2020

SYRINGE EXCHANGE PROGRAM

ANNUAL REPORT

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I. EXECUTIVE SUMMARY

- **Another record year of syringe exchange for SEP:** Statewide, 1,182,624 syringes were exchanged compared to 1,180,158 syringes exchanged in 2019 - a 0.21% increase.
- **Fewer visits, but more exchanges:** Statewide, the number of SEP visits decreased 26%, while the average number of syringes exchanged per visit increased 34%.
- **Volume of SEP visits rose at neighbor island sites and fell on Oʻahu:** The volume of SEP visits rose 1-2% at all sites except Oʻahu, which decreased 4%.
- **Volume of SEP exchanges varied across sites:** The volume of SEP exchanges remained unchanged for Hawaiʻi Island and Kauaʻi, but rose 1% on Maui and fell 1% on Oʻahu.
- **Gatekeeping activity is on the rise:** Statewide, 850 gatekeepers exchanged 799,156 syringes for 3,414 individuals who could not otherwise access SEP.
- **Rise in the distribution of harm reduction supplies during SEP visits to participants who needed more basic supplies during the COVID-19 Pandemic:** Pipe covers were distributed during 15% of visits; hygiene kits were distributed during 20% of visits; first aid kits were distributed during 54% of visits; condoms were distributed during 37% of visits; food was distributed during 37% of visits; and personal protective equipment (PPE) items like disposable face masks, were provided as needed.
- **Fentanyl test strips are in demand:** A total of 3,924 fentanyl test strips were distributed during SEP visits (an average of 2 test strips per SEP visit) and 182 during outreach visits (an average of 5 test strips per outreach visit).
- **Most participants identify as male:** 65% of SEP participants and 57% of outreach participants identify as male.
- **Most participants identify as Caucasian/White and Hawaiian/Pacific Islander:** 50% of SEP participants and 37% of outreach participants identify as Caucasian/White compared to 28% of SEP participants and 44% of outreach participants who identify as Hawaiian/Pacific Islander.
- **The average age of SEP participants is 40 years.**
- **About half (48%) of SEP participants were born in Hawaiʻi or the Pacific Islands.**
- **The majority (85%) of SEP participants have health insurance.**
- **About half (47%) of SEP participants are currently experiencing homelessness or temporary/unstable housing.**
- **Most SEP participants reported that the substances they most often inject are heroin and methamphetamine**: 45% reported injecting heroin compared to 43% who reported injecting methamphetamine most often.
- **1,204 individuals were trained to administer naloxone between 2016 and 2020**.
- **137 individuals were trained to administer naloxone**
- **46 overdose reversals were reported as a result of naloxone distributed by HHHRC.**
- **Polysubstance use was dominant among naloxone trainees:** Of the trainees who reported substance use over the past 30 days, 67% reported polysubstance use.

II. THE FOUNDATION OF SYRINGE EXCHANGE IN HAWAIʻI

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Hawaiʻi was the first in the nation to create a state-funded syringe exchange program offering coordinated services statewide. In 1989, the Hawaiʻi Department of Health (HDOH) piloted a syringe exchange program in response to the growing human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) crisis in the state. The project's goal was to reduce the acquisition and transmission of HIV among persons who inject drugs (PWID) by staffing health educators who had lived experience injecting drugs and others knowledgeable of drug use in the state to provide services.

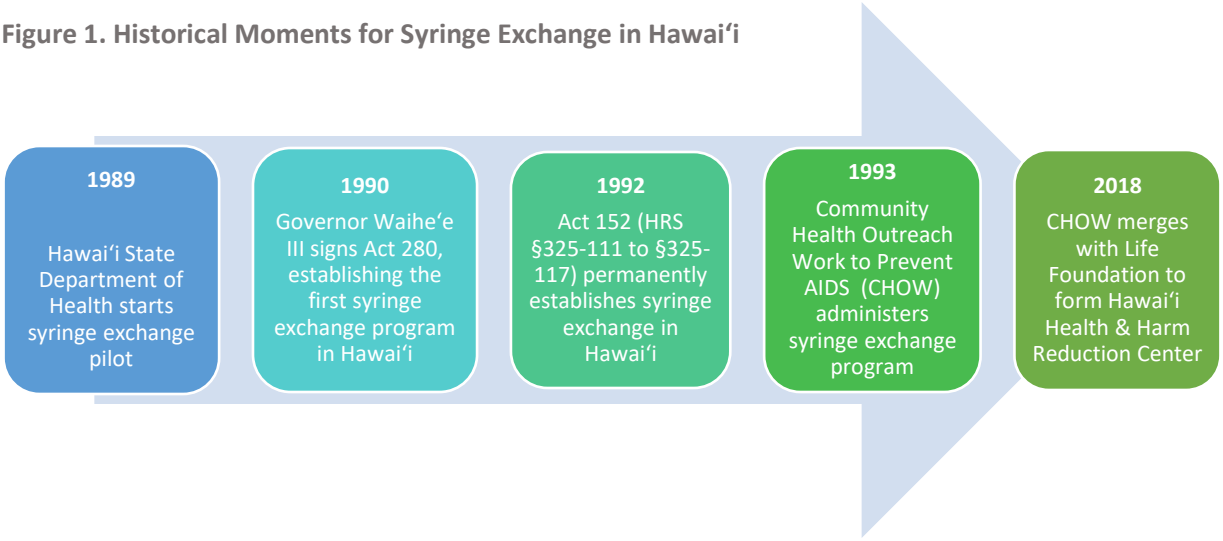
In 1990, former Governor John David Waiheʻe III signed Act 280 into law, which enabled HDOH to establish a two-year pilot syringe exchange program (SEP). The first Hawaiʻi-based SEP site was operated out of the Rubber Room on Hotel Street in Honolulu by members of Life Foundation – the most extensive and oldest AIDS service organization (ASO) in the Pacific. Life Foundation's early involvement with SEP preceded its eventual merge with the community organization that would run the SEP in Hawaiʻi – Community Health Outreach Work to Prevent AIDS (CHOW) – twenty-eight years later.

In 1992, when the two-year pilot SEP concluded and its safety and efficacy were assessed, the Hawaiʻi State Legislature passed Act 152. Act 152, codified as Chapter 325, Part VII of Hawaiʻi Revised Statutes (HRS §325-111 through §325-117), enabled HDOH to implement a statewide SEP. HRS §325-115 requires HDOH to appoint a Syringe Exchange Oversight Committee (SEOC) to monitor the progress and effectiveness of SEP and to examine data compiled by the program. HRS §325-116 requires HDOH to report annually to the SEOC, including the number and demographics of participants, the program's impact on HIV infection rates, an assessment of the program's cost-effectiveness, the prudence of its continuation, and ways to improve SEP. This evaluation fulfills SEP's obligations under these two statutes.

The goal of statewide SEP is to prevent the transmission of human immunodeficiency virus (HIV), hepatitis C virus (HCV), other blood-borne pathogens and refer persons who inject drugs (PWID) to needed health and social services in Hawaiʻi.

In 1993, Hawaiʻi State Legislature named CHOW the coordinating agency for statewide SEP. By 1994, CHOW extended SEP from Oʻahu to the counties of Hawaiʻi Island, Maui, and Kauaʻi. In 2018, CHOW merged with Life Foundation, under its new organization name – Hawaiʻi Health & Harm Reduction Center (HHHRC) – continuing the legacy of both organizations to expand services to meet the growing needs of PWID and other vulnerable populations in Hawaiʻi (refer, Figure 1, p. 3).

Figure 1. Historical Moments for Syringe Exchange in Hawai'i



HHHRC operates five mobile vans covering the counties of O'ahu, Hawai'i Island, Maui, and Kaua'i, providing a variety of services in addition to syringe access. At the mobile van sites, outreach workers establish contact and rapport with PWID and other vulnerable populations using a harm reduction approach to encourage safer behaviors. As of October 2021, 372 SEPs were operating in 45 states and territories, including the District of Columbia and Puerto Rico.[1]

About SEP Operations

Presently, HHHRC operates SEP through mobile syringe exchange sites (mobile sites), syringe exchange appointments (SEA), and fixed location sites (fixed sites) through partner agencies on Hawai'i Island and Kaua'i. When SEP occurs at mobile sites, outreach workers conduct exchanges and other harm reduction activities out of HHHRC vans. When SEP occurs through SEA, outreach workers meet participants at locations determined by the participants or outreach in areas frequented by PWID. When SEP occurs at a fixed site, participants go to the fixed site for their SEP needs.

In 2020, HHHRC exchanged 1,182,624 syringes statewide, a 3,344% increase compared to the 35,365 syringes exchanged by CHOW in 1993.

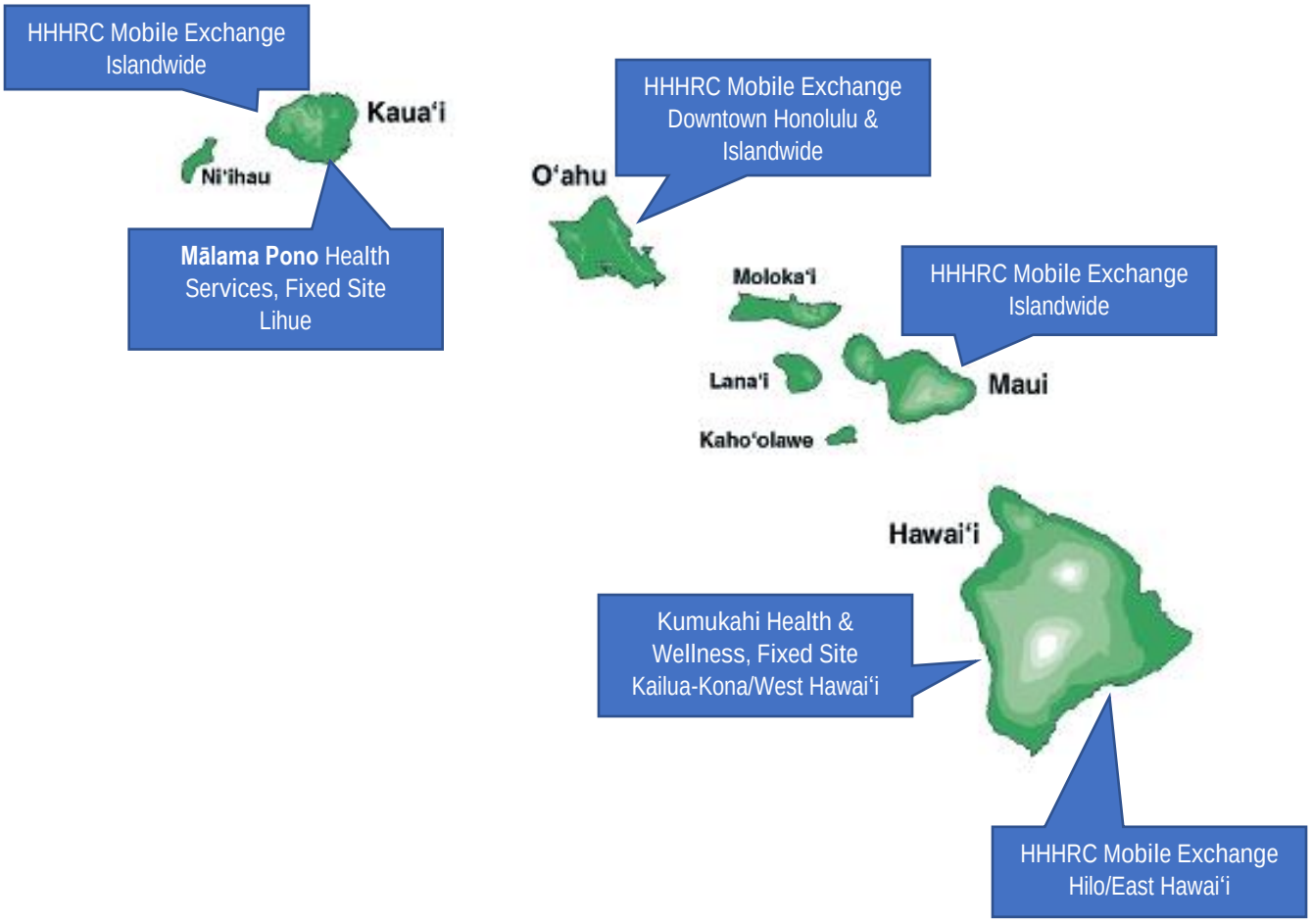
On O'ahu, SEP occurs through mobile sites and SEA (refer, Figure 2, p. 4). SEP occurring at mobile sites keeps a regular schedule where an HHHRC van parks at a fixed site five days per week in downtown Honolulu. A second HHHRC van visits other parts of O'ahu to offer services to SEP participants who cannot make it to the downtown Honolulu location. SEP outreach workers also conduct SEA, as needed. While running SEP through mobile sites provides flexibility, it can limit the services provided, such as HIV and HCV outreach, testing, linkage activities, and wound care. However, SEP continues to find innovative ways to provide needed services in the field. For example, in August 2021, HHHRC launched its Medical Mobile Unit (MMU), bringing quality on-the-spot medical care and social services directly to underserved

[1] NASEN. (n.d.). SEP Locations. SEP Locations: NASEN Directory. Retrieved October 11, 2020, from https://www.nasen.org/map/

communities throughout O'ahu, such as HCV and HIV testing, wound care, naloxone training, and syringe exchange (refer, https://www.hhhrc.org/mmu).

Hawai'i Island and Kaua'i operate their respective SEPs through mobile sites, SEA, and fixed sites, while Maui operates SEP only through SEA (refer, Figure 2). In 2016, Hawai'i Island SEP formalized collaboration with Kumukahi Health & Wellness (KHW) to conduct fixed site syringe exchange out of their office in Kailua-Kona. Since KHW outreach workers do not exchange outside of their office, SEP outreach workers provide services via a mobile site and SEA for Hawaiian Ocean View Estates (HOVE) and across the Eastern side of Hawai'i Island, including Hilo, Pahoa, Mountain View, and Kea'au. In 2017, Kaua'i SEP formally partnered with Mālama Pono Health Services (MPHS) to provide services in Lihue. MPHS conducts fixed site syringe exchange out of their office on Kukui Grove Street. SEP outreach workers perform most syringe exchange services on Kaua'i via a mobile site, SEA, and community outreach wherein SEP outreach workers journey to outlying areas to see if anyone there needs services who may not otherwise have contact with SEP on Kaua'i. Maui SEP has no fixed site, utilizing only SEA to serve the residents of Maui in need of SEP services. HHHRC continues to seek community partnerships on neighbor islands to enable harm reduction services to reach more community members in need of assistance.

Figure 2. Map of Statewide HHHRC SEP Coverage and Subcontractors



III. INJECTION DRUG USE, RISK BEHAVIORS, & OVERDOSE

Youth

In 2019, national data from the Youth Risk Behavior Survey (YRBS) showed that **1.6% of youth in high school had ever injected illegal drugs**.[2] Within that 1.6%, there were differences between cisgender (i.e., corresponds with their sex assigned at birth) male and female youth who had ever injected illegal drugs – 2.1% for males compared to 1.1% for females.[2] In Hawai'i, the differences between cisgender male and female youth who had ever injected illegal drugs were even more significant – 3.7% for males compared to 1% for females.[2]

In 2019, national data from the YRBS also showed that **youth in high school identifying as gay, lesbian, or bisexual were more likely to have ever injected illegal drugs (3.5%) than their heterosexual counterparts (1.1%)**.[2] Within that 3.5%, differences were found between cisgender gay and bisexual male and female youth who had ever injected illegal drugs (i.e., 7% for males compared to 2.5% for females).[2] In Hawai'i, the differences between youth in high school identifying as gay, lesbian, or bisexual were more likely to have ever injected illegal drugs (2.9%) than their heterosexual counterparts (2.2%).[2] In Hawai'i, differences were also found between cisgender gay and bisexual male and female youth who had ever injected illegal drugs (i.e., 3.9% for males compared to 2.3% for females).[2] It is relevant to highlight statistics specific to youth identifying as gay, lesbian, or bisexual who have ever injected drugs because their risk is heightened compared to their heterosexual counterparts due to additional stressors they face daily, such as sexuality-based discrimination and stigma at local and national levels. Clarifying the risks for different sub-populations also allows for tailored, culturally appropriate interventions to reduce the harm of injection drug use in these communities.

Adults

Data related to injection drug use among adults in Hawai'i is less available than data related to injection drug use among youth. However, the Substance Abuse and Mental Health Services Administration (SAMHSA) annually conducts the National Survey on Drug Use and Health (NSDUH), providing national- and state- estimates of drug use. While the resultant data provides a snapshot of drug use among adults (i.e., those 18 and older) over the past year, it does not give the mode of drug use (e.g., injected, snorted, smoked).

Nationally, heroin use among adults decreased slightly during 2013-2014 (0.32%) and 2018-2019 (0.31%), peaking during 2016-2017 (0.37%).[3] **Methamphetamine use among adults increased** from 2015-2016 (0.62%) to 2018-2019 (0.76%).[3] Also, **prescription opioid misuse among adults fell** from 2015-2016 (4.54%) to 2018-2019 (3.69%).[3]

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[2] Centers for Disease Control and Prevention. (n.d.). Youth Online: High School YRBS - 2019 Results | DASH | CDC. Youth Online: High School YRBS - 2019 Results. Retrieved October 11, 2021, from https://nccd.cdc.gov/youthonline/App/Results

[3] Substance Abuse Mental Health Data Archive. (n.d.). NSDUH State Estimates. Interactive NSDUH State Estimates. Retrieved October 11, 2021, from https://pdas.samhsa.gov/saes/state#

In Hawai'i, despite scantly decreasing nationally, **heroin use among adults increased** from 2013-2014 (0.13%) to 2018-2019 (0.28%), peaking in 2017-2018 (0.29%).[3] **Methamphetamine use among adults increased** from 2015-2016 (1%) to 2018-2019 (1.42%).[3] **Prescription opioid misuse among adults fell** from 2015-2016 (3.93%) to 2018-2019 (3.55%).[3] In response to national and local data on substance use and overdose in youth and adults, HHHRC continues monitoring and data collection to help fill gaps in understanding PWID within the state, their needs, and how best to develop and implement harm reduction and prevention interventions.

Overdose

The National Center for Health Statistics (NCHS) at the Centers for Disease Control and Prevention (CDC) collects information on deaths involving drugs. **Between 1999 and 2019, nearly 500,000 people died from an opioid overdose**.[4] **Between 1999 and 2019, the rate of fatal opioid overdoses has risen consistently each year**.[4] In 1999, opioid overdose accounted for 2.9 deaths per 100,000 people compared to 2019, when opioid overdose accounted for 15.5 deaths per 100,000 people.[4] In 2019, opioids were involved in 49,860 deaths – over six times the number of opioid-involved deaths in 1999 – accounting for 70.6% of all 70,630 drug overdose deaths that year.[4] Notably, overdoses in the US increased by over 30% during the first year of the COVID-19 pandemic. [5]

Not a single state in the United States experienced a significant decrease in opioid-related drug overdose deaths from 2018 to 2019.[4] In Hawai'i, 242 opioid-related drug overdose deaths occurred in 2019 compared to 213 in 2018 and 157 in 2014.[4] Hawai'i's 242 opioid-related drug overdose deaths in 2019 resulted in a death rate of 15.9 per 100,000 persons compared to 14.3 per 100,000 persons in 2018, resulting in an 11.2% rise in fatal opioid-related overdoses between 2018 and 2019.[4]

Still, the Hawai'i Opioid Initiative reported aggregate data based on hospital emergency department and inpatient records during the average five-year period between 2013 and 2017, resulting in 384 nonfatal opioid overdoses.[6] Also, based on phone records from 2017, the Hawai'i Poison Hotline received 180 opioid-related calls.[6] Lastly, EMS patient care reports submitted to HDOH for 2017 showed that 1,332 EMS patients were treated with naloxone – a drug used to reverse an opioid overdose.[6] To address the rise in opioid-related overdose, HHHRC began offering training and education on overdose prevention (reversal) in 2016. More information on this program is included in the Prevention of Fatal Opioid Overdose Using Naloxone section of this report (refer, p. 24).

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[3] Substance Abuse Mental Health Data Archive. (n.d.). NSDUH State Estimates. Interactive NSDUH State Estimates. Retrieved October 11, 2021, from https://pdas.samhsa.gov/saes/state#

[4] Centers for Disease Control and Prevention (CDC). (n.d.). Drug Overdose Deaths | Drug Overdose | CDC Injury Center. Retrieved October 11, 2021, from https://www.cdc.gov/drugoverdose/deaths/index.html

[5] Ahmad, F. B., Rossen, L. M. & Sutton, P. (2021) Provisional Drug Overdose death counts. National Center for Health Statistics.

[6] Hawai'i Opioid Initiative. (n.d.). Learn the Facts. Retrieved October 11, 2021, from https://www.hawaiiopioid.org/learn-the-facts/

IV. NATIONAL & STATEWIDE HIV & HCV OVERVIEW

HIV

The transmission of HIV can be decreased through access to sterile injection and other equipment as part of SEP. To estimate the effectiveness of HHHRC's SEP, HIV cases among PWID have been compared to national surveillance data. During the first twenty years of the epidemic, only Stage 3 HIV data was available because HIV was not yet a reportable condition. Consequently, the comparison of historical data is limited as some cases of HIV may never progress to Stage 3 HIV thanks to advances in pharmaceutical therapy. Therefore, examining Stage 3 HIV cases likely does not reflect current trends.

Due to medical advances in HIV testing and treatment, the term AIDS is not used colloquially anymore. AIDS is now mostly referred to as Stage 3 HIV.

In the United States, approximately 1.2 million people are living with HIV.[7] Of that 1.2 million people, an estimated 13% (156,000) don't know they have HIV and need testing.[7] **In 2019, 36,801 people were diagnosed with HIV, an overall 9% decrease compared to 2015, and an estimated 34,800 new HIV infections occurred, an 8% decrease from 2015**.[7] These reductions in HIV may be related to the 33% drop in new HIV infections among young gay and bisexual men (ages 13-24).[7] Regardless, gay, bisexual, and other men who have sex with men (MSM) are still the population most affected by HIV, accounting for 69% of new HIV diagnoses.[7] **Nationally, from 2015 through 2019, HIV infections attributed to injection drug use (IDU) increased.** In 2019, 6.8% (2,508) PWID were diagnosed with HIV out of 36,801 total people diagnosed with HIV that year.[8]

In Hawai‘i, 4,831 people are living with HIV, including 3,546 whose HIV has progressed to Stage 3 HIV.[9] Cumulatively, 10% (357) of HIV infections are related to IDU, and 9.7% (342) to MSM/IDU, meaning nearly 20% (699) of all cases in Hawai‘i are somehow associated with IDU.[9] **In 2019, 64 people were diagnosed with HIV, 23 of whom had Stage 3 HIV**.[9] However, in 2019, **no new HIV cases were associated with IDU, and only one was related to MSM/IDU** compared to 2018 when four new HIV cases were associated with IDU, and four were associated with MSM/IDU.[9] Comparing national and statewide HIV data assists in highlighting the possible impacts that SEP is having on lowering the rate of new HIV infections in Hawai‘i as expressed by the noticeably lower rates of infection locally compared to nationwide.

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[7] HIV.gov. (2021, June 2). U.S. Statistics. Retrieved October 11, 2021, from https://www.hiv.gov/hiv-basics/overview/data-and-trends/statistics

[8] Centers for Disease Control and Prevention (CDC). (n.d.-b). Special Focus Profiles | Volume 32 | HIV Surveillance | Reports | Resource Library | HIV/AIDS | CDC. Retrieved October 11, 2020, from https://www.cdc.gov/hiv/library/reports/hiv-surveillance/vol-32/content/special-focus-profiles.html

[9] Hawai‘i State Department of Health. (2020, October). Hawaii HIV/AIDS Surveillance 2019 Annual Report. https://health.hawaii.gov/harmreduction/files/2021/03/2020_HIV_SurveillanceReportu.pdf

According to the 2019 National Healthcare Quality and Disparities Report, some measures that examine HIV management and mortality are improving. Nationally, new HIV cases in persons aged 13 and older have decreased (3.2%) from 19 per 100,000 persons in 2008 to 14.6 per 100,000 persons in 2016.[10] In Hawai'i, new HIV cases in persons aged 13 and older are estimated to be 6.5 per 100,000 persons.[10] Nationally, persons aged 13 and older living with HIV who know their serostatus has risen (2.9%) from 83.1% in 2010 to 85.8% in 2016.[10] In Hawai'i, persons aged 13 and older living with HIV who know their serostatus is estimated to be 86.3%.[10] Lastly, nationally, HIV infection deaths have decreased (7.2%) from 5.2 per 100,000 persons in 2000 to 1.6 per 100,000 persons in 2017.[10]

The 2019 National Healthcare Quality and Disparities Report scored individual states on their performance measures related to HIV on a meter, including ratings from worst (very weak) to best (very strong). Using this metered score, Hawai'i's performance on measures related to HIV and Stage 3 HIV is rated as "strong".[10] However, there is still a steep uphill climb ahead. Nationally, by year-end 2019, there were 15,815 deaths among persons with HIV and 11,899 deaths among persons with Stage 3 HIV.[10] In Hawai'i, by year-end 2019, there were 43 deaths among persons with HIV, 38 of whom had Stage 3 HIV.[10]

HHHRC continues to do its part for Hawai'i to lower the incidence of HIV infections among PWID through SEP. Numerous studies have shown that SEP can reduce the transmission of HIV. The continued provision of sterile syringes, safer injection equipment, condoms, and other harm reduction supplies through SEP reduces HIV prevalence among PWID and transmission to sexual partners and children and does not increase drug use. Exchanging syringes for others, also known as secondary exchange or "gatekeeping" reduces HIV transmission risks associated with sharing injection equipment. For example, participating in gatekeeping lowers the odds of syringe reuse and sharing needles among PWID compared to their counterparts who did not participate in SEP.

HCV

HCV transmission can also be decreased through SEP, although it is more easily transmitted than HIV. Since HCV is a blood-borne pathogen, meaning it is spread by blood-to-blood exposure, it is especially likely to be transmitted when PWID share syringes. **The number of HCV cases reported in the United States has increased every year since 2012.** The number of cases reported in 2019 (4,136) corresponded to a 14% increase from the 3,621 cases reported in 2018 and a 133% increase from the 1,778 cases reported in 2012.[11]

According to the CDC's Viral Hepatitis Surveillance Report, in 2019, 4,136 HCV cases were reported, averaging at 1.3 cases per 100,000 people.[11] The 4,136 HCV cases reported in 2019

[10] Agency for Healthcare Research and Quality (AHRQ). (n.d.). NHQDR Web Site Hawaii HIV and AIDS Snapshot Summary. National Healthcare Quality and Disparities Report. Retrieved October 11, 2021, from https://nhqrnet.ahrq.gov/inhqrdr/Hawaii/snapshot/summary/Diseases_and_Conditions/HIV_and_AIDS

[11] Centers for Disease Control and Prevention (CDC). (n.d.-b). Figure 3.1 of 2019 Viral Hepatitis Surveillance report | CDC. Retrieved October 11, 2021, from https://www.cdc.gov/hepatitis/statistics/2019surveillance/Figure3.1.htm

are estimated to correspond with 57,500 estimated cases that have gone unreported.[10] In 2019, the highest rates of reported HCV occurred in persons aged 20-39, which is consistent with age groups most impacted by the nation's opioid crisis.[11] Among the 1,952 reported HCV cases with IDU information available, 67% (1,302) were PWID.[11]

In Hawai'i, the lack of funded surveillance infrastructure meant that between 2015 and 2019, cases of HCV were unavailable to the CDC, with only 7 cases reported in 2019.[11] It is common for someone to have HCV and not know it, and therefore, HCV in Hawai'i is likely very underreported. In 2016, an HDOH news release stated that Hawai'i had the highest rate of liver cancer in the United States, which is relevant because HBV or HCV causes most liver cancer cases in Hawai'i.[12] At that time, an estimated 23,000 people in Hawai'i were living with chronic HCV.[11] Given that it is challenging to gauge HCV prevalence and incidence in Hawai'i, death data might be a more reliable source: In 2019, the number of deaths with HCV listed as a cause of death was 45, averaging 2.38 deaths per 100,000 people.[11]

Efficacy of SEP in Reducing HIV & HCV

The lack of SEP in other parts of the nation demonstrates the efficacy of syringe exchange programming. An article published in 2016 entitled "HIV Transmission and Injection Drug Use: Lessons from the Indiana Outbreak" speculated on the lessons learned by the outbreak of HIV infection centered in the rural town of Austin in Scott County, Indiana, which was associated with widespread injection drug use.[13] To summarize, an HIV outbreak was identified in December 2014 when a physician in a town neighboring Austin confirmed that two individuals were HIV positive within a short time frame. A third individual was diagnosed as HIV positive shortly after, and a specialist was able to connect the 3 cases with an additional 8 cases by January 2015. The CDC was alerted in February 2015 and declared a public health emergency in March 2015. By March 2015, there were 55 confirmed cases and 13 preliminary cases (all subsequently confirmed) of HIV infection. By the end of June 2015, 170 individuals had been diagnosed with HIV infection, and by the end of April 2016, the number rose to 188 cases of confirmed HIV infection. In addition, HIV-infected individuals had a 92% rate of HCV co-infection.

As of 2015, it was estimated that there were more than 500 syringe-sharing partners involved in the HIV outbreak wherein injection practices were multigenerational and injection equipment was commonly shared. Furthermore, individuals diagnosed with HIV infection during the outbreak had an average of 9 high-risk syringe-sharing sex or social partners who needed to be tested for HIV infection. The multi-pronged approach to containing this outbreak

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11 Centers for Disease Control and Prevention (CDC). (n.d.-b). Figure 3.1 of 2019 Viral Hepatitis Surveillance report | CDC. Retrieved October 11, 2021, from https://www.cdc.gov/hepatitis/statistics/2019surveillance/Figure3.1.htm

12 Hawai'i Department of Health (HDOH). (2016, May). Highest Rates of Hepatitis C Found Among Hawai'i's Kupuna. https://health.hawaii.gov/news/files/2013/05/16-028-High-Rates-of-Hepatitis-C-Found-Among-Hawaiis-Kupuna.pdf

13 Janowicz D. M. (2016). HIV Transmission and Injection Drug Use: Lessons from the Indiana Outbreak. *Topics in antiviral medicine*, *24*(2), 90–92.

required coordinated efforts by state, federal, local, and academic institutions to implement and maintain on-site programs and services, including a syringe exchange program.

The construction of what became known as the "One-Stop-Shop" was a significant component of containing the outbreak. The services offered at this site included HIV and HCV testing and a syringe exchange program. Participants in the syringe exchange program were issued unique ID cards and could complete exchanges weekly. They received clean syringes, a wound care kit, and referrals to health services during that time. The syringe exchange program also featured a mobile site to drive through neighborhoods and offer clean syringes. In a study among the first 100 participants in the syringe exchange program, the proportion who shared syringes decreased from 34% to 5% over three months, the proportion of those who shared syringes to divide drugs decreased from 38% to 10%, and lastly, the proportion of those who shared injection equipment dropped from 44% to 11%. HHHRC's SEP model, which has been utilized for over thirty years, is akin to Indiana's "One-Stop-Shop" model, showing the model's efficacy.

A report published in 2020 entitled "Needling Policy Makers and Sharpening the Debate: Do syringe exchange programs improve public health at the population level?" explored whether states with laws supporting SEPs had reductions in transmission rates of HBV and HCV compared to states without such laws.[14] Utilizing a longitudinal panel design, they determined the legal status of SEPs in each state for the years 1983 through 2016, estimating disease transmission rates for this period, as well. It was found that HBV and HCV transmission rates per 100,000 declined in states with local ordinances/decriminalized statutes and legalized SEPs.

While the battles against HIV and HCV are ongoing, SEP is a crucial weapon in the fight. Also, community and practitioner awareness of the realities of injection drug use along with HCV and HIV infections is essential. HHHRC is committed to continuing its efforts to do its part to reduce the amount of harm done through injection drug use.

V. 2020 SYRINGE EXCHANGE PROGRAM EVALUATION

SEP Staffing & Services During the COVID-19 Pandemic

Regardless of the far-reaching effects of the COVID-19 pandemic, HHHRC never stopped serving the community. In the words of the 2020 SEP Manager: *"We did what we could for the community with what we had."* However, due to safety precautions, such as social distancing, data collection was stripped back to the bare minimum, which might have impacted some of the data outcomes reflected in this report. The number of SEP visits falling, the number of syringes exchanged rising, and the number of individuals gatekeepers served increasing might be explained by how the COVID-19 pandemic impacted HHHRC's services.

[14] Motie, I., Carretta, H. J., & Beitsch, L. M. (2020). Needling Policy Makers and Sharpening the Debate: Do Syringe Exchange Programs Improve Health at the Population Level? *Journal of Public Health Management and Practice*, *26*(3), 222-226.

Reduction in Services

During the COVID-19 pandemic, the SEP staff experienced shortages that impacted services. The remaining staff adapted and continued to provide uninterrupted services, albeit with safety challenges and struggling against potential burnout. Due to COVID-19 pandemic-related safety precautions and Emergency Orders on O'ahu, HHHRC had to reduce its scope of SEP services. For example, SEA on the West Side shifted from weekly to every other week, rotating schedules with the Windward Side. HHHRC also had to pause conducting its weekly SEA and outreach in Honolulu. Instead, HHHRC encouraged its participants in Honolulu to go to the mobile site located downtown on River Street. Due to lack of staffing, the mobile site on River Street was closed on Wednesdays, but its hours on Monday, Tuesday, Thursday, and Friday from 9am to 2pm remained the same. In addition, HHHRC's HIV and HCV testing services through the mobile site were halted. Lastly, due to the stay-at-home emergency orders, HHHRC could not host its quarterly health fairs or conduct its 100-participant Seroprevalence Survey, which always involved providing SEP services, harm reduction supplies, testing services, and related outreach, data from which is usually included in this report.

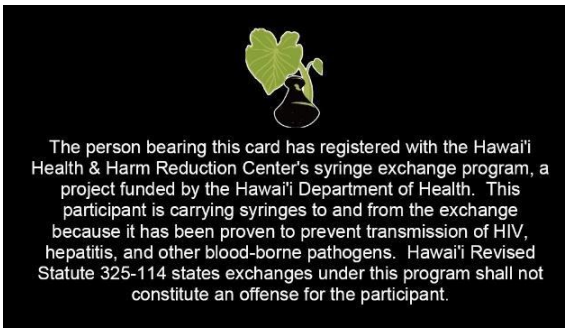
Data Sources

As so many nonprofits did during the pandemic, HHHRC had to pivot in several regards. This section will describe the services provided through SEP during 2020. The date range for the information presented is January 1, 2020, through December 31, 2020. During 2020, HHHRC SEP staff collected data, which was entered into the following databases:

Participant Identification Card Registry Database

Starting in 2012, CHOW Project (now HHHRC) began to distribute Participant Identification Cards (Participant Cards) with a unique alphanumeric identifier (Participant ID) to protect the participant's identity. Participants who register for a Participant Card provide demographics and drug use practices. Registering for a Participant Card is incentivized because the back of the Participant Card summarizes the Hawai‘i Revised Statute that allows participants to carry syringes to and from SEP, providing participants with limited amnesty if stopped by the police while carrying syringes to or from SEP (refer, Figure 3).

Figure. 3 Front and Back of Participant Card



Daily Logs Databases

Daily Logs are filled out by SEP staff to track participant usage. Daily logs record Participant ID and basic demographics (i.e., gender, ethnicity, where they sleep, where the exchange occurred); the number of syringes exchanged daily; if the SEP participant is gatekeeping (i.e., exchanging syringes for others); and what harm reduction supplies were given out (i.e., pipe covers, hygiene kits, first aid kits, and fentanyl strips). It is required that SEP staff record all exchanges on Daily Logs for reporting purposes.

Naloxone Registration & Refill Databases

In September 2016, due to Act 68, CHOW (now HHHRC) launched its overdose prevention program by providing group and individual training with PWID on administering naloxone during outreach or syringe exchange. The overdose prevention program eventually expanded to include training friends and family of PWID, social service providers, law enforcement, and other interested community members on how to administer naloxone. Initially, to receive naloxone through HHHRC, individuals must first be trained by an HHHRC staff member. During this time, they fill out a Naloxone Registration Form, which captures demographics, overdose risk factors, and overdose history. Subsequently, every time naloxone refill is dispensed through HHHRC, recipients fill out a Naloxone Refill Form, which documents the reason for the refill (e.g., due to use or loss) and information surrounding the experience of using naloxone (e.g., the result of using the naloxone). It is required that HHHRC staff record all naloxone distributed through SEP.

Outreach, Testing & Linkage (APHIRM) Databases

HHHRC provides HIV and HCV outreach, testing, and linkage (OTL) as part of its portfolio of services. These services are offered through the main office on O‘ahu and at the downtown SEP mobile site. HHHRC also hosts health fairs around Honolulu where HIV and HCV screening are provided and other services. However, due to the COVID-19 pandemic, HHHRC could not host any health fairs in 2020. Participants who wish to get tested on neighboring islands are referred to HDOH testing sites. During testing, demographics, risk factors, screening results, and referrals are reported to HDOH's APHIRM database. As APHIRM does not collect referral information, it is impossible to report neighbor island testing activity driven by HHHRC SEP workers. Thus, the information provided in this evaluation reflects OTL on O‘ahu only.

Data Analysis Plan

Data from the above-referenced four databases were used to understand better the utilization and efficacy of HHHRC SEP in 2020 (refer, Figure 4, p. 13). Data from these databases were coded and entered in Microsoft Excel, then imported into the statistical software program Statistical Package for the Social Sciences (SPSS). After importing the data from Microsoft Excel to SPSS, SPSS was used to conduct preliminary analyses to evaluate the relationship between SEP utilization in 2020 (i.e., the number of syringes exchanged in 2020), relevant variables (e.g.,

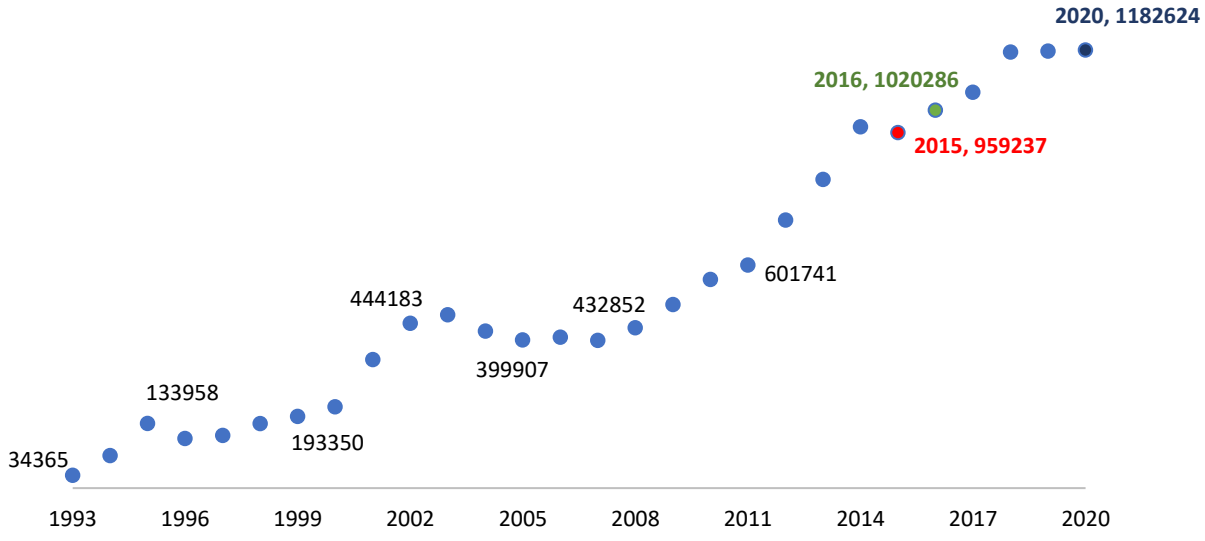
harm reduction supplies distributed, naloxone training and refills, gatekeeping, counseling, testing, and referral), and other covariates (e.g., exchange site, gender, ethnicity).

Figure. 4 Data Used from SEP Databases for Reporting

Syringe Exchange Activity in 2020

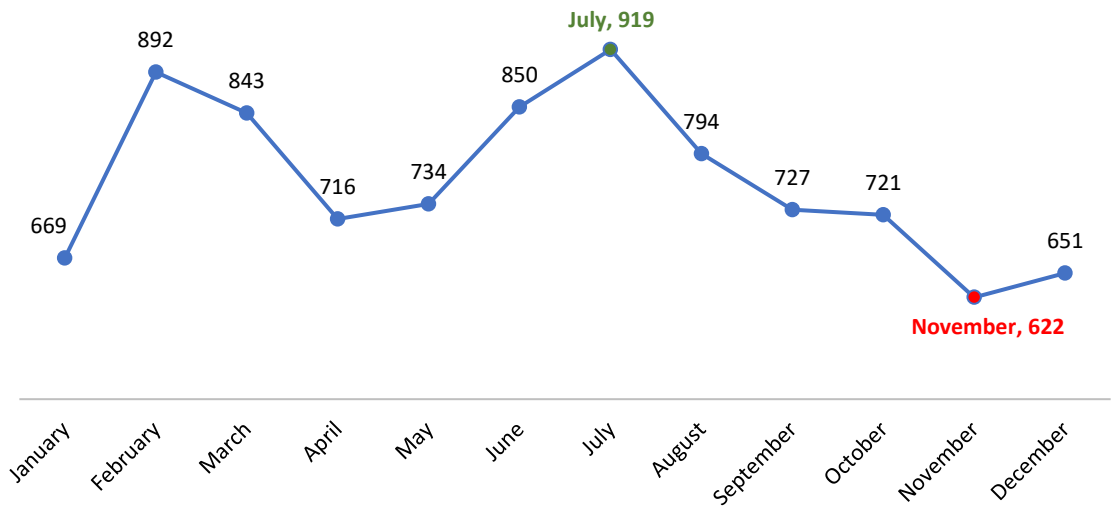
Statewide, a record 1,182,624 syringes were exchanged in 2020 compared to 1,180,158 syringes exchanged in 2019, which is a 0.21% increase in exchange volume. This increase in syringes exchanged continues steadily increasing growth since 2016 (N=1,020,286) after a slight dip in 2015 (N=959,237) (refer, Figure 5).

Figure 5. Statewide Annual No. of Syringes Exchanged Between 1993 and 2020



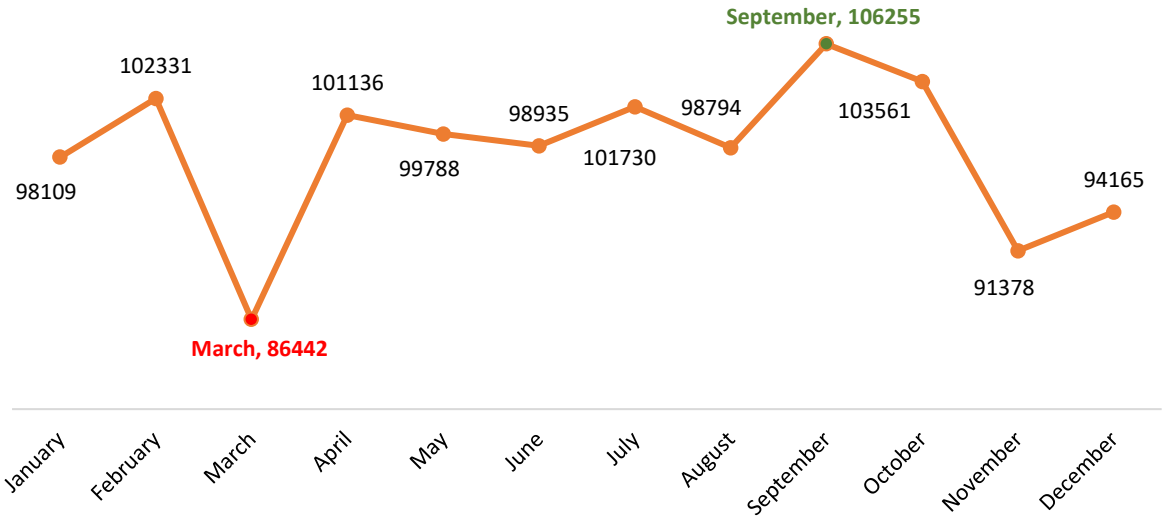
July was the busiest month with 919 visits, while November was the slowest month with 622 visits (refer, Figure 6).

Figure 6. Statewide Annual No. of Monthly SEP Visits in 2020



In terms of exchanges, March (i.e., beginning of COVID-19 pandemic safety protocols in Hawai'i) had the lightest volume of syringes exchanged at 86,442 syringes, while September had the heaviest volume of syringes exchanged at 106,255 syringes (refer, Figure 7).

Figure 7. Statewide Annual No. of Monthly Syringes Exchanged in 2020



Fewer Visits, But More Exchanges

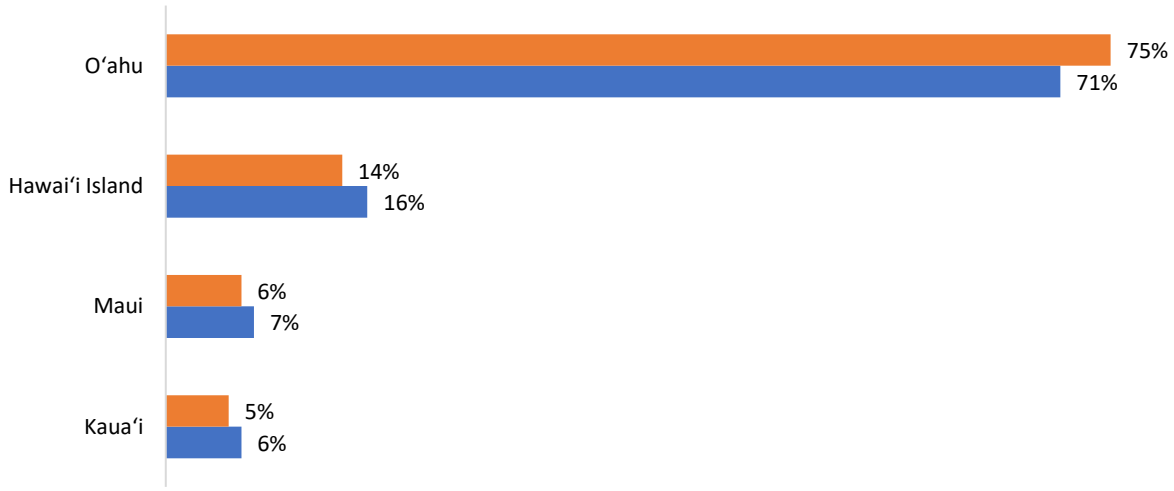
In 2020, the annual statewide number of visits decreased (N=9,138) compared to 2019 (N=12,337) – a 26% decrease in the yearly number of visits. However, the statewide average number of syringes exchanged per visit increased in 2020 (N=129) compared to 2019 (N=96) – a

34% increase in the average number of syringes exchanged per visit. On O'ahu, the average number of syringes exchanged per visit increased in 2020 (n=80) compared to 2019 (n=57) – a 40% increase in the average number of syringes exchanged per visit. Other sites experienced similar gains in 2020, with the average number of syringes exchanged per visit increasing from 193 to 245 on Hawai'i Island (+27%), 284 to 326 on Maui (+15%), and 180 to 185 on Kaua'i (+3%). These are more significant fluctuations in the annual number of visits and the average number of syringes exchanged per visit than in previous years. Refer, Table 1, p. 16.

Exchange Activity Remained *Relatively* Stable Across All Sites

Visits. The volume of SEP visits in 2020 rose 1-2% in all sites except O'ahu, which decreased 4%. Most SEP visits occurred on O'ahu, accounting for 71% (n=6,523) of all syringe exchange visits (N=9,138) in 2020 compared to 75% (n=9,283) of all syringe exchange visits (N=12,337) in 2019 – a 4% decrease in visits. Hawai'i Island accounted for 16% (n=1,423) of all syringe exchange visits in 2020 compared to 14% (n=1,777) of all syringe exchange visits in 2019 – a 2% increase in visits. Maui accounted for 7% (n=638) of all syringe exchange visits in 2020 compared to 6% (n=710) of all syringe exchange visits in 2019 – a 1% increase in visits. Kaua'i accounted for 6% (n=554) of all syringe exchange visits in 2020 compared to 5% (n=567) of all syringe exchange visits in 2019 – a 1% increase in visits. Refer, Figure 8, below & Table 1, p. 16.

Figure 8. Volume of 2019 SEP Visits Compared to 2020 SEP Visits



Exchanges. The volume of SEP exchanges in 2020 remained unchanged for Hawai'i Island and Kaua'i, but rose 1% on Maui and fell 1% on O'ahu. Most SEP exchanges occurred on O'ahu, handling 44% (n=523,875) of all syringes exchanged (N=1,182,624) in 2020 compared to 45% (n=532,760) of all syringes exchanged (N=1,180,158) in 2019 – a 1% decrease in exchanges. Hawai'i Island handled 29% (n=348,522) of all syringes exchanged in 2020 compared to 29% (n=343,365) of all syringes exchanged in 2019 – no change in exchanges. Maui handled 18% (n=207,772) of all syringes exchanged in 2020 compared to 17% (n=201,762) of all syringes exchanged in 2019 – a 1% increase in exchanges. Kaua'i handled 9% (n=102,455) of all syringes exchanged in 2020 compared to 9% (n=102,271) of all syringes exchanged in 2019 – no change in exchanges. Refer, Figure 9 & Table 1, p. 16.

Figure 9. Volume of 2019 SEP Exchanges Compared to 2020 SEP Exchanges

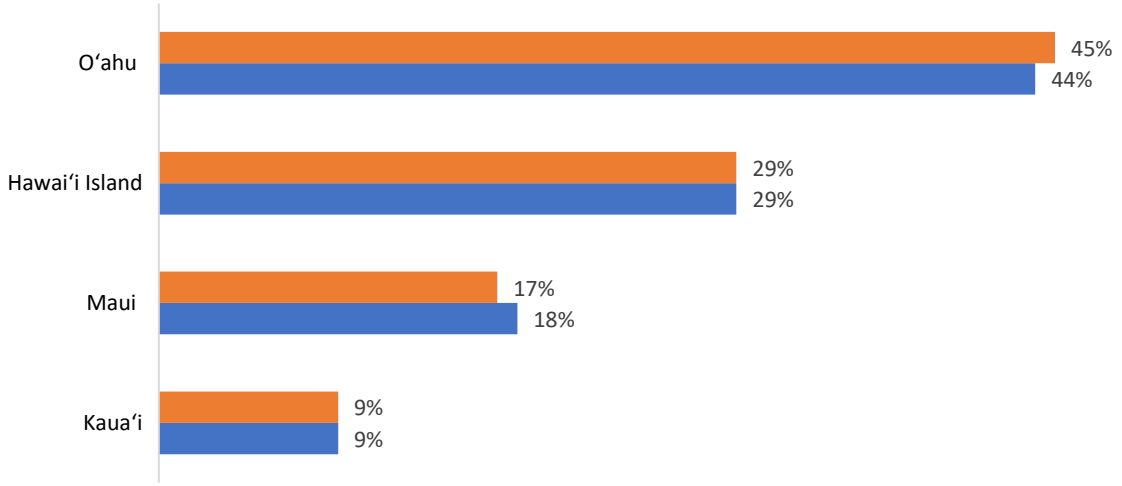
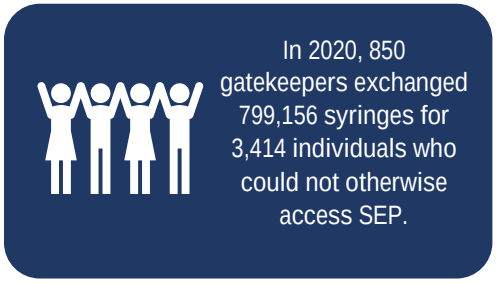


Table 1. Statewide Annual Syringe Exchange Visits, Syringes Exchanged, and Average Syringes Exchanged Per Visit between 2016 and 2020

Location	Year	Total Visits	Total No. of Syringes Exchanged	Average No. of Syringes Exchanged Per Visit
Statewide	2020	9,138	1,182,624	129
	2019	12,337	1,180,158	96
	2018	13,366	1,177,421	88
	2017	12,967	1,068,621	82
	2016	11,120	1,020,286	92
O‘ahu	2020	6,523	523,875	80
	2019	9,283	532,760	57
	2018	10,367	522,870	50
	2017	10,401	487,041	47
	2016	8,591	455,022	53
Hawai‘i Island	2020	1,423	348,522	245
	2019	1,777	343,365	193
	2018	1,643	359,018	219
	2017	1,550	327,963	212
	2016	1,472	333,486	227
Maui	2020	638	207,772	326
	2019	710	201,762	284
	2018	765	176,685	231
	2017	505	170,669	338
	2016	690	159,114	231
Kaua‘i	2020	554	102,455	185
	2019	567	102,271	180
	2018	591	118,548	201
	2017	511	83,908	164
	2016	367	72,264	197

Gatekeeping Activity on the Rise



Gatekeeping – the practice of exchanging syringes for others who cannot access syringe exchange services themselves is on the rise in 2020 compared to 2019. Out of all 9,138 syringe exchange visits in 2020, 3,432 unique individuals were identified using Participant IDs. Of those 3,432 individuals, 850 (25%) individual SEP participants reported gatekeeping for at least 3,414 individuals, averaging four individuals being gatekept per gatekeeper. By volume, a total of 799,156 syringes were exchanged by gatekeepers during 4,369 gatekeeper visits, averaging 183 syringes exchanged per gatekeeper visit in 2020 compared to 586,058 syringes exchanged by gatekeepers in 2019. Refer, Table 2.

The average number of syringes exchanged by gatekeepers per visit was the lowest on O‘ahu, with an average of 99 syringes being exchanged per visit by gatekeepers. Conversely, the average number of syringes exchanged by gatekeepers per visit was the highest on Maui, with an average of 346 syringes being exchanged per visit by gatekeepers. Both Hawai‘i Island and Kaua‘i were similarly matched between O‘ahu and Maui, with 288 syringes being exchanged per visit by gatekeepers on Hawai‘i Island and 230 syringes being exchanged per visit by gatekeepers on Kaua‘i. Refer, Table 2.

O‘ahu having the lowest average number of syringes exchanged by gatekeepers is likely due to O‘ahu being the most urban island with more accessible services, allowing individuals to come to SEP more often. In comparison, Maui having the highest average number of syringes exchanged by gatekeepers is likely due to Maui being the only county whose SEP is only available through a single mobile site, causing SEP to be less accessible less frequently compared to Hawai‘i Island and Kaua‘i, which operate SEP through both a fixed site and a mobile site. Evaluation of gatekeeping practices demonstrates that continuously providing gatekeeping services helps diminish risk-taking injection behaviors among PWID who cannot directly reach HHHRC. Refer, Table 2.

Table 2. Statewide Annual Gatekeeper Visits and Exchanges in 2020

Location	Individual Gatekeepers	Individuals being Gatekept for	Gatekeeper Visits	Syringes Exchanged by Gatekeepers	Average No. of Individuals being Gatekept for Per Gatekeeper	Average No. of Syringes Exchanged Per Visit by Gatekeepers
Statewide	850	3,414	4,369	799,156	4	183
O‘ahu	291	1,349	2,506	248,264	5	99
Hawai‘i Island	230	988	959	276,084	4	288
Maui	254	749	578	199,886	3	346
Kaua‘i	75	328	326	74,922	4	230

Additional Harm Reduction Opportunities

Due to structural barriers to care-seeking, many PWIDs avoid proper care and resort to self-care techniques.[14] Therefore, SEP outreach workers distribute other harm reduction supplies and safer injection equipment to participants. Specifically, pipe covers, hygiene kits, first aid kits, and fentanyl test strips. The harm reduction supplies described below were distributed through SEP (N=9,138) and outreach (N=980) visits in 2020. Refer, Table 3, p. 19.

An **"Outreach" visit is a** SEP visit where no syringes are exchanged, but harm reduction supplies are provided.

Pipe Covers. Pipe covers were distributed during 15% (n=1,357) of SEP visits and 22% (n=218) of outreach visits. Pipe covers are provided to prevent cuts and burns caused by smoking with a glass pipe, reducing the spread of blood-borne pathogens like HIV and HCV between participants sharing smoking devices.

Hygiene Kits. Hygiene kits were distributed during 20% (n=1,849) of SEP visits and 24% (n=235) of outreach visits. Hygiene kits are provided to promote general hygiene, especially since skin and soft tissue infections (SSTI) are a common complication experienced by PWIDs, resulting in illness or death.[14]

First Aid Kits. First aid kits were distributed during 54% (n=4,925) of SEP visits and 38% (n=374) of outreach visits. First aid kits are provided to compel participants to treat wounds since PWIDs are often unwilling or unable to get treatment for wounds, such as abscesses, which can rapidly become painful and dangerous, sometimes resulting in gangrene and amputation or death.[15]

Food. Food and snacks were distributed during 37% (3,405) of SEP visits and 36% (n=351) of outreach visits. Food and snacks are provided because many participants are actively experiencing houselessness or mental health issues, causing them to struggle to meet their basic needs. Food and snacks are provided to HHHRC by Food Bank Hawai'i.

Condoms. Condoms were distributed during 16% (n=1,472) of SEP visits and 32% (n=317) of outreach visits. Condoms are provided to reduce the likelihood of HIV transmission during unprotected receptive anal or vaginal intercourse that involves torn mucosal lining or the presence of genital ulcerations (which are commonly caused by some sexually transmitted infections).[16]

[15] Gilbert, A. R., Hellman, J. L., Wilkes, M. S., Rees, V. W., & Summers, P. J. (2019). Self-care habits among people who inject drugs with skin and soft tissue infections: a qualitative analysis. Harm Reduction Journal, 16(1). https://doi.org/10.1186/s12954-019-0345-z

[16] Burrows, D. (2007). Guide to Starting and Managing Needle and Syringe Programs. World Health Organization, Department of HIV/AIDS.

Fentanyl Test Strips. A total of 3,924 fentanyl test strips were distributed during SEP visits (an average of 2 test strips per SEP visit) and 182 during outreach visits (an average of 5 test strips per outreach visit). Test strips are provided so that participants can test for fentanyl in their drug supply. According to a SEP worker, while test strips may not deter drug use, "They can empower people who use drugs to make more educated decisions about their drug supply."

Table 3. Statewide Annual Harm Reduction Supplies Distributed through SEP and Outreach in 2020

Location	No. of Visits Where Supplies Were Distributed					Actual No. of Supplies Distributed
	Pipe Covers	Hygiene Kits	First Aid Kits	Food	Condoms	Fentanyl Test Strips
Statewide						
SEP	1,357	1,849	4,925	3,405	1,472	3,924
Outreach	218	235	374	351	317	182
SEP+Outreach	1,575	2,084	5,299	3,756	1,789	4,106
O'ahu						
SEP	608	819	2,984	2,171	781	2,457
Outreach	78	149	280	261	207	151
SEP+Outreach	686	968	3,264	2,432	988	2,608
Hawai'i Island						
SEP	352	479	879	857	394	359
Outreach	4	11	7	10	8	5
SEP+Outreach	356	490	886	867	402	364
Maui						
SEP	251	137	557	0	205	556
Outreach	2	0	5	0	3	3
SEP+Outreach	253	137	562	0	208	559
Kaua'i						
SEP	146	414	505	377	92	552
Outreach	134	75	82	80	99	23
SEP+Outreach	280	489	587	457	191	575

Participant Demographics & Selected Risk Factors

This section presents demographics and selected risk factors for those who received services through SEP in 2020. Out of all 9,138 syringe exchange visits in 2020, 3,432 unique individuals were identified using Participant IDs. Participant demographic information and selected risk factors were retrieved from two sources: (1) the Daily Logs Databases was used to retrieve gender and ethnicity data for both SEP and Outreach participants and (2) the Participant Identification Card Registry Database was utilized to retrieve age, birthplace, housing, and substance use information for SEP participants only. While many SEP participants may also be Outreach participants, they do not present their Participant IDs. Therefore, the only demographic data available for SEP and Outreach participants is gender and ethnicity, but the

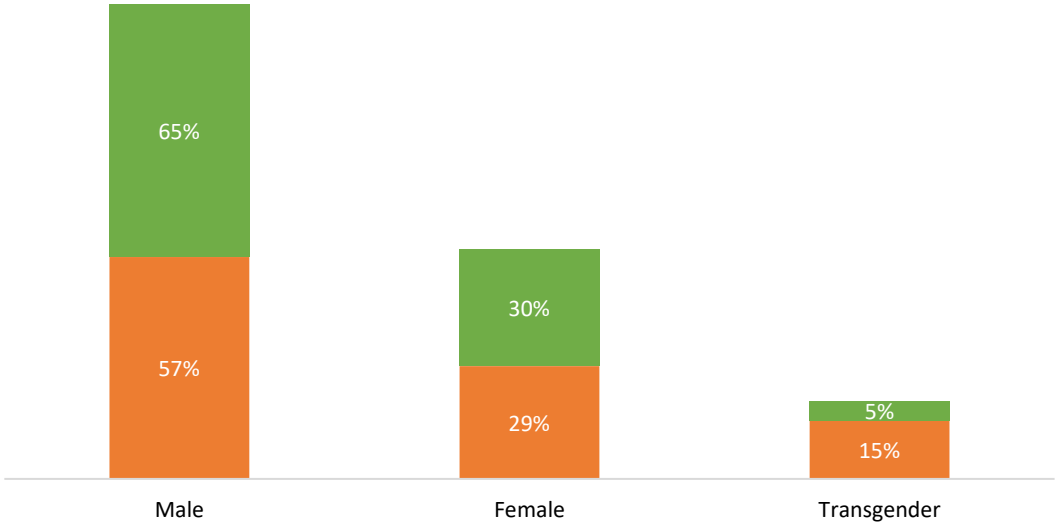
remaining demographic and selected risk factor data presented is only available for SEP participants.

Demographics

SEP Gender. Of the 3,432 unique individuals who utilized SEP in 2020, 65% (n=2,221) of participants identified as male compared to 30% (n=1,037) who identified as female and 5% (n=174) who identified as transgender. Refer, Figure 10, below & Table 5, p. 23.

Outreach Gender. Of the 980 outreach visits in 2020, 57% (n=554) identified as male compared to 29% (n=283) who identified as female and 15% (n=143) who identified as transgender. Refer, Figure 10, below & Table 4, p. 22.

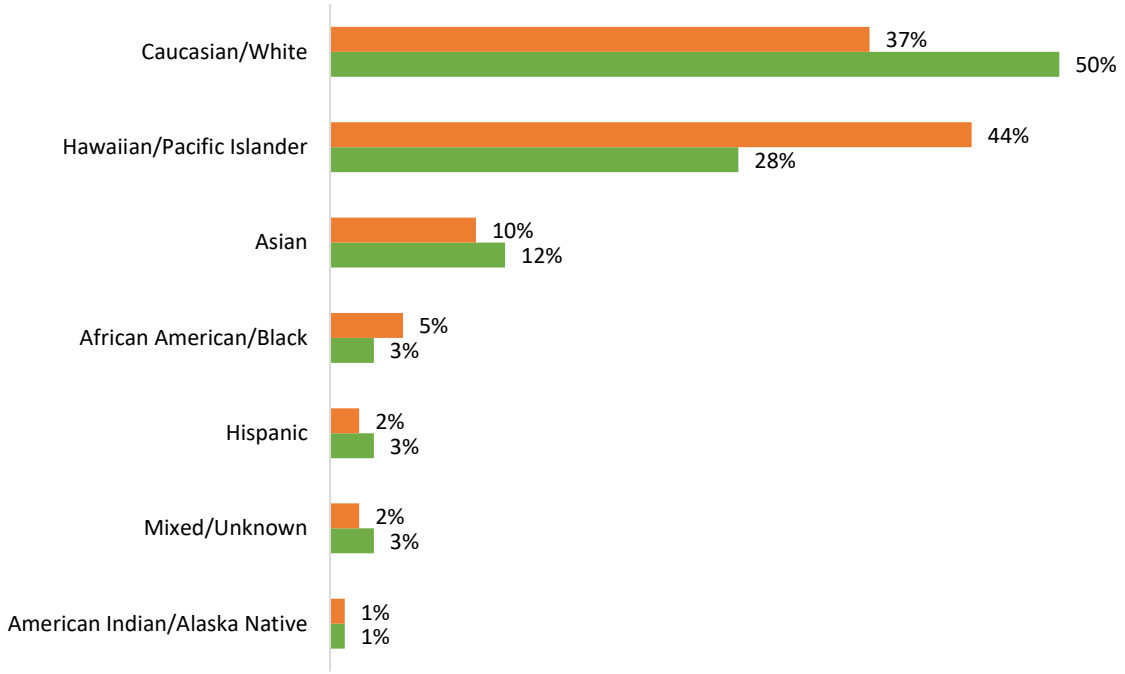
Figure 10. Gender Identity of SEP (N=3,432) and Outreach (N=980) Participants



SEP Ethnicity. This report uses HDOH's methodology for reporting Native Hawaiians, wherein any person who reports having any Native Hawaiian ancestry is registered as Native Hawaiian. Statewide, 90% (n=3,104) identified as White/Caucasian, Native Hawaiian/Pacific Islander or Asian. Of the 3,432 unique individuals who utilized SEP in 2020, half identified as White/Caucasian (n=1,715; 50%) and over a quarter identified as Native Hawaiian/Pacific Islander (n=968; 28%) followed by those who identified as Asian (n=421; 12%). The following accounted for the remainder of participant ethnicities: African American (n=97; 3%), Hispanic (n=100; 3%), and Other/Multiracial (n=87; 3%), and American Indian/Alaska Native (n=44; 1%). Refer, Figure 11, p. 21 & Table 5, p. 23.

Outreach Ethnicity. Of the 980 outreach visits in 2020, the majority identified as Native Hawaiian/Pacific Islander (n=427; 44%), followed by Caucasian/White (n=359; 37%) and Asian (n=102; 10%). The following accounted for the remainder of outreach visit ethnicities: African American (n=47; 5%), Hispanic (n=18; 2%), and Other/Multiracial (n=20; 2%), and American Indian/Alaska Native (n=7; 1%). Refer, Figure 11, p. 21 & Table 4, p. 22.

Figure 11. Ethnic Identity of SEP (N=3,432) and Outreach (N=980) Participants



SEP Age. Age data was available for 1,429 SEP participants. **Statewide, the average age of SEP participants was 40 years.** Statewide, the age range of SEP participants was 18 to 81 years. Refer, Table 5, p. 23.

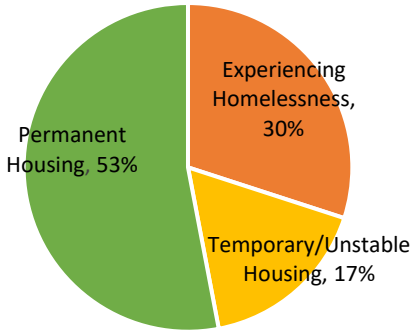
SEP Birthplace. Birthplace data was available for 1,357 SEP participants. **About half (n=654; 48%) were either born in Hawai'i (n=639; 47%) or the Pacific Islands (n=15; 1%).** The other half were born in the Continental United States (n=636; 47%), and few born outside of the United States (n=67; 5%). Refer, Table 5, p. 23.

SEP Participant Risk Factors

SEP Health Insurance. Insurance data was available for 1,381 SEP participants. Of that 1,381, **85% (n=1,177) had health insurance and 15% (n=203) did not**.

SEP Housing. Housing data was available for 1,392 SEP participants. Of that 1,392, **47% were either currently experiencing homelessness (n=422; 30%) or in temporary/unstable housing (n=238; 17%)** and just over half of the participants reported that they were permanently housed (n=732; 53%). Refer, Figure 12 & Table 5, p. 23.

Figure 12. Housing Status of SEP Participants (N=1,392)



SEP Substance Use. When registering for Participant Cards, participants are asked to report on the substance they most often inject. Injection substance use data was available for 1,020 SEP participants. The following data describes those 1,020 SEP participants who reported on their injection substance use. The most frequently injected substances were heroin (n=454; 45%) and methamphetamine (n=439; 43%), comprising 88% of reported injected substance use. The following accounted for the remainder of reported injected substance use: Other (n=54; 5%); pills/opioids (n=54; 5%); cocaine (n=10; 1%), and speedballs (n=9; 1%). Refer, Figure 13, below & Table 5, p. 23.

Figure 13. Injection Substance Use of SEP Participants (N=1,020)

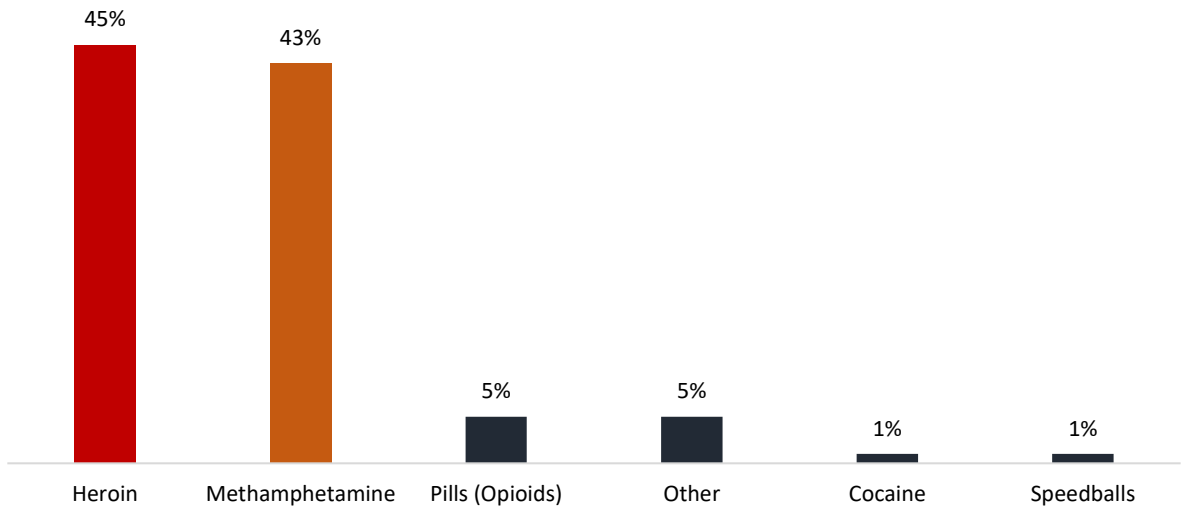


Table 4. Statewide Annual Demographics of Outreach Visits

Demographics	O'ahu	Hawai'i Island	Maui	Kaua'i	Statewide
No. of Outreach Visits	778	16	5	181	980
Gender (N=980)					
Male	408	8	3	135	554
Female	228	8	1	46	283
Transgender	142	0	1	0	143
Age (Years)	*Age data not collected for outreach participants.*				
Ethnicity (N=980)					
African American/Black	42	0	0	5	47
Asian	93	2	3	4	102
Caucasian/White	236	8	2	113	359
Hawaiian/Pacific Islander	362	6	0	59	427
Hispanic	18	0	0	0	18
Mixed/Unknown	20	0	0	0	20
American Indian/Alaska Native	7	0	0	0	7
Birthplace	*Birthplace data not collected for outreach participants.*				
Housing	*Housing data not collected for outreach participants.*				
Injected Substance Use	*Substance use data not collected for outreach participants.*				

Table 5. Statewide Annual Demographics of Individual SEP Participants

Demographics & Risk Factors	O'ahu	Hawai'i Island	Maui	Kaua'i	Statewide
No. of Individual SEP Participants	2,375	548	323	186	3,432
Gender (N=3,432)					
Male	1,612	326	172	111	2,221
Female	595	218	150	74	1,037
Transgender	168	4	1	1	174
Age (Years) (N=1,429)					
Range	20-81	18-75	18-69	21-73	18-81
Average	41	40	38	40	40
Ethnicity (N=3,432)					
African American/Black	82	14	1	0	97
Asian	292	10	113	6	421
Caucasian/White	1,067	332	193	123	1,715
Hawaiian/Pacific Islander	762	144	14	48	968
Hispanic	79	15	1	5	100
Mixed/Unknown	59	23	1	4	87
American Indian/Alaska Native	34	10	0	0	44
Birthplace (N=1,357)					
Hawai'i	409	124	65	45	639
Pacific Islands	13	2	0	0	15
Continental US	344	173	76	43	636
International	46	15	6	0	67
Housing (N=1,392)					
Experiencing Homelessness	266	75	35	46	422
Permanently Housed	468	164	72	28	732
Temporary/Unstable Housing	102	75	38	23	238
Injected Substance Use (N=1,020)					
Heroin	250	89	69	46	454
Methamphetamine	237	135	32	35	439
Pills/Opioids	21	20	12	1	54
Cocaine	3	6	1	0	10
Speedballs	3	2	3	1	9
Other	44	8	2	0	54

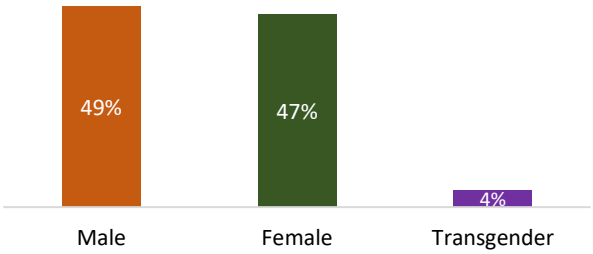
Prevention of Fatal Opioid Overdose Using Naloxone

Naloxone Training

From the start of the naloxone training program in 2016 through 2020, HHHRC has trained 1,204 individuals through SEP on overdose prevention, including rescue breathing and naloxone administration. In 2020, 137 people were taught. Below is a discussion of those who were trained in 2020. Refer, Table 6, p. 28-29.

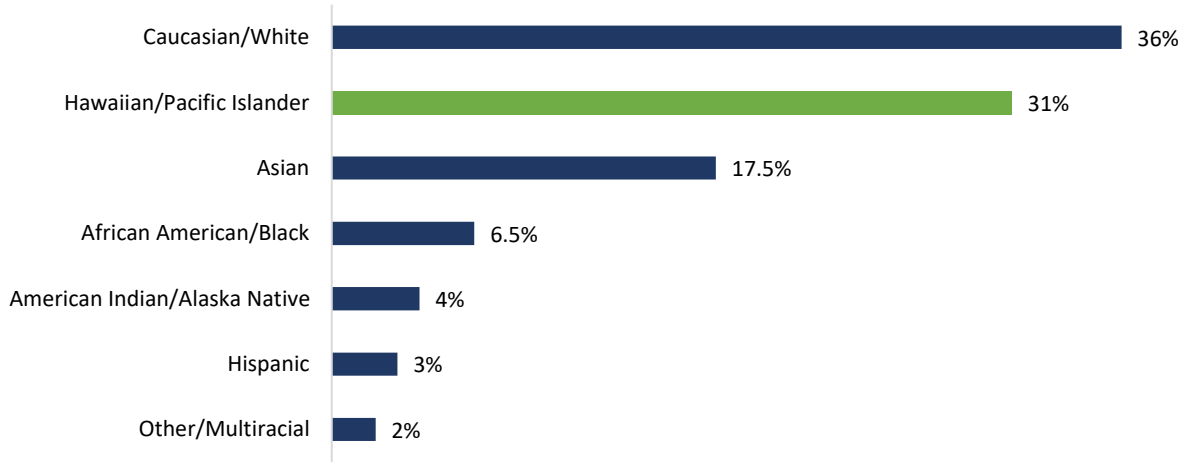
Trainee Gender. About half of the participants (N=137) identified as male (n=67; 49%), and slightly less than half identified as female (n=64; 47%) compared to the least number of participants who identified as transgender (n=6; 4%). Refer, Figure 14.

Figure 14. Gender Identity of Naloxone Trainees (N=137)



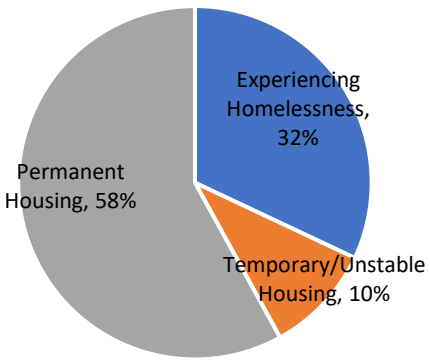
Trainee Ethnicity. Most participants identified as White/Caucasian (n=49; 36%), followed by Native Hawaiian/Pacific Islander (n=43; 31%) and Asian (n=24; 17.5%). The following accounted for the remainder of participant ethnicities: African American (n=9; 6.5%), American Indian/Alaska Native (n=5; 4%), Hispanic (n=4; 3%), and Other/Multiracial (n=3; 2%). Refer, Figure 15.

Figure 15. Ethnic Identity of Naloxone Trainees (N=137)



Trainee Housing. Over half of the participants reported that they were permanently housed (n=79; 58%) compared to the remainder who were either experiencing homelessness (n=44; 32%) or in temporary/unstable housing (n=14; 10%). Refer, Figure 16.

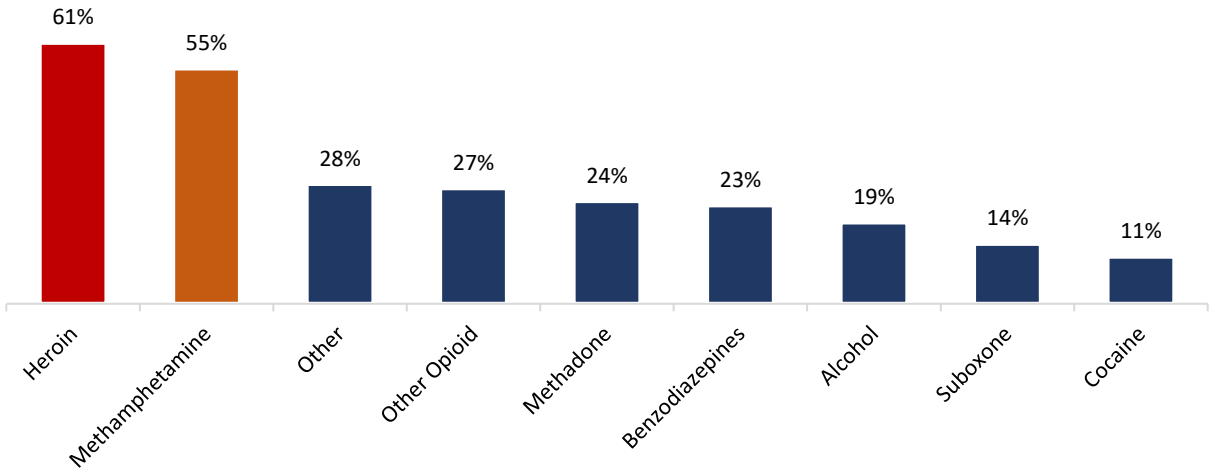
Figure 16. Housing Status of Naloxone Trainees (N=137)



Trainee Substance Use. Trainees were asked to self-report their substance use over the past 30 days. Of the 137 trainees, 61% (n=83) reported using one or more substances over the past 30 days, while 39% (n=54) did not answer. The following data describes those who reported on their substance use over 30 days.

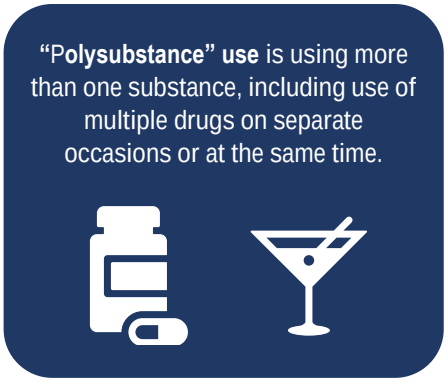
The most frequently used substance was heroin, with 61% (n=55) of trainees reporting using it over the past 30 days. The second-most frequently reported substance was methamphetamine, with 55% (n=46) reporting using it over the past 30 days. The following accounted for the remainder of reported substances used over the past 30 days: Other (n=23; 28%); other opioid (n=22; 27%); methadone (n=20; 24%); benzodiazepines (n=19; 23%); alcohol (n=16; 19%); suboxone (n=12; 14%); and cocaine (n=9; 11%). Refer, Figure 17.

Figure 17. Substance Use of Naloxone Trainees Over the Past 30 Days (n=83)



Some of the drugs reported may be utilized for substance use treatment (i.e., methadone, benzodiazepines, and suboxone). However, there is no way of knowing if any trainees who reported using those substances were prescribed for treatment purposes.

Of the 83 trainees who reported substance use over the past 30 days, 67% (n=56) reported polysubstance use compared to 33% (n=27) who reported using a single substance. Polysubstance use has been associated with an increased risk for overdose.[17] Polysubstance use has also been associated with an increased risk of contracting HIV and HCV.[18] Therefore, it can be inferred that most trainees are at increased risk for overdose along with contracting HIV and HCV.

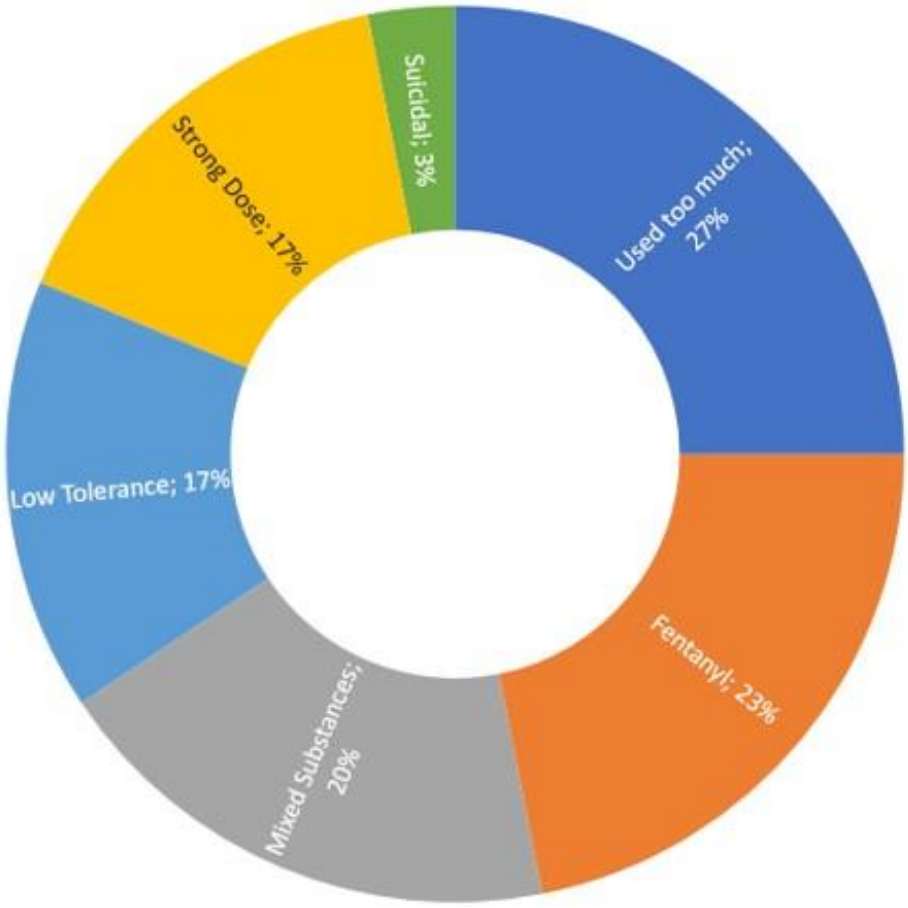


[17] Crummy, E. A., O'Neal, T. J., Baskin, B. M., & Ferguson, S. M. (2020). One Is Not Enough: Understanding and Modeling Polysubstance Use. Frontiers in Neuroscience, 14. https://doi.org/10.3389/fnins.2020.00569

[18] Meacham, M. C. (2015). *Polydrug use and risk of HIV and overdose among people who inject drugs in San Diego, California, and Tijuana, Baja California, Mexico*. University of California, San Diego.

Trainee Overdose History. Trainees were asked about their history of overdose and whether they had personally experienced an overdose or witnessed it. Of the 137 trainees, 22% (n=30) reported that they had personally experienced an overdose, and 42% (n=58) said they had witnessed it. Of the 30 trainees who reported experiencing an overdose, they cumulatively experienced 86 overdoses, ranging from experiencing as little as 1 to as many as 12 overdoses per person, averaging three overdoses per person. When asked what the reason for their overdoses were, trainees reported the following reasons: Used too much of the substance (n=8; 27%), fentanyl in their drug supply (n=7; 23%), mixed substances (n=6; 20%), dose stronger than expected (n=5; 17%), having a lowered tolerance (n=5; 17%), and feeling suicidal (n=1; 3%). Refer, Figure 18.

Figure 18. Reason for Overdose of Naloxone Trainees Who Experienced Overdose (n=30)

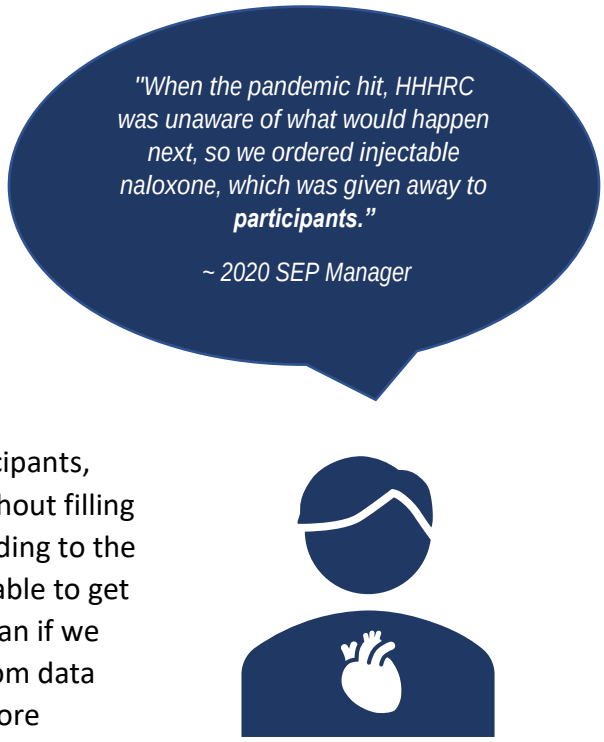


Of the 58 trainees who reported witnessing an overdose, they cumulatively witnessed at least 375 overdoses, ranging from witnessing as little as 1 to as many as 100 overdoses, averaging witnessing seven overdoses per trainee. Among those who had witnessed an overdose, 59% (n=34) reported that naloxone was administered, and 43% (n=25) said that they had previously administered naloxone themselves.

Naloxone Refills

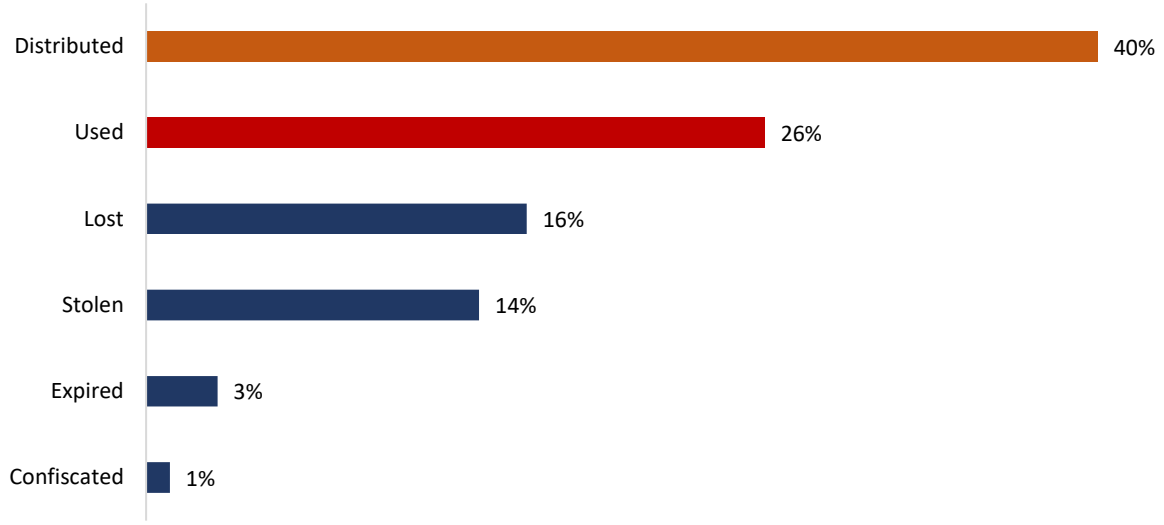
Upon completing naloxone training, each participant is provided with at least one naloxone kit (each kit contains two 4-milliliter doses of nasal naloxone). All trainees are encouraged to access naloxone refills through SEP regardless of if their refills are due to being used to reverse an overdose, lost, stolen, expired, or distributed. Statewide, in 2020, through training and refill requests, 471 naloxone kits or 942 naloxone doses were provided during 365 visits compared to 1,060 naloxone kits/2,120 doses provided during 360 visits in 2019 – a 56% decrease. Refer, Table 6, p. 28-29.

Decrease in Naloxone Refill Data. This steep decrease of nasal naloxone doses provided between 2019 and 2020 (-56%) can be attributed to HHHRC ordering and giving out injectable naloxone to participants at the start of the COVID-19 pandemic without collecting data. HHHRC primarily distributes nasal naloxone – purchased for HHHRC by the Alcohol and Drug Abuse Division (ADAD) – rather than injectable naloxone – purchased directly by HHHRC. At the time, it was not required for participants to complete Naloxone Registration and Refill forms when receiving injectable naloxone. Following HHHRC protocol, SEP workers did not ask participants to fill out Naloxone Registration and Refill forms unless they received nasal naloxone. However, since some participants prefer nasal naloxone, those participants were asked to answer the bare minimum of Naloxone Registration and Refill forms questions in favor of nasal naloxone. But, most participants, when given a chance to get naloxone quickly and without filling out paperwork, preferred injectable naloxone. According to the 2020 SEP Manager, "The ease in which people were able to get injectable naloxone undoubtedly saved more lives than if we hadn't done this." The following data is presented from data collected during nasal naloxone refills in 2020, but more injectable naloxone refills were distributed that went undocumented.



Reason for Naloxone Refill. During the naloxone refill request process, participants are asked to list the reason for refilling their naloxone by dose. Data on the reason for refills was available for 18% (n=371) of the total doses (N=2,120) provided. Of the 371 reasons for refill data available, 74% (n=275) were due to naloxone doses being lost, stolen, expired, or distributed, and 26% (n=96) were due to use. Refer, Figure 19.

Figure 19. Reason for Naloxone Refill (n=371)



Overdose Reversals. In 2020, statewide, HHHRC's naloxone training and refill services were responsible for at least 46 reported overdose reversals. It should be noted that while 46 overdose reversals are priceless in that it means 46 possible overdose deaths were prevented, this number is still likely grossly underreported. It can require one or multiple doses of naloxone to reverse an overdose depending on many factors, such as the amount and strength of substances taken leading to the overdose, the individual's substance tolerance level at the time of the overdose, and many more since participants are provided at least two doses of naloxone per kit and often request more than one kit per refill. It is difficult to gauge how many actual overdose incidents occurred and how many overdoses were reversed. For example, participants who are refilling their naloxone due to use could have used one or both doses from a single naloxone kit to reverse one overdose or reversed two overdoses using both doses provided in a single naloxone kit. Refer, Table 6, p. 28-29.

Table 6. Statewide Naloxone Distributed through Training/Refills and Overdose Reversals

Location	Visits	Naloxone Kits	Naloxone Doses	Overdose Reversals
Statewide				
Training	137	159	318	N/A
Refill	230	314	628	N/A
Training+Refill	365	471	942	46
O'ahu				
Training	86	96	192	N/A
Refill	121	161	322	N/A
Training+Refill	207	257	514	23
Hawai'i Island				
Training	24	27	54	N/A
Refill	84	112	224	N/A
Training+Refill	108	139	278	20

Location	Visits	Naloxone Kits	Naloxone Doses	Overdose Reversals
Maui				
Training	9	9	18	N/A
Refill	3	3	6	N/A
Training+Refill	12	12	24	0
Kaua'i				
Training	18	27	54	N/A
Refill	22	38	76	N/A
Training+Refill	40	65	130	3

HIV & HCV Outreach, Testing & Linkage Services

As mentioned earlier, once the COVID-19 pandemic reached Hawaii, SEP halted OTL. The following data is reflective of OTL that was accomplished beforehand. In 2020, 11 individuals were screened for HIV and HCV through SEP compared to 152 in 2019 – a 93% decrease. Unfortunately, this significant drop in testing services is due to discontinued testing for health and safety reasons during the COVID-19 pandemic. The 11 individuals received their testing services before testing services were halted. Of those 11 individuals, five were screened for HIV and HCV through outreach visits, and six were screened for HIV and HCV through SEP visits. HIV test results were received by 91% (n=10), and HCV test results were received by 100% (N=11) of 11 of those individuals.

VI. COST-BENEFIT ANALYSIS OF SEP

In 2009, nationally, the CDC Division of HIV Prevention estimated that the life treatment cost of HIV was $367,134 per person.[19] By state, the estimated annual cost of HIV was calculated based on the number of new HIV diagnoses in each state, multiplied by the lifetime treatment cost discounted to the time of the infection for each unique case.[18] In Hawaii, based on 70 new HIV diagnoses, the lifetime treatment cost was estimated to be $26 million total or $371,428 per person.[18] The CDC Division of HIV Prevention has not conducted any updated studies at the federal level to update the lifetime cost of HIV.

In 2015, a publication entitled "The lifetime medical cost savings from preventing HIV in the United States" sought to estimate the medical cost saved by averting one HIV infection in the United States using a computer simulation model of HIV disease and treatment.[20] They found that the estimated discounted lifetime cost for persons who become HIV infected at age 35 is $326,500, which includes antiretroviral medications (60%), other drugs (15%), and nondrug costs (25%). For individuals who remain uninfected but at high risk for infection, the discounted lifetime cost estimate is $96,700.[19] Therefore, the medical cost saved by avoiding one HIV

[19] Centers for Disease Control and Prevention (CDC). (n.d.). HIV Cost-effectiveness | Guidance | Program Resources | HIV/AIDS | CDC. Retrieved December 1, 2021, from https://www.cdc.gov/hiv/programresources/guidance/costeffectiveness/index.html

infection is $229,800, or the price saved would reach $338,400 if all HIV-infected individuals presented early and remained in care.[19]

It is challenging to prove cost-savings in prevention efforts, like SEP, because it's challenging to ascertain the cost of something that hasn't happened yet. However, it can be inferred that Hawaii having a lower case of HIV prevalence compared to the national rate of HIV prevalence suggests that SEP is working to reduce the transmission of HIV infections within the state. Furthermore, if the cost savings of averting one HIV infection is between $229,800 and $338,400, this means preventing one case saves more money than the total budget of HHHRC's SEP program.

VII. CONCLUSIONS

Increase in Syringes Exchanged Despite Barriers

In 2020, despite the impacts of the COVID-19 pandemic, HHHRC continued to provide access to clean syringes and harm reduction supplies to SEP participants. The increase in syringes exchanged every year since 2016 continued in 2020, with a statewide record of 1,182,624 syringes exchanged. This continuing rise in syringes exchanged annually indicates that HHHRC's SEP reduced the risk of HIV and HCV transmission among PWID through its uninterrupted syringe exchange services in 2020. This continued success of SEP is entirely due to the grit and dedication of the HHHRC SEP staffers who continued to serve their community during a global pandemic.

Increase in Gatekeeping & Decrease in Visits

Gatekeeping activity among SEP participants in 2020 was unprecedented, with 850 gatekeepers exchanging 799,156 syringes for 3,414 individuals. In 2020, 799,156 syringes were exchanged by gatekeepers compared to 586,058 syringes exchanged in 2019 – a 36% increase. This rise in gatekeeping activity was accompanied by a 26% fall in annual SEP visits compared to 2019. HHHRC has been mindful and encouraging of gatekeeping activity in the past due to the opportunity gatekeeping creates to connect to other PWID that HHHRC might not otherwise reach through a proxy. The 2020 gatekeeping figures suggest that gatekeeping is a powerful tool and should be cultivated and encouraged. HHHRC aspires to engage in more formalized gatekeeping training and education to continue this trend in the future.

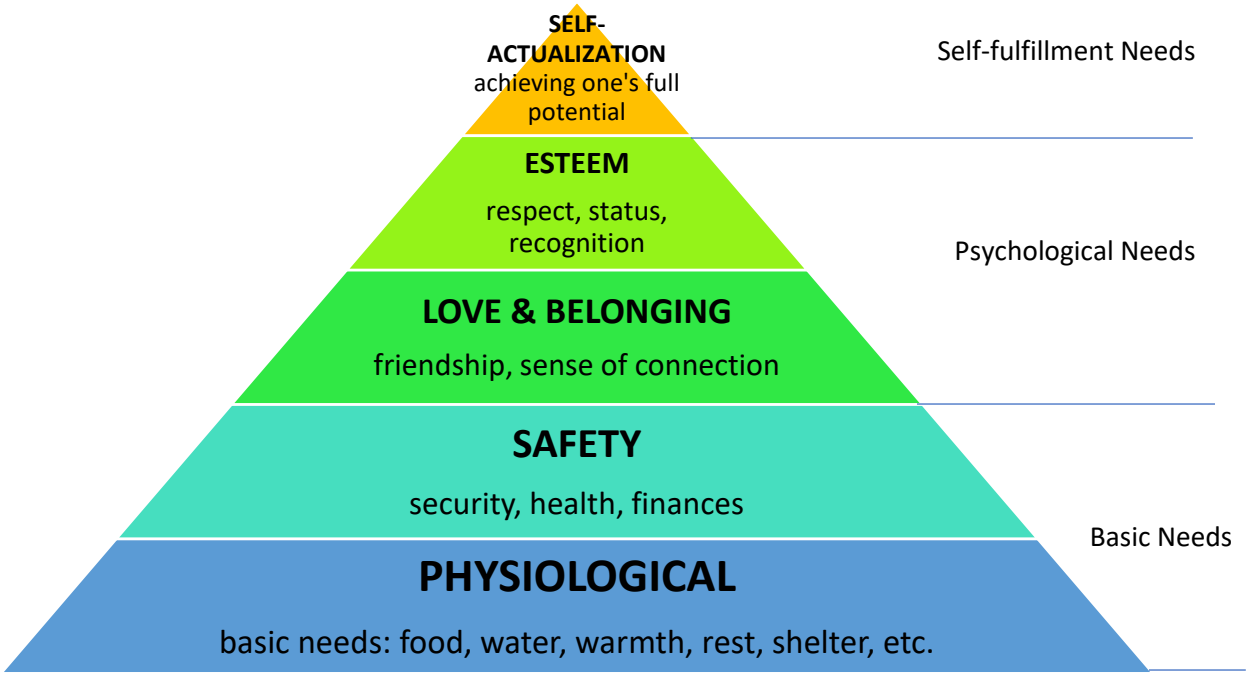
Back to Basics

In 2020, the COVID-19 pandemic highlighted that many SEP participants lack the necessities required to meet their most basic needs. This is demonstrated by the rise in the distribution of harm reduction supplies to SEP participants in 2020. For example: Pipe covers were distributed during 15% of SEP visits in 2020 compared to 12% in 2019; hygiene kits were distributed during 20% of SEP visits in 2020 compared to 18% in 2019; first aid kits were distributed during 54% of SEP visits in 2020 compared to 46% in 2019; condoms were distributed during 37% of SEP visits

in 2020 compared to 15% in 2019. In addition, there was an increased demand for food, which was distributed during 37% of SEP visits in 2020, and personal protective equipment (PPE) items like disposable face masks, which were provided as needed.

Maslow's (1943) hierarchy of needs theory addresses the motivational drive of human behavior. It is based on the belief that the five basic needs – physiological, safety, belongingness, esteem, self-actualization – are critical to motivating humans to accomplish desired results.[21] Maslow's hierarchy of needs theory is most often displayed as a pyramid where the lowest levels comprise the most basic needs, such as physiological and safety, while the most complex needs are at the top, such as esteem and self-actualization.[21] According to Maslow's Hierarchy, individuals cannot move on to the next level of needs until the most basic physiological needs, including food, water, sleep, and warmth, are met.[21] The increase in the need for harm reduction supplies suggests that SEP participants are especially vulnerable and require assistance in meeting their most basic physiological and safety needs before they can even begin to address their psychological and self-fulfillment needs (refer, Figure 20).

Figure 20. Maslow's Hierarchy of Needs



Remain Vigilant of Need for HIV & HCV Outreach, Testing & Linkage

In 2020, due to the safety precautions taken by HHHRC in response to the COVID-19 pandemic, HHHRC was unable to conduct its usual HIV and HCV OTL. In 2019, 149 SEP participants tested for HIV, and 148 tests were negative, except for one client whose HIV-positive status was known. If this trend were to continue in 2020, HIV-positive results would remain low or non-

[21] Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50(4), 370-396. https://doi.org/10.1037/h0054346

existent. However, of the 142 persons tested for HCV in 2019, 37% were HCV positive, up from 28% in 2018. If this trend continued in 2020, HCV positive results would remain stable at 37%, testing positive for HCV or higher. It will take HHHRC some time to know the ramifications of having almost no HIV and HCV OTL in 2020. In the meantime, HHHRC continues to ramp its OTL services back up.

Evaluation Limitations

This evaluation presents the information HHHRC has on SEP activity in 2020 based on the available data. As with previous evaluations, there are limitations inherent to the approach taken in this evaluation. Simply stated, real life does not occur in a clean and controlled lab setting; life, like data, is inherently imperfect, but we do the best with what we have - always. The following describes some of the limitations of the data used in this report:

Self-Reporting. A self-report is any method that involves asking a participant about their demographics, feelings, attitudes, beliefs, and so on.[22] All data utilized in this report is self-reported data from SEP, outreach, and overdose prevention training participants. Some of the disadvantages of self-report data include: honesty – participants may not answer honestly; introspective ability – participants may not be assessing themselves accurately; interpretation of questions – different words may have different meanings to various participants.[22]

Data Gaps. Participant ID Card Registration data can limit what data is reported and know precisely how many individuals utilize SEP. For example: Participants may lose their Participant ID Cards; participants might register more than once; participants may provide the wrong card number while exchanging; cards with the same ID number may be distributed if participants have overlapping initials and birth dates.

Missing Data. Due to the enhanced safety precautions necessitated by the COVID-19 pandemic, some SEP data collection was inconsistent or stopped altogether. In particular, naloxone refill and registration data were sparsely collected. However, best practices of SEP indicate that it is best to minimize data collection.[23] SEP's collection of data from participants should be minimal and should not detract from the primary mission, which is to provide sterile syringes, harm reduction supplies, overdose prevention training, and naloxone.[23]

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[22] Salters-Pedneault, K. (2020, June 19). *Can psychological self-report information be trusted?* Verywell Mind. Retrieved December 21, 2021, from https://www.verywellmind.com/definition-of-self-report-425267

[23] New York City Department of Health and Mental Hygiene. (2009). (rep.). *Recommended Best Practices for Effective Syringe Exchange Programs in the United States*. New York City Department of Health and Mental Hygiene. Retrieved December 21, 2021, from http://www.santacruzhealth.org/Portals/7/Pdfs/SEP%20Recs%20-%20Consensus%20Meeting.pdf

VIII. RECOMMENDATIONS

Based on the findings of this report, the evaluator recommends the following:

SEP Recommendations

Invest in More Harm Reduction Supplies

As evidenced by the uptick in harm reduction supplies provided during 2020, it is suggested that SEP invest funds into existing harm reduction supplies being provided (i.e., pipe covers, hygiene kits, first aid kits, food, condoms, and fentanyl test strips). In addition, it is suggested that SEP explore investing funds in other harm reduction supplies that would benefit its SEP and outreach participants, such as starter kits, drug testing kits, etc.

Ramp Up HIV & HCV Outreach, Testing & Linkage

The lack of OTL that HHHRC provided in 2020 suggests that many SEP participants likely remain undiagnosed or untreated for HIV and HCV. This is a public health issue, and it is highly recommended that HHHRC invest additional time and energy into ramping up HIV and HCV OTL. This may require more staffing or more testing equipment.

Increase Staffing on Neighbor Islands

The high average numbers of syringes exchanged per visit on the neighboring islands suggest that SEP participants exchange in large quantities. This is likely due to scarcity of the availability of SEP because of lack of adequate staffing. It is encouraged that HHHRC continues to seek community partnerships on the neighbor islands and increase its internal SEP staffing on the neighbor islands.

Policy Recommendations

Retire Seroprevalence Survey Requirement

In the 2009 report entitled "Recommended Best Practices for Effective Syringe Exchange Programs in the United States," it is advised that SEP data collection be kept as minimal as possible for SEP to focus on serving its primary purpose – to reduce harm to PWID and the larger community.[23] The authors wrote: "Since the science on SEP effectiveness is well-established, excessive data collection is wasteful and inefficient" (p. 9).[23] Imposing extensive reporting requirements on SEPs will result in the expectation for considerable data collected from participants at SEPs, which, in turn, will create barriers to SEP participation among PWID because the threshold of services is necessarily raised.[23] It is strongly recommended that the Seroprevalence Survey requirement of the SEOC to HHHRC SEP be dismissed indefinitely.

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[23] New York City Department of Health and Mental Hygiene. (2009). (rep.). *Recommended Best Practices for Effective Syringe Exchange Programs in the United States*. New York City Department of Health and Mental Hygiene. Retrieved December 21, 2021, from http://www.santacruzhealth.org/Portals/7/Pdfs/SEP%20Recs%20-%20Consensus%20Meeting.pdf

Insurance Coverage for Harm Reduction & Street-Based Services

When signing up for their Participant ID Cards, 85% of SEP participants reported having health insurance. Some other states are adapting models of healthcare where harm reduction and street-based services are billable services, including syringe exchange.[24] For example, as of July 1, 2018, the New York State Department of Health established a model permitting New York State Medicaid to offer reimbursement for specific harm reduction services.[24] Under this model, New York Medicaid members who use or have used any drugs are permitted to harm reduction services at authorized SEPs, which will be reimbursed by both Medicaid Managed Care and Medicaid fee-for-service systems.[24] Insurance coverage considerations should also include reducing barriers to covered services. For example, although the 2019 SEP report found that 56% of participants were HCV antibody positive, MedQUEST requires prior authorizations of curative medications. Partnerships between harm reduction providers and healthcare providers are beneficial in engaging PWID in healthcare and prevention services and are highly recommended for consideration at a policy level in Hawai‘i.

Change from One-for-One Model to Distribution Model

Hawai‘i is one of only three out of fifty states – the other two being Delaware and Florida – in the nation that follows the one-for-one model of syringe exchange.[25] In the 2009 report entitled "Recommended Best Practices for Effective Syringe Exchange Programs in the United States," it is recommended not to impose limits on the number of syringes allowed to be exchanged.[23] The report explicitly states that the following are SEP practices to avoid:

- Supplying single-use syringes;
- Limiting the frequency of visits and number of syringes;
- Requiring one-for-one exchange;
- Imposing geographic limits;
- Restricting syringe volume with unnecessary maximums;
- Requiring identifying documents; and
- Requiring unnecessary data collection.[23]

Therefore, it is ***strongly encouraged*** that Hawai‘i changes the one-for-one SEP model to a needs-based distribution SEP model, which is currently considered best practice.

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[23] New York City Department of Health and Mental Hygiene. (2009). (rep.). *Recommended Best Practices for Effective Syringe Exchange Programs in the United States*. New York City Department of Health and Mental Hygiene. Retrieved December 21, 2021, from http://www.santacruzhealth.org/Portals/7/Pdfs/SEP%20Recs%20-%20Consensus%20Meeting.pdf

[24] New York State Department of Health. (n.d.). Medicaid Harm Reduction Services Benefit. Retrieved December 23, 2021, from https://www.health.ny.gov/diseases/aids/consumers/prevention/medicaid_harm_reduction.htm

[25] The Policy Surveillance Program. (n.d.). *Syringe Service Program laws*. Policy Surveillance Portal. Retrieved December 23, 2021, from https://lawatlas.org/datasets/syringe-services-programs-laws