HEALTH MANAGEMENT ASSOCIATES

HMA COMMUNITY STRATEGIES

Needs Assessment of HIV, Viral Hepatitis, and Sexually Transmitted Infections in Wyoming

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AUGUST 12, 2022

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SUMMARY OF KEY TAKEAWAYS

Diagnose

- Most providers and emergency rooms do not offer routine testing, even to individuals who may be at high risk of infection because of potential exposure and/or lived experience with human immunodeficiency virus (HIV), viral hepatitis (VH), or sexually transmitted infections (STI)s.
- Community stigma inhibits individuals from getting tested and providers from discussing testing with their patients.
- Providers face limited staff, financial, and time capacity to offer routine and rapid testing for HIV, VH, and STIs.
- Capacity to provide testing is greater among local public health offices than in other care settings; however, community stigma often inhibits individuals from going to local public health offices for testing.
- Providers and patients do not routinely request three-site testing (vaginal/urine, rectal, and pharyngeal) when offering STI testing.
- Offering routine testing helps to diffuse patient-level stigma.
- Most individuals diagnosed with HIV, VH, and STIs got tested for routine testing at their clinician's office or community testing site.
- Redemption rates of KnoWyo.org low or no-cost testing vouchers varies largely by geography. Local community outreach and education staff in each county are a strong facilitator of increasing testing.

Treat

- Most referrals to treatment for HIV, VH, and STIs are to private (non-public) providers.
- There are very few HIV and VH treatment providers in Wyoming and transportation to these providers is a huge barrier for linking people to receive treatment.
- Few providers are offering rapid antiretroviral treatment (ART) initiation due to discomfort and lack of expertise.
- Having personal, inter-provider relationships between organizations that offer testing and organizations that provide treatment is important to supporting patients' rapid linkage to treatment.
- Primary care physicians are relied on when infectious disease specialists are unavailable; however, patients have not always received the most appropriate or highest quality of care from PCPs.
- Beyond providing referrals, organizations have limited capacity to ensure clients are linked to treatment services.
- Providers expressed a need for more training and guidance around rapid initiation of ART, VH care for people living with HIV (PLWH), and HIV and VH care for people who inject drugs (PWID).
- Organizations and clients express a lack of LGBTQIA+-affirming care providers.
- Continuity of care is challenging for transient and unhoused people because of difficulties in establishing and re-establishing care and coordinating housing.

- Continuity of care is challenges for people experiencing substance use disorders (SUD) and/or mental illness because of lack of effective collaborations between physical and behavioral health providers.
- COVID-19 decreased staff capacity and disrupted organizations' ability to provide in-person HIV, VH, and STI testing and treatment services.
- Few treatment providers offer telehealth treatment services but are interested in offering these services. These providers need guidance and technical assistance to stand up these services.
- PLWH found it easy to get connected to treatment after testing positive, whereas people diagnosed with VH or STIs had varying difficulty being connected to treatment.
- Clients experience overall good quality of care.
- Mental health services are the most needed and least received service among those diagnosed with HIV, VH, and STIs.

Prevent

- Sexual health counseling and screening are not routinely offered to patients and criteria for who is offered counseling and screening varies by provider.
- The lack of PrEP and PEP providers in Wyoming geographic distance in comparison to prescribers and pharmacists is a barrier.
- Providers' comfort level in providing PrEP and PEP varies and many providers. There are some that would like more education and training on PrEP and PEP prescribing and there are some that would prefer to refer to someone else.
- Providers would like more training and education about U=U.
- Most community members get information about prevention from their primary care doctor but expressed that this information was only somewhat helpful.
- Community stigma against HIV, VH, and STIs and stereotypes of the types of people at risk for these conditions is a major barrier to knowledge and engagement in prevention measures.
- Comprehensive and inclusive K-12 sex education is needed to reduce stigma and enhance engagement in prevention.

Respond

- Providers lack familiarity with and engagement in key response initiatives in the state, including Data-to-Care and non-medical case management.
- Outbreak response planning and interventions must take a syndemic approach.
- Providers would like timely and understandable information and data on incidence, prevalence, and social determinants of health to improve HIV testing, treatment, and prevention strategies.

INTRODUCTION

Purpose

The purpose of this comprehensive needs assessment is to identify the data-driven and community-defined needs, challenges, and barriers related to the prevention, treatment, and care of human immunodeficiency virus (HIV), viral hepatitis (VH), and sexually transmitted infections (STIs) in Wyoming. Given the overlap in risk factors, healthcare and public health interventions, and communities impacted by these three health conditions, this needs assessment employs a syndemic approach in its analysis and discussion of needs.[1] This approach also aligns with the White House's new *National HIV/AIDS Strategy for 2022-2025* and Centers for Disease Control and Prevention's (CDC) updated and individual *National Strategic Plans for HIV, VH, and STIs for 2021-2025*, which all call out the need for integrated and collaborative approaches to prevention, treatment, and care across these health conditions.[2,3,4,5] Additionally, this needs assessment frames its findings under the "Four Pillars" of the CDC's Ending the HIV Epidemic (EHE) Initiative: Diagnose, Treat, Prevent, and Respond.[6] Since the launch of the EHE initiative in 2019, federal agencies, states, and local jurisdictions have begun categorizing assessments, strategic goals, and services under these pillars. While this assessment examines needs related to VH and STIs in addition to HIV, these findings are also categorized under the four EHE pillars.

This needs assessment serves as a foundational document in the development of Wyoming's Integrated HIV Prevention and Care Plan for 2022-2026 (Integrated Plan), as required by the Human Resources Services Administration (HRSA) and the CDC.[7] The findings from this needs assessment will be incorporated into various sections of the Integrated Plan to provide context on the current state and community-defined needs of HIV landscape in Wyoming. Based on the information provided in this needs assessment, the Wyoming Department of Health (WDH) Communicable Disease Unit (CDU), in conjunction with the Comprehensive Care and Prevention Planning Alliance (CAPPA)—Wyoming's statewide community planning group for HIV, VH, and STIs—will develop the key Goals and Objectives of the Integrated Plan, which will serve as a strategic roadmap to enhance HIV prevention, treatment, and care services in the state.

Context

State Demographic Profile

As of 2021, Wyoming was home to 578,803 residents and has the smallest population of any state in the US.[8] Wyoming also has the second lowest population density of any state in the US. Its most populated cities are Cheyenne, in Laramie County, Casper; in Natrona County; and Laramie, in Albany County.

[1] https://onlinelibrary.wiley.com/doi/full/10.1002/9781118924396.wbiea1719
[2] https://hivgov-prod-v3.s3.amazonaws.com/s3fs-public/NHAS-2022-2025.pdf
[3] https://files.hiv.gov/s3fs-public/HIV-National-Strategic-Plan-2021-2025.pdf
[4] https://www.hhs.gov/sites/default/files/Viral-Hepatitis-National-Strategic-Plan-2021-2025.pdf
[5] https://www.hhs.gov/sites/default/files/STI-National-Strategic-Plan-2021-2025.pdf
[6] https://www.cdc.gov/endhiv/index.html
[7] https://ryanwhite.hrsa.gov/sites/default/files/ryanwhite/grants/integrated-hiv-dear-college-6-30-21.pdf
[8] https://www.census.gov/quickfacts/fact/table/WY,US/PST045221

TABLE 1. RACIAL/ETHNIC BREAKDOWN IN WYOMING AND THE US (2021).[9]

Race/Ethnicity	WY	US
American Indian/Alaska Native, alone	2.7%	1.3%
Asian and Pacific Islander, alone	1.2%	6.1%
Black/African American, alone	1.3%	13.4%
Hispanic/Latinx, all races	10.1%	18.5%
White/Caucasian, alone	83.7%	76.3%
Two or more races	2.2%	2.8%

According to 2021 data from the US Census Bureau, the large majority of Wyoming residents identify as White/Caucasian, alone (Table 1). The second largest racial/ethnic group in Wyoming are individuals who identify as Hispanic/Latinx, followed by individuals who identify as American Indian or Alaska Natives, alone. Compared to the country as a whole, Wyoming's has a greater prevalence of individuals who identify as White/Caucasian, alone and American Indian/Alaska Native, alone than other racial/ethnic groups. Just over three percent of residents in Wyoming identify as foreign-born and primarily reside in Albany and Teton Counties.[10] The five major Native American tribes in Wyoming include the Arapaho, the Cheyenne, the Crow, the Shoshone, and the Ute, with only the Arapaho and Shoshone tribes being recognized by the federal government. The Wind River Indian Reservation is the only reservation located within Wyoming's state boundary and encompasses the majority of land in Fremont County and southern part of Hot Springs County.

While there are not precise data on the number of individuals who identify as lesbian, gay, bisexual, transgender, queer, or as other sexual or gender minorities (LGBTQ+), a 2020 analysis by the Williams Institute—the nation's top research group on sexual orientation and gender identity—estimated that approximately 3.3% of adults aged 18+ living in Wyoming are LGBTQ+.[11] This is significantly lower than the national estimated average of 8%.[12]

Communicable Disease Unit

The Communicable Disease Unit within the Wyoming Department of Health oversees all state services related to HIV, VH, and STIs. CDU also oversees state services for tuberculosis (TB). CDU is divided into three specific programs: Prevention, Treatment, and Surveillance.

The Prevention Program manages the state's free condom program, partnering with county public health offices, family planning clinics, federally qualified health centers FQHCs, local colleges and single university, and other bars, libraries, and community spaces to distribute free condoms, dental dams, and lubricant at various sites across the state. The Prevention Program also supports prescribers of pre-exposure prophylaxis (PrEP) through national training opportunities and treatment guidelines. Each of the state's 23 counties is staffed with a public health nurse who conducts HIV, VH, and STI testing and must report all risk assessments conducted with patients during the time of testing to the Prevention

[9] https://www.census.gov/quickfacts/fact/table/WY,US/PST045221
[10] https://www.indexmundi.com/facts/united-states/quick-facts/wyoming/foreign-born-population-percent#map
[11] https://www.lgbtmap.org/equality-maps/profile_state/WY
[12] https://www.census.gov/data/experimental-data-products/household-pulse-survey.html

Program. The Prevention Program also markets statewide testing and prevention resources through their website, KnoWyo.org, and distributes vouchers to state residents to receive low or no-cost testing for HIV, VH, and STIs at local testing sites. The Prevention Program also oversees county public health nurses' participation in HRSA's 340B Drug Pricing Program to assist in purchasing contraceptives, testing supplies, and medications at reduced rates. Additionally, the Prevention Program team oversees an HIV Peer Support Navigation program to link individuals who are living with HIV with a peer who is also living with HIV and can provide them with interpersonal support and help them navigate personal and system-level barriers to treatment and care. Finally, the Prevention Program also manages medication ordering and reporting for expedited partner therapy services that are conducted by county public health offices and local clinics in which the sexual partners of clients diagnosed with an STI can be treated without an intervening personal assessment by a health care provider.

The **Treatment Program** provides a holistic approach for those living with HIV in Wyoming. The program manages funding received from Housing and Urban Development (HUD) Housing Opportunities for Persons with AIDS (HOPWA), Health Resources and Services Administration (HRSA) Ryan White Part B/ AIDS Drug Assistance Program (ADAP), and HRSA Ryan White Part C grants. These funds primarily support medication support through the state's ADAP. Funding additionally supports case management services for PLWH, case management services for PLWH , which are provided largely through county public health offices. Ryan White funding is used to reimburse the state's three HIV medical care providers on a fee-for-service basis along with other providers across the state providing care for comorbidities for PLWH in Wyoming. Additionally, the program uses funding to support exams and treatments for mental health, substance use, oral, and vision services. Lastly, The Treatment Program's funding provides housing and other supportive services for PLWH.

The **Surveillance Program** oversees all epidemiological data and reporting on HIV, VH, and STIs in the state. The program also provides data and reporting for TB. Local county public health offices report cases of HIV, VH, and STIs to the state through the Patient Reporting Investigation Surveillance Manager (PRISM), the state's data management system for communicable diseases and case management. Disease Interventions Specialists (DIS) investigate and interview individuals who receive a positive test result for HIV, VH and STIs. The Surveillance Program is responsible for analyzing and publishing yearly updates on HIV, VH, and STI trends in the state.

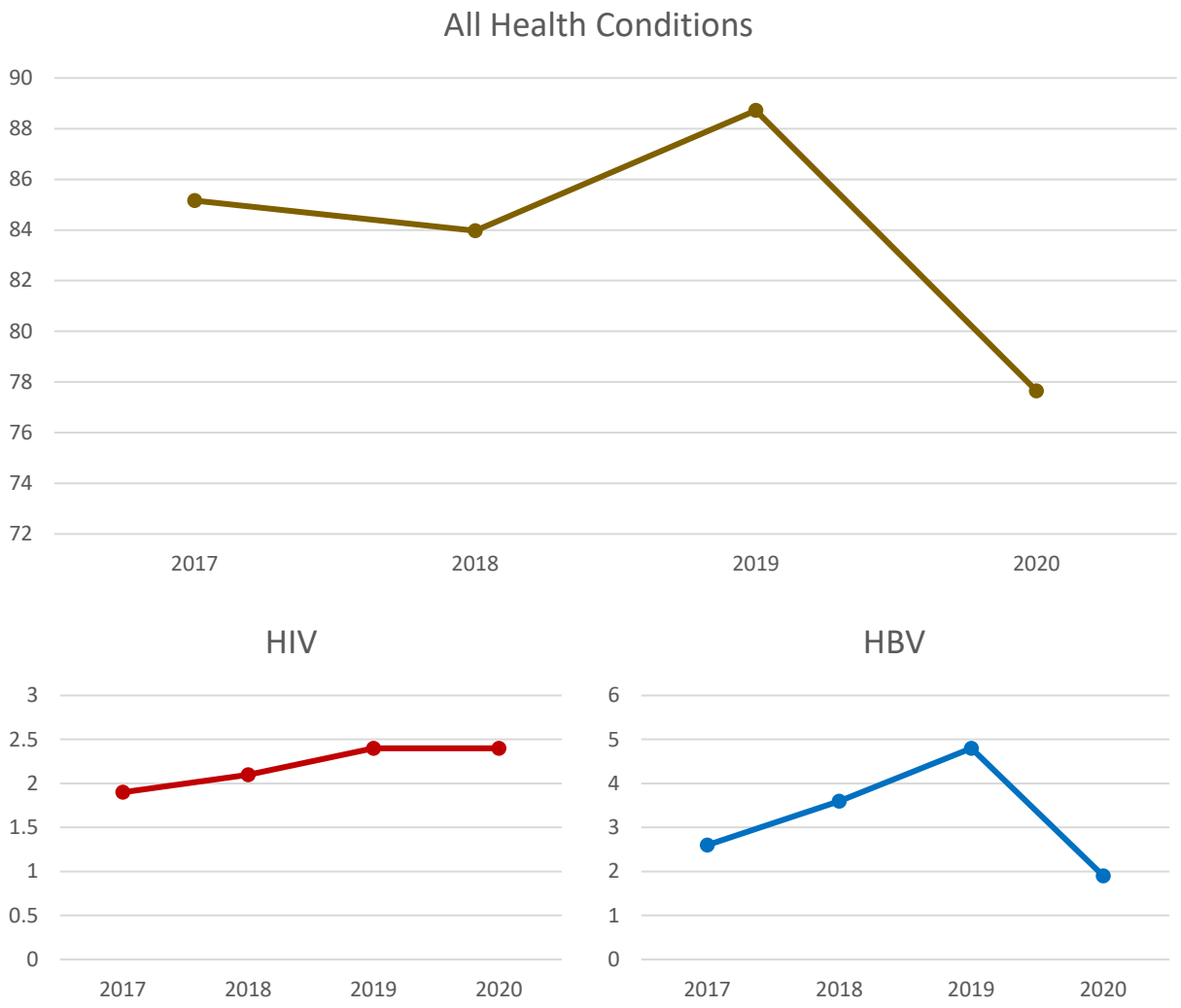
CDU also supports the Wyoming Comprehensive Care and Prevention Planning Alliance (CAPPA)—the state's community planning group for HIV, hepatitis, and STIs—which includes community advocates, public agency employees, providers, and people with lived experience. The Surveillance Program also manages the HIV Surveillance and Viral Hepatitis grants.

EPIDEMIOLOGICAL OVERVIEW

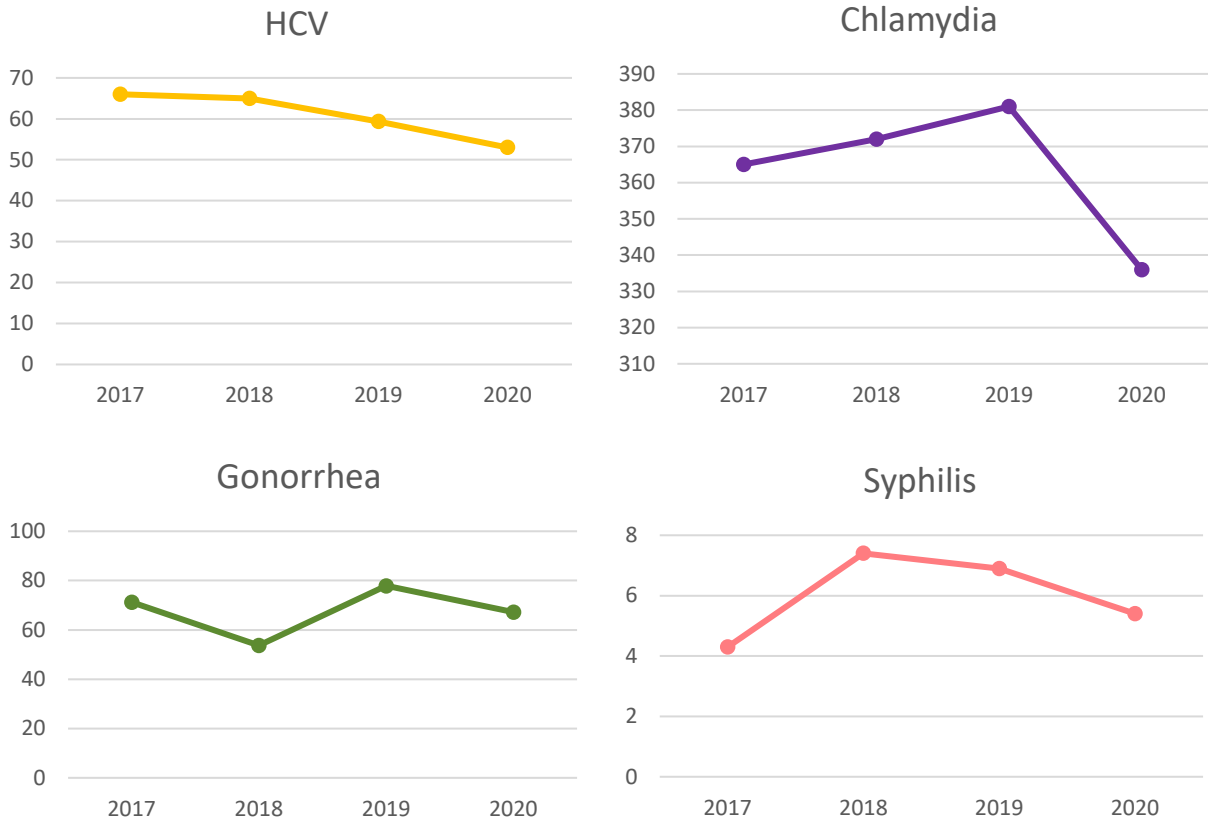
All epidemiological data displayed in this section was provided by the CDU Surveillance Program.[13] All rates provided are per 100,000 population. Rate calculations are not adjusted by age. For certain population subgroups that have smaller prevalence in Wyoming—for example, Black/African American people—rates may be higher compared to other population subgroups with greater prevalence even though the actual count of individuals from smaller population subgroups is much smaller than the count of individuals from larger population subgroups. Tables and figures that show all health conditions use an average rate per 100,000 calculated across all six health conditions examined (HIV, HBV, HCV, Chlamydia, Gonorrhea, and Syphilis).

HIV, VH, and STI Incidence

FIGURE 1. NEWLY DIAGNOSED CASE RATES PER 100,000 BY YEAR AND HEALTH CONDITION, 2017-2020.



[13] https://health.wyo.gov/publichealth/communicable-disease-unit/hivaids-surveillance-program/



Between 2017 and 2021, 16,005 new cases of HIV, VH, and STIs in Wyoming were reported to CDU. The majority of these cases (52.7%) were of chlamydia, which had the highest new case rate of any health condition each year. Looking at the average new case rate per 100,000 of all health conditions together, new case rates were relatively stable each year, with a slight decrease between 2019 and 2020. This is most likely attributable to the COVID-19 pandemic and public health restrictions, as fewer individuals were tested for these health conditions; therefore, fewer cases were diagnosed and reported. Of the six syndemic health conditions, the new case rate for HCV was the only new case rate that saw a steady decline between 2016 and 2021. Excluding the drop in new cases in 2020 because of the COVID-19 pandemic, all five other health conditions had trends of increasing case rates. The greatest increases in new case rates were for HBV—which had an 84.3% increase in new case rate between 2017 and 2019—and syphilis—which had a 60.4% increase in new case rate between 2017 and 2019. The rate of new HIV infections has slowly increased from 1.9 in 2017 to 2.4 in 2020.

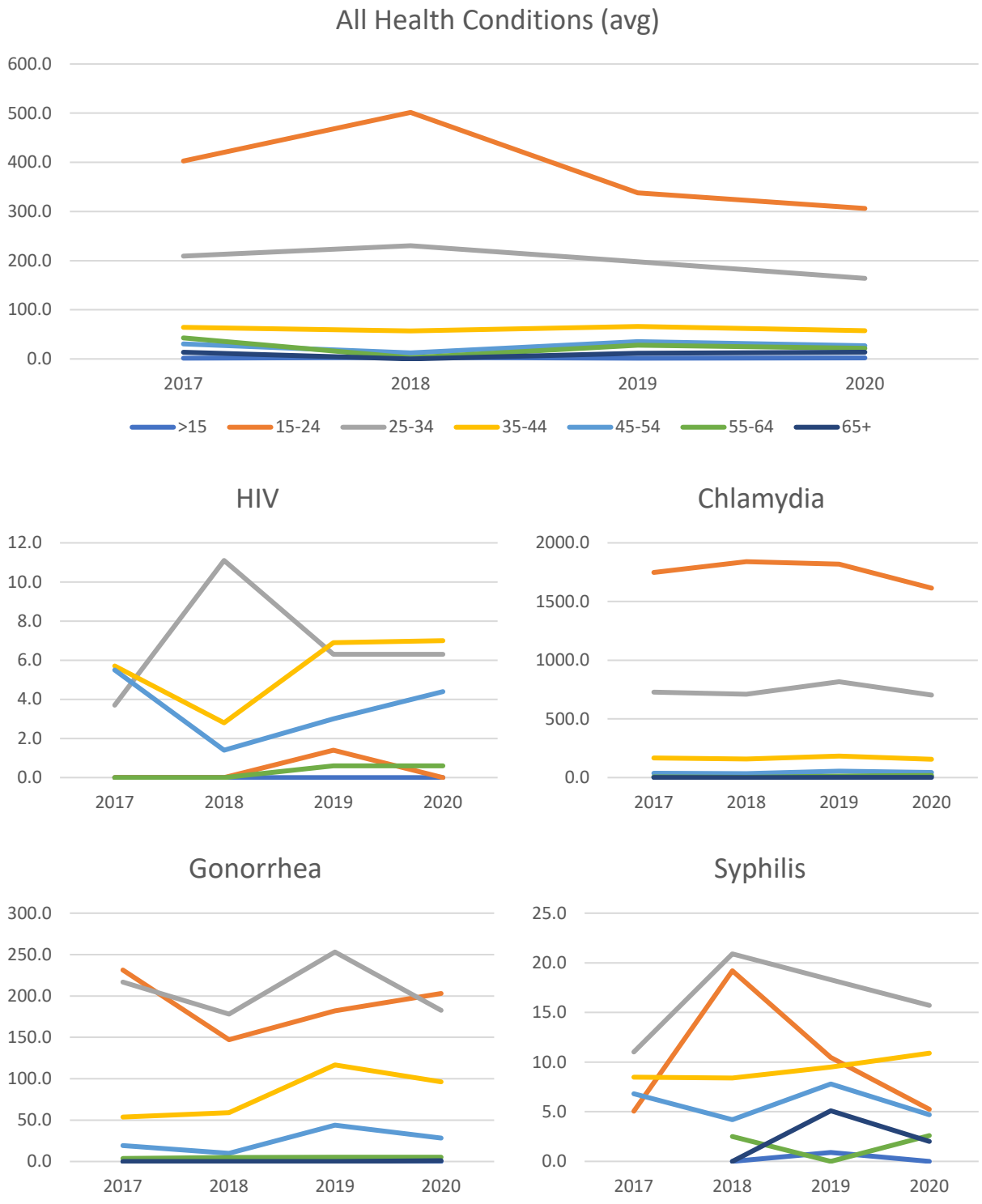
TABLE 2. NEWLY DIAGNOSED CASE RATES BY SEX AT BIRTH AND HEALTH CONDITION, 2016-2021.

		2017 Count (Rate per 100,00)	2018 Count (Rate per 100,00)	2019 Count (Rate per 100,00)	2020 Count (Rate per 100,00)
All Health Conditions	Male	1213 (67.9, avg)	1218 (67.1, avg)	1291 (72.7, avg)	1067 (78.4, avg)
	Female	1764 (103.1, avg)	1735 (101.5, avg)	1790 (104.8, avg)	1628 (124.2, avg)

HIV	Male	10 (3.4)	11 (3.7)	12 (4.2)	12 (4.2)
	Female	1 (0.4)	1 (0.4)	2 (0.7)	2 (0.7)
HBV	Male	9 (3.0)	12 (4.0)	13 (4.4)	8 (3.5)
	Female	6 (2.1)	9 (3.2)	15 (5.3)	3 (1.4)
HCV	Male	252 (84.7)	241 (80.8)	226 (76.3)	195 (86.2)
	Female	130 (45.6)	135 (47.4)	117 (41.1)	112 (51.3)
Chlamydia	Male	735 (246.9)	746 (250.1)	770 (260)	624 (275.9)
	Female	1394 (488.5)	1424 (499.8)	1435 (503.8)	1319 (603.8)
Gonorrhea	Male	187 (62.8)	156 (52.3)	240 (81.0)	208 (92.0)
	Female	228 (79.9)	157 (55.1)	211 (74.1)	181 (82.9)
Syphilis	Male	20 (6.7)	34 (11.4)	30 (10.1)	20 (8.8)
	Female	5 (1.8)	9 (3.2)	10 (3.5)	11 (5.0)

Individuals assigned female at birth had higher overall new case rates each year between 2017-2021 compared to males due to disproportionately high new case rates of chlamydia. However, individuals assigned male at birth had higher new cases rates compared to females for HIV, HBV, HCV, and syphilis. Notably, new cases rates for syphilis decreased among males but increased among females. New case rates for gonorrhea were relatively similar between males and females and increased for both sexes between 2017 and 2021. There is not reliable or consistent reporting on the gender identity of clients at the time of testing, so unfortunately, new case rates are not able to be analyzed by gender.

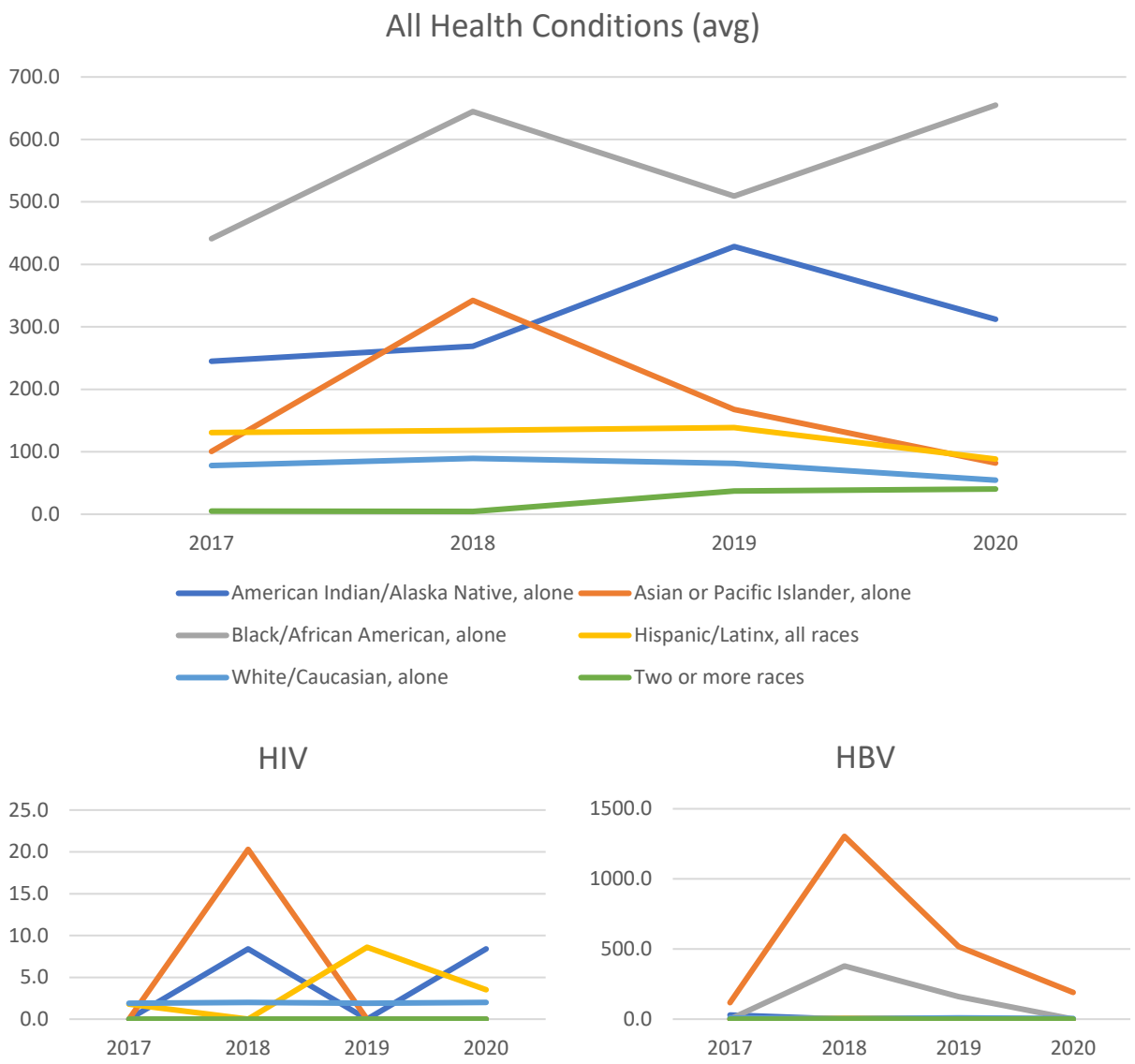
FIGURE 2. NEWLY DIAGNOSED CASE RATES PER 100,000 BY AGE AND HEALTH CONDITION, 2017-2020. *

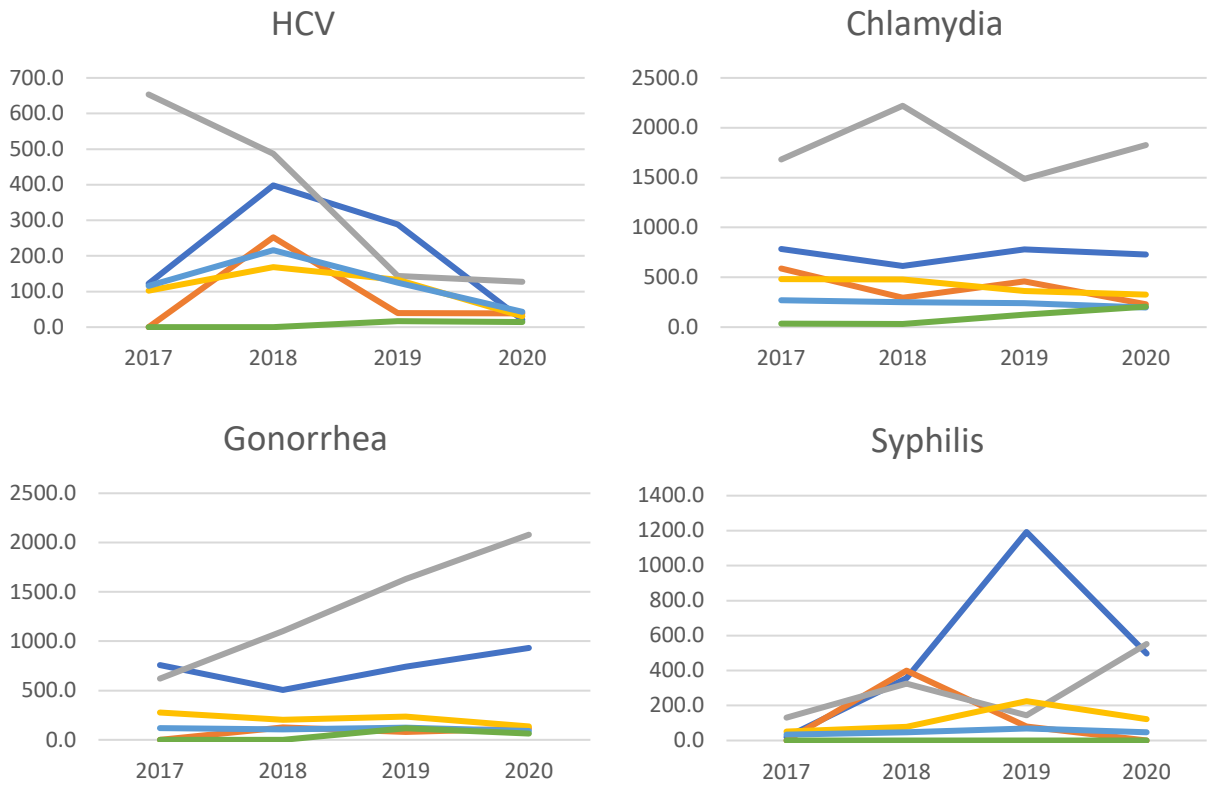


*Age-level new case rate data are not available for HCV and HBV. Age-level data for HIV do not include the age categories 55-64 and 65+, these data are grouped only as 55+. Incident rates for syphilis for age categories >15, 55-64, and 65+ were not available for 2017.

Between 2017 and 2020, 15–24 year-olds had the highest new case rate per 100,000 when averaged across all health conditions. This is because this age group has a significantly high new case rate of chlamydia each year compared to new case rates among other health conditions. New case rates of chlamydia for all age groups remained relatively stable between 2017 and 2020. New case rates for HIV are highest among 25-34 year-olds and 35-44 year-olds. In the last three years, new HIV case rates increased for both 35-44 year-olds and 45-54 year-olds. New case rates also increased among these age groups for gonorrhea and syphilis between 2017 and 2020. However, 15-24 year-olds and 25-34 year-olds continue to have the highest case rates of gonorrhea and syphilis.

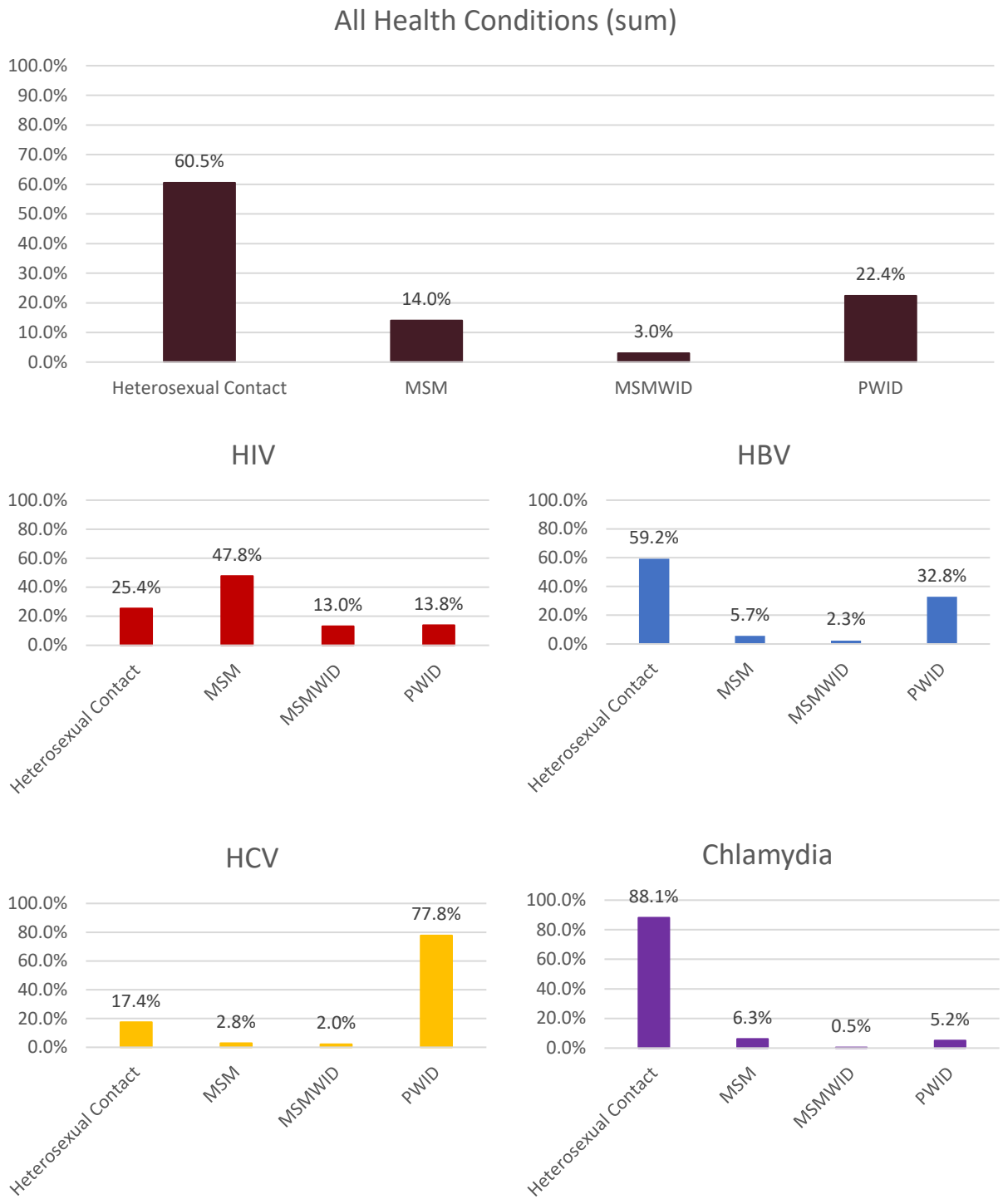
FIGURE 3. NEWLY DIAGNOSED CASE RATES BY RACE/ETHNICITY AND HEALTH CONDITION, 2017-2020.

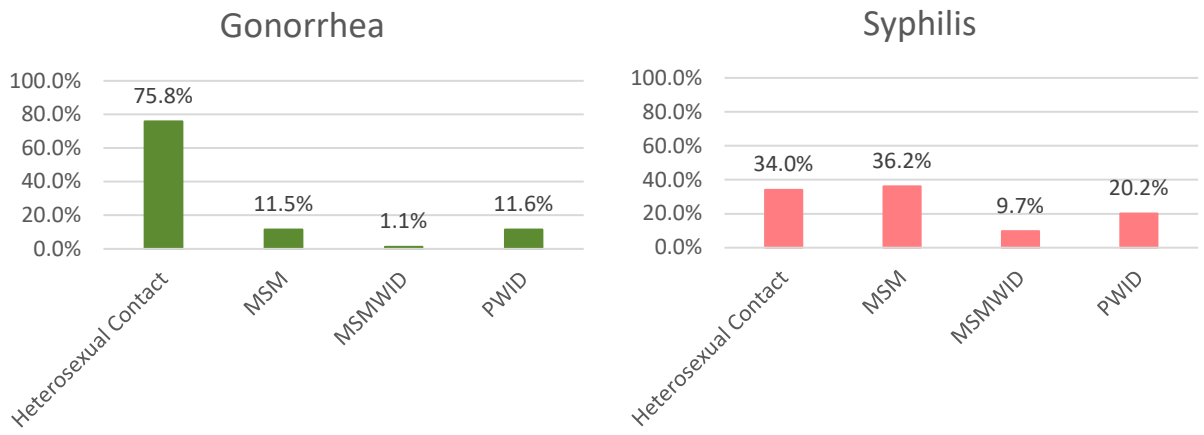




Black/African American individuals had the highest new case rates across all health conditions between 2017 and 2020; However, this is because there is a relatively small number of individuals in Wyoming who are Black/African American compared to other racial/ethnic groups. The majority of individuals diagnosed with any of the syndemic health conditions each year were White/Caucasian—accounting for two thirds of all new cases reported between 2017 and 2020. While the majority of new HIV cases were White/Caucasian, the number and rate of new HIV cases among White/Caucasian individuals in Wyoming decreased between 2017 and 2020. The number and rate of new HIV cases increased among Hispanic/Latinx individuals. There was also an increase in new case rates among Hispanic/Latinx individuals in Wyoming for syphilis. Notably, though Asian and Pacific Islander individuals represent a small portion of the overall population in Wyoming, they make up a relatively large share (38.9%) of new HBV cases between 2017 and 2020. This may be due to the fact that many of these individuals may have come to Wyoming from countries where HBV is more common than in the US. Excluding 2020 data, given the potential impact of COVID-19 on testing, American Indians or Alaska Natives had the greatest increase in new HCV case rates (135.5% between 2017-2019). All other racial/ethnic groups saw relatively similar or decreases in new HCV case rates between 2017 and 2019. The largest number of new HCV cases each year were among White/Caucasian individuals.

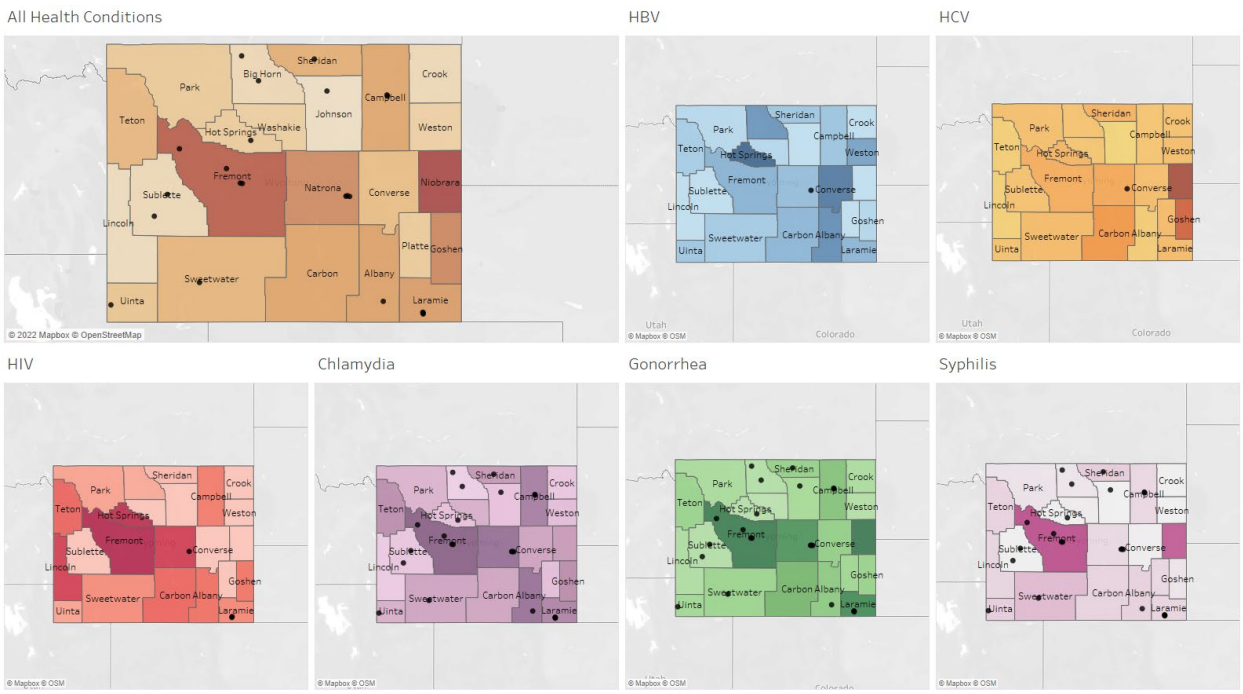
FIGURE 4. NEWLY DIAGNOSED CASES BY EXPOSURE CATEGORY AND HEALTH CONDITION, 2017-2020.





While overall, heterosexual contact was the most commonly cited exposure category (60.5%) for all syndemic health conditions, this varied for each health condition. Men who have sex with men (MSM) accounted for the largest percent of new HIV cases (47.8%). Notably, MSM who use injection drugs (MSMWID) also made up a sizeable percent of new HIV cases reported (13.0%). For HCV, people who use injection drugs (PWID), including MSM who inject drugs, accounted for the majority of newly diagnosed cases (79.8%). Heterosexual contact was by far the most prominent risk factor among new HBV, chlamydia, and gonorrhea cases. Lastly, MSM and heterosexual contact accounted for the largest share of new syphilis cases, with MSM making a slightly larger share (36.2%) of new cases than heterosexual contact (34.0%).

FIGURE 5. AVERAGE NEWLY DIAGNOSED CASE RATE PER 100,000 BY COUNTY AND HEALTH CONDITION WITH PLOTTED TREATMENT PROVIDERS, 2017-2020.



Niobrara and Fremont Counties had the highest rates overall for total new cases of all syndemic health conditions between 2017 and 2020 (246.6 and 216.4 respectively). However, Natrona and Laramie Counties had the highest number of new cases of all health conditions (3,823 and 3,891, respectively). Niobrara County had the highest case rate for HCV (688.0), followed by Goshen County (534.9), and Carbon County (287.6). This may be because these counties contain some of the largest corrections facilities in the state and a large number of new HCV cases are being diagnosed in these facilities upon intake. The greatest number of new HCV cases, however, were from Natrona and Laramie Counties—890 and 727, respectively—which are the state's most populous counties. Fremont County had the highest rate of new chlamydia cases (595.8), HIV cases (8.9), and syphilis cases (310.5). When looking at case counts instead of rates, Natrona and Laramie Counties had the greatest number of new cases for chlamydia and HIV, but Fremont still had a significantly greater number of new syphilis cases than these counties (619). Albany County, which contains the city of Laramie—the state's fourth largest city and where the University of Wyoming is located—had the third highest new case rate of any county for chlamydia (524.4) and HBV (25.73).

Fremont County has the greatest number of sites that provide STI treatment services four (4), and it also has some of the highest rates of new STI cases in the state. Niobrara County has the second highest rate of new syphilis cases in the state and also lack public health sites providing STI treatment services. These new syphilis cases are likely contained to the large corrections facility located in Niobrara County, who provide internal STI treatment services to facility residents. There is only one provider in the state that provides treatment for VH, located in Casper, Wyoming, of Natrona County. While Natrona County had a significant number of new HBV cases between 2017-2021 (N=5), Laramie (N=21) and Albany Counties (N=9) had the highest number of new HBV cases. This represents a geographic gap in treatment services for people residing in these counties. Additionally, Natrona County had the highest number of new HCV cases in 2017-2021, followed by Laramie and Fremont, with no treatment providers in those counties.

HIV Prevalence

As of December 31, 2020, there were 349 people in Wyoming living with HIV. Of these, 168 had been diagnosed during HIV stages 1 or 2 and 181 had been diagnosed during HIV stage 3 (AIDS), meaning they had fewer than 200 CD4 cells/mm3 at the time of their diagnosis. The majority of PLWH in Wyoming were assigned male at birth (80.5%) and identify as White/Caucasian. However, there is a disproportionately larger share of American Indian/Alaska Native, Black/African American, and Hispanic/Latinx who are living with HIV compared to their share of the general population of Wyoming. The greatest percentage of PLWH in the state are 55+ (36.1%). The majority of PLWH who are 45-54 and 55+ were first diagnosed with HIV during stage 3, whereas most PLWH in all younger age groups were first diagnosed with HIV during stages 1 and 2.

TABLE 3. HIV PREVALENT CASES BY DEMOGRAPHIC FACTORS, AS OF 2020.

	HIV Stage 1 or 2 Count	**HIV Stage 3** Count	**Total PLWH** Count (%)
Total	168	181	349 (100%)

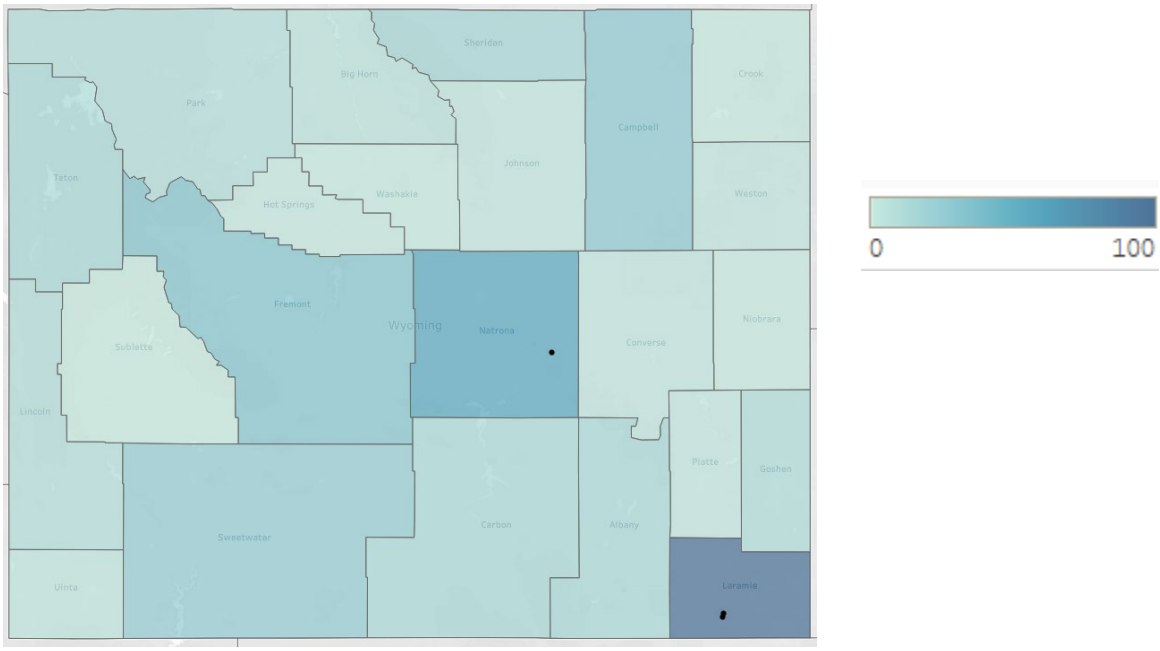
Sex at Birth			
Male	137	144	281 (80.5%)
Female	31	37	68 (19.5%)
Age			
<15	2	0	2 (0.6%)
15-24	9	2	11 (3.2%)
25-34	36	10	46 (13.2%)
35-44	44	32	76 (21.8%)
45-54	35	53	88 (25.2%)
55+	42	84	126 (36.1%)
Race/Ethnicity			
American Indian/Alaska Native, alone	6	8	14 (4.0%)
Asian, alone	3	0	4 (0.9%)
Black/African American, alone	16	10	26 (7.4%)
Hispanic/Latinx, all races	26	33	59 (16.9%)
Native Hawaiian/Pacific Islander, alone	1	0	1 (0.3%)
White/Caucasian, alone	112	119	231 (66.2%)
Two or more races	5	4	9 (2.6%)

TABLE 4. HIV PREVALENT CASES BY EXPOSURE CATEGORY, AS OF 2020.

	Total PLWH Count	Total PLWH Percent
Male	**281**	**100.0%**
Men who have sex with men (MSM)	173	61.6%
People who inject drugs (PWID)	18	6.4%
MSM who inject drugs (MSMSWID)	43	15.3%
Heterosexual contact	10	3.6%
No identified risk (NIR)	32	11.4%
Perinatal exposure	5	1.8%
Female	**68**	**100.0%**
People who inject drugs (PWID)	17	25.0%
Heterosexual contact	32	47.1%
No identified risk	14	20.6%
Perinatal exposure	5	7.4%

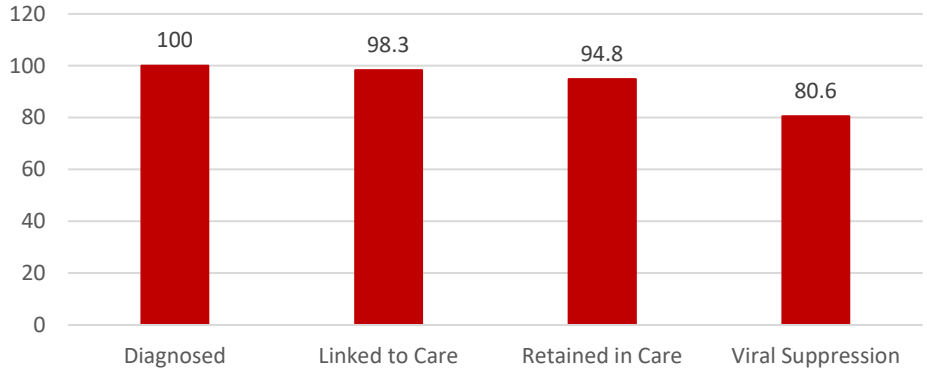
Among PLWH assigned male at birth, MSM was the most common exposure category—61.6% of male PLWH were MSM—followed by MSMWID. Among PLWH assigned female at birth, heterosexual contact was the most common exposure category, followed by PWID.

FIGURE 6. HIV PREVALENCE COUNTS BY COUNTY AND HIV TREATMENT PROVIDERS, AS OF 2020.



HIV medical care is offered by five providers in the state. One is in Natrona County and four are located in Laramie County. Recently, UW Family Practice in Laramie County has been treating an individual for nearly a year and there was a nurse practitioner that was with Laramie Reproductive Health and now works for Natrona City Dept of Health that took on a client this spring. These two counties also have the greatest number of PLWH, followed by Fremont, Campbell, and Sweetwater Counties (32, 27, and 24, respectively). However, no HIV medical care providers are in those counties, forcing PLWH residing there to travel either to Natrona or Laramie County, or out-of-state, to receive HIV medical care. HIV case management is offered through the public health nursing staff in each counties' health office.

FIGURE 7. HIV CARE CONTINUUM, AS OF 2020.



Given the small numbers of new HIV diagnoses each year compared to number of HIV tests performed, it is estimated that close to 100% of all PLWH in Wyoming know their status. Of those, 98.3% are linked to care and 94.8% are retained in care. The largest gap in the HIV care continuum for the state is the percent of PLWH who maintain viral suppression, which is just above 80%.

Prevention Services

Condoms

Almost 50% of free condoms distributed across the state were distributed by local county public health offices, followed by Title X-funded clinics (18.8%). The Teton County Health Department distributed the greatest number of condoms (240,776) in 2021 through CDU Prevention Program's free condom distribution program. The greatest number of free dental dams and lubricants were distributed in Albany County, primarily through the University of Wyoming Student Health Services. Fremont County has the greatest number of free condom distribution sites (30) and had the second highest condom distribution numbers, but smaller dental dam and lubricant distribution numbers compared to other counties.

Pre-Exposure Prophylaxis (PrEP)

FIGURE 8. PREP REFERRALS BY QUARTER, 2019-2021.

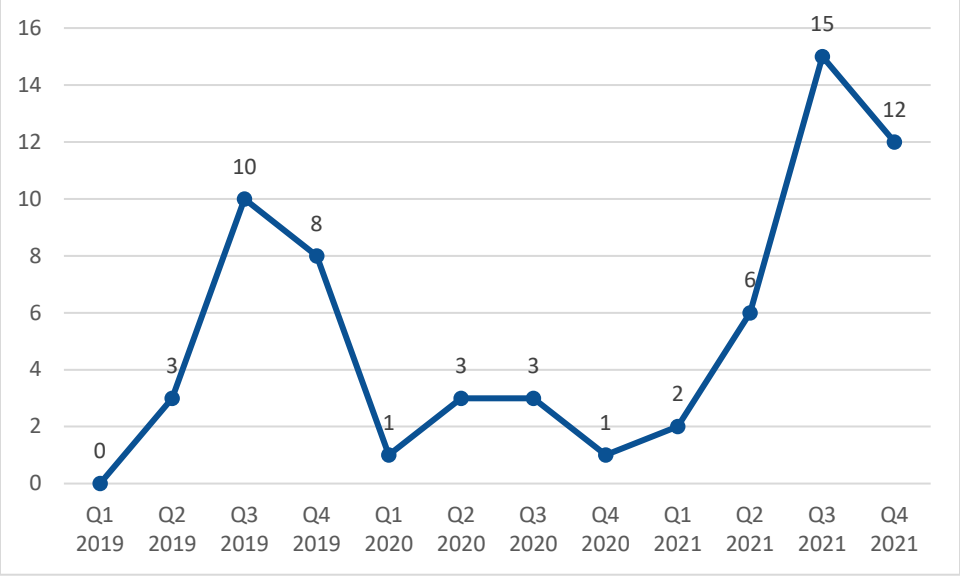
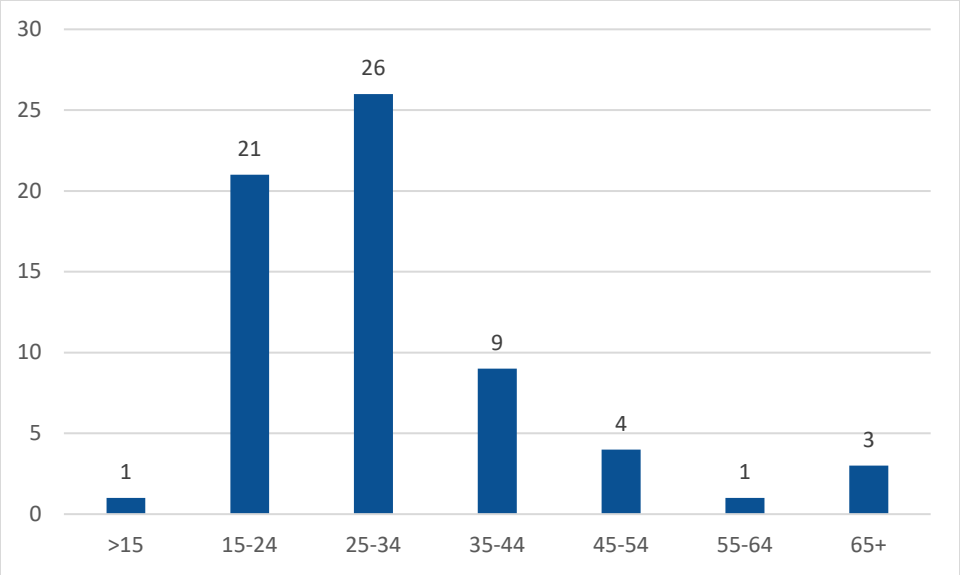
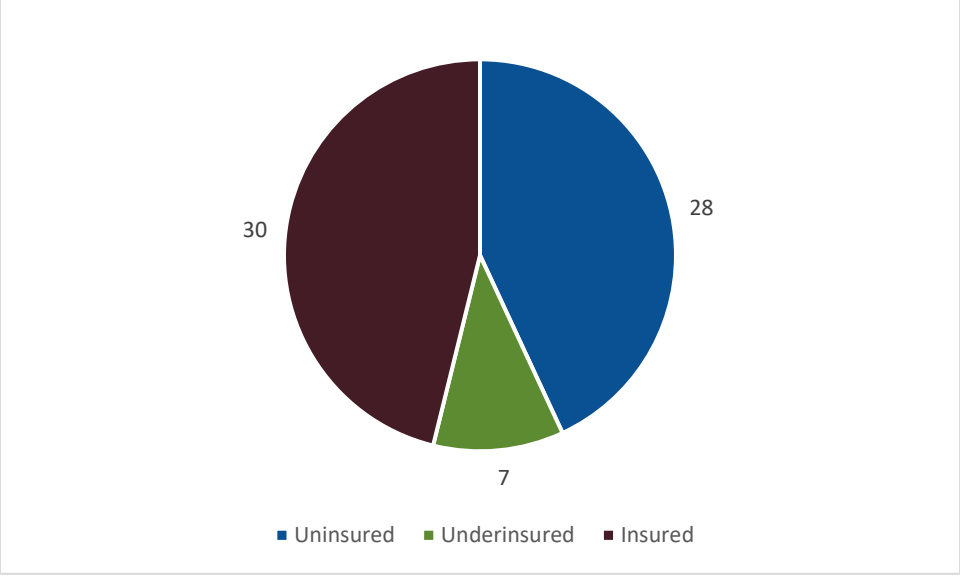


FIGURE 9. PREP REFERRALS BY AGE, 2019-2021.



There are sixteen providers in Wyoming currently offering PrEP prescription services and seven providers in neighboring state offering PrEP services. In 2019, CDU began tracking patient referrals for PrEP made by CDU, local county public health offices, and other provider practices. However, data is not available regarding the total number of individuals who are accessing PrEP in the state. While the referral program is new, the number of referrals continues to increase. The majority of individuals referred for PrEP services were under the age of thirty-five. CDU has made the most referrals of any participating entity (30), followed by the Teton County Health Department (5).

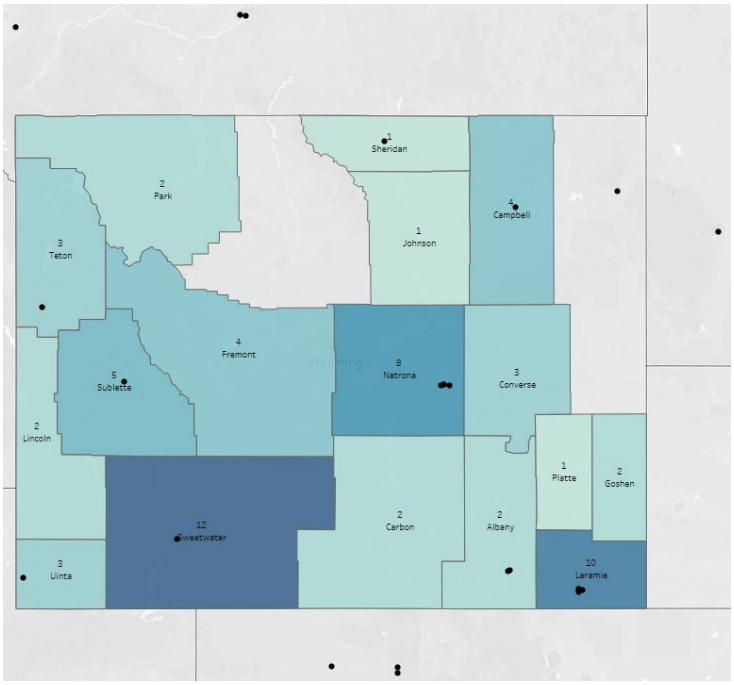
FIGURE 10. PREP REFERRALS BY INSURANCE STATUS, 2019-2021.



Notably, 43% of PrEP referrals were for uninsured individuals and 11% were for underinsured individuals. Wyoming does not have an established PrEP Drug Assistance Program (PrEP DAP) but does

direct individuals who need assistance affording PrEP medications to Gilead's national medication assistance program.[14]

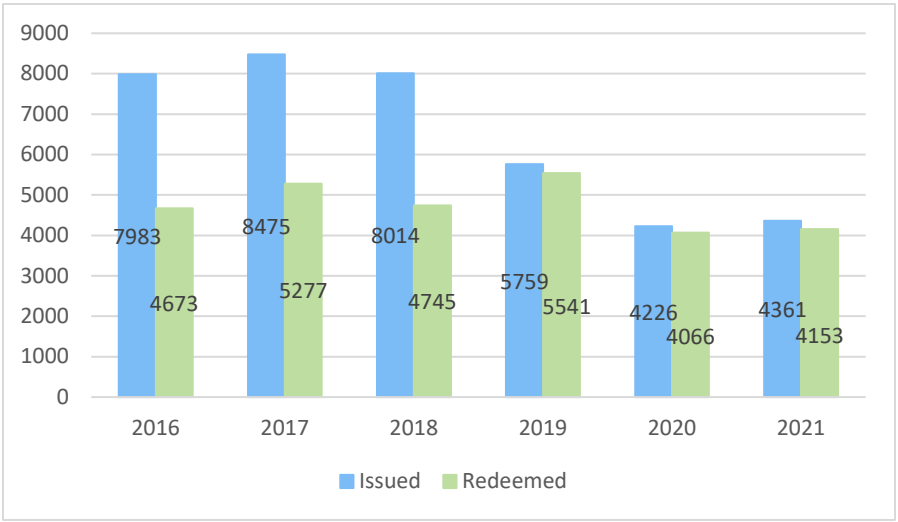
FIGURE 11. PREP REFERRALS BY COUNTY AND PREP PROVIDERS, 2019-2021.



Sweetwater, Laramie, and Natrona Counties have the greatest number of PrEP referrals. Interestingly, while Sweetwater had the highest number of PrEP referrals between 2019-2021, it had more moderate new HIV case rates and numbers compared to other others.

Testing Services

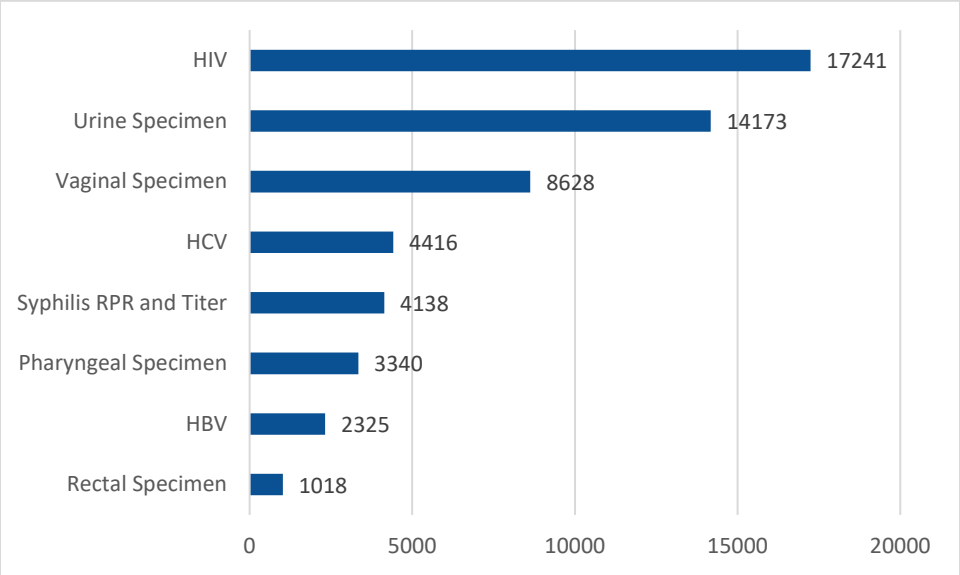
FIGURE 12. TESTING VOUCHERS ISSUED AND REDEEMED, 2016-2021.



[14] https://www.cdc.gov/hiv/basics/prep/paying-for-prep/gilead-medication-assistance-program.html

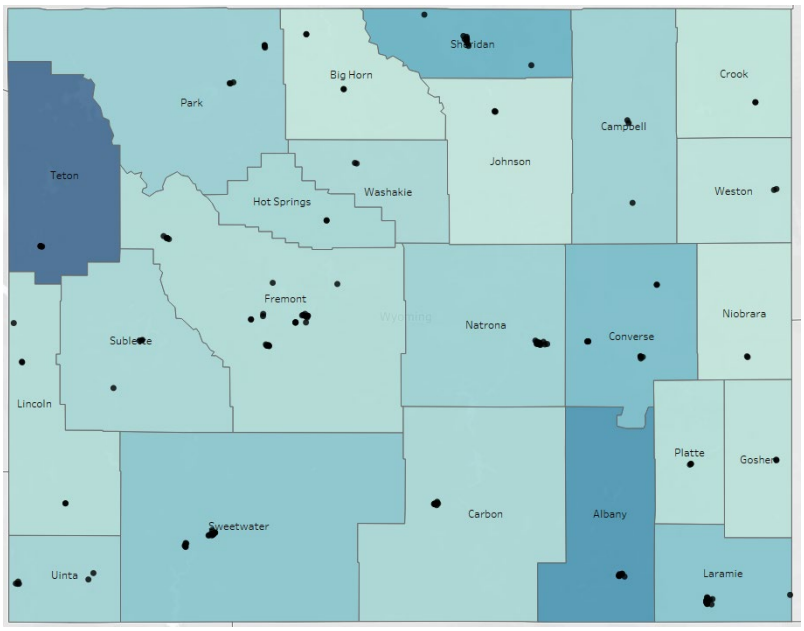
Testing for HIV, VH, and STIs is offered in all counties through public health nurses, Title X Clinics, FQHC, university student health, and by various provider practices in some counties. CDU collects data on the number of low or no-cost testing vouchers issued to and redeemed by individuals in the state; however, this does not represent the number of tests that are conducted in the state. The number of low or no-cost testing vouchers issued by the state has decreased between 2016 and 2021. While the number of free test vouchers actually redeemed increased between 2016 and 2019, it decreased in 2020 and remained lower than earlier years in 2021. This was likely a result of the COVID-19 pandemic—fewer individuals getting tested for HIV, VH, and STIs. Interestingly, the percent of redeemed testing vouchers increased over time, showing that more individuals issued testing vouchers actually received services.

FIGURE 13. TESTING VOUCHERS ISSUED BY TEST TYPE, 2016-2021.



The greatest number of vouchers issued between 2016 and 2021 were for HIV tests (17,241), followed by urine specimen tests and vaginal specimen tests, which can detect chlamydia and gonorrhea infection. Compared to HIV, many more individuals in Wyoming were infected with chlamydia and gonorrhea from 2016-2017. CDU recommends three-site STI testing—testing specimens from the genitals, pharynx, and rectum—to ensure individuals are tested for chlamydia and gonorrhea in all sites that infection may occur. However, fewer vouchers were issued for pharyngeal and rectal specimen tests, showing that individuals are likely not getting tested in all three sites. This suggests that there may be individuals with chlamydia and gonorrhea who go undiagnosed and/or are diagnosed late because they are not tested in the site of infection.

FIGURE 14. AVERAGE TESTING VOUCHER REDEMPTION RATE BY COUNTY AND TESTING SITES, 2016-2021.



Teton County has the highest rate of testing vouchers redeemed, followed by Albany County. While Fremont has the most testing sites of any county, it had a relatively low rate of testing vouchers redeemed compared to counties with fewer testing sites. This is especially salient because Fremont County had some of the highest rates of new cases, showing that individuals may be getting tested without using free testing vouchers, or that there may be large numbers of individuals in Fremont County who may have these health conditions but are not getting diagnosed.

METHODS

Needs Assessment Work Group

The needs assessment process was overseen by a twelve-person work group consisting of individuals representing federally qualified health centers (FQHCs), Title X clinics, student health services, local public health offices, HIV case managers, CDU, and PLWH. The work group was governed by tri-chair leadership structure, with one chair from each of the following constituency groups: CDU, the provider community, and PLWH. Health Management Associates Community Strategies (HMACS) coordinated and facilitated the group, which met monthly from February through July 2022.

HMACS met with the work group tri-chairs prior to each meeting to review the proposed agenda, prepare meeting materials, and develop the specific objectives for the meeting. Work group meetings centered around data collection material development and recruitment, ongoing presentations of data and findings, and finally a review of the final needs assessment and brainstorming of priorities to recommend.

Structure

The needs assessment was informed by six key data collection components, as described in Figure 15.

FIGURE 15. NEEDS ASSESSMENT DATA COLLECTION COMPONENTS.

Literature Review and Environmental Scan

At the first needs assessment work group meeting, work group members shared their particular interests and goals for how to better address HIV, VH, and STIs in Wyoming. HMA used these initial priorities to formulate a set of search criteria and identified literature on national and other states' best practices and promising approach to address HIV, VH, and STI prevention, treatment, and care. The resulting literature review discussed innovative community-based interventions—including social media, mobile services, pill delivery, and community champions—and systems-based interventions—including care integration, Project ECHO, rapid ART initiation, telehealth, primary care, and behavioral health—that could be considered as strategies to enhance services. The literature review was disseminated to

the work group and was used to guide the group's discussion on recommendations for the strategic goals included in this needs assessment.

Ecosystem Mapping

HMA obtained epidemiological data from CDU on the counts and rates of newly diagnosed HIV, VH, and STIs between 2017 and 2020 broken down by race, ethnicity, sex-at-birth, age, exposure category, county of residence, and year of diagnosis. CDU also provided HMA with data on the number of low or no-cost testing vouchers requested and redeemed, free condom distributed by entities across the state, and PrEP referrals made. HMA visualized these data on interactive dashboards, charts, and maps, so that work group members could identify specific geographic and demographic trends in HIV, VH, and STI incidence and testing. Additionally, HMA compiled information on the locations of HIV, VH, STI testing and treatment providers, PrEP providers, and free condom distributors in the state and plotted these locations over relevant trends in incidence rates, PrEP prescribing counts, testing counts, and condom distribution. This allowed the needs assessment workgroup to identify areas of the state where there may be gaps given high incidence rates, low prevention distribution, and few resources. By analyzing and reviewing the geographic and demographic trends alongside available services and resources presented in the ecosystem maps, HMA, CDU, and the needs assessment work group identified gaps and priorities for enhancing these ecosystems across the state. These data were also used to help inform primary data collection for the needs assessment, including community outreach and engagement.

Provider Survey

To ensure broad input from various providers of HIV, VH, and STI testing, treatment, and prevention, HMA conducted a large-scale online survey between May 1 and May 31. The provider survey targeted physical and behavioral health clinicians, case managers, local public health nurses, and other professionals who provide direct client services to PLWH and people diagnosed with or at risk for VH or STIs. The survey consisted of a mix of multiple choice, open response, and matrix questions and assessed providers' experiences delivering services, barriers to delivering services, comfort delivering services to different types of clients, and knowledge and utilization of different state and national resources to support providers. The survey also asked providers to identify specific recommendations they had on how they state could better support providers. The needs assessment work group reviewed and revised the survey before dissemination and reviewed survey findings.

The provider survey was distributed by the work group members through their provider network communication channels. Additionally, CDU advertised a promotional flyer for the provider survey through its social media.

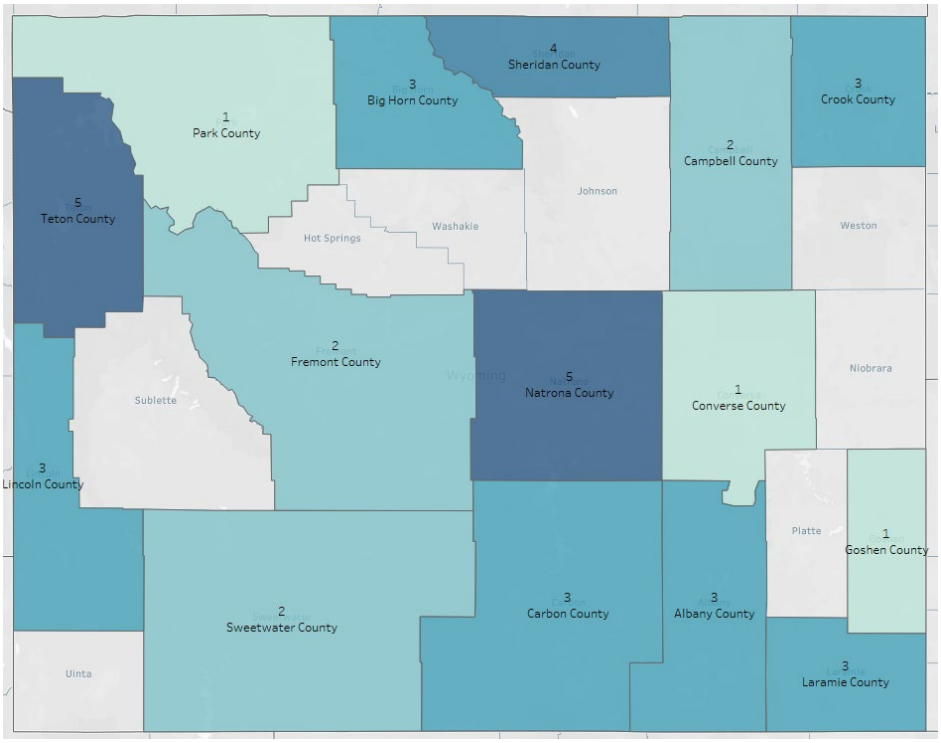
The survey was analyzed in Excel. Analytics included descriptive statistics of responses. Cross tabs were conducted to understand to what extent response differed between specific service provider types and geographic locations. Questions with open-ended responses were analyzed to identify key themes across the responses. Findings were categorized into the 4 EHE pillars.

TABLE 5: PRACTICE SETTINGS OF PROVIDER SURVEY RESPONDENTS.

Practice Setting	Number of Respondents
FQHC	5
ER or urgent care	3
Private practice	2
University Health Center	2
Local Health Department	33
Family Planning Clinic	4

Eighty-one providers submitted electronic responses to the survey. Most respondents were providers at local county health departments. Twenty-nine providers receive Ryan White funding and nine receive Title X funding.

FIGURE 16: GEOGRAPHIC DISTRIBUTION OF PROVIDER SURVEY RESPONDENTS.



Respondents practice in counties across Wyoming, with Teton County and Natrona County having the highest number of respondents.

TABLE 6: SERVICES PROVIDED BY PROVIDER SURVEY RESPONDENTS.

Services	Number of Respondents
HIV testing	38
HIV treatment	5
PrEP	11
PEP	10
VH testing	36
VH treatment	3

STI testing	39
STI treatment	37
Primary health care	11
Medical case management	21
Non-medical case management	14
Oral health care	4
Substance use treatment	3
Medication-assisted treatment (MAT)	3
Mental health	1

Lastly, respondents provide a variety of different services related to HIV, VH, and STI testing, treatment, and prevention; however, only one respondent was a mental health provider.

Community Survey

In addition to the provider survey, HMA conducted a large-scale online survey of community members to better understand their experiences and needs related to HIV, VH, and STI prevention, testing, and treatment. This survey asked respondents about their experiences with prevention, testing, and treatment services, any barriers or challenges they had with these services, and other physical health, behavioral health, or social needs. The survey also asked respondents to identify what they believe works well and what could be improved about HIV, VH, and STI prevention, treatment, and care services in Wyoming. Not all respondents answered every question. The survey included branching logic so that individuals who indicated they were living with HIV, had ever been diagnosed with VH, and/or had ever been diagnosed with and STI would be asked an additional set of questions about their experiences related to treatment and care of those health conditions. The needs assessment work group reviewed and revised the survey questions before dissemination.

The community survey was sent by the work group members through their provider network communication channels to encourage providers to publicize the survey among their clients. CDU advertised a promotional flyer for the community survey through its social media. Additionally, promotional flyers with a link and scannable QR code were distributed at local Pride events through the state in the month of June. The community survey ran from May 1 to June 30.

The survey was analyzed in Excel. Analytics included descriptive statistics of responses. Cross tabs were conducted to understand to what extent response differed between specific service provider types and geographic locations. Questions with open-ended responses were analyzed to identify key themes across the responses. Findings were categorized into the 4 EHE pillars.

One hundred and sixty-three community members responded to the community sexual health survey, though not every respondent answered each question, including the demographic questions. Of these, five respondents were living with HIV, five had been diagnosed with VH (two with HAV, two with HBV, and one with HCV), and 23 had been diagnosed with another STI (two with gonorrhea, seven with chlamydia, two with syphilis, eight with HPV, and four with other STIs). Three of the five individuals living with HIV identified as long-term survivors. Of the five PLWH, one had experienced co-infection

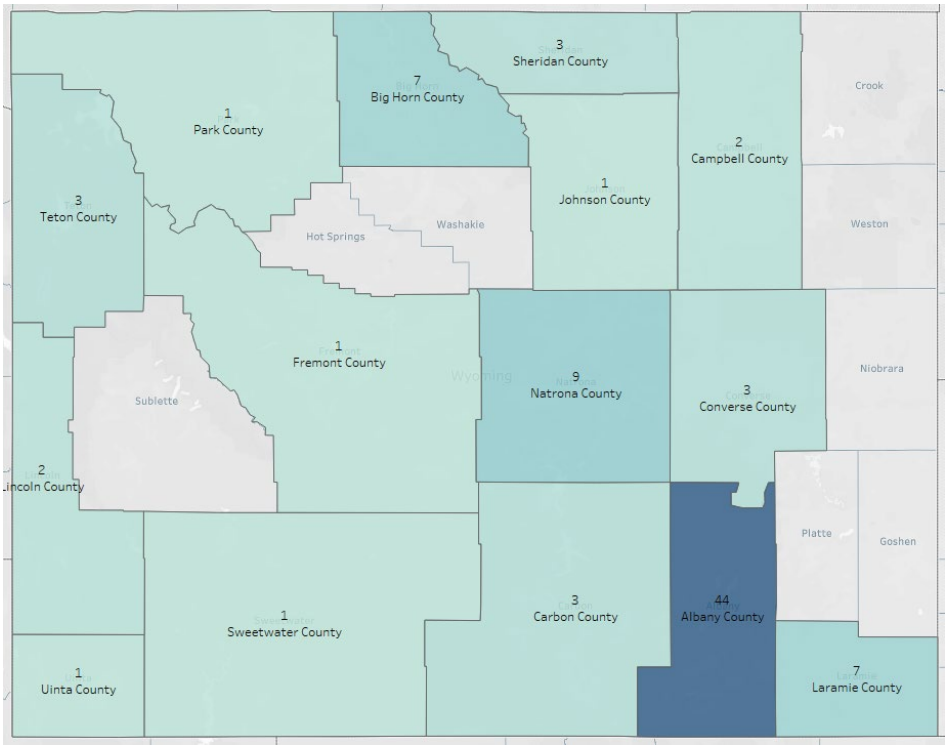
with HBV, one had experienced co-infection with HPV, and one had experienced co-infection with syphilis.

TABLE 7: AGE DEMOGRAPHICS OF COMMUNITY SURVEY RESPONDENTS.

Age Range	Number of Respondents
<15	0
15-24	47
25-34	11
35-44	9
45-54	10
55-64	6
65+	1

Just over half of all respondents who answered demographic information were between 15 and 24 years old.

FIGURE 17: GEOGRAPHIC DISTRIBUTION OF COMMUNITY SURVEY RESPONDENTS.



Most respondents also were from Albany County, which is where the University of Wyoming's main campus is located, so likely, a good portion of respondents were current UW students.

TABLE 8: RACIAL/ETHNIC DEMOGRAPHICS OF COMMUNITY SURVEY RESPONDENTS.

Answer	Number of Respondents
Asian American or Asian Born	2
Black American, African American, or African Born	2
Hispanic, Latino, Latina, Latinx, or Latin American	4

Middle Eastern or Arab American	0
Native Hawaiian or Other Pacific Islander	1
Native American, Indigenous, or Alaska Native	1
White or European American	84
Other	0
Prefer not to answer	4

Additionally, most respondents identified as White or of European American descent.

TABLE 9: SEXUAL ORIENTATION DEMOGRAPHICS OF COMMUNITY SURVEY RESPONDENTS.

Answer	Number of Respondents
Heterosexual or Straight	63
Gay or Man who has sex with other men	6
Lesbian or Woman who has sex with other women	3
Bisexual or Bi	10
Pansexual or Pan	5
Asexual or Ace	3
Queer or Questioning	9
Other	2
Prefer not to answer	5

A majority of respondents also identified as heterosexual or straight, followed by bisexual, and queer or questioning. Only six respondents identified as men who have sex with men.

TABLE 10: GENDER DEMOGRAPHICS OF COMMUNITY SURVEY RESPONDENTS.

Answer	Number of Respondents
Agender	1
Cisgender man	17
Cisgender woman	54
Gender Expansive	9
Intersex	1
Transgender man	4
Transgender woman	0
Two Spirit	0
Questioning	4
Other	5
Prefer not to say	4

Cisgender women made up the largest represented group in terms of gender, followed by cisgender men and individuals who identified as gender expansive—which includes identities like gender-fluid, gender neutral, genderqueer, gender nonconforming, and nonbinary.

Provider Interviews

Phone interviews were conducted with case managers, public health nurses, providers, and clinics throughout Wyoming. A discussion guide was developed to learn about provider experiences delivering and supporting services, any barriers or challenges, and other needs related to delivering high quality

HIV, VH, and STIs services and supporting clients. Additionally, questions probed on providers' thoughts on what works well and what could be improved about HIV, VH, and STI prevention, treatment, and care services in Wyoming. The work group members reviewed the draft discussion guide and provided edits and comments, which were then incorporated, and a draft was finalized by HMA.

The work group helped to identify a list of providers to interview. Each person interviewed received a $20 gift card for their time. Four stakeholder interviews were conducted and are listed in Table 11.

TABLE 11: DESCRIPTION OF PROVIDER INTERVIEWEES.

Organization	Provider Type	Services Offered	County or Counties Served
UW Family Practice	DO	PrEP prescribing, health clinic, gender affirming care	Natrona (Casper)
St John's Family Health/Teton County Public Health	FNP	PrEP prescribing, health clinic	Teton
Casper Natrona County Health Dept.	Communicable Disease Manager	Health clinic, case management, HIV/STI outreach	Natrona (Casper)
Northwest Healthcare	Executive Director	Health clinic, STI testing and treatment, Rapid HIV testing, wellness exams	Cody

A content analysis was conducted of the provider interviews and community focus groups, where data was categorized to classify and summarize using 4 EHE pillars: Diagnose, Treat, Prevent, Respond. Coding was done manually, in Excel, and looked for word and phrase repetitions, primary and secondary data comparisons, and missing information. Noteworthy quotations from transcripts were used to highlight major themes within the findings. Qualitative and any relevant quantitative data were summarized and synthesized to help inform the need assessment recommendations.

Unfortunately, few providers were able to participate in interviews. Providers were overwhelmed due to workforce shortages and their capacity to participate in a one-hour interview was limited. However, the findings from the interviews did align with the provider survey. Together, the two data sources create a more robust illustration of the key perspectives of providers delivering high quality HIV, VH, and STIs services in Wyoming.

Key Population Focus Groups

A discussion guide was developed to learn the community member experiences receiving services, any barriers or challenges with receiving HIV, VH, and STIs services and supports. Additionally, questions asked about community members' perspectives on what works well and what could be improved about HIV, VH, and STI prevention, treatment, and care services in Wyoming. The work group members reviewed the draft discussion guide and provided edits and comments, which were then incorporated,

and a draft was finalized by HMA. Each focus group participant received a $25 gift card for their time. Focus groups lasted 60 to 90 minutes.

Focus group participants were recruited with the support of the Needs Assessment Workgroup members. The survey had an option for respondents to opt in to learning more about opportunities to participate in a focus group on the survey topics. Twelve respondents opted in to learning more and two of these twelve respondents participated in focus groups.

Two focus groups were conducted and a total of six individuals participated across both focus groups. One focus group was held in-person and one was held virtually. All participants gave consent to participate in the focus groups. The focus group feedback provided a deeper dive into findings from the survey as well as insight and examples of participants' experience in accessing testing and treatment services. Demographic information was not formally collected for focus group participants; however, five participants disclosed that they were living with HIV, and all participants disclosed they had experience with STIs. No one disclosed experience with viral hepatitis.

A content analysis was conducted of the community focus groups, where data was categorized to classify and summarize using 4 EHE pillars: Diagnose, Treat, Prevent, and Respond. Coding was done manually, in Excel, and looked for word and phrase repetitions, primary and secondary data comparisons, and missing information. Noteworthy quotations from transcripts were used to highlight major themes within the findings. Qualitative and any relevant quantitative data were summarized and synthesized to help inform the need assessment recommendations.

FINDINGS

I. Diagnose

The goal of EHE's "Diagnose" pillar is to diagnose all people with HIV as early as possible. Key approaches to achieving this goal are:[15]

- Routine testing in all health care settings;
- Annual testing, at a minimum, among people at substantial risk;
- Self-testing kits for people with HIV; and
- Expansion of innovations, such as telemedicine and telehealth; rapid HIV tests, and same-day delivery of PrEP or treatment upon HIV test results

Using a syndemic approach, this section discusses key findings from interviews, focus groups, and surveys as they relate to enhancing diagnoses of HIV, VH, and STIs in Wyoming.

Capacity for Routine HIV, STI, and VH Testing

The provider survey asked respondents about the situations in which their organization offered STI, HIV, and VH testing. Less than one third of providers who offer testing services said they offer routine testing to all individuals seeking care at their organization. Most organizations said they offer diagnostic testing based on clinical signs or symptoms consistent with STI/HIV/VH infection. Providers are also more likely to offer an HIV and VH test if an individual presents for STI screening. Providers are more likely to offer targeted testing for MSM and PWID. Lastly, only 22-55% of providers offer HIV, VH, or STI testing to individuals who have previously been or are currently being treated for HIV, VH, or an STI, which shows a lack of syndemic testing strategy. Community focus group participants indicated some providers only discuss testing when asked by the patient and emphasized the importance of promoting testing broadly and proactively. One focus group participant stated, "You have to be comfortable with your provider [to ask for a test] and that's a huge barrier. Some providers may not be recommending a test because they don't think the patient fits the stereotype."

TABLE 12: WHICH SITUATIONS DOES YOUR ORGANIZATION OFFER STI/HIV/VH TESTING?

Situation	STI Testing (n=37)	HIV Testing (n=26)	VH Testing (n=20)
All individuals who enter into our organization are offered HIV, VH, and STI testing	30%	27%	20%
Diagnostic testing based on clinical signs or symptoms consistent with STI/HIV/VH infection	54%	58%	65%
Targeted testing of people who use drugs	27%	42%	55%
Targeted testing of all youth	14%	N/A	N/A
Targeted testing of men who have sex with men	24%	50%	55%
Targeted testing of pregnant individuals	22%	31%	30%
Targeted testing of individuals with high numbers of sexual partners	27%	28%	50%

[15] https://www.cdc.gov/endhiv/diagnose.html

Targeted testing of individuals who are currently or have been treated for HIV/VH/STI	27% (HV) 22% (VH)	38% (VH) 50% (STIs)	35% (HIV) 55% (STIs)
Other	27%	12%	15%
All individuals who present for STI screening	N/A	85%	85%
Targeted testing of partners in sero-discordant relationships	N/A	42%	N/A
Targeted testing of all patients born between 1945 and 1965	N/A	N/A	40%

Of the 37 provider respondents who offer testing services, 32 (86.5%) of them indicated their organizations conduct STI partner services and testing for clients. Most of these organizations were county public health offices. Among the settings who reported they did not offer partner services and testing were FQHCs, and jail or correctional facilities. Providers were somewhat more likely to offer partner services and testing for HIV (96%) than STIs (87%) or VH (80%). For clients who test positive for STIs, 97% of responding organizations offer or refer clients for VH and HIV testing.

Provider interviews offered insight as to why there is this variation in routine testing across clinical health settings. For example, a public health setting is more apt to offer routine testing, while an urgent care facility or hospital setting tend to utilize a targeted screening approach. This is because these settings lack the capacity to conduct routine testing. Here, capacity is defined by:

1) The extent of provider knowledge of routine testing and willingness to adjust workflows
2) Limited time with the need to prioritize more urgent and acute care needs
3) Comfort with screening for HIV, VH and STIs and an observation that "these are difficult conversations to initiate" for providers

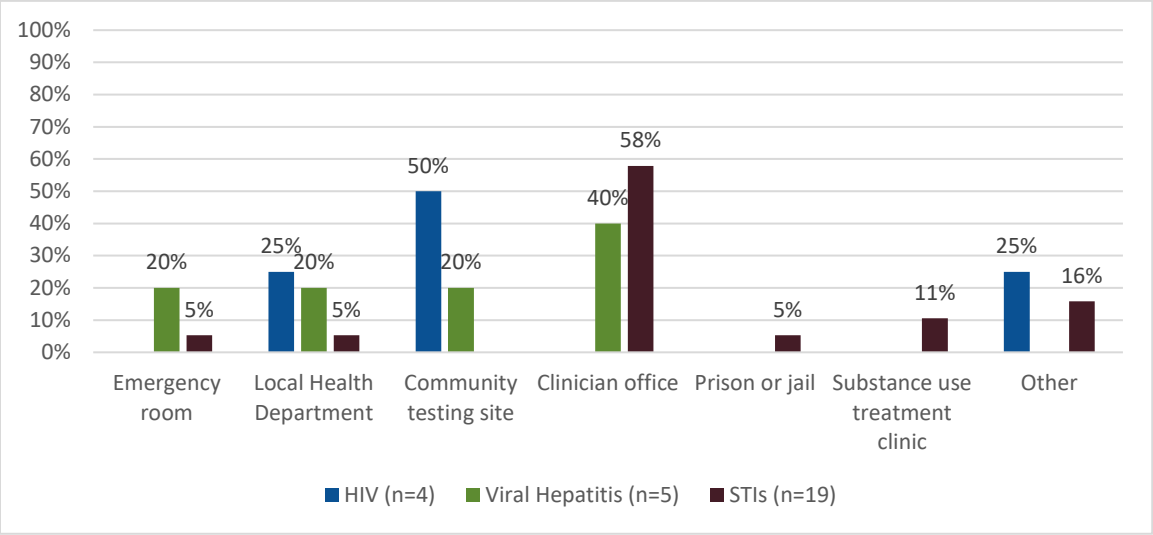
How can testing capacity be increased?

"For public health, it would be increased nurse capacity and clinic capacity. Their nurses wear 10 different hats. To have more nurses dedicated to testing and counseling would be significant."
--Key informant interview

Providers felt that there is an advantage of reaching more people with routine testing in hospitals and urgent care settings, compared to a public health setting. However, even though routine testing is more likely to occur in a public health clinic, shortages of nursing staff and lack of time can be a barrier to implementation.

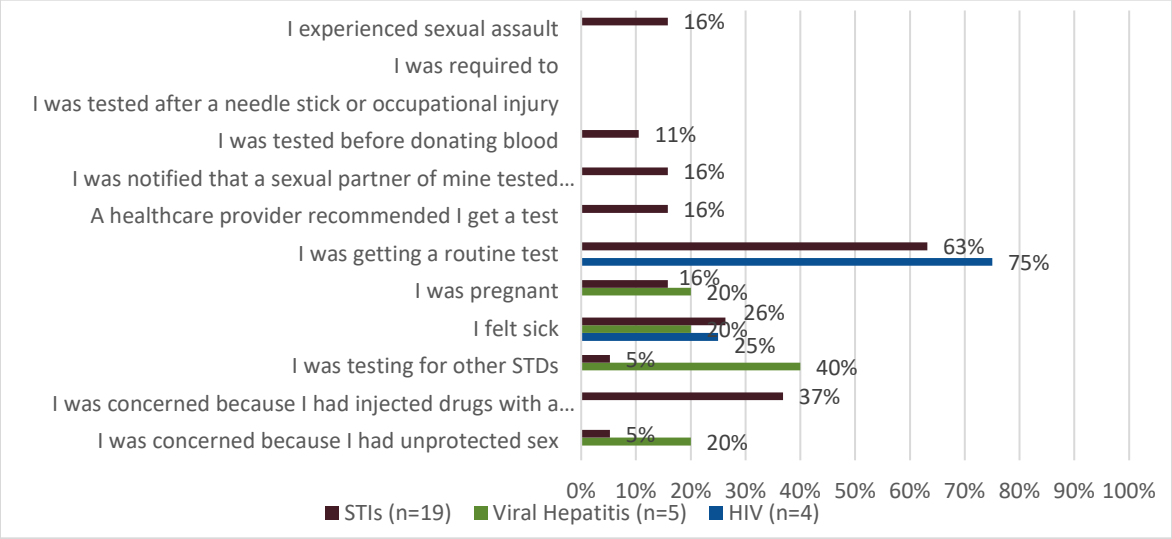
Even though few respondents in the community survey had been diagnosed with VH, or STIs, those respondents said that they got tested primarily at clinicians' offices, local health departments, and community testing sites.

FIGURE 18: WHERE DID YOU TEST POSITIVE FOR HIV/VH/STIS?



Additionally, respondents in the community survey who had been diagnosed with HIV, VH, or an STI had a variety of reasons for seeking testing. The most common was getting a routine test, showing that routine testing in different healthcare settings is an important method for detection of HIV, VH, and STIs. Additionally, participants said they got tested because they felt sick or because they had injected drugs using a needle. Interestingly, among people with lived hepatitis experience, the most common reason for getting tested was because they were already getting tested for other STIs, showing the importance of offering comprehensive STI testing that includes VH. In an interview with Wyoming's DOH, one stakeholder mentioned that they often see a lot of diagnoses in jail-based settings. These are often late diagnoses of patients who were unable to or did not access community-based testing services. However, HIV testing is elective and depends on each jail setting in Wyoming. This variation is due to limited testing resources available in jail settings.

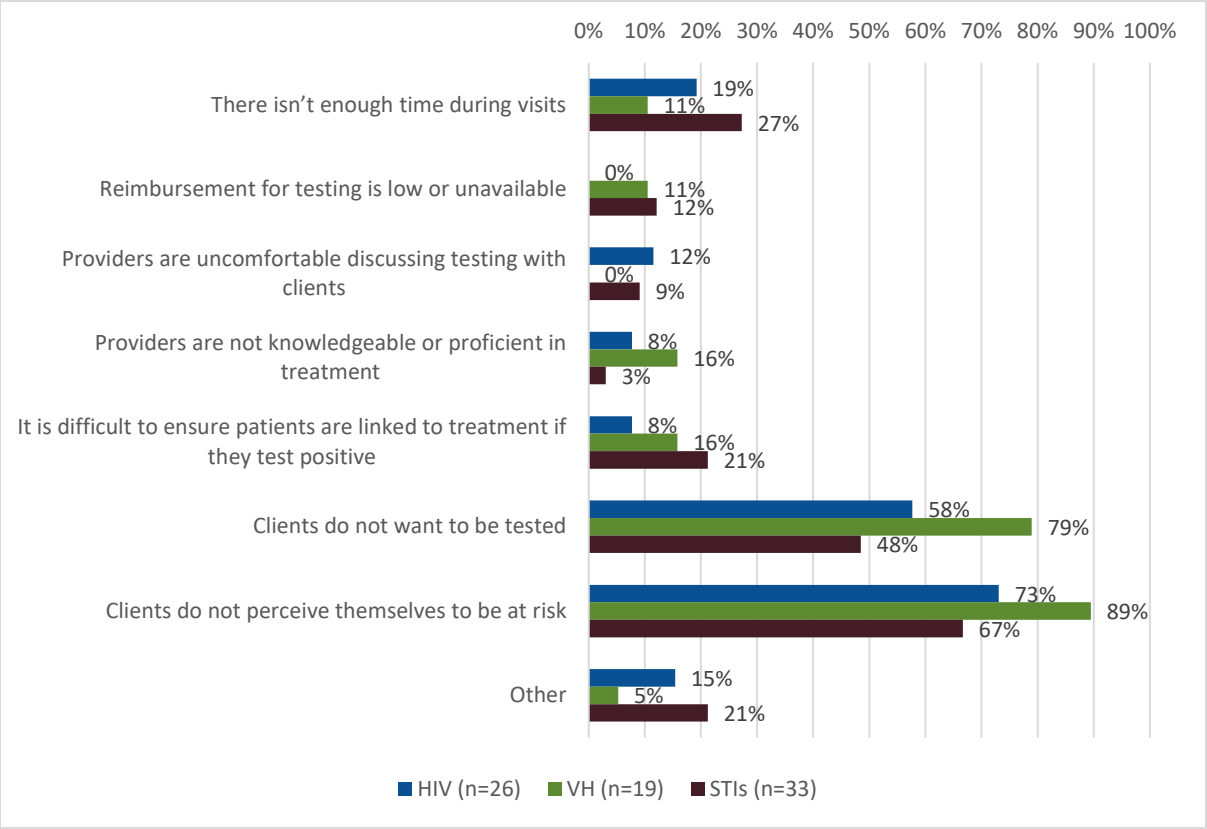
FIGURE 18: WHAT MADE YOU DECIDE TO GET TESTED FOR HIV/VH/STIS AT THAT TIME?



Barriers for Routine HIV, STI, and VH Testing

The most common barrier providers said they face in the provider survey when offering STI, HIV, or VH testing is their clients not perceiving themselves to be at risk. This was somewhat more of a barrier for providers offering VH testing (89%) than HIV (73%) and STI testing (67%).

FIGURE 19: BARRIERS PROVIDERS FACE WHEN OFFERING TESTING.



Provider interviewees spoke to the routine use of a risk assessment, which indicates what test is then to be conducted. To increase openness to universal testing, interviewees spoke to the need for more education and efforts to set the expectation that testing is a "routine part of any doctor's visit if you are sexually active." They said that it needs to become the norm that "if the doctor isn't asking you about your sexual risk, you should be asking about it."

> *"In 2017 – they didn't originally write [routine testing] in the outreach contact. And then they were out doing it – and realized you can't just do one test and not the other, all the risk factors are there. You need to test for all". - Provider key informant*

The second biggest barrier identified was the lack of interest from their clients in getting tested during a visit. This was also somewhat more of a barrier for providers offering VH testing (79%) compared to HIV (58%) and STI testing (48%).

Relative to STIs and HIV testing, providers reported that a bigger barrier for VH testing is limited knowledge or proficiency in VH treatment. Additionally, lack of reimbursement or low reimbursement

was acknowledged as a barrier for some providers to conduct VH and STI testing. Interestingly, low reimbursement was not a barrier for any provider to conduct HIV testing.

A number of respondents provided 'other' barriers around testing such as cost, shortage of staff, clients becoming fearful of about their test/result, and lack of clients' understanding about the need for testing. Focus group feedback suggested that additional barriers to testing included underage individuals' concerns about confidentiality of test results being shared with their parents and cost concerns. Focus group participants emphasized the importance of increasing awareness of KnoWyo.org to make sure cost is not a barrier testing.

Provider interviews suggest that there are also procedural challenges to the implementation of routine testing, including administration, labs, and storage. Providers said that it is a challenge to communicate and work with labs and maintain other infrastructure needed to implement routine testing. One provider mentioned that getting a rapid test machine approved and purchased has been a challenge. They would also need to develop protocols, controls, and storage associated with rapid testing, which is more difficult with limited provider capacity.

"Urgent Care, they have opportunity to do more STI and HIV testing because they see everyone for every reason. There is no stigma for the urgent care" – Rural provider in Teton, WY

In locations where routine testing is successful, it was thought to help normalize testing among patients and that the availability of rapid testing drives the extent of routine testing. One informant noted that success with routine testing was that "people are getting tested and are viewing it as a regular, normal test." The availability or rapid testing is a key driver of success and overcoming the challenge of limited staff time. However, costs of rapid tests may be passed on to patients, which can be a barrier to implementation. One interviewee spoke to a partnership they are developing with the lab and health department so that costs are not passed along to the patient.

Lastly, provider interviewees identified stigma as an important consideration in the success of routine testing. It was noted that having access to routine testing in settings outside of public health clinics helps to overcome the perceived stigma that public health clinics are primarily for STI prevention and testing. WDH supports several contracts in counties to do community awareness and education to increasing testing. However, the success of these programs varies largely by the individuals in these contract positions.

This stigma of HIV, VH, and STIs may also affect community members' knowledge of where they can be tested for HIV, VH, and STIs. Just under a quarter of the 96 community survey respondents did not know where they could go to get tested for HIV, VH, or STIs when asked. Community survey respondents emphasized the need to increase free testing access and awareness though publicity campaigns, especially in schools. When asked how testing for HIV, VH, and STIs could be improved, respondents emphasized the need to integrate testing into routine primary care, reduce stigma among providers, and teach providers about culturally sensitive care for certain populations like LGBTQ+ people.

Key Takeaways

- Most providers do not offer routine testing, even to individuals who may be at high risk of infection because of potential exposure and/or lived experience with HIV, VH, or STIs.
- Community stigma inhibits individuals from getting tested and providers from discussing testing with their patients.
- Providers face limited staff, financial, and time capacity to offer routine and rapid testing for HIV, VH, and STIs.
- Capacity to provide testing is greater among local public health offices than in other care settings; however, community stigma often inhibits individuals from going to local public health offices for testing.
- Providers and patients do not routinely request three-site testing (vaginal/urine, rectal, and pharyngeal) when offering STI testing.
- Offering routine testing helps to diffuse patient-level stigma.
- Most individuals diagnosed with HIV, VH, and STIs got tested for routine testing at their clinician's office or community testing site.
- Redemption rates of KnoWyo.org free testing vouchers varies largely by geography. Local community outreach and education staff in each county are a strong facilitator of increasing testing.

II. Treat

The goal of the EHE's "Treat" pillar is to treat people with HIV rapidly and effectively to reach sustained viral suppression. Key approaches to achieving this goal are:[16]

- Collaboration with partners and providers so people who receive a positive HIV test result are quickly linked to care and receive treatment as soon as possible after diagnosis; and
- Helping partners expand local programs that identify and follow up with people who have stopped receiving HIV care and treatment.

This section discusses key findings from interviews, focus groups, and surveys to highlight what is working well and where are these opportunities for improvement in Wyoming's capacity to treat all people with HIV, VH and STIs as quickly and effectively as possible.

Confidence in Discussing HIV, STI, and VH Transmission and Care

The provider survey asked respondents how comfortable they are in discussing care and transmission with specific populations. Respondents reported high levels of confidence in discussing care and transmission across most of the specified populations, with 84% to 100% of respondents responding "very confident" or "somewhat confident" across all health topics. Reported confidence in discussing care and transmission with people with intellectual and/or developmental disability and people with limited English proficiency was lower, as 67% to 85% of respondents reported "very confident" or "somewhat confident" across all health topics.

[16] https://www.cdc.gov/endhiv/treat.html

TABLE 13: HOW COMFORTABLE ARE YOU DISCUSSING TRANSMISSION AND CARE WITH THE FOLLOWING GROUPS OF INDIVIDUALS?*

	HIV (n=26)	VH (n=20)	STIs (n=40)	Sexual health and counseling (n=20)
People living with HIV	96%	100%	92%	95%
Men who have sex with men	96%	100%	95%	100%
People who use drugs	93%	100%	100%	95%
People who engage in sex work	89%	100%	84%	95%
Men	96%	100%	100%	95%
Women	96%	100%	100%	95%
Adolescents (13-19 years)	93%	100%	95%	95%
LGBTQIA+	96%	100%	92%	95%
Transgender people or gender expansive/ non-conforming/ non-binary	93%	100%	92%	95%
People with intellectual and/or Developmental Disability	85%	85%	78%	85%
People with limited English proficiency	74%	75%	67%	75%
Native Americans	96%	100%	97%	95%
Other racial/ethnic minorities	96%	100%	95%	94%

*Percentage indicates total portion of respondents who responded either "very confident" or "somewhat confident" in discussing sexual health topics.

Linking Clients to Treatment

Respondents from the provider survey were asked what strategies their organization uses to link clients to treatment who test positive for HIV, VH, or STIs. Respondents most commonly referred clients to specific external providers. Since more organizations are able to provide STI care, internal referrals were more common for STI treatment compared to HIV or VH treatment or the local health department (10%). Ten percent of respondents also noted "other" strategies for linking clients to STI treatment, including providing psychosocial support and prescribing medication internally. Given the dedicated funding from RWHAP Part B, more organizations responded that they provided case management services to link PLWH with care compared to linking people diagnosed with VH or an STI with care. Even though most organizations refer individuals to specific providers for care, under a quarter of responded said they actually provide reminders about treatment appointments, provide transportation to treatment appointments, or confirm that clients attended treatment appointments. Again, these actions were more commonly done for PLWH than people diagnosed with VH or an STI.

TABLE 14: WHAT DOES YOUR ORGANIZATION DO TO LINK PEOPLE WHO TEST POSITIVE FOR AN STI, HIV OR VH?

	HIV (n=25)	VH (n=21)	STIs (n=35)
Provide referrals to specific providers	96%	90%	57%
Refer clients internally for care	16%	19%	49%
Schedule appointments for clients	44%	19%	34%
Refer clients to the local health department	16%	14%	31%
Provide clients with a list of local providers for treatment	44%	19%	29%

Provide case management services	72%	10%	26%
Provide early intervention services	28%	5%	23%
Provide reminders to clients about upcoming treatment appointments	20%	10%	17%
Confirm that clients attended the treatment appointment	24%	14%	17%
Provide transportation assistance to clients for treatment appointment	24%	0%	6%
Accompany clients to treatment appointments	0%	0%	0%

Provider key informant interviews discussed that for HIV and VH treatment, access to an infectious disease specialist looks different across the state. Primary care physicians are looked to in the event the infectious disease specialist is not accessible.

Typically, the first call is to the infectious disease group out of Pocatello. In the last year and half, I have finally gotten that contact and have an easy line of communication. The specialist, pharmacist, and the nurse are the first call to get specialty consult set up. [Staff] are helpful regarding guidance on quick start strategies, labs to draw, and next steps. Previously, she would determine if they had a PCP and go that route".

When accessible, Rocky Mountain Infectious Disease (RMID) is the first call after a positive HIV and VH screen. The relationship between the provider and RMID is essential to effective linkage to care. However, with that being said, all interviewees did say that they are able to link people to care within 30 days. What the process looks like can be easier or harder depending on that initial relationship.

"We are fairly strong in this area and have a strong network. I do think though that the new organizations coming and building a better referral base with them would be helpful. It would be nice if somehow all the health care providers in the area could get together and network and learn about the different organizations about what they do and provide". – Provider in Billings/Cody

Relationships are key in setting up successful pathways to HIV and VH treatment. Relationships with RMID, primary care, pharmacists, and labs need to be in place to successfully respond to a positive screen. Having the necessary relationships can be challenging in some communities due to COVID-19 and the disruption of relationships, and new organizations and partners and the opportunities to understand what all they do in support of linkages to care.

Respondents from the provider survey were asked what barriers they face in linking clients to STI, HIV, or VH treatment. Regarding barriers to STI treatment, respondents most commonly identified cost (50%) as a barrier to treatment, as well patient/client hesitancy (32%). For HIV and VH treatment, lack of treatment providers was most commonly cited as a barrier. This was especially cited for providers practicing in counties that do not have an HIV or VH treatment provider located in the same county. Additionally, organizations cited lack of nearby HIV and VH treatment providers and clients' lack of

transportation to go to a treatment provider. Cost was also cited as a more common barrier for linkage to HIV and STI treatment.

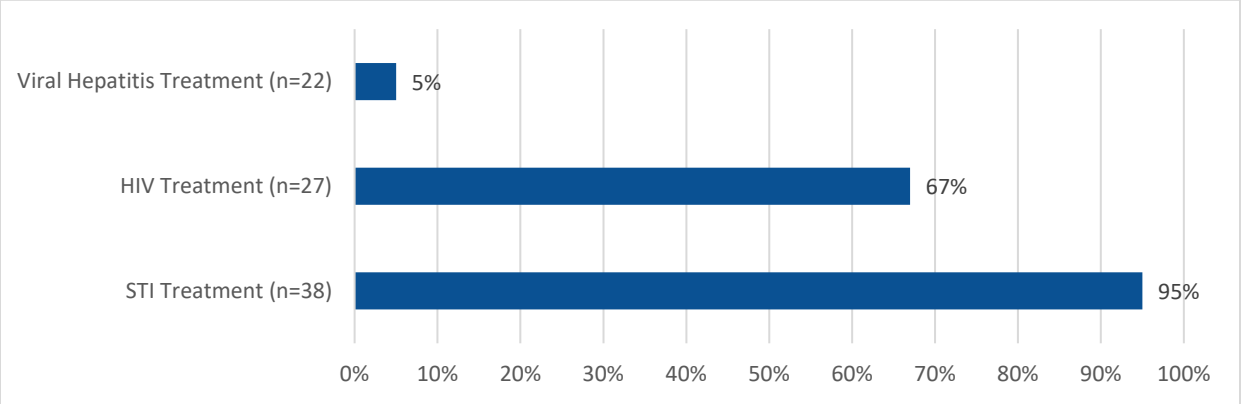
TABLE 15: BARRIERS PROVIDERS FACE IN LINKING CLIENTS TO TREATMENT.

Barriers	HIV (n=24)	VH (n=19)	STIs (n=28)
Lack of treatment providers	67%	68%	32%
Treatment providers are not accepting new patients	17%	16%	4%
Treatment providers are too far away for clients	54%	53%	25%
Clients do not have transportation to go to treatment provider	50%	32%	29%
Treatment providers don't take clients' insurance	8%	21%	11%
Clients cannot pay for treatment services	38%	37%	50%
No established protocol in place	0%	11%	21%
Staff cultural competency/comfort	4%	0%	4%
Staff knowledge/experience	0%	5%	7%
Patient/client resistance or hesitancy	8%	11%	32%
Inability to be reimbursed/lack of funding for linkage services	8%	0%	4%
Limited staff time	17%	11%	18%
Other	8%	5%	14%

Capacity to Offer Treatment

Only one respondent from the provider survey indicated that they currently offer VH treatment services. The most commonly cited reason for organizations not offering HIV, VH, or STI treatment services was a lack of appropriate providers and staff knowledge or expertise, followed by limited staff time. Additionally, some organizations do not currently have VH or HIV treatment services in their scope of work and/or are currently working on protocols to begin offering these services.

FIGURE 20: DOES YOUR ORGANIZATION OFFER TREATMENT SERVICES?



Among organizations that provide treatment services for HIV and VH, only 29% of organization provide telehealth HIV care and 17% provide telehealth VH care. The most common barrier cited was that organizations do not have enough staff at their organization to provide this service. Some respondents noted that they are in the process of establishing treatment protocols to begin offering this service. One respondent noted that they would need direction and support from the Communicable Disease Unit (CDU) to implement this service. Telehealth is particularly important for HIV and VH care in Wyoming,

since treatment providers are only located in two cities in the state and the geography, and the low population density of the state requires people to travel a distance to meet with a provider. According to WDH, while telehealth addresses the provider shortage concern in Wyoming, it can also address the barriers to care including transportation and timely access. However, in 2021, WDH received complaints from clients expressing they prefer face to face after doing telehealth appointments in 2020.

When asked about their confidence in providing different types of HIV, VH, and STI care services to clients, most providers (n=19) said that they were somewhat or very confident in addressing client sexual risk, communicating HIV or hepatitis transmission risk, discussing prevention, and addressing client substance use. Providers felt less confident in supporting ART adherence, providing general medical care unrelated to HIV, assessing client adverse effects, providing long-term HIV or VH; however, this is likely because most providers who responded to the survey were from local public health organizations that are not set up to provide general medical care or long-term HIV or VH care.

Respondents from the provider survey were asked what they would need to increase their confidence in providing HIV, STI and VH care or services. Regarding HIV and STIs, respondents noted a need for more education and training to respond to the unique susceptibilities of the specific populations—like PWID and individuals living with HIV experiencing co-infections—more effectively. One respondent noted that they are working to create a care protocol that provides a comprehensive treatment model for individuals with both HIV and VH. Several respondents reported a desire for greater exposure and practical experience providing care for PLWH and people with VH, as one respondent noted that they only have two clients currently enrolled in their program for one county. One respondent noted that serving people with limited English proficiency was a challenge, even with a translator, the quality of care is impacted, pointing to a need for more bilingual staff.

Barriers to Providing Treatment Services

Respondents who do provide HIV, VH, and STI treatment and care services were asked what the most significant barriers their organization faces when providing these services. Regarding barriers to STI treatment and testing, respondents noted a lack of referral partners (21%), a lack of proficient providers of STI treatment (17%), and insurance coverage concerns (15%) as the three most significant barriers. Regarding barriers to HIV treatment and testing, respondents noted a lack of proficient providers of HIV treatment (30%), a lack of referral partners (21%) and a lack of providers who are comfortable talking with clients about STIs (11%) as the three most significant barriers. Regarding barriers to VH treatment and testing, respondents noted a lack of proficient providers of VH treatment (67%) and a lack of reimbursement of services (33%) as the two most significant barriers. The “other” barriers cited by respondents include clients unable to afford cost of STI services and the difficultly staying in contact with clients for HIV services.

TABLE 14: TOP BARRIERS FACED WHEN PROVIDING TREATMENT SERVICES.

Barrier	HIV Services (n=18)	VH Services (n=2)	STI Services (n=20)
Lack of referral partners for services not offered by our organization	50%	0%	50%
Lack of reimbursement for services	11%	33%	15%
Lack of available providers proficient in the provision of treatment	72%	67%	40%
Lack of providers who are comfortable talking with clients who have HIV/VH/STIs	28%	0%	10%
Stigma or avoidance among staff	6%	0%	20%
Lack of cultural competency when communicating with clients who are LGBTQIA+	17%	0%	10%
Lack of cultural competency when communicating with clients who use drugs	6%	0%	10%
Insurance coverage concerns	22%	0%	35%
Prior authorization concerns	17%	0%	10%
Formulary restrictions	6%	0%	15%
Other	11%	0%	20%

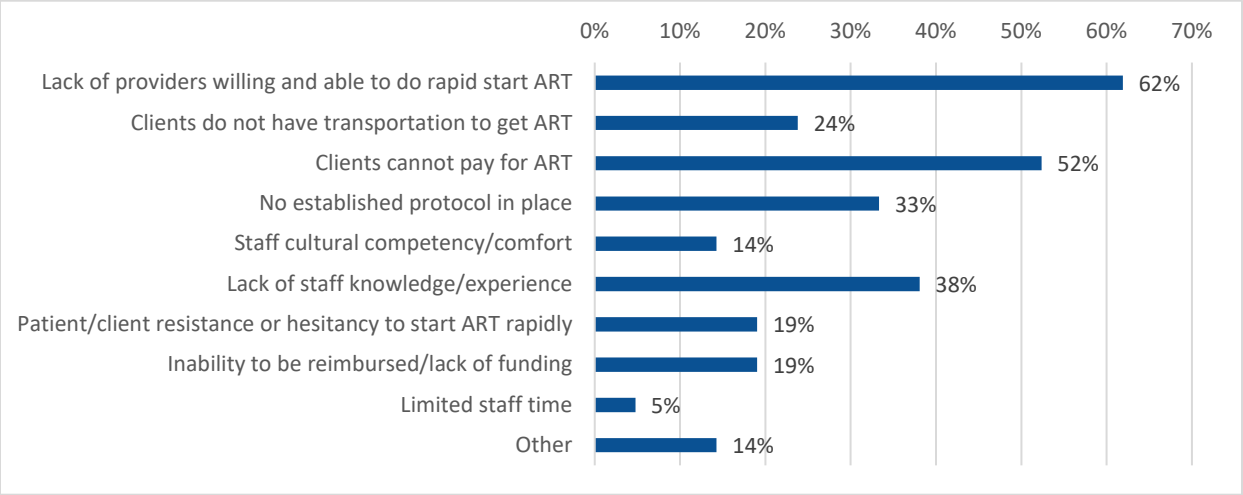
Barriers Specific to HIV Treatment

Eighteen respondents said they offer HIV treatment services. Of these 18, more than 80% reported that 5% of their total clients served in an average year are living with HIV. Several of the participants noted they do not have easy access to HIV specialty providers, and therefore manage their treatment through their primary care provider who sometimes is not educated on the best standard of care. One focus group participated stated, “I’ve talked to people who are now seeing an HIV specialist and they say looking back they know they weren’t receiving the best care [from their PCP].”

Rapid initiation of ART has become the recommended protocol for HIV treatment.[17] People who are diagnosed with HIV should begin taking ART within 72-hours, ideally on the same day, as their diagnosis. Respondents from the provider survey were asked what barriers their clients faced in starting rapid initiation of ART. The most commonly identified barrier among respondents was a lack of providers willing and able to offer rapid initiation of ART (62%). Fifty two percent of respondents noted that cost was a barrier for clients accessing ART, as well as 19% percent of respondents said that they are not able to be reimbursed for offering ART services. Additionally, 38% of respondents noted that there was a lack of staff knowledge or experience in offering rapid initiation of ART and 33% had no protocols established.

[17] https://aidsetc.org/resource/rapid-immediate-art-initiation-restart-guide-clinicians

FIGURE 21: BARRIERS TO RAPID ART INITIATION (N=21).



Key informant interviews with providers supported what was gleaned through the survey responses. Access to prescriptions can be a barrier treatment, with some settings having better access than others due to capacity to fill prescriptions on site. Being able to fill prescriptions on site expedites linkages to care, and treatment. Transportation was a noted barrier for many patients; and is one reason why on-site prescriptions supports linkages to care.

"I think providers believe there are going to be cost barriers. I think we need a lot of education with providers."

Linkages to care for STIs is easier than it is for HIV and VH. Many interviewees indicate strong capacity in the knowledge, workflows, and relationships needed to treat a positive STI screen. However, for HIV and VH, for some interviewees, barriers to successful treatment are provider hesitation, not in providing primary care services for people with HIV or VH, but rather, hesitance in their capacity to write a prescription and provide the treatment itself; and financial, and a lack of understanding on costs of treatment and what do providers need for reimbursement and/or payment.

Continuity of care is the most challenging among the most vulnerable populations. Being transient, having a mental illness, insecurely housed, and/or a drug user are characteristics that interviewees noted puts people at risk of poor continuity of care for their HIV, VH, and STIs. Challenges for these populations stem from their capacity to acquiring, including transportation, and affording medications.

- Among the transient, there is lag in establishing/re-establishing treatment and then lag in continuity that treatment in the community where they are going.

- Among people insecurely housed, it is challenging to find and coordinate housing.
- Among people who use drugs, it is challenging to ensure connections to SUD treatment create opportunities and resources (i.e., emotionally, physically) to connect with HIV, VH and/or STI treatment.
- Among people with a mental illness, the challenge is in identifying mental health providers who also understand and support the continuity of care for HIV, VH and STI treatment.

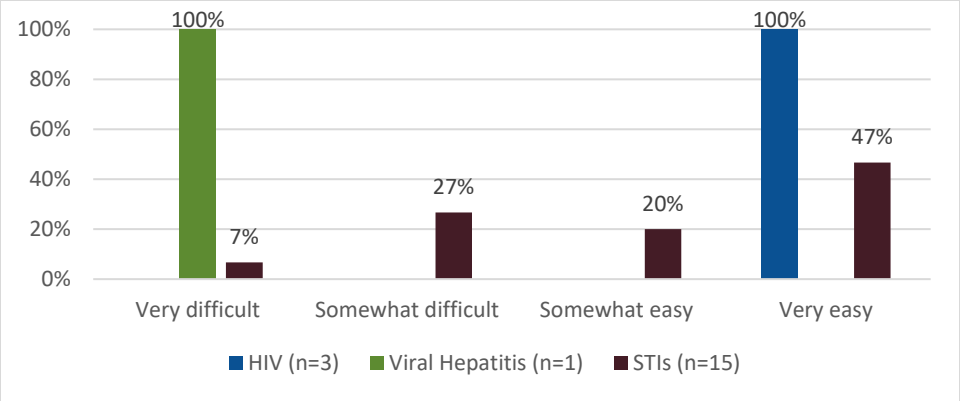
They have expanded MH in the hospital. Do not know though if MH providers have training for HIV populations - I would think this is something providers would be interested in expanding.

Focus group participants supported these findings and shared that coordination with BH/SUD providers is essential to helping individuals stay adherent to their treatment. Gender affirming care is not prevalent yet, but there is a willingness to provide it. Education is needed, and when accessed, it is from local states. Among providers who have been able to provide gender affirming care, local pharmacies have been able to fill hormone replacement therapy.

Impacts of COVID-19

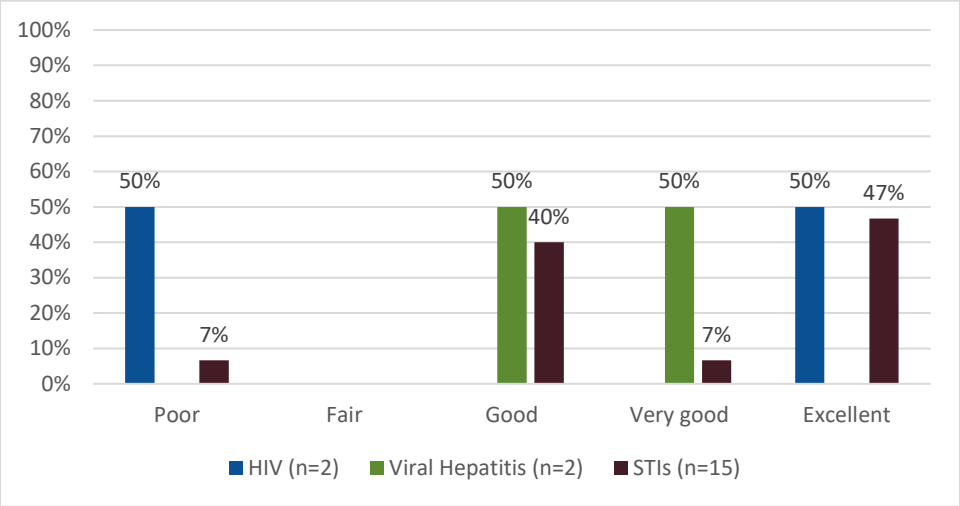
The COVID-19 pandemic required staff (which was already limited in capacity for some organizations) to reprioritize their focus to COVID-19. Thus, testing and treatment for STIs, HIV and VH was not prioritized, and services were limited related to STI, HIV and VH testing or treatment. One respondent noted that they had testing supply shortages that prevented them from offering STI, HIV and VH testing, and another respondent noted that their agency stopped offering STI, HIV and VH testing altogether for one year given limited staffing capacity. Clients came in person for STI, HIV and VH services less often, which led to less communication and "face-to-face" contact with clients and fewer opportunities for engagement, testing, or other interventions. Moreover, clients faced competing priorities during the COVID-19 pandemic and sought out routine STI testing less often to avoid possible exposure to COVID-19. While the pandemic presented challenges for providers related to testing and treatment, several providers noted that they were able to successfully continue offering testing and treatment at their agency with no significant impact to services.

FIGURE 22: HOW EASY WAS IT TO GET CONNECTED TO TREATMENT AFTER YOU FIRST TESTED POSITIVE?



Of those who responded to questions about HIV treatment, all said that it was somewhat or very easy to be connected to a treatment provider and start ART after being diagnosed with HIV. However, when asked about their HIV treatment now, two of the three respondents said it was somewhat difficult or very difficult to see their treatment provider, citing barriers of distance, lack of transportation, and the lack of reimbursement for fuel. In a rural state like Wyoming where individuals may have to travel hundreds of miles to treatment, fuel prices may be a barrier for individuals living with HIV. Even still, all three respondents said that they have not had any disruptions to their care or ART adherence, including during the COVID-19 pandemic. The one respondent with lived VH experience said that it was very difficult to see a provider for treatment after their diagnosis, marking that they had to wait 3-6 months. Among respondents with lived STI experience, most found it somewhat or very easy to be connected to treatment. However, those that had a difficult time accessing treatment cited fear of stigma, cost, and distance/lack of transportation as barriers.

FIGURE 23: HOW WOULD YOU RATE THE OVERALL QUALITY OF HIV/VH/STI MEDICAL CARE YOU HAVE ACCESSED?



Respondents' reviews of the quality of their care were mixed. One respondent rated their HIV care as poor and said their treatment provider is hard to get ahold of, is not prompt in scheduling appointments, does not spend enough time with them during their appointments, and does not listen to them during visits. The other respondent had opposing views, saying their care was excellent and that they have remained in treatment because of the compassion and care provided by their treatment

team. When asked about their concerns living with HIV as they age, respondents said they were most concerned about maintaining access to HIV services, the long-term impacts of HIV medications, and staying generally healthy. Although the one respondent with lived VH experience had difficulty accessing care, they rated the care they received as excellent. This respondent did not provide any additional details. The majority of respondents who received treatment for STIs rated the quality of their care as good to excellent.

When asked what could be done to improve HIV, VH, and STI treatment in the state, respondents emphasized the need for provider education and awareness on treatment options and protocols, as well as stigma reduction and education on how best to provide care for specific communities like LGBTQ+ people and drug users. For HIV and VH care specifically, respondents wanted to increase the number of treatment providers available, especially in rural areas of the state.

Finally, sixteen respondents with lived experience—two living with HIV, two with lived VH experience, and twelve with lived STI experience—were asked about the different types of services they needed and either received or did not receive.

TABLE 15: SERVICE NEED AND RECEIPT FOR PEOPLE WITH LIVED EXPERIENCE (N=16).

	Needed and Received	Needed but NOT Received	Not Needed
Mental health services	25%	19%	56%
Oral health care	88%	13%	0%
Medical case management	19%	13%	69%
Assistance navigating health insurance benefits	31%	13%	56%
Assistance with COVID-19 benefits	25%	13%	63%
Assistance accessing general benefits	6%	13%	81%
Financial assistance to help pay for rent/mortgage	0%	13%	88%
Nutritional counseling from a dietician	6%	13%	81%
Healthcare for COVID-19	31%	6%	63%
Financial assistance to pay for food/groceries	38%	6%	56%
Assistance in obtaining and paying for HIV medications	25%	6%	69%
Social activities	6%	6%	88%
Clean needles and education on safer drug use	0%	6%	94%
Childcare assistance	6%	6%	88%
Assistance planning for end of life	0%	6%	94%
Primary health care	94%	0%	6%
Education and counseling to help routinely take HIV medication	6%	0%	94%
HIV testing	31%	0%	69%
VH testing (Hep A, Hep B, Hep C)	44%	0%	56%
STI testing (Chlamydia, Gonorrhea, Syphilis)	50%	0%	50%
COVID-19 Testing	100%	0%	0%
COVID-19 Vaccination	94%	0%	6%
Emergency housing assistance	0%	0%	100%
Short-term or temporary housing assistance	0%	0%	100%

Long-term housing assistance	0%	0%	100%
Financial assistance to pay for utilities	19%	0%	81%
Assistance in obtaining and paying for hepatitis medications	0%	0%	100%
Assistance in obtaining and paying for STI medications	13%	0%	88%
Transportation assistance to health care services	13%	0%	88%
Home-delivered meals	0%	0%	100%
Inpatient or residential substance use treatment services	0%	0%	100%
Outpatient substance use treatment services	0%	0%	100%
Home health care services from a nurse or home-health aide	0%	0%	100%
Assistance with legal issues	0%	0%	100%
Financial assistance planning for retirement	13%	0%	88%
Legal assistance planning for end-of-life care	6%	0%	94%
Interpretation or translation services	0%	0%	100%

Overall, mental health services were the most common service respondents said that they needed but did not receive. Among PLWH (n=2), 50% of respondents said that they needed mental health services but did not receive them. Half of respondents living with HIV also needed but did not receive assistance accessing general benefits, financial assistance for rent or mortgage payments, and nutritional counseling. One hundred percent of respondents said that they needed and received COVID-19 testing. The other most common services that were needed and received were primary health care and COVID-19 vaccinations.

Key Takeaways

- Most referrals to treatment for HIV, VH, and STIs are to non-public external providers.
- There are very few HIV and VH treatment providers in Wyoming and transportation to these providers is a huge barrier for linking people to receive treatment.
- Few providers are offering rapid ART initiation due to discomfort and lack of expertise.
- Having personal, inter-provider relationships between organizations that offer testing and organizations that provide treatment is important to supporting patients' rapid linkage to treatment.
- Primary care physicians are relied on when infectious disease specialists are unavailable; however, patients have not always received the most appropriate or highest quality of care from PCPs.
- Beyond providing referrals, organizations have limited capacity to ensure clients are linked to treatment services.
- Providers expressed a need for more training and guidance around rapid initiation of ART, VH care for PLWH, and HIV and VH care for PWID.
- Organizations and clients express a lack of LGBTQIA+-affirming care providers.
- Continuity of care is challenging for transient and unhoused people because of difficulties in establishing and re-establishing care and coordinating housing.
- Continuity of care is challenges for people experiencing SUD and/or mental illness because of lack of effective collaborations between physical and behavioral health providers.

- COVID-19 decreased staff capacity and disrupted organizations' ability to provide in-person HIV, VH, and STI testing and treatment services.
- Few treatment providers offer telehealth treatment services but are interested in offering these services. These providers need guidance and technical assistance to stand up these services.
- PLWH found it easy to get connected to treatment after testing positive, whereas people diagnosed with VH or STIs had varying difficulty being connected to treatment.
- Clients experience overall good quality of care.
- Mental health services are the most needed and least received service among PLWH and people diagnosed with VH and STIs.

III. Prevent

The goal for the EHE "Prevent" pillar is to prevent new HIV transmissions by using proven interventions. This includes pre-exposure prophylaxis (PrEP) and syringe services programs (SSPs).

PrEP is only an effective form of prevention for HIV and not for VH and STIs. Given the syndemic approach of this needs assessment, this section discusses findings from focus groups, interviews, and surveys on the current strengths and needs of various prevention services available in Wyoming.

Capacity to Implement Preventative Services

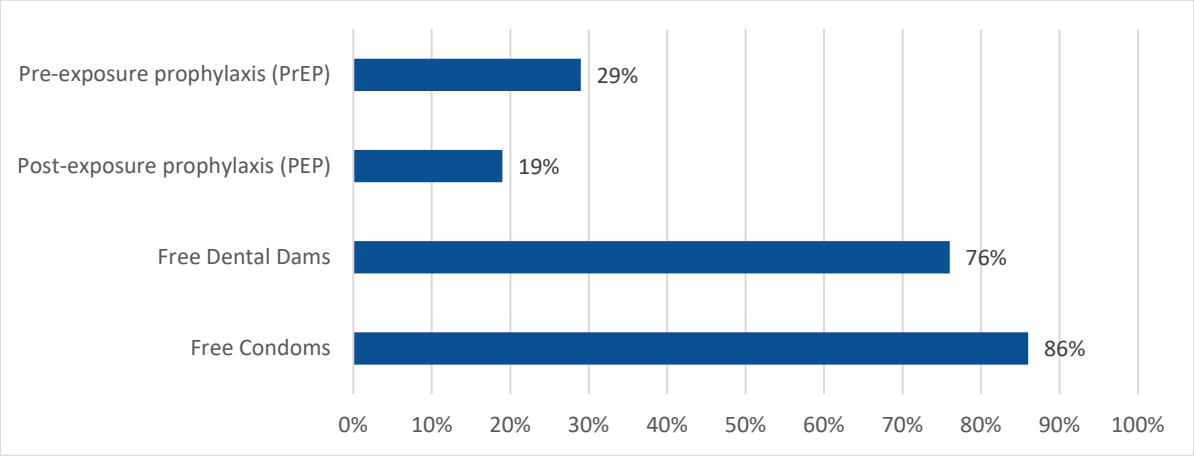
Nearly all (86.3%) survey respondents provide sexual health screening and counseling. However, among these providers, more than half (55.6%) report only providing sexual health screening and counseling to "some" clients, and not "all." The clients that are offered sexual health screening and counseling include:

- Students for all sexual health, cervical cancer screening in females
- Those who are requesting Family Planning or STI testing services or possible birth control services
- Clients that request STI/HIV testing
- Those perceived to be at risk—which includes MSM and PWID (criteria varies by provider)
- Clients symptomatic with HIV, VH, and STIs

For the five providers not offering sexual health screening and counseling, half (50%) report limited staff time, followed by lack of established protocols in place (37.5%) and lack of staff cultural competency and comfort (12.5%).

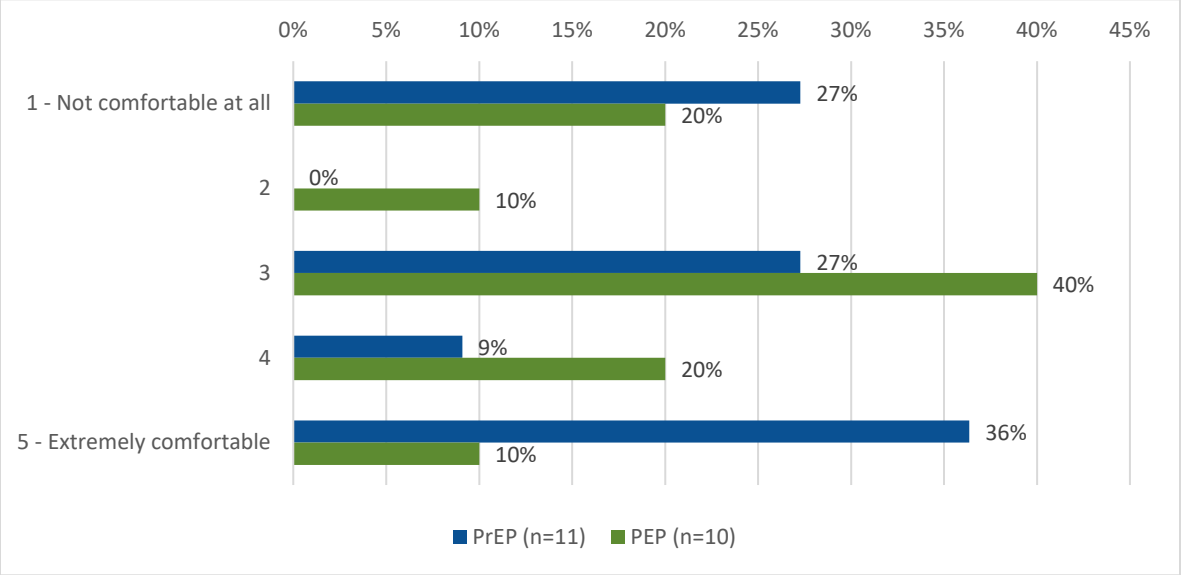
Survey respondents were asked whether they offer certain type of prevention methods (Figure 24). The majority of providers offer free condoms to clients. For those that do not, they identified the reasons being that their organizations could not afford to provide free condoms and that "offering a handful of condoms is not a long-term contraception plan." Only 29% of provider survey respondents offered PrEP. Cost was the leading reason why providers indicated that they did not offer PrEP. Even fewer providers (19%) said that they offer PEP.

FIGURE 25: PERCENT OF PROVIDERS WHO OFFER DIFFERENT PREVENTION METHODS.



Among those providers offering PrEP and PEP, comfort with prescribing varied (Figure 26). Respondents indicated they needed more education and experience to increase their comfort level.

FIGURE 26: PROVIDERS' COMFORT LEVEL IN PROVIDING PREP AND PEP.



Provider interviewees suggested that the implementation of PrEP and PEP is provider and setting dependent. Since pharmacy access and distance is a challenge for clients, providers would prefer to be able to dispense the medications onsite to ensure that clients receive them.

Among providers who work with individuals living with HIV, 71% report they discuss with them that adherence to ART can help them achieve an undetectable viral load and that people with undetectable HIV viral loads cannot transmit HIV, also known as U=U. For two providers who do work with individuals living with HIV, the reason they do not discuss U=U is they do not have enough knowledge about U=U. However, among providers discussing U=U, their comfort level is high, with 75% of responding providers reporting extremely comfortable.

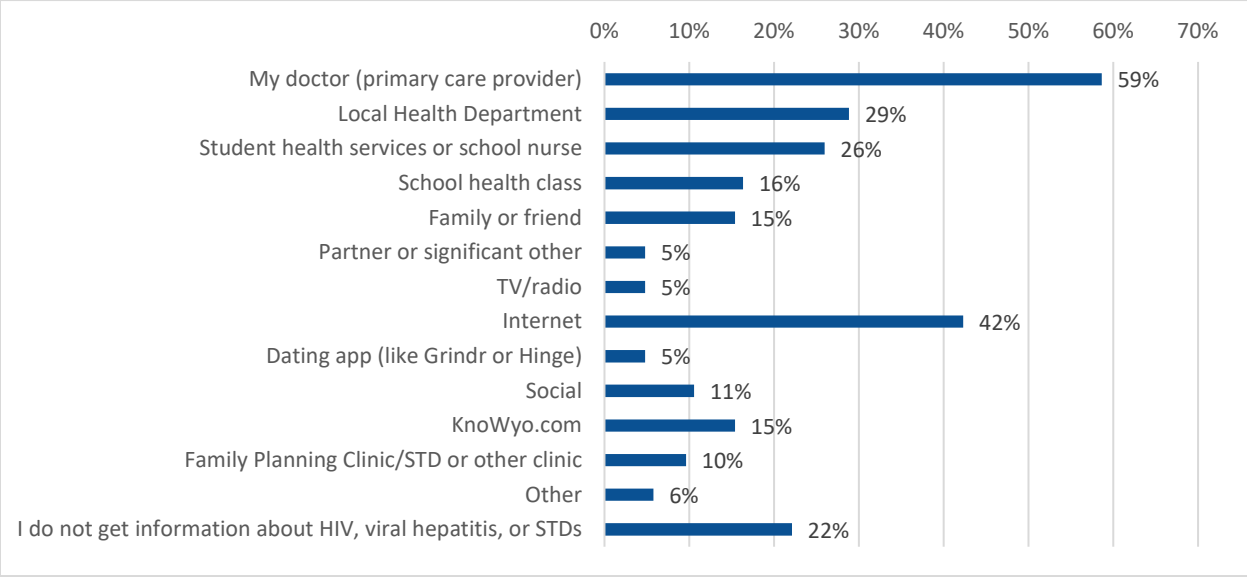
Provider key informants provide additional context to the extent to which prevention services are offered and why or why not. Providers either know about U=U, and use it, or they do not know about, and want to learn more.

Among providers who know and understand U=U, there is buy-in to its use with HIV population. That it helps to reduce the misunderstandings surrounding HIV today. Among providers who do not know about, there is an interest in learning more about the campaign as an opportunity to improve care among people with HIV. One suggestion was to provide further explanation, including the science behind U=U using fourth grade basic language.

> *"I do [use U=U]! I always mention it during education. I think that it helps breakdown the stigma of "there is this thing spreading around" and to help understand that it is a lifeline chronic illness, but it isn't going to spread and it's a death sentence". – Provider Key Informant*

Provider education on prevention methods, including U=U, may be important for increasing knowledge of prevention among people living with and at risk for HIV, VH, and STIs as well. In the community survey, primary care doctors were cited the most common source of information about prevention, followed by the internet.

FIGURE 27: WHERE DO YOU RECEIVE INFORMATION ABOUT PREVENTION? (N=104).



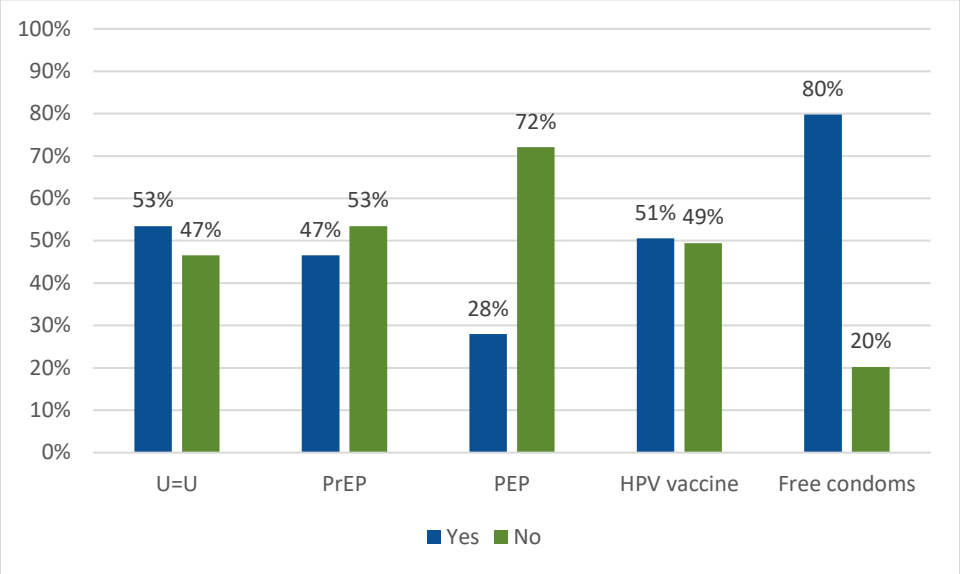
Interestingly though, when asked how helpful this information was in making decisions about preventing HIV, VH, and STIs, 44% said that the information provided by these sources was only somewhat helpful. Forty three percent said that the information was very helpful and 13% said the information was not helpful at all.

One theme from the interviews was a shared sentiment that improving the visibility and accessibility of HIV, VH, and STI prevention is needed. Interviewees noted the need to increase awareness of HIV, VH and STI prevalence in the community. In particular, what is needed is more awareness that these diseases can happen to anyone. It was noted that one challenge with prevention is the "mythology" behind these diseases, in particular HIV, that they are "confined to a certain group of people." One practice that is thought to be helping to overcome this myth are the new screening tools that ask, "have you had an STI".

"I think we could do more in regard to capturing the seasonal population through advertisements, increase clinic times, and go out to the rural parts, [the better our prevention efforts]". – Provider Key Informant

This is also reflected in the community response results. All respondents were asked if they knew about different forms of HIV, VH, and STI prevention available in the state.

FIGURE 28: ARE YOU AWARE OF THE FOLLOWING FORMS OF PREVENTION AVAILABLE IN WYOMING? (N=104).



Most people know about free condoms available in Wyoming and where to access them. Fewer respondents, however, knew about U=U, the HPV vaccine (also known as Gardasil®) and PrEP. Less than a third of respondents knew about PEP. Of those who knew about PrEP, just 53% knew where they could go to be prescribed PrEP, and of those who knew about PEP, only 25% knew where they could go to be prescribed PEP—showing that not only is awareness and knowledge of these forms of prevention lacking, but also concrete information on how to access these prevention methods.

When asked what could be done to improve prevention in Wyoming, respondents overwhelming called out the need for comprehensive sex education in K-12 schools. Specifically, respondents wanted this curriculum to educate students on all sorts of prevention materials, the basic biology of STIs, and include culturally tailored information for LGBTQ+ and disabled individuals. Enhancing sex education was also

seen as a way to reduce overall community stigma against these health conditions. Respondents also expressed that providers should be leading conversations with their patients about prevention as part of routine care to reduce stigma. Focus group participants validated the community survey findings by sharing that many Wyoming schools are still teaching abstinence only, and general messaging about prevention and testing are missing from current curriculums. Focus group participants also indicated that stereotypes about HIV, STI and VH prevent people from thinking they need to get tested. One focus group participant said, "People who do IV drugs and people who do not identify as gay are getting left out of the messaging regarding prevention and testing. We should message broadly in grocery stores, libraries, and coffee shops. Many older adults don't understand they're at risk for hep C."

Key Takeaways

- Sexual health counseling and screening are not routinely offered to patients and criteria for who is offered counseling and screening varies by provider.
- There are few PrEP and PEP providers in Wyoming geographic distance to prescribers and pharmacists is a barrier.
- Providers' comfort level in providing PrEP and PEP varies and many providers would like more education and training on PrEP and PEP prescribing.
- Providers would like more training and education about U=U.
- Most community members get information about prevention from their primary care doctor but expressed that this information was only somewhat helpful.
- Community stigma against HIV, VH, and STIs and stereotypes of the types of people at risk for these conditions is a major barrier to knowledge and engagement in prevention.
- Comprehensive and inclusive K-12 sex education is needed to reduce stigma and enhance engagement in prevention.

IV. Respond

The goal of the EHE "Respond" pillar is to respond quickly to potential HIV outbreaks and get vital prevention and treatment services to people who need them.[18] Strategies included:

- Real time response systems;
- Public health approaches that can pinpoint areas of rapid transmission and can mobilize resources for HIV treatment and prevention; and
- Cluster detection and outbreak response uses data routinely reported to health departments to identify groups of people and communities experiencing rapid transmission.

CDU and county public health nurses are the primary implementers of response-related interventions and strategies in Wyoming. Therefore, this section discusses some key findings and perspectives that these stakeholders shared about the current state of response efforts for HIV, VH, and STIs. Few data were collected from healthcare practitioners on their understanding of some response efforts. No data were collected from community members about response efforts.

[18] https://www.cdc.gov/endhiv/respond.html

Providers' Perspective

Wyoming Department of Health and CDU offer several services to support providers in linking clients with HIV treatment and prevention and targeting response efforts for potential clusters and outbreaks of HIV, VH, and STIs. When asked about their familiarity with and use of these services, most respondents were familiar with and had used immunizations (70%). More respondents were familiar with, but had not used, the Wyoming Surveillance Program (40%). Finally, survey respondents are least likely to be familiar with Data-to-Care program (65%), which is a public health strategy supported by the CDC[19] to facilitate linkage and engagement in treatment and prevention, and non-medical case management (40%).

TABLE 16: PROVIDERS' FAMILIARITY WITH AND USE OF STATE RESPONSE SERVICES.

Services	I am FAMILIAR WITH and HAVE USED this service	I am FAMILIAR WITH but HAVE NOT USED this service	I am NOT FAMILIAR WITH this service
Immunizations	90%	10%	0%
Partner Services	65%	20%	15%
Ryan White Program Services	60%	30%	10%
Medical Case Management	60%	25%	15%
AIDS Drug Assistance Program (ADAP)	60%	10%	30%
Outreach services	60%	10%	30%
Non-medical case management	50%	10%	40%
Wyoming Surveillance Program	45%	40%	15%
Data to Care Program	10%	25%	65%

In provider interviews, providers expressed a desire for data from CDU. There was agreement among the interviewees that timely updates from CDU on prevalence and incidence for HIV, VH, and STI would be helpful. This would help to understand to what extent they are missing people in treatment. Providers also wanted data show support and rational for implementation of routine rapid testing. As one interviewee noted: "Being able to show data to support opt out initiatives. We need data to convince the hospital and urgent care that these programs are worth doing." Lastly, providers wanted data and information on the social determinant of health needs of Wyoming's communities to help them identify the right strategies to improve access to and utilization of care.

> *"[It would be good to know] are we reaching individuals? If we know that there are 20 HIV positive in the community, 8 are getting treatment. How do we reach to the other 12 people? This is to know how help that individual but also provide community-based medicine as well" – Provider Key Informant*

[19] https://www.cdc.gov/hiv/effective-interventions/treat/data-to-care?Sort=Title%3A%3Aasc&Intervention%20Name=Data%20to%20Care

CDU Perspective

According to CDU stakeholders, the state currently has an outbreak response plan for HIV and revisions are underway to include outbreak response plans for HCV. There was a previous HCV cluster in the state in 2016 and CDU found that many of the individuals linked to this cluster were also linked to potential HIV and STI exposure, thus reinforcing the need for a syndemic approach to infection response planning. CDU uses an alert network to blast information to providers on potential outbreaks and clusters of HIV, VH, and STIs, but "tries to use these with discretion so that providers do not get numb to getting these alerts." Additionally, the Surveillance Program under CDU provides annual updates to incidence data for HIV, VH, and STIs and publishes these to their webpage, but it is unclear how much providers engage with these reports.

Key Takeaways

- Providers lack familiarity with and engagement in key response initiatives in the state, including Data-to-Care and non-medical case management.
- Outbreak response planning and interventions must take a syndemic approach.
- Providers would like timely and understandable information and data on incidence, prevalence, and social determinants of health to improve HIV testing, treatment, and prevention strategies.

CONCLUSION

While Wyoming has many challenges in serving people at risk of and/or living with HIV, STI, and VH due to its conservative social and political climate, there is a strong commitment from the Communicable Disease Unit and providers to enhance and expand services. There are a handful of champion providers who are willing to enhance and expand services yet continue to face challenges in recruiting a knowledgeable and culturally competent workforce. Expanding the workforce needs to be a key priority for the state. Moreover, there is a significant barrier to normalize prevention efforts like PrEP and treatment as prevention like Undetectable = Untransmittable. To support a greater understanding of the interrelationships of drug user health, HIV, STI, and VH, HMA encourages CDU to foster a syndemic approach to its data analysis and utilize a framework of sexual health services for addressing these health conditions.

Opportunities to strengthen the continuum of care for HIV, VH and STI. Interviewees were asked "in an ideal world, what kind of things would you like to see happen?". The things described were focused on increased awareness, reduced stigma in getting tested, and improved accessibility, sharing a theme of "start to educate and start early":

- "It would be improved awareness. In WY they are fighting a battle that they are decades behind. For example, they tried to initiate a gender assessment at check-in. There was so much push back within their system. It felt defeating. A form is mocked".
- "There would be no hesitation to come in and get tested from the patients".
- "We have more funds for availability. The provider is only at the office 2 days a week. If we could provide that service more than 2 days a week".

- "I would get everyone to talk openly about HIV and HEP and other STIs – I would use it to make sure that our patients were able to get to clinic for visits for medications and for immunizations. That they have access to medications routinely. They had someone they could call anytime to get answers about what for a lot of people can be very frightening situations they find themselves in at first".

HMA Recommendations

- Share CDU data and provide community updates on a regular basis
- Focus on both provider and community education on enhancing cultural competency to reduce the stigma of HIV, STD and VH.
- Develop a network of providers who are willing to prescribe and treat individuals living with HIV.
- Expand PrEP/PEP awareness
- Enhance provider education on U=U

Needs Assessment Workgroup Priorities to End the HIV Epidemic

Diagnosis

1. Provide tools and education to make providers more comfortable in discussing sexual health to reduce stigma and promote routine and self-testing in the community.
2. Increase community outreach and provide community testing in both traditional and non-traditional venues where higher risk clients are receiving other services.
3. Train and support providers and nurses in PCP offices to offer and encourage routine screening and testing to every patient.

Treat

1. Provide easier access to training and consulting opportunities to build provider networks so PCPs feel more comfortable providing VH and HIV treatment to improve retention of clients.
2. Increase field staff awareness and utilization of Expedited Partner Therapy (EPT).
3. Improve telehealth options for HIV/VH care, treatment options for VH, rapid ART for HIV, and HCV navigation assistance.

Prevent

1. Increase Wyoming's PrEP/PEP prescribers' network (including pharmacists and public health nurses) through increased training to bolster comfort and knowledge of providing PrEP/PEP.
2. Improve community education and awareness about PrEP/PEP, WhY PrEP Matters, and KnoWyo websites as well as PrEP navigation assistance.
3. Promote harm reduction strategies for PWID by providing education that increases understanding, decreases stigma, an normalizes testing for all diseases.

Respond

1. Provide education to providers on CDU data on an annual basis to improve awareness of state response services.
2. Utilize outreach staff to build a network of champions who are willing and able to respond to outbreaks and increase the number of providers willing to see people living with HIV.
3. Improve care for persons with HIV, VH, and STIs by seeking and maximizing funding sources and establish clear lines of communication and guidelines for connecting individuals to care.