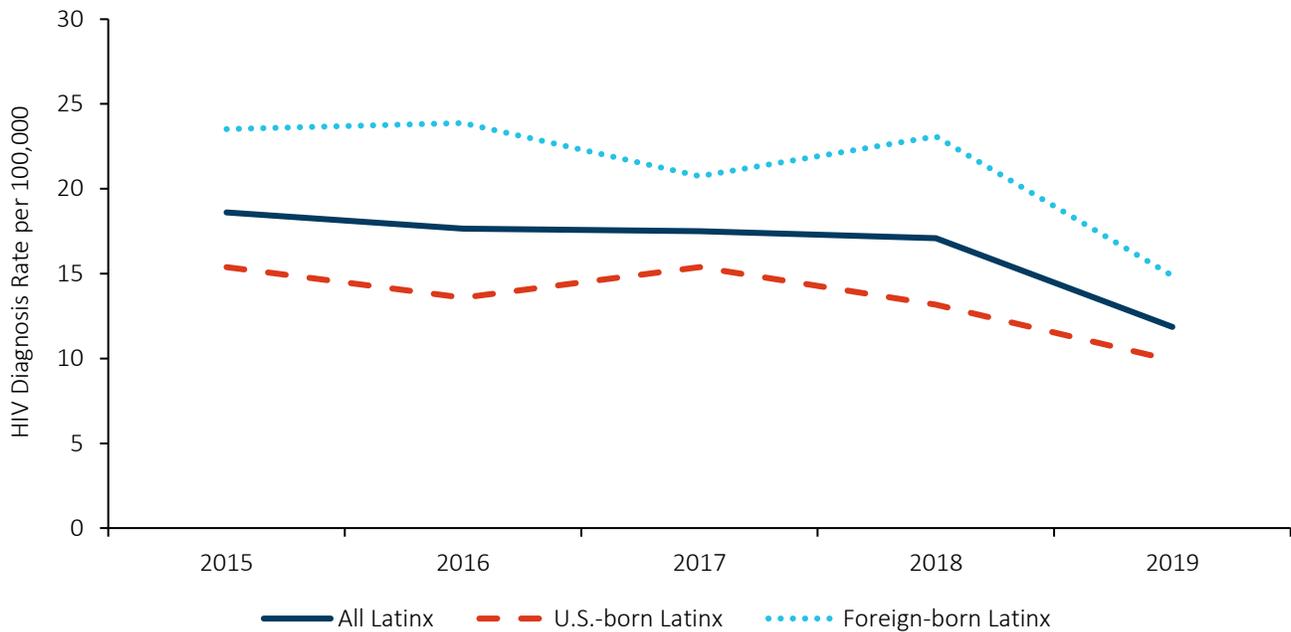
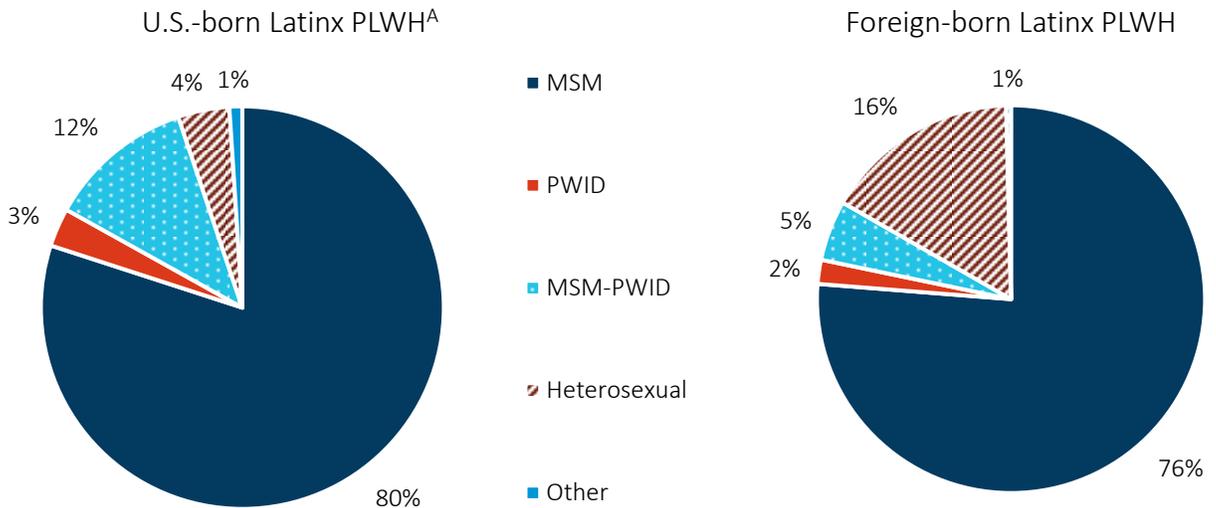


FIGURE 11-2: HIV DIAGNOSIS RATES AMONG LATINX PEOPLE BY NATIVITY, KING COUNTY, WA, 2015-2019



Rates are per 100,000 and shown as 3-year rolling averages to reduce random fluctuations year-to-year.

FIGURE 11-3. HIV RISK CATEGORIES AMONG LATINX PEOPLE LIVING WITH HIV BY NATIVITY, KING COUNTY, WA, 2019



^AU.S. Born includes unknown nativity; MSM = Men who have sex with men; PWID = People who inject drugs

risk for HIV were currently using PrEP, although the number of Latinx MSM surveyed was small (n=23). In comparison, 42% of White higher risk MSM and 41% of all higher risk MSM were currently using PrEP at the time of survey completion.

Other Interventions: HIV testing is available at the PHSKC Sexual Health Clinic and other PHSKC 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).

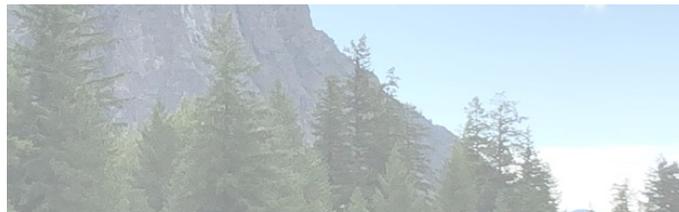
Contributed by Francis Slaughter, Audrey Brezak, and Susan Buskin

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

In 2019, MSM comprised 82% of all new HIV diagnoses in King County.

Since 2015, the rate of new diagnoses among MSM has declined 30%.

HIV among MSM in King County is characterized by profound racial and ethnic disparities. In 2019 the estimated rate of new HIV diagnoses were 2.5 and 3.7 times higher in Black and Latino MSM than in White MSM. Latinx MSM account for 10% of the estimated King County MSM population but account for 26% of all new diagnoses among MSM.

Among MSM with any viral load measurements in 2019, 94% were virally suppressed.

Approximately 1 in 4 HIV-negative MSM in King County is currently using PrEP, and 47% of MSM at higher risk of HIV are estimated to be using PrEP.

OVERVIEW OF HIV EPIDEMIOLOGY

In King County, men who have sex with men (MSM) have been, and continue to be, the population most heavily impacted by the HIV epidemic. In 2019, MSM, including MSM who inject drugs, accounted for 69% of all new HIV diagnoses in King County and 82% of all diagnoses where an exposure category was identified. There were 126 new HIV diagnoses among MSM in 2019. This corresponds to an estimated rate of new diagnosis among MSM of 232 per 100,000 MSM, which is a 30% reduction in the rate of new diagnoses since 2015 (Table 12-1, Figure 12-1). In 2019, MSM who inject drugs accounted for 10% of all new HIV diagnoses among MSM (Figure 12-2).

Approximately one in 10 MSM (8.9%) in King County is living with HIV, although this varies by race (Figure 12-3). An estimated 85% of HIV-positive MSM are virally suppressed. (Among MSM with a viral load reported to Public Health – Seattle & King County (PHSKC) in 2018, 95% were virally suppressed.) In 2019, 57% of new HIV diagnoses among MSM occurred in individuals who were between 20 and 34 years old, an age group that accounts for only 15% of the estimated population of King County males. Nearly half (48%) of all new HIV diagnoses among MSM occurred among White MSM, who comprise 68% of the male population in King County. Latinx MSM and Black MSM accounted for 26% and 12% of all new HIV diagnoses, respectively, but were only 11% and 7% of the King County male population. In 2019, the estimated rate of new HIV diagnoses were 2.5 and 3.7 times higher in Black and Latino MSM than in White MSM.

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 2015 through 2019, 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: 6.3% (2015), 6.4% (2016), 6.6% (2017), and 6.7% (2018) and 6.5% (2019). (Personal Communications: Mark Serafin, Washington State Department of Health and Lin Song, Assessment, Policy Development and Evaluation, PHSKC). 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 the male population, the observed change in the rates would only be modestly different.

HIV PREVENTION INTERVENTIONS

HIV Testing: PHSKC and Washington State Department of Health (WA DOH)

TABLE 12-1: KEY HIV METRICS FOR MEN WHO HAVE SEX WITH MEN, KING COUNTY, WA, 2019

Key Metrics	TOTAL MSM	White MSM	Black MSM	Latinx MSM
HIV Prevalence in 2019				
Number of MSM Prevalent Cases	5,334	3,281	571	849
Prevalence (%)	8.9%	8.9%	14.6%	14.8%
Percent of All Cases in Each Race/Ethnicity Group Occurring in MSM (Among Cases with Known Risk)	82%	91%	50%	86%
HIV Incidence (New Diagnosis)				
2019 Number of New Diagnoses	126	61	15	33
2019 Diagnosis Incidence Rate per 100,000 MSM	232	182	448	673
5-year Trend (% Decline 2015-2019)	30%	35%	45%	13%
Estimated Number of MSM ^A in King County (2018)				
	59,629	36,788	3,917	5,753
Viral Suppression among HIV+ MSM ^B				
	85%	87%	77%	85%

^A MSM population are estimated as 6.5% of males age 15+ years in 2019.

^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 2019, 95% were virally suppressed.

FIGURE 12-1. RATE OF NEW HIV DIAGNOSIS AMONG MSM OVERALL AND BY SELECTED RACE/ETHNICITY, KING COUNTY, WA, 2015-2019

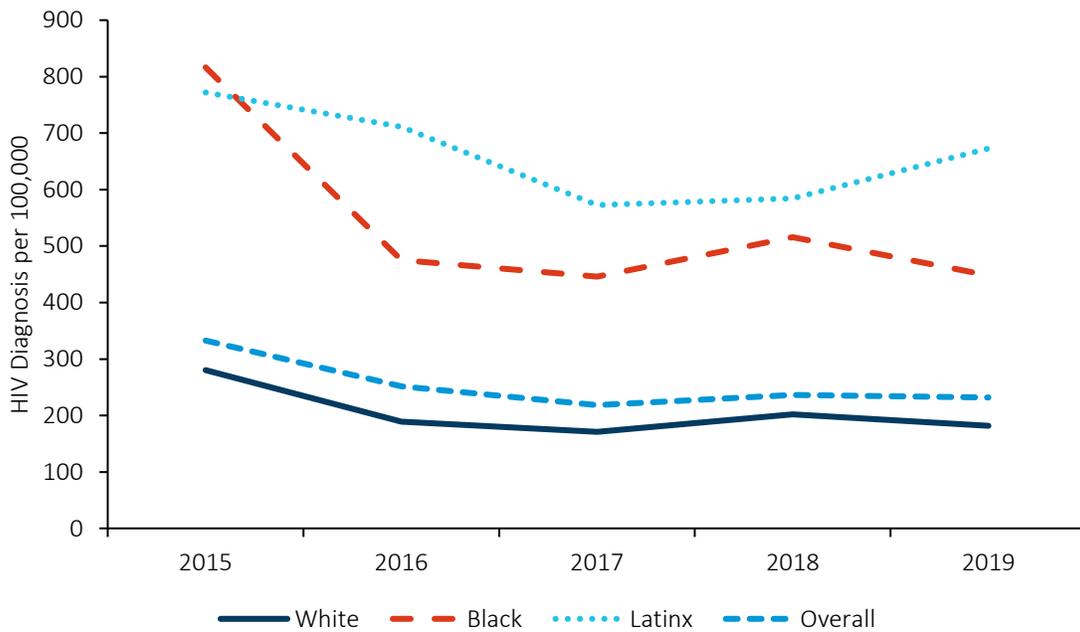
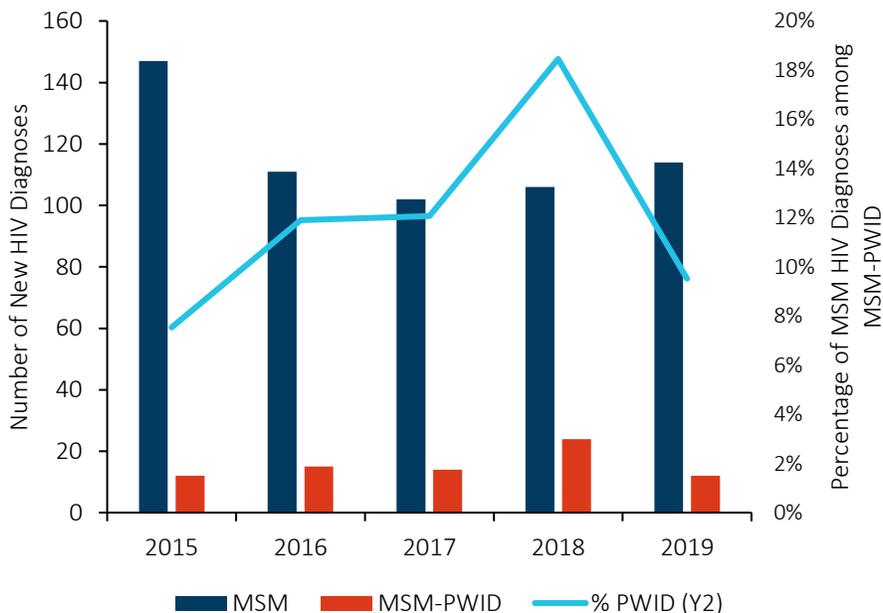


FIGURE 12-2. NUMBER OF NEW HIV DIAGNOSIS AMONG ALL MEN WHO HAVE SEX WITH MEN (MSM), MSM WHO INJECT DRUGS (MSM-PWID) AND PERCENTAGE OF NEW MSM HIV DIAGNOSES AMONG MSM-PWID, KING COUNTY, WA, 2015-2019



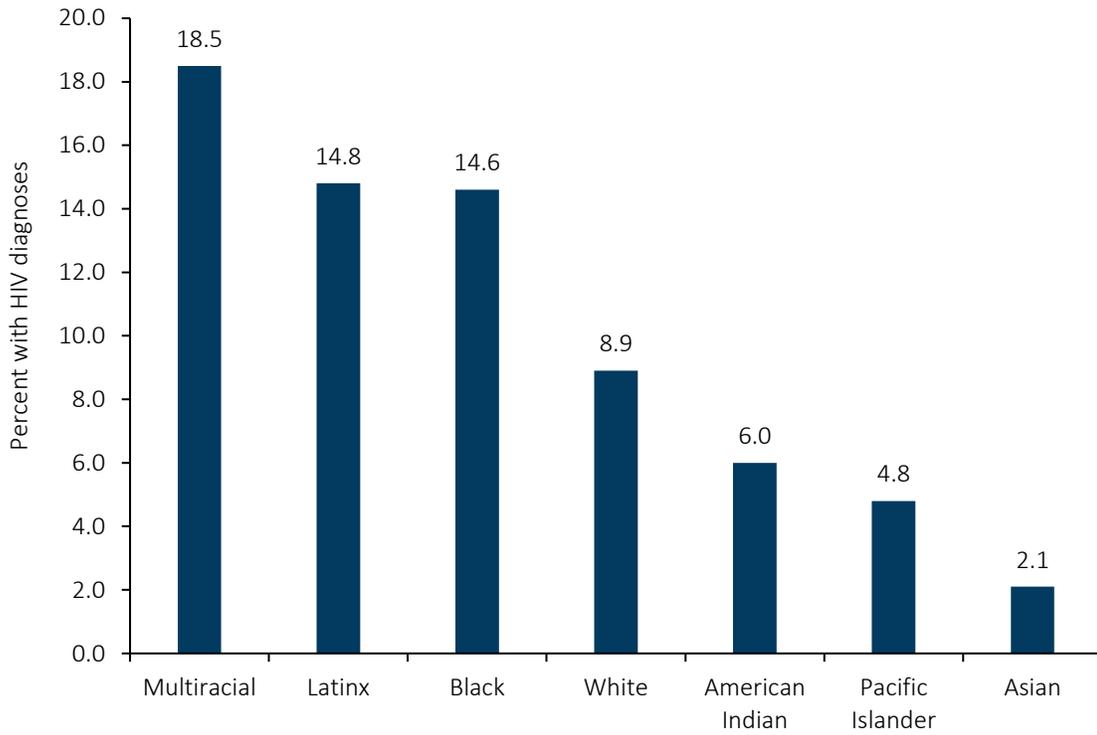
fund HIV testing, primarily for people at higher risk of HIV. Since 2012, the number of HIV tests performed among MSM increased by 30%, and in 2019 there were 7,941 publicly-funded HIV tests performed for MSM in King County. In 2019, the median time since last HIV negative test among newly diagnosed MSM was 9.0 months. PHSKC investigators obtained HIV testing histories for 59% of MSM diagnosed with HIV in King County in 2019 and, of these, 8% had never had a prior negative test. Of MSM with a negative HIV test prior to an HIV diagnosis in 2019, 81% 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 Sexual Health Clinic at Harborview Medical Center, which provides walk-in services five days per week. The clinic provides care on a sliding fee scale.

PrEP: Overall, PHSKC estimates that approximately 28% (range: 20-35%) of all MSM in King County were on PrEP in 2019, and approximately 47% (range: 39-58%) of MSM at higher risk for HIV were on PrEP. PHSKC’s annual 2020 Pride survey suggested approximately 32% of all HIV-uninfected MSM in King County had ever taken PrEP and 43% of higher-risk MSM were currently using PrEP in the summer of 2020. PHSKC promotes PrEP for MSM in several ways, including providing PrEP referrals via STD partner services, providing PrEP at the PHSKC Sexual Health Clinic, and maintaining (on the PHSKC website) a

publicly available list of PrEP providers and a map of PrEP provider locations. In 2019, 170 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 Sexual Health clinic initiated 321 MSM patients on PrEP in 2019, and had 635 patients actively on PrEP as of December 2019.

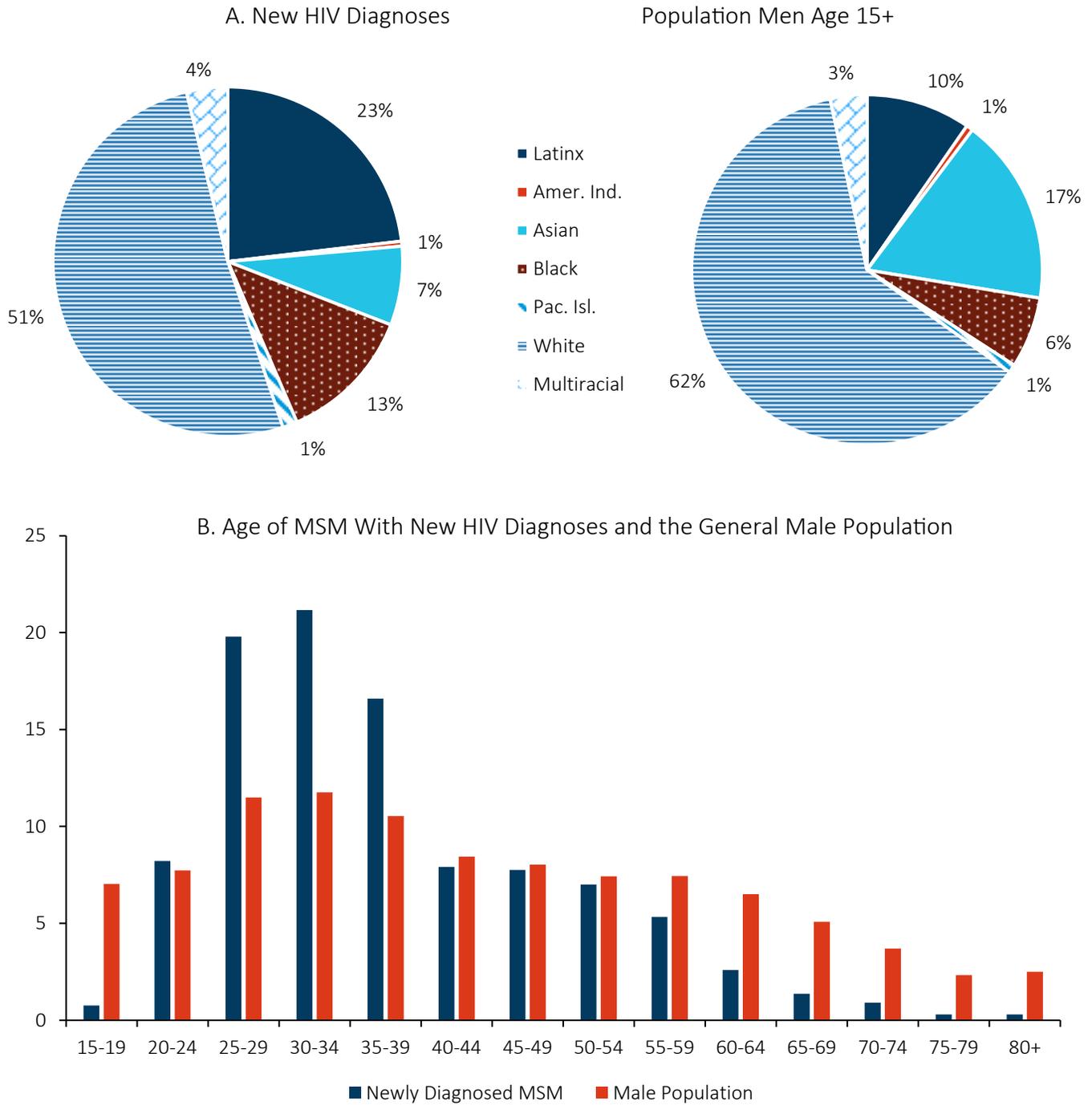
Condom Distribution: In 2019, PHSKC distributed 177,000 condoms at various locations throughout the county. WA DOH provided an additional 276,359 condoms to agencies and organizations in King County. The 2019 Seattle Pride survey asked MSM participants where they usually obtained condoms. Fifty-three 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 has several innovative 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 Sexual Health Clinic. To date, the Sexual Health Clinic has distributed 870 Tool Kits, including 14,790 condoms and 2,610 packets of lubricant. Other projects include increased delivery and promotion of free condoms through a map and a new community distribution program (see Pillar 3 – Prevention article elsewhere in this report).

FIGURE 12-3. PREVALENCE OF DIAGNOSED HIV INFECTION AMONG MSM BY RACE/ETHNICITY, KING COUNTY, WA, 2019



Contributed by Audrey Brezak and Francis Slaughter

FIGURE 12-4. (A) RACE/ETHNICITY AND (B) AGE DISTRIBUTION OF NEW HIV DIAGNOSES AMONG MEN WHO HAVE SEX WITH MEN (MSM) AGE 15+ COMPARED TO ALL MEN AGE 15+, KING COUNTY, WA, 2015-2019



Contributed by Audrey Brezak and Francis Slaughter

HIV/AIDS Fact Sheet

People Who Inject Drugs (PWID)



KEY POINTS

Following an outbreak of HIV among PWID in 2018, the number of new HIV diagnoses among PWID declined 47% in 2019. Sixteen percent of HIV cases in King County were among people who inject drugs (PWID) in 2019.

The decrease in HIV among PWID occurred among both men who have sex with men (MSM) PWID (24 to 12 cases) and non-MSM PWID (31 to 17 cases).

PWID who are MSM and who inject methamphetamine have the highest prevalence of HIV (35-45%) of any definable group in King County.

More than three-fourths (76%) of HIV-positive PWID were virally suppressed in 2019 compared to 84% of all people living with HIV (PWH). Eighteen percent of all virally unsuppressed people in King County inject drugs.

In 2019, Public Health – Seattle & King County's syringe services programs (SSP) exchanged nearly 7.5 million syringes.

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

OVERVIEW OF HIV EPIDEMIOLOGY AND DRUG USE BEHAVIORS AMONG PWID

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. There was an average of 8 cases per year in 2014-2017 among PWID who did not also report being a man who had sex with men (MSM), and 15 cases per year among PWID-MSM (**Figure 13-1**). (PWID-MSM are typically classified as a separate category due to dual possible HIV transmission routes.) In 2018, HIV diagnoses among PWID, including MSM-PWID, increased 162% (21 to 55) from 2017. In 2019, the number of PWID cases decreased 47% (55 to 29). Between 2018 and 2019, the percentage of all new diagnoses occurring in non-MSM PWID decreased from 14% to 9%, while the percentage occurring among MSM-PWID decreased from 11% to 7%. In summary, 2018 appears to have been an outlier year with spiking HIV diagnoses among PWID, including PWID-MSM. The number of new diagnoses and the proportion of cases attributed to injection drug use declined in 2019. These estimates have returned to pre-2018 levels among PWID-MSM, while they remain somewhat elevated among non-MSM PWID.

Based on data from routine HIV surveillance, we estimate that the HIV prevalence among non-MSM PWID is approximately 1-4% and 12-19% among PWID-MSM. Data from the National HIV Behavioral Surveillance surveys of MSM and PWID have found a higher prevalence of HIV among the subset of PWID-MSM who inject methamphetamine (35-45%). The prevalence of hepatitis C antibodies among all PWID is high at approximately 70-75%.

The 2019 survey of Public Health – Seattle & King County (PHSKC) syringe services program (SSP) 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 to those from the 2017 survey. Nearly 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., the combination 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 13-2**). 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. This increased to 26,500 in 2018, including 5,000 PWID-MSM and 21,500 non-MSM. Due to only a modest increase in the overall population size and no new data on the prevalence of injection drug use in the population, we estimated that there

TABLE 13-1: KEY HIV METRICS FOR PEOPLE WHO INJECT DRUGS (PWID), KING COUNTY, WA, 2019

KEY METRICS	PWID (NON-MSM)	PWID-MSM
ESTIMATED NUMBER OF PWID IN KING COUNTY (2019)	~21,500	~5,000
HIV PREVALENCE IN 2019		
Number of PWID Living with HIV	290	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)		
2019 Number of New Diagnoses	17	12
2019 Diagnosis Incidence Rate per 100,000 PWID	80 per 100,000	275 per 100,000
5-year Trend (2015-2019) ^A	Increase overall with a significant outbreak in 2018	No change overall with a large increase in 2018
VIRAL SUPPRESSION AMONG HIV+ PWID^B		
	76%	80%

Abbreviations: PWID, people who inject drugs; MSM, men who have sex with men.
^A 5-year trend based on case counts instead of rates due to uncertainty regarding population sizes.
^B Among all PWID with diagnosed HIV-infection. Viral suppression defined as plasma HIV RNA < 200 copies/mL.

was no change in King County PWID population size in 2019.

HIV PREVENTION AND CARE INTERVENTIONS

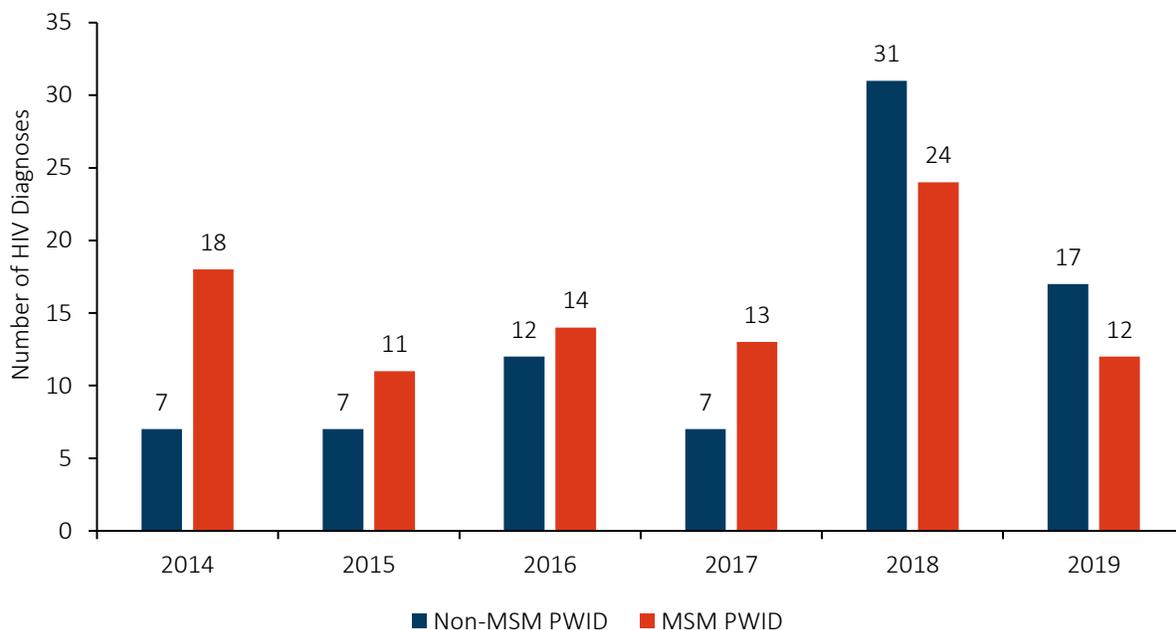
Syringe Services Program (SSP): SSPs are effective interventions for decreasing the risk of HIV transmission among PWID. The PHSKC SSP is the second-longest running exchange program in the United States, and exchanged nearly 7.5 million syringes in 2019. The PHSKC SSP includes two fixed locations (downtown 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 Prevention article for more information on these services. In the 2019 PHSKC SSP survey, clients reported that heroin was the most commonly used drug, but methamphetamine use (on its own and in combination with heroin [known as goofball]) is also very common and has been increasing over the past decade (Figure 13-2).

HIV Testing and Viral Suppression: HIV testing among PWID in the Seattle area declined between 2004 and 2015. 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 reported HIV testing in the past year, while data from the 2017 and 2019 PHSKC SSP survey found that the percentage of respondents who HIV tested in the prior year increased from 56% to 66%. The boost in 2019 is likely a result of increased HIV testing outreach conducted due to the outbreak among PWID. In 2019, 76% of non-MSM PWID and 80% of PWID-MSM were virally suppressed; these estimates of viral suppression – particularly the estimate for non-MSM PWID – are lower than the estimated level of viral suppression among HIV positive people in King County overall (84%). 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 (pre-exposure prophylaxis) knowledge and use remain low among non-MSM PWID. In recent surveys of PWID, PrEP awareness ranged 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 PrEP.³ With respect to PWID, these guidelines state that health care providers should recommend PrEP initiation to patients who are MSM or transgender people who have sex with men and who

FIGURE 13-1: TRENDS IN HIV DIAGNOSES AMONG PEOPLE WHO INJECT DRUGS (PWID), KING COUNTY, WA, 2014-2019



have used methamphetamine in the past year (including injection), people diagnosed with syphilis or rectal gonorrhea, and to people 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.

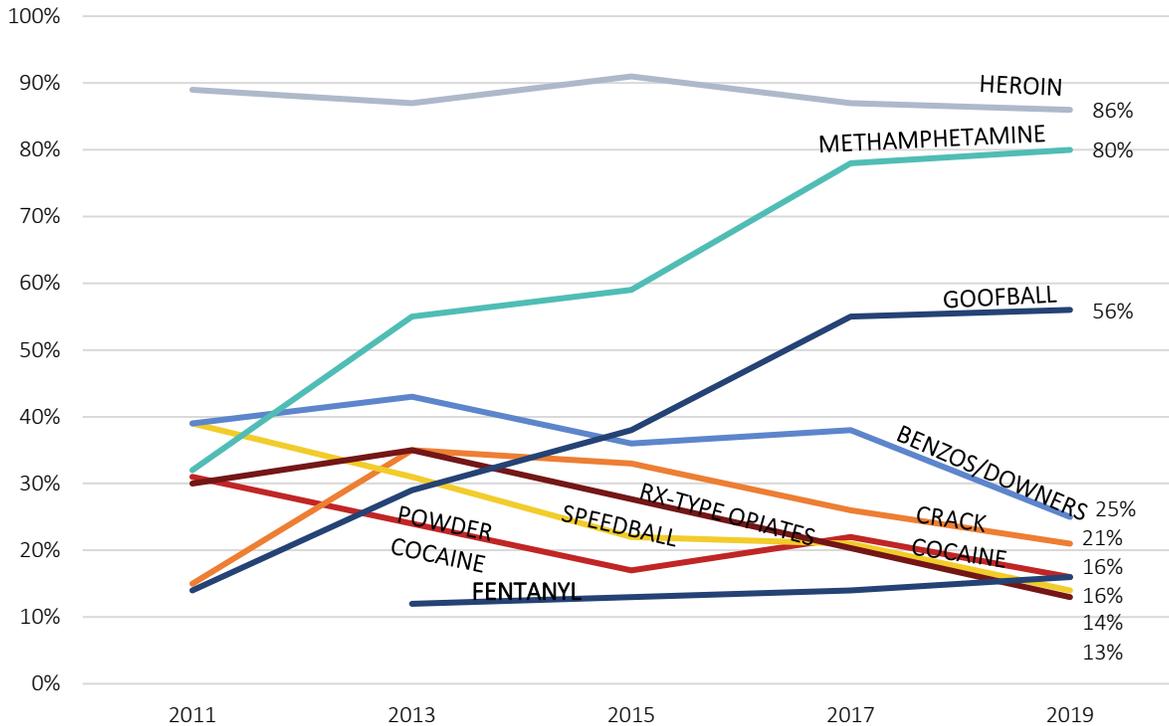
Medication for Opioid Use Disorder (MOUD): Two opioid agonist therapies, methadone and buprenorphine, have been shown to decrease HIV risk behaviors among PWID. In the 2019 PHSKC SSP survey, 33% of all SSP clients reported being currently in any type of treatment for substance use disorder; 19% of all clients were receiving methadone treatment and 12% were receiving buprenorphine treatment.

In 2019, PHSKC SSP staff provided MOUD referrals to 311 SSP clients. In the past, PHSKC SSP maintained a waitlist for methadone treatment, but there is currently no waitlist. 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. Given high levels of demand, the program expanded in late 2018 and is now located in a separate space above the SSP. During the year, Bupe

Pathways had 1,829 client visits with an average of 152 visits per month.

Max Clinic: The Max Clinic is a walk-in HIV care clinic located within the PHSKC Sexual Health Clinic at Harborview Medical Center. Patients are referred to the Max Clinic by HIV medical providers, social workers, and public health programs if they have had difficulty maintaining care engagement and viral suppression in conventional HIV care. The majority of patients are homeless or unstably housed and have substance use or mental health disorders. As of June 2020, 227 patients had ever enrolled in the Max Clinic and approximately 190 were currently enrolled. Among all people enrolled, 60% had used methamphetamine and 42% had injected drugs in the year prior to enrollment. Approximately 90% of people enrolled have achieved viral suppression at least once, and in mid-2020, 65% of patients were virally suppressed at their most recent lab, highlighting the effectiveness of this model for this population.

FIGURE 13-2. TRENDS IN REPORTED DRUG USE AMONG PUBLIC HEALTH – SEATTLE & KING COUNTY SYRINGE SERVICES PROGRAM (SSP) CLIENTS, 2011-2019



Note: Goofball refers to injecting heroin and methamphetamine at the same time.

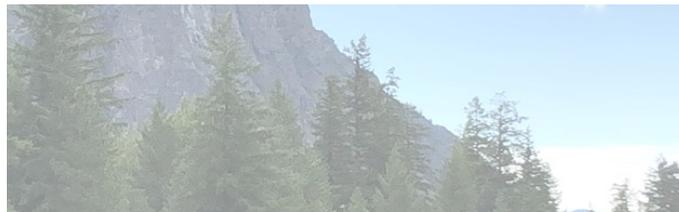
Contributed by Francis Slaughter, Audrey Brezak, Joe Tinsley, and Sara Glick

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 people 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

Transgender and Non-binary Populations



KEY POINTS

In 2019, 3 transgender women and no transgender men were known to have been diagnosed with HIV. Between 2015 and 2019 there were 10 HIV diagnoses among transgender women and one in a transgender man.

The 2020 Pride Survey found that the majority of transgender and non-binary people at increased risk for HIV were seeking STI and HIV testing services; 27% were on PrEP.

BACKGROUND

In this fact sheet we focus on HIV outcomes and prevention efforts among populations who are transgender and/or non-binary. Public Health – Seattle & King County (PHSKC) monitors health issues, including HIV, among transgender and non-binary people in King County through several surveys and data sources, including HIV surveillance data, intake forms completed by transgender and non-binary patients at the PHSKC Sexual Health Clinic, and an annual Pride Survey. The 2020 Pride Survey was administered as an online survey due to COVID-19-related cancellations of in-person events, including Trans* Pride and the Pride Parade. For this survey, Washington residents who are gay, lesbian, bisexual, transgender, non-binary, or genderqueer were eligible to participate and recruited through social media, listservs, and a virtual booth staffed by PHSKC. The datasets used in this fact sheet measured and labeled genders in distinct ways. Though we acknowledge that these words for people's genders can have distinct meanings and are not interchangeable, for the purposes of this fact sheet, we will collectively refer to the group of people who reported being transgender, non-binary, genderqueer, gender non-conforming and/or another identity as transgender and non-binary (TGNB).

OVERVIEW OF HIV EPIDEMIOLOGY

In 2019, three transgender women were diagnosed with HIV, and no transgender men were diagnosed with HIV. Over the five-year period of 2015-2019 the numbers of diagnoses were 10 and one respectively. At the end of 2019, there were 67 people living with HIV (PLWH) in King County who were known to be transgender, representing 1% of the 7,056 PLWH in King County. Among these 67 cases, 93% were transgender men, 36% were White, 31% were Hispanic/Latinx, 13% were Black, 4% were Asian, and 15% reported another race. (It is likely there are additional TGNB PLWH whose gender is not correctly reflected in the data, in part because HIV surveillance data have not recorded non-binary identities.) The percent of King County PLWH with a suppressed viral load was similar among transgender PLWH (87%) compared to the total King County PLWH population (84%). Because the U.S. Census does not provide a population size estimate for the number of King County residents who are TGNB, we are unable to calculate HIV incidence (diagnosis) rates or an estimate of the prevalence of HIV among TGNB people.

DEMOGRAPHIC AND HEALTH CHARACTERISTICS

Table 14-1 presents demographic and health characteristics among King County TGNB participants in the 2020 Pride Survey. Data are presented for transgender women (n=53), transgender men (n=63), and participants who were non-binary, genderqueer, and/or gender non-conforming (NB/GQ/GNC, n=281). Participants appear in multiple columns if they selected more than one gender. The majority of participants were White, over 30 years old, and attained a college degree. Over 90% of all participants had health insurance.

Slightly more transgender women (8%) reported being homeless in the past year than transgender men (6%) or NB/GQ/GNC participants (2%). Eleven percent of all TGNB participants reported being a current (tobacco) smoker. Sexual orientation differed between groups, with the majority of all TGNB participants (63%) identifying as queer. Approximately 1% of TGNB participants were HIV-positive by self-report. Illegal substance use was relatively uncommon. Approximately three-quarters (74%) of TGNB participants reported having oral, anal, or vaginal/front hole sex in the past year. The gender of sex partners varied across groups, with cisgender men being the most common overall (52%). Three percent of TGNB participants reported exchange sex for money, drugs, or other goods in the past year.

UTILIZATION OF HIV AND STD SERVICES

Table 14-2 summarizes utilization of HIV testing, pre-exposure prophylaxis (PrEP), and STI services among TGNB participants in the 2020 Pride Survey who lived in King County, reported sex in the past year, and did not have HIV. Data are presented in three groups by gender: transgender women, transgender men, and a combined group of NB/GQ/GNC people. People who selected more than one gender appear in multiple columns. A fourth group includes any TGNB participant who met the criteria for being at higher risk for HIV, which was based on a study of MSM clients of the PHSKC Sexual Health Clinic, reported a sex partner who was a man (cis or trans) *and* reported one or more of the following in the past year: ≥ 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). (We acknowledge that these criteria have not been validated among TGNB people and are a proxy for increased risk.)

There were 260 TGNB Pride Survey participants in 2020 who lived in King County, had sex in the past year, and did not report being HIV-positive. Among them 22 (8.5%) met the criteria for being at higher risk for HIV. Across all groups, a high proportion ($\geq 79\%$) reported ever testing for HIV and $\geq 86\%$ had ever heard of PrEP. Nearly all estimates of HIV and STI testing were highest among TGNB participants at increased risk for HIV, including STI testing in the past year (86%) and ≥ 2 HIV tests in the past two years (70%).

PREP USE

PrEP is recommended for transgender people who have sex with men and meet additional criteria including any

of the following in the past year: diagnosis of rectal gonorrhea or early syphilis, methamphetamine or poppers use, or exchanging sex for money or drugs.¹ Furthermore, PrEP is recommended for individuals who have an HIV-positive partner who is not virally suppressed or within 6 months of starting antiretroviral therapy. These criteria are not consistently available across all data sources, so PHSKC also uses criteria for being at “higher risk” for HIV outlined above.

Table 14-3 provides data on PrEP use among TGNB populations from four PHSKC data sources. PrEP use among TGNB people who have sex with men was highest in clients at the PHSKC Sexual Health Clinic (31% overall and 51% among those at “higher risk”) and those interviewed for partner services after a bacterial STI diagnosis (39%). (Estimates from the Sexual Health Clinic and STI partner services are limited to TGNB who have cisgender male partners only.) Current PrEP use (27%) was somewhat lower among TGNB respondents in the 2020 Pride Survey who had partners who were men (cisgender or transgender) and met criteria for being at higher risk for HIV. This lower estimate was to be expected since the survey was focused on the general TGNB population, and not a subset of people seeking or receiving STI-related services. Finally, in 2019-2020 the National HIV Behavioral Surveillance survey (NHBS) which focused specifically on transgender women and included some assigned male sex at birth (AMAB) non-binary participants, we found that 19% of participants who had oral, vaginal/front hole, or anal sex in the past year and 22% of participants at “higher risk” for HIV reported PrEP use in the past year.

As shown in **Table 14-2**, among TGNB respondents who had not taken PrEP the most common reasons for not taking PrEP were the perception of being at low risk, not knowing enough about PrEP, concerns about side effects, and concerns about interactions with hormones.

SEXUAL HEALTH CLINIC UTILIZATION

Table 14-4 includes data from PHSKC Sexual Health Clinic intake forms for visits completed by TGNB patients between July 2019 and June 2020. The data presented are for visits and may include multiple visits made by the same patient. 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. The table breaks down people who are non-binary or genderqueer (NB/GQ) according to whether they were AMAB or assigned female at birth (AFAB). During this period, TGNB patients comprised 2% of all Sexual Health Clinic visits. A

majority of patients reported ever testing for HIV with AMAB NB/GQ people and transgender men reporting the highest percentages (97% and 96%, respectively). Although any drug use was reported by 30% or more in each group, ≤4% reported injection drug use. Transactional sex was not uncommon (11-16%). Transgender women and AMAB NB/GQ people were the only groups among TGNB patients to report unstable housing (3% and 5%, respectively) and having HIV (2% and 4%, respectively).

CONCLUSION

In analyses of national and international data, transgender populations – and transgender women of color, in particular – have high incidence and prevalence of HIV. In King County, our routine HIV surveillance data do not reflect similarly high rates; the number of new HIV diagnoses among transgender people appears to be low. We acknowledge that our surveillance systems may undercount HIV cases among transgender populations due to miscoding of gender data, and there are scant data available for non-binary people. Moreover, small sample sizes of transgender women of color in our local surveys limit our ability to make firmer conclusions about the HIV prevalence in this population. PrEP remains a key component of HIV prevention efforts among TGNB populations at elevated risk for HIV. We estimate that 27-51% of TGNB people who meet these criteria are currently using PrEP. Data from our 2020 Pride Survey, provided a snapshot of demographic and health characteristics among TGNB survey participants. The large number of participants who identified as NB/GQ/GNC 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 and calls for improvement in our surveillance and other data systems.

Contributed by Audrey Brezak, Francis Slaughter, Susan Buskin, Courtney Moreno, and Sara Glick

Reference

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

TABLE 14-1: DEMOGRAPHIC CHARACTERISTICS OF TRANSGENDER & NON-BINARY (TGNB) PRIDE SURVEY PARTICIPANTS, KING COUNTY, WA, 2020

	Transgender Women ^A N=53		Transgender Men ^A N=63		Non-Binary, Genderqueer, and/ or Gender Non-Conforming ^A N=281		Total TGNB Participants N=362	
	n	Col %	n	Col %	n	Col %	n	Col %
Age <30 years	21	42%	30	48%	137	50%	169	48%
Race/Ethnicity^B								
Asian	6	11%	4	6%	35	13%	41	11%
Black	2	4%	3	5%	13	5%	15	4%
Hispanic/Latinx	4	8%	7	12%	29	11%	37	11%
Native American/AK Native	2	2%	2	3%	14	5%	16	4%
Pacific Islander/Native HI	0	0%	0	0%	4	1%	4	1%
White	46	87%	58	92%	241	86%	316	87%
Education								
<4-year college degree	21	41%	28	44%	111	40%	144	40%
Four-year college degree	15	29%	21	33%	98	35%	124	35%
>4-year college degree	15	29%	14	22%	71	25%	91	25%
Annual Income								
< \$15,000	9	18%	12	21%	48	18%	63	18%
\$15,000-\$50,000	17	34%	28	50%	135	50%	163	47%
>\$50,000	24	48%	16	29%	88	32%	119	34%
Has health insurance, currently	49	94%	61	97%	257	93%	334	94%
Homeless in the last year	4	8%	4	6%	7	2%	12	3%
Substance use, past year								
Injection drug use	1	2%	1	2%	3	1%	3	1%
Cocaine or crack	3	6%	1	2%	21	8%	22	6%
Methamphetamine	0	0%	0	0%	3	1%	3	1%
Poppers	1	2%	3	5%	20	7%	22	6%
Prescription painkillers (recreational)	3	6%	5	8%	13	5%	17	5%
Tobacco smoking (current)	4	8%	10	16%	34	12%	40	11%
Sexual orientation^B								
Bisexual	15	28%	19	30%	78	28%	102	28%
Gay	5	9%	16	25%	57	20%	69	19%
Lesbian	24	45%	0	0%	36	13%	56	15%
Pansexual	13	25%	9	14%	88	31%	96	27%
Queer	21	40%	37	59%	197	70%	227	63%
Straight	4	8%	2	3%	3	1%	7	2%
Another sexual identity	3	6%	6	10%	21	7%	29	8%
HIV positive	0	0%	0	0%	3	1%	3	1%
Oral, anal, or vaginal/front hole sex, past year	37	70%	44	70%	215	77%	266	74%
Gender of sex partners, past year (if had oral, anal, or vaginal/front hole sex)								
Transgender women	16	43%	4	10%	40	19%	52	20%
Transgender men	7	19%	10	24%	40	19%	49	19%
Non-binary, assigned female at birth	7	19%	6	14%	67	32%	72	28%
Non-binary, assigned male at birth	7	19%	3	8%	45	22%	50	20%
Cisgender women	19	51%	17	40%	73	34%	97	37%
Cisgender men	14	38%	25	58%	113	53%	136	52%
Transactional sex, past year	2	5%	1	2%	7	3%	7	3%

^A Participants can appear in multiple columns if they selected more than one gender. For example, transgender participants who selected “woman” and “non-binary, genderqueer, and/or gender non-conforming” appear in both columns. Participants were categorized as transgender women if they selected “woman” for their gender and indicated they were transgender. Participants were categorized as transgender men if they selected “man” for their gender and indicated they were transgender. Participants were categorized as non-binary, genderqueer, and/or gender non-conforming if they selected that option for their gender.

^B Participants could select more than one option and can appear in multiple rows (i.e., column percents sum to >100%).

Note: Column totals do not always sum to the overall N for each column due to missing data.

TABLE 14-2: UTILIZATION OF HIV AND STD SERVICES AMONG TRANSGENDER & NON-BINARY (TGNB) PRIDE SURVEY RESPONDENTS WHO HAD ORAL, ANAL, OR VAGINAL/FRONT HOLE SEX IN THE PAST YEAR AND REPORTED A NEGATIVE OR UNKNOWN HIV STATUS, KING COUNTY, WA, 2020

TGNB Participants who had oral, anal, or vaginal/front hole sex in the past year and do not have HIV ^A				
	Transgender Women ^B (n=37)	Transgender Men ^B (n=44)	Non-Binary/ Genderqueer/ Gender non-conforming ^B (n=213)	TGNB Participants at Higher Risk for HIV ^C (n=22)
Sexually transmitted infection testing, past year	42%	36%	50%	86%
Tested for HIV, ever	79%	82%	82%	95%
≥2 HIV Tests, prior 2 years	32%	23%	33%	70%
Heard of PrEP	86%	98%	94%	95%
Currently on PrEP	5%	7%	5%	27%
Barriers to PrEP, if never taken PrEP				
Perceive self as low risk	49%	61%	71%	32%
Cost concerns	3%	2%	5%	0%
Don't know where to get it	8%	7%	5%	9%
Don't know enough about it	16%	18%	14%	14%
Concerns about side-effects	8%	5%	10%	9%
Taking a daily medication would be challenging	11%	9%	7%	14%
Requires too many doctors' appointments	5%	5%	4%	0%
Concern that PrEP may interact with hormones	19%	14%	7%	9%

^A Participants can appear in multiple columns if they selected more than one gender. For example, transgender participants who selected "woman" and "non-binary, genderqueer, and/or gender non-conforming" appear in both columns.

^B Participants were categorized as transgender women if they selected "woman" for their gender and indicated they were transgender. Participants were categorized as transgender men if they selected "man" for their gender and indicated they were transgender. Participants were categorized as non-binary, genderqueer, and/or gender non-conforming if they selected that option for their gender.

^C "Higher risk for HIV" was defined as not being HIV-positive, having sex with a male partner (cis or trans) in the past year, and ≥1 of the following in the past year: ≥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 14-3. PREP USE AMONG TRANSGENDER & NON-BINARY (TGNB) PEOPLE WHO REPORTED A NEGATIVE OR UNKNOWN HIV STATUS, KING COUNTY, WA, 2018-2020

Data Source	Population	PrEP Use
PHSKC Partner Services, 2018-2019	TGNB cases who reported sex with cis-gender men (N=54)	39% currently on PrEP
	-Transgender women	-40% currently on PrEP
	-Transgender men	-40% currently on PrEP
	-Non-binary/genderqueer people	-38% currently on PrEP
PHSKC Sexual Health Clinic, 2019	TGNB patients who reported sex with cis-gender men (N=139)	31% currently on PrEP
	TGNB patients who reported sex with men and met criteria for being at higher risk of HIV (N=71)	51% currently on PrEP
2020 Pride Survey	TGNB respondents who reported oral, anal, or vaginal/front hole sex in the past year	
	-Transgender women	-5% currently on PrEP
	-Transgender men	-7% currently on PrEP
	-NB/GQ/GNC people	-5% currently on PrEP
	TGNB respondents who reported sex with men (cisgender or transgender) and met criteria for being at higher risk of HIV (N=22)	27% currently on PrEP
NHBS Survey of Transgender Women and Assigned Male At Birth (AMAB) non-binary people, 2019-2020	Transgender women and AMAB non-binary people who reported oral, anal or vaginal/front hole sex in the past year (N=85)	19% used PrEP in the past year
	Transgender women and AMAB non-binary people who met criteria for being at higher risk of HIV (N=51)	22% used PrEP in the past year

TABLE 14-4: HARBORVIEW SEXUAL HEALTH CLINIC VISITS BY TRANSGENDER & NON-BINARY (TGNB) PATIENTS, JULY 2019-JUNE 2020^{A,B}

	Transgender Women (n=58)	Transgender Men (n=27)	Non-Binary/Genderqueer/ Gender Non-Conforming	
			Assigned Male at Birth (AMAB) (n=89)	Assigned Female at Birth (AFAB) (n=44)
HIV diagnosed, ever	2%	0%	4%	0%
Tested for HIV, ever	91%	96%	97%	75%
Unstable housing, past year	5%	0%	3%	0%
Transactional sex, past year	16%	11%	11%	16%
Injection drug use, past year	3%	4%	3%	0%
Any drug use, past year ^C	33%	37%	73%	30%
STI diagnosis at visit ^D	12%	19%	25%	2%

^AData presented are for visits and may contain multiple visits by the same individual.

^BData are based on self-report except sexually transmitted infection diagnosis data which was assessed using testing at time of visit.

^CIncludes methamphetamine, poppers, cocaine, crack.

^DSTI, sexually transmitted infection; Includes diagnoses of chlamydia, gonorrhea, or syphilis.

HIV/AIDS Fact Sheet

Women



KEY POINTS

Of 7,056 people living with HIV (PLWH) in King County in 2019, there were 922 cisgender women (13%) and 62 transgender women (1%).

Of 183 new diagnoses in 2019, 30 (16%) were presumptively cisgender women, and three (2%) were transgender women.

HIV disproportionately affects U.S.-born Black, Latinx, American Indian/Alaska Native and foreign-born Black women. About 25% of female King County residents are foreign born. Over half (54%) of women living with HIV in King County are foreign-born and 39% of women living with HIV are foreign-born Black women.

In 2019, 82% of women living with HIV in King County were virally suppressed; this reflects no change in five years (2016-2019) and a 20% increase over 10 years.

OVERVIEW OF HIV EPIDEMIOLOGY

At the end of 2019, 922 (13%) of the 7,056 people living with HIV (PLWH) in King County were women. In 2019, there were 30 new diagnoses of HIV among presumptively cisgender women living in King County and 3 among transgender women. “Presumptively” cisgender is an acknowledgement that transgender status is likely not always correctly ascertained. Diagnosis rates, calculated for people assigned female sex at birth were 2.7 cases per 100,000 in 2019 (**Table 15-1, Figure 15-1**). This compares to an overall diagnosis incidence of 8.2 per 100,000 residents in King County in 2019. The diagnosis rate among people assigned female sex at birth decreased 37% between 2018 and 2019 as a 2018 outbreak of HIV in north Seattle waned, though the rate of new HIV diagnoses in women in 2019 still somewhat exceeded that seen from 2015-2017. Unless otherwise specified, hereafter, this fact sheet defines women as inclusive of both cisgender and transgender women.

POPULATION SIZE AND CHARACTERISTICS

In 2019, U.S. Census and American Community Survey data estimate that there were 1,112,667 women (people assigned female sex at birth) living in King County, of which about 279,624 (24%) were foreign-born (**Tables 15-1 and 15-2**). Among the 984 women living with diagnosed HIV in King County in 2019, more than half (54%) were foreign-born, including 47% of the 162 women diagnosed between 2015 and 2019. Relative to the overall King County population of women, those living with HIV were far more likely to be foreign-born and Black. Among women living with HIV in King County in 2019, 41% were Black. Among Black women with HIV, 71% were foreign born. Women recently diagnosed with HIV were more likely to be age 20-49 years relative to the general population.

HIV RISK CATEGORY

Figure 15-2 shows the distribution of HIV risk categories among U.S.-born and foreign-born women living in King County in 2019. Individuals with an unknown risk factor comprised 26% of foreign-born women and 8% of U.S.-born women. Heterosexual contact is the predominant risk factor for both foreign-born (63%) and U.S.-born women (54%). Injection drug use was frequently reported by U.S.-born women (26%) and rarely by foreign-born women (1%).

VIRAL SUPPRESSION

Among women living with diagnosed HIV infection, the proportion with documented viral suppression (viral load <200 copies/mL) remained relatively flat at about 82% from 2015 to 2019. (**Figure 15-3**). 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.

TABLE 15-1: KEY HIV METRICS FOR WOMEN^A, KING COUNTY, WA, 2019

Key Metrics	Total Cisgender Women	Foreign-born Cisgender Women	U.S.-born Cisgender Women	Transgender Women
Est. No. Women in King County (2019)	1,112,667	279,624	833,043	Unknown
HIV Prevalence in 2019				
Number of women living with HIV	922	513	409	62
Prevalence (%)	0.08%	0.18%	0.05%	Unknown
Percent of all HIV cases	13%	7%	6%	1%
HIV Incidence (New Diagnoses)^B				
2019 number of new diagnoses	30	9	21	3
2019 diagnosis incidence rate per 100,000	2.7	3.2	2.5	Unknown
Trends (2015-2019 or 2014-2019) ^C	21% increase	76% increase	31% decrease	33% decrease
Viral Suppression among HIV+ Women^D				
	82%	85%	78%	85%

^A For the purposes of this fact sheet, unless otherwise specified women include presumptively cisgender women and transgender women. Please see the Transgender and Non-Binary Populations fact sheet for additional data regarding transgender and non-binary populations. Population data are based on sex assigned at birth.
^B Diagnoses among individuals reporting a prior diagnosis more than a year earlier or while residing in another country or state are excluded.
^C Trends for women (aggregate, U.S.-born and foreign-born) are based on a percent change in the rates for women per 100,000 from 2015 to 2019. For transgender women, due to small numbers (none to three per year) the trend was based on the change in case counts summed for 2014-2016 versus 2017-2019).
^D Among all women with diagnosed HIV infection. Viral suppression defined as plasma HIV RNA < 200 copies/mL.

FIGURE 15-1: HIV DIAGNOSIS RATES AMONG CISGENDER WOMEN, KING COUNTY, WA, 2015-2019

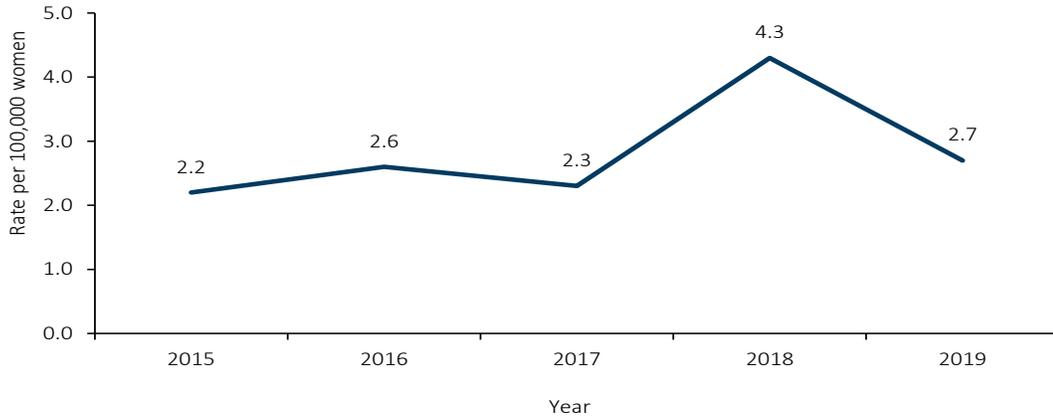


FIGURE 15-2. HIV RISK CATEGORIES AMONG WOMEN LIVING WITH HIV BY NATIVITY, KING COUNTY, WA, 2019

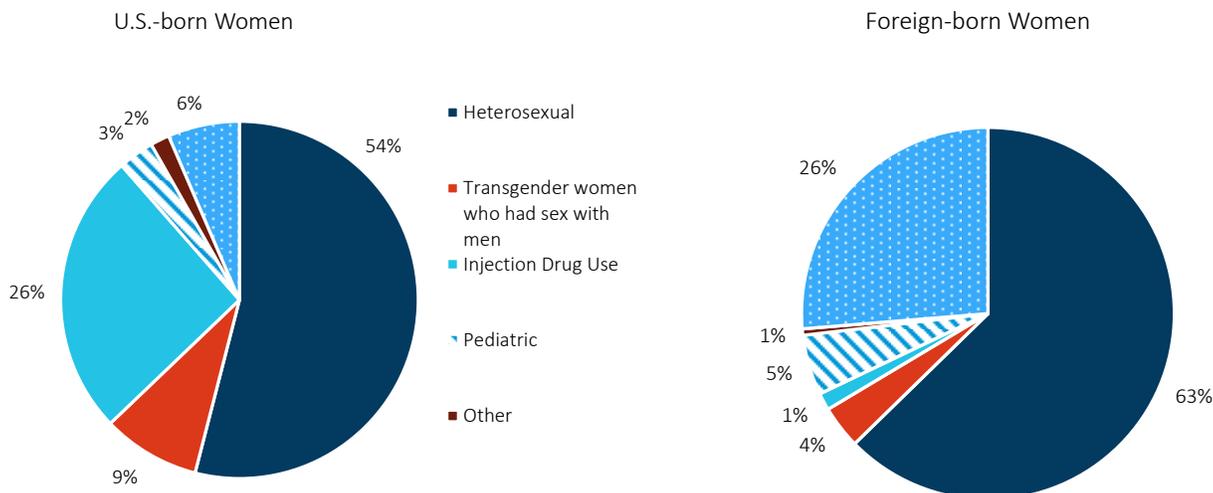


TABLE 15-2: CHARACTERISTICS OF WOMEN RECENTLY DIAGNOSED WITH HIV IN 2015-2019, LIVING WITH HIV IN 2019, AND HIV PREVALENCE PER 100,000 WOMEN, KING COUNTY, WA, 2019

CHARACTERISTIC		DIAGNOSES IN THE PAST 5 YEARS (2015-2019) ^B No. (COL %)	WOMEN LIVING WITH HIV 2019 No. (COL %)	PREVALENCE DIAGNOSED HIV INFECTION (PER 100,000)	FEMALE KING COUNTY RESIDENTS, 2019
TOTAL	ALL WOMEN	162 (100%)	984 (100%)	UNDEFINED	UNKNOWN
	Cisgender	152 (94%)	922 (94%)	83	1,112,667
	Transgender	10 (6%)	62 (6%)	Undefined	Unknown
NATIVITY	Foreign-born	76 (53%)	533 (54%)	191	279,624 (25%)
	U.S.-born (includes unknown)	86 (47%)	451 (46%)	54	833,043 (75%)
RACE/ETHNICITY	Black, non-Latina	66 (41%)	527 (54%)	742	71,041 (6%)
	<i>Foreign-born Black</i>	47 (29%)	379 (39%)	1513	25,048 (2%)
	<i>U.S.-born Black</i>	19 (12%)	148 (15%)	322	45,993 (4%)
	White, non-Latina	54 (33%)	227 (23%)	35	650,906 (58%)
	Latina	20 (12%)	115 (12%)	107	107,197 (10%)
	<i>Foreign-born Latina</i>	12 (7%)	80 (8%)	188	42,545 (4%)
	<i>U.S.-born Latina</i>	8 (4%)	35 (4%)	54	64,652 (6%)
	Asian, Non-Latina	11 (7%)	40 (4%)	19	213,414 (19%)
	Native American, Non-Latina	4 (2%)	17 (2%)	156	10,925 (1%)
	Pacific Islanders, Non-Latina	1 (<1%)	4 (<1%)	42	9,570 (1%)
	Multiracial, Non-Latina	5 (3%)	54 (5%)	100	53,771 (5%)
HIV RISK CATEGORY	People who inject drugs	38 (23%)	127 (13%)	Undefined	Unknown
	Heterosexual ^C	92 (57%)	586 (60%)	Undefined	Unknown
	Other, including pediatric	2 (1%)	54 (5%)	Undefined	Unknown
	Transgender women who have sex with men ^D	10 (6%)	61 (6%)	Undefined	Unknown
	Unknown	22 (14%)	171 (17%)	Undefined	Unknown
AGE^A	< 20	3 (2%)	18 (2%)	7.2	250,608 (23%)
	20-29	37(23%)	60 (6%)	34.5	173,805 (16%)
	30-39	41 (25%)	190 (19%)	100.2	189,670 (17%)
	40-49	35 (22%)	299 (30%)	176.4	145,479 (13%)
	50-59	31 (19%)	261 (27%)	205.5	133,977 (12%)
	60+	15 (9%)	156 (16%)	71.2	219,126 (20%)

^A Age is at time of diagnosis for women diagnosed with HIV 2015-2019 and current age for women living with HIV.

^B Recent diagnoses exclude women reporting prior diagnoses more than a year earlier or while residing out of state.

^C Heterosexuals include presumed heterosexuals: women who have had sex with men and denied injection drug use.

^D Transgender women who have sex with men may also be counted as people who inject drugs, other categories are mutually exclusive.

TIMING OF HIV DIAGNOSES

Among 162 King County women diagnosed with HIV in the past five years (2015 to 2019), 25 (17%) reported a negative HIV test within the prior year, although 35% were missing data on testing history. U.S.-born women were far more likely to have a negative HIV test within a year of diagnosis (21%) relative to foreign-born women (9%). About one-third (34%) of foreign-born women never had a negative HIV test prior to their HIV diagnosis, relative to 15% of U.S.-born women. This intertest interval – defined as the time between a person’s last negative and first positive HIV test – is a measure of how well HIV testing is reaching the population at risk for HIV, as well as data on the potential time from HIV Infection to HIV diagnosis.

Late HIV diagnosis is sometimes defined as an AIDS diagnosis within one year of an HIV diagnosis. By this definition, 30% of women diagnosed with HIV between 2015 and 2019 were diagnosed late, including 69% of foreign-born women and 18% of U.S.-born women.

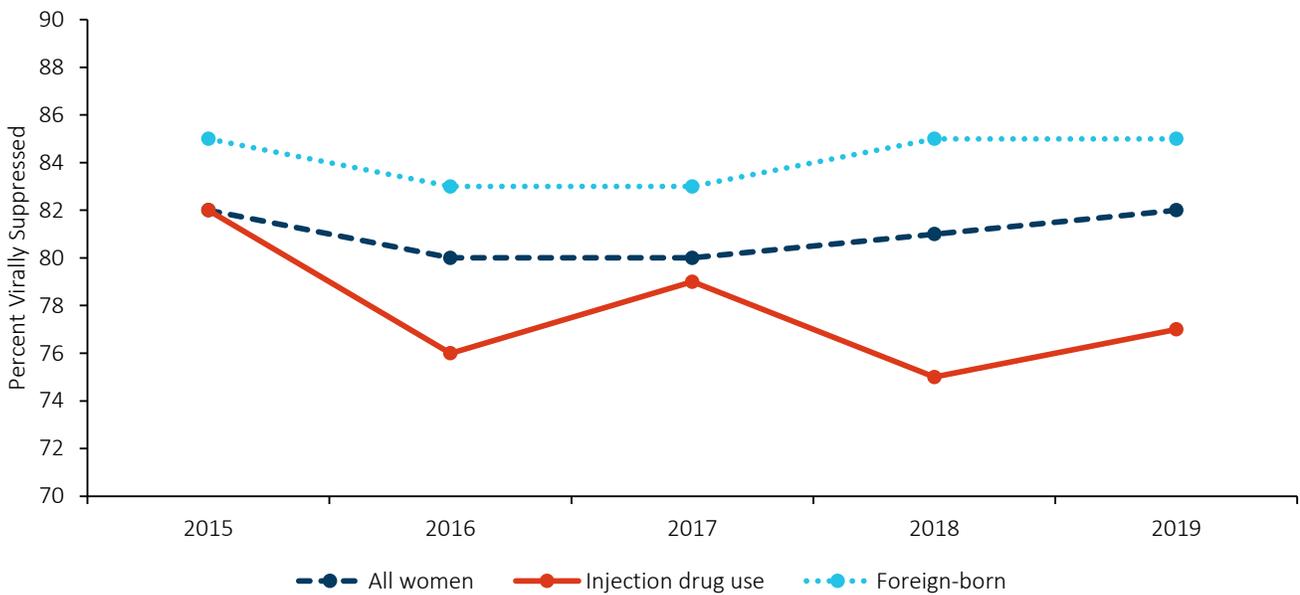
(Note: The foreign-born women described here exclude those diagnosed with HIV prior to entering the U.S.)

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 people 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 the Prevention 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](http://www.kingcounty.gov/depts/health/communicable-diseases/hiv-std/patients/~/media/depts/health/communicable-diseases/documents/hivstd/PrEP-implementation-guidelines.ashx).)

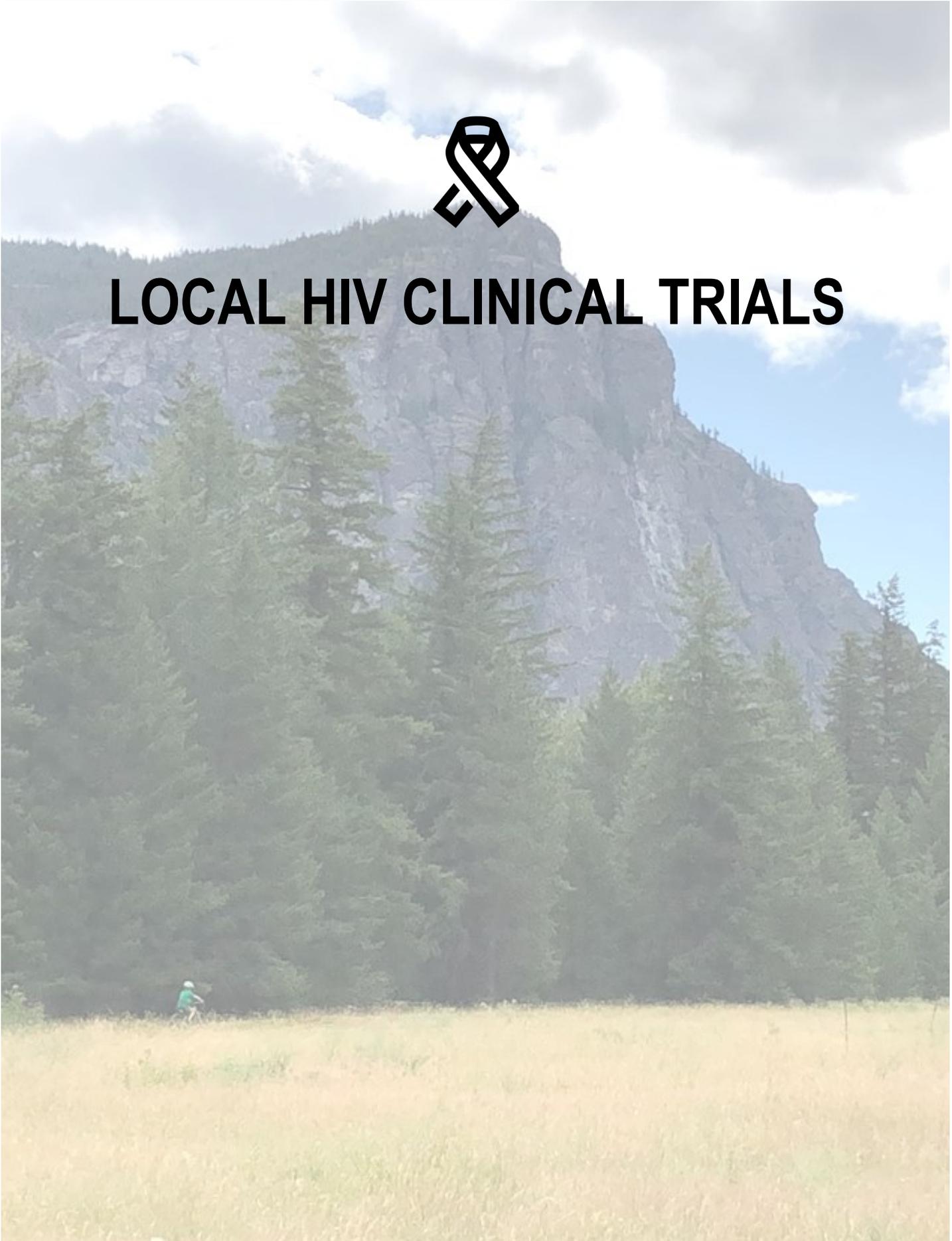
Contributed by Audrey Brezak, Francis Slaughter, and Susan Buskin

FIGURE 15-3: VIRAL SUPPRESSION AMONG WOMEN LIVING WITH HIV, KING COUNTY, WA, 2015-2019





LOCAL HIV CLINICAL TRIALS



WHAT'S NEW AT THE UW ACTU? COVID-19, METABOLIC COMPLICATIONS, AND HEPATITIS STUDIES

ACTG TAKES ON COVID-19 THERAPEUTICS: ACTIV-2 AND OTHERS

Although our main mission is to improve treatment for people living with HIV (PLWH), the AIDS Clinical Trials Group, as one of the few international clinical trials networks focused on infectious diseases, as early as March 2020, we were recruited by the National Institutes of Health to join the public-private partnership towards treatments for COVID-19 treatments. From late April 2020 through June 2020, the UW ACTU participated as a site in a national study of hydroxychloroquine with and without azithromycin vs placebo in patients admitted to hospitals in the UW Medicine system (HAT-COVID) and hydroxychloroquine plus azithromycin vs placebo in outpatients; both studies were closed early when it was clear that there was no benefit from these agents against SARS-CoV-2 infection in multiple international randomized trials. The UW ACTU also participated in a randomized controlled study of ruxolitinib (RUX-COVID) in patients admitted with COVID-19 pneumonia through this partnership.

Since September 2020, the UW ACTU has been participating in the ACTIV-2 study (Accelerating COVID-19 Therapeutic Interventions and Vaccines; riseabovcovid.org) as part of Operation Warp Speed. This is an adaptive protocol that allows multiple therapies to be introduced either one at a time or several at a time, and graduate from Phase II to Phase III if they are safe and show some efficacy. The ACTIV-2 study is for people with early infection with the goal to evaluate reduction in hospitalizations, symptom duration, and duration of viral shedding. The first agent in this study is the Lilly monoclonal antibody (LYCoV555), soon to be followed by other monoclonal antibodies and other types of outpatient therapies. All current monoclonal antibody therapies under evaluation target one or more parts of the Spike protein on SARS-CoV-2, and some products are combinations of two monoclonal antibodies targeting different portions of Spike to prevent resistance and ideally result in synergy. While ACTU investigators and our Community Advisory Board are thrilled that we are fighting to bring treatments rapidly to fruition

during this public health crisis, we are enthusiastic that we have several new HIV studies that are open or soon to open now that the Division of AIDS has permitted this work to proceed. Two such studies include the Hepatitis B vaccine trial for PLWH and a short-course therapy for acute Hepatitis C for people with and without HIV that were announced last year. One other theme in new studies is improvement in metabolic and inflammatory changes associated with HIV and antiretroviral therapy (ART).

DO-IT STUDY: DORAVIRINE FOR PEOPLE WITH EXCESSIVE WEIGHT GAIN ON INTEGRASE INHIBITORS (INSTI) AND TENOFOVIR ALEFENAMIDE (TAF) (ACTG 5391)

Weight gain following ART initiation is common and was often regarded as a 'return to health' phenomenon early in the human immunodeficiency virus (HIV) epidemic. In the current era, a rising proportion of PLWH are overweight or obese. Several prospective and retrospective studies report that PWH starting or switching to INSTI-containing ART regimens have significantly greater weight gain compared to protease inhibitor (PI) and non-nucleoside reverse transcriptase inhibitor (NNRTI)-containing regimens, which may be further compounded by the use of TAF as a second agent. At present, it is unknown whether PWH who experience a high degree of weight gain on INSTI+TAF/FTC (or TAF/3TC) could either attenuate their rate of weight increase over time or reduce body weight with a change to a different ART regimen.

The UW ACTU will be recruiting PLWH aged ≥ 18 years, a body mass index (BMI) ≥ 27.5 kg/m², and an unintentional $>10\%$ weight gain in 1-3 years after starting an integrase strand transfer inhibitor (INSTI)-containing regimen + TAF/FTC (or TAF/3TC), and who have maintained virologic suppression (HIV-1 RNA <50 copies/mL or below the lower limit of HIV-1 RNA detection available at the site) for the 48 weeks prior to entry.

Participants will be randomized to continue on their current INSTI+ TAF/FTC regimen or to switch to doravirine (DOR) + TAF/FTC or DOR + TDF/FTC. This study will assess whether regimen switch results in weight changes over 48 weeks in either of the two DOR arms compared to remaining on INSTI-based regimens.

SLIM LIVER: A SINGLE-ARM STUDY OF SEMAGLUTIDE FOR NON-ALCOHOLIC FATTY LIVER DISEASE (NAFLD) (A5371)

Thirty-40% of adults with HIV also have NAFLD, which is associated with steatosis and may progress to non-alcoholic steatohepatitis and ultimately cirrhosis and its complications. Most people with NAFLD also have the metabolic syndrome, central adiposity, and/or type 2 diabetes. PLWH have both a higher cardiovascular disease risk, which is multifactorial, but can be reduced by treating NAFLD and associated insulin resistance and pro-inflammatory state. Semaglutide is a long-acting glucagon-like peptide (GLP-1) receptor agonist, which is FDA-approved to treat diabetes as well as promote weight loss and cardiovascular disease risk reduction in overweight people

with and without diabetes. This study will test whether semaglutide, administered in increasing weekly doses, can change the intra-hepatic triglyceride (IHTG) measurement using a special fat fraction density MRI scan before and after treatment, as well as effects on insulin resistance, weight loss, and lipid profiles. We will be recruiting PLWH who have undetectable HIV VL during the 48 weeks prior to entry, on a stable ART regimen, with elevated waist circumference, impaired fasting glucose (100-125 mg/dL), HbA1c 5.7-6.5% and elevated IHTG on a screening MRI-PDFD among other eligibility criteria.

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 people 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 people with and without HIV. Drug-drug interaction studies support the use of glecaprevir/pibrentasvir 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 PEOPLE 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 people 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 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 people 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 people with HIV and is seeking individuals who: do not have protective levels of HBV antibodies despite vaccination with a standard HBV vaccine series OR 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 the following table for a summary 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: (206)-733-7129.

Contributed by Rachel Bender Ignacio

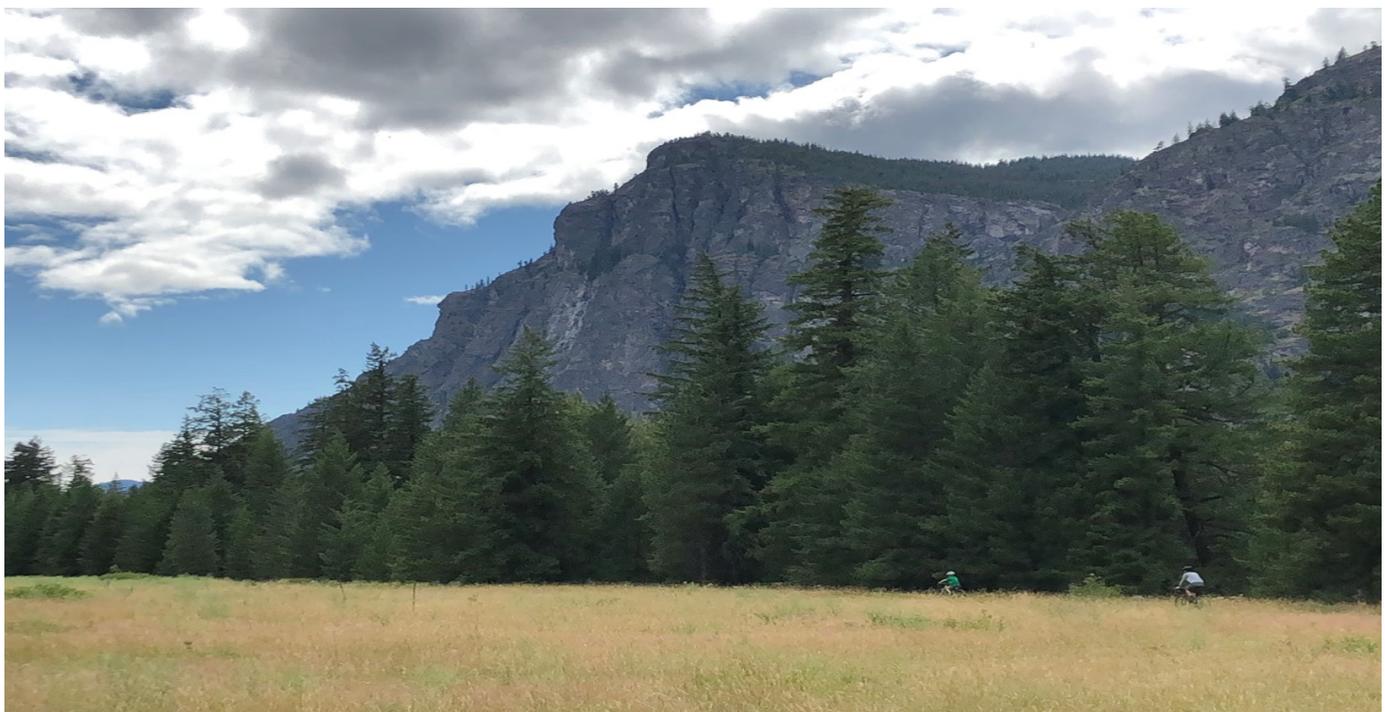
STUDY TITLE	STUDY INTERVENTION	KEY PARTICIPANT CHARACTERISTICS	COMMENTS
The LATITUDE Study (A5359)	Long-acting ART for non-adherent people	Non-adherence in the past 18 mos, VL>200, no severe active alcohol or severe substance abuse	Must be referred by their provider or case manager
The Do-IT Study (A5391)	DOR+ TDF/FTC or TAF/FTC vs	People with suppressed viral load and unintentional weight gain on INSTI+ TAF	Must be on INSTI+TAF/FTC for at least 48 weeks, suppressed, >10% weight gain
The SLIM LIVER Study (A5371)	Semaglutide	NAFLD, increased waist circumference, impaired glucose tolerance, suppressed on stable ART	Receives an MRI-PDFF for screening, eligible if >5% intra-hepatic TG on imaging
The PURGE-C Study (A5380)	Acute HCV treatment	Acute HCV (with or without HIV)	4 weeks of Mavyret
The TRIPLE ANTIBODY Study (A5377)	Phase 1 of Tri-specific bNAb SAR44236	No prior HIV meds; CD4>350, VL5K-100K, willing to start HIV antiretrovirals in 28 days, believable plan to avoid transmitting HIV	Not appropriate for people with newly diagnosed HIV
The BEe-HIVe Study (A5379)	Novel HBV vaccine	HIV, plus either: No protective antibody after standard HBV vaccine series OR Never received HBV vaccine	Open-label
The INJECTABLES PLUS Study (A5357)	Long-acting cabotegravir and a bNAb (VRC07-LS)	Virologically suppressed people without integrase mutations willing to change ART	Includes change to single-ARV+ bNAb given every 4 weeks (CAB-LA) and 8 weeks (VRC07-LS)

CURRENT AIDS MALIGNANCY TRIALS OPEN MID 2020

STUDY	SYNOPSIS	SELECT ENROLLMENT CRITERIA	INTERVENTION(S)	ENROLLED LOCALLY
ANCHOR AMC-A01 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.	<ul style="list-style-type: none"> ≥ 35 years old living with HIV infection No HPV vaccination No history of anogenital cancer No history of HSIL treatment 	<ul style="list-style-type: none"> Ablation Cream: <ul style="list-style-type: none"> 5-fluorouracil or imiquimod Surgery Monitoring 	133
AMC-088 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.	<ul style="list-style-type: none"> ≥ 25 years old living with HIV infection No history of anal cancer No previous use of the intervention for treatment of HSIL (listed to the right), previous ablation is okay 	<ul style="list-style-type: none"> 5-fluorouracil cream or imiquimod cream 	2
AMC-095 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.	<ul style="list-style-type: none"> > 18 years old living with HIV infection Diagnosis of a metastatic or non-resectable solid tumor (trial excludes brain/spinal cord primary tumor or metastases) No autoimmune disease requiring immune-suppressive treatment relapsed refractory HIV-associated classical Hodgkin lymphoma (HIV-cHL) as a separate cohort 	<ul style="list-style-type: none"> Nivolumab alone or Ipilimumab and Nivolumab 	2

CONTINUED, AIDS MALIGNANCY TRIALS OPEN STUDIES AS OF MID 2020

STUDY	SYNOPSIS	SELECT ENROLLMENT CRITERIA	INTERVENTION(S)	ENROLLED LOCALLY
AMC-096 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 Known HIV status Biopsy-proven KS Treatment naïve, refractory to, or intolerant of one or more prior therapies, or treated with prior systemic treatment	sEphB4-HSA	0
AMC-098 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 Known HIV status Biopsy-proven KS	Nelfinavir	5
AMC-101 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. Dose finding and dose expansion cohorts	> 18 years old living with HIV infection histologically documented CD20 positive or negative diffuse large B-cell lymphoma (DLBCL) Stage II-IV disease, measurable by CT or PET scans if enrolled in the dose-expansion cohort	Ibrutinib	0



Clinical Trials Enrolling at the Office of Dr. Peter Shalit and Associates

Starting in December 2020, our clinic will be participating in a trio of Phase 1 studies sponsored by Abbvie: M19-939, M19-966, and M19-972. The goal of these studies is to look at the safety and tolerability of two investigational agents, ABBV-181 and ABBV-382. Both drugs are monoclonal antibodies given parenterally (intravenously or subcutaneously). Each study involves one or a few doses of study drug (or placebo) followed by several weeks of monitoring for safety and tolerability.

The sponsor's longer term goal is to employ these agents as part of a limited-duration, combination treatment, given in one or a few doses to produce long term remission of HIV infection without ongoing medication. However, these Phase 1 studies will only look at safety and tolerability. Study volunteers should not expect personal benefit from participation, other than the satisfaction that they are helping researchers progress toward a new way to control HIV infection.

The studies will recruit participants of any gender, between the ages of 18 and 65, with chronic suppressed HIV infection and no history of AIDS-defining illness. Viral load must have been suppressed for the preceding 6 months. CD4 must be over 450 cells/microliter at screening and at least once during the preceding 12 months.

We are looking for altruistic volunteers living with HIV and on successful antiretroviral therapy, willing to donate their time, to help us learn about these two drugs which could potentially be part of a treatment to produce long-term remission of HIV infection. Volunteers will be compensated for their time.

Referring providers should contact our Study Coordinator, Jon White, PA-C, at <jon@tribalmed.com>, or Principal Investigator, Peter Shalit, MD, PhD, at <peter@tribalmed.com>, or via telephone at 206-624-0688.

