

Highlights of Hawaii HIV/AIDS Epidemiology, 2017 and beyond

Trends, Progress, and 2021 Care Continuum

Prepared for:

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EXECUTIVE SUMMARY

The national Ending the HIV Epidemic initiative set the overarching goal to reduce new HIV infections in the United States by 90% by 2030. ¹ The following indicators are used to monitor progress in achieving the national goals: 1) to increase the percentage of people with diagnosed HIV who are linked to HIV medical care within one month of HIV diagnosis to at least 95% by 2025 and remain at 95% by 2030; and 2) to increase the percentage of persons with diagnosed HIV infection who are virally suppressed to at least 95% by 2025 and remain at 95% by 2030. ¹ To align with national goals, in 2021, Hawaii published its local plan: Hawaii to Zero which sets the following three bold objectives for 2030: zero new infections, zero deaths from HIV illness, and zero HIV related stigma. ²

This year, in lieu of a full integrated epidemiological profile, this report will highlight progress on selected HIV care indicators as well as the 2021 HIV care continuum at the state and county level. Below are highlights from the analysis with details in the following pages:

- 1. Percentages of viral suppression increased significantly from 73.3% in 2017 to 84.3% in 2021, much higher than the national average at 65.9% ³ and surpassing the national 2020 target of 80% ⁴, but still below the national 2030 goal of at least 95%.
- 2. Disparities were observed in viral suppression in 2021 with the following demographic groups not reaching 80%: transgender people (70.8%), Blacks/African Americans (71.7%), Native Hawaiian / Pacific Islanders (77.3%), persons aged 25-34 years (79.2%) and 35-44 years (77.0%), males with HIV due to injection drug use (72.0%), persons with HIV due to perinatal transmission (72.7%), and persons whose HIV risk factors were not reported or identified (77.3%).
- 3. **HIV diagnosis:** after the largest drop in 2020, the total number of HIV diagnoses bounced back to 73 in 2021 and further increased to 76 in 2022, higher than prepandemic levels (n=65 in 2019) and significantly above the 2030 target of zero cases annually.
- 4. **Percentages of linkage to care** varied from year to year, e.g., 74% in 2021 and 84.2% in 2022, below the national 2030 target of at least 95%.

¹ Centers for Disease Control and Prevention. Ending the HIV Epidemic. Accessed on December 15, 2023 and available at <u>https://www.cdc.gov/endhiv/ehe-progress/index.html</u>

² Hawaii to Zero: the Plan to End HIV in Hawaii. Accessed on December 19, 2023 and available at <u>https://health.hawaii.gov/harmreduction/files/2022/12/Hawaii-to-Zero-Plan-10.10.22.pdf</u>

³ Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2021. HIV Surveillance Supplemental Report 2023;28(4). Accessed on December 15, 2023 and available at <u>https://www.cdc.gov/hiv/library/reports/hiv-surveillance/vol-28-no-4/index.html</u>

⁴ Centers for Disease Control and Prevention. Division of HIV/AIDS Prevention strategic plan 2017-2020. Accessed on December 20, 2023, available at <u>http://www.cdc.gov/hiv/dhap/strategicplan/</u>.

The overall trend of HIV diagnosis

The total number of HIV diagnoses decreased from 82 in 2017 to 72 in 2018, equivalent to a 12.2% reduction. It then decreased to 65 in 2019, equivalent to a 9.7% reduction from 2018. In 2020, it had the largest drop, with the total number at 56. This is equivalent to a 13.8% decrease from 2019, larger than any previous annual decrease. In 2021, the total number bounced back to 73 and further increased to 76 in 2022, a long way to reach the 2030 goals of zero cases. The partial rebound in the number of HIV diagnoses post pandemic may be due to the identification and reporting of HIV diagnoses missed in 2020 because of disruptions in clinical care services and patient hesitancy in accessing clinical services during the height of the pandemic. ¹

Please be aware that only persons whose residence was in Hawaii at the time of HIV diagnosis were included in the count. Data for 2022 is preliminary because it is based on a 6-month reporting delay, instead of the minimum 12-month reporting delay. In addition, the total number of new diagnoses each year, in particular, most recent years, are subject to change due to reporting delays, ongoing national deduplication project, and ongoing data cleaning.



* 2017 serves as the baseline year.

** Due to COVID-19 pandemic, data for 2020 should be interpreted with caution.

*** Data for 2022 is preliminary because it is based on a 6-month reporting delay.

¹ Centers for Disease Control and Prevention. Diagnoses of HIV Infection in the United States and Dependent Areas, 2021. HIV Surveillance Report 2023; 34. Accessed on January 9th, 2024, available at <u>https://www.cdc.gov/hiv/library/reports/hiv-surveillance/vol-34/index.html</u>

Knowledge of HIV status

Knowledge of HIV status is estimated as percentages of persons with HIV who have received an HIV diagnosis. It is calculated by dividing the number of people living with diagnosed HIV over the estimated total number of people living with both diagnosed and undiagnosed HIV each year. CDC used a CD4 depletion model to estimate the distribution of delay from infection to diagnosis and then to produce national and jurisdiction-level estimates of persons living with diagnosed or undiagnosed infection among adults and adolescents, or persons aged ≥ 13 years.¹

At the national level, the estimated percentages of people living with HIV who have received an HIV diagnosis increased slowly but significantly from 86.0% in 2017 to 87.3% in 2021 (P<.001). For Hawaii, the percentage also increased, from 88.5% in 2017 to 89.1% in 2021 but was not statistically significantly (P=0.77). In 2021, the percentages for both the nation (87.1%) and Hawaii (89.1%) were below the national 2030 goal of at least 95%.²



Estimated percentage of people living with HIV who have received an HIV diagnosis*

* The national 2030 goal is to increase the percentage of HIV-positive individuals who are aware of their HIV status to at least 95%. ** 2017 serves as the baseline year.

*** Due to COVID-19 pandemic, data for 2020 should be interpreted with caution.

¹ Centers for Disease Control and Prevention. Estimated HIV incidence and prevalence in the United States 2017–2021. HIV Surveillance Supplemental Report 2023;28(3). Accessed on January 16, 2021 and available at https://www.cdc.gov/hiv/library/reports/hiv-surveillance/vol-28-no-3/index.html

² Centers for Disease Control and Prevention. Ending the HIV Epidemic. Accessed on December 15, 2023 and available at <u>https://www.cdc.gov/endhiv/ehe-progress/index.html</u>

Linkage to HIV medical care within one month of HIV diagnosis

Linkage to HIV medical care within one month of HIV diagnosis is defined as documentation of at least one CD4 test (count or percentage) or viral load test performed within one month after HIV diagnosis, including tests performed on the same date as the date of HIV diagnosis. ¹ Only data from persons \geq 13 years and residing in Hawaii at the time of HIV diagnosis were included in the analysis.

Percentages of persons linked to HIV medical care within one month of HIV diagnosis varied from year to year in Hawaii. In 2022, the percentage was 84.2%, below the national 2030 target of 95% or higher. Data for 2022 is preliminary because it is based on a 6-month reporting delay, instead of the minimum 12-month reporting delay. As a state with a relatively small number of new cases each year, a few persons not linked to care can easily skew the percentage downward. Nevertheless, efforts should continue to quickly engage newly diagnosed people into HIV medical care to keep them healthy, achieve viral suppression, and limit the spread of HIV. ²



Percentage of linkage to HIV medical care within one month of HIV diagnosis, Hawaii *

* Linkage to HIV medical care is defined as documentation of at least one CD4 or viral load test within one month of HIV diagnosis. The Hawaii to Zero goal is to increase the percentage of people linked to HIV medical care within one month of HIV diagnosis to at least 95% by 2030, which aligns with the national 2030 goal.

** 2017 serves as the baseline year.

**** Data for 2022 is preliminary because it is based on a 6-month reporting delay.

^{***} Due to COVID-19 pandemic, data for 2020 should be interpreted with caution.

¹ CDC. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2021. HIV Surveillance Supplemental Report 2023;28(4). Accessed on January 4 ,2024 and available at https://www.cdc.gov/hiv/library/reports/hiv-surveillance/vol-28-no-4/index.html

² Centers for Disease Control and Prevention. Ending the HIV Epidemic. Accessed on December 15, 2023 and available at <u>https://www.cdc.gov/endhiv/ehe-progress/index.html</u>

Viral suppression within 6 months of diagnosis

Viral suppression within 6 months of diagnosis is defined as a viral load result of < 200 copies/mL at any viral load test within 6 months of an HIV diagnosis. ¹ Only data from persons \geq 13 years and residing in Hawaii at the time of HIV diagnosis were included in the analysis.

Percentages of viral suppression ≤ 6 months of HIV diagnosis varied from year to year in Hawaii. In 2022, the percentage was 61.8%, lower than the national average of 69% in 2021¹ and well below the national 2030 target of 95%. ² Please be aware that data for 2022 is preliminary because it is based on a 6-month reporting delay, instead of the minimum 12-month reporting delay. As a state with a relatively small number of new cases each year, a few persons not achieving viral suppression within 6 months of HIV diagnosis can easily skew the percentage downward. Nevertheless, efforts should continue to be made to support people newly diagnosed with HIV to quickly initiate and be successful on HIV treatment. Achieving viral suppression rapidly maintains the individual's health and prevents transmission of HIV. ¹



Percentage of viral suppression ≤ 6 months of HIV diagnosis *

* Viral suppression ≤ 6 months of HIV diagnosis is defined as a viral load result of <200 copies/mL at any viral load test within 6 months of an HIV diagnosis. The Hawaii to Zero goal is to increase the percentage of people achieving a suppressed viral load ≤ 6 months of HIV diagnosis to at least 95% by 2030, which aligns with the national 2030 goal.

** 2017 serves as the baseline year.

*** Due to COVID-19 pandemic, data for 2020 should be interpreted with caution.

**** Data for 2022 is preliminary because it is based on a 6-month reporting delay.

¹ CDC. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2021. HIV Surveillance Supplemental Report 2023;28(4). Accessed on January 4 ,2024 and available at https://www.cdc.gov/hiv/library/reports/hiv-surveillance/vol-28-no-4/index.html

² Centers for Disease Control and Prevention. Ending the HIV Epidemic. Accessed on December 15, 2023 and available at <u>https://www.cdc.gov/endhiv/ehe-progress/index.html</u>

Overall viral suppression

Overall viral suppression in the population is expressed as the percentage of people who are virally suppressed (defined as a viral load result of < 200 copies/mL at the most recent viral load test in the year of measurement) among people who are at least 13 years old, with HIV infection diagnosed prior to the measurement year, and residing in Hawaii at the end of the measurement year. Increasing the percentage of people with diagnosed HIV infection who are virally suppressed to at least 95% by 2030 is a goal set by the nation ¹ and Hawaii to Zero. ²

Statewide, the percentage of viral suppression increased significantly from 73.3% in 2017 to 84.3% in 2021 (P<.001), much higher than the national average at 65.9% ³ but still a long way to reach the 2030 goal of 95% or higher. Although there is a slight decrease when comparing 2020 to 2019, the decrease is not statistically significant, and the trend continues to show improvement in this metric.



Percentage of viral suppression by year, Hawaii *

* Viral suppression is defined as a viral load result of < 200 copies/mL at the most recent viral load test in the year of measurment. The Hawaii to Zero goal is to **increase** the percentage of viral suppression to **at least 95%** by 2030, which aligns with the national 2030 goal. ** 2017 serves as the baseline year.

*** Due to COVID-19 pandemic, data for 2020 should be interpreted with caution.

² Hawaii to Zero: the Plan to End HIV in Hawaii. Accessed on December 19, 2023 and available at https://health.hawaii.gov/harmreduction/files/2022/12/Hawaii-to-Zero-Plan-10.10.22.pdf

¹ Centers for Disease Control and Prevention. Ending the HIV Epidemic. Accessed on December 15, 2023 and available at <u>https://www.cdc.gov/endhiv/ehe-progress/index.html</u>

³ Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2021. HIV Surveillance Supplemental Report 2023;28(4). Accessed on December 15, 2023 and available at https://www.cdc.gov/hiv/library/reports/hiv-surveillance/vol-28-no-4/index.html

Disparities in viral suppression

Statewide, Hawaii is doing very well in the overall viral suppression, with a percentage of 84.3% in 2021, much higher than the national average at $65.9\%^{-1}$ and surpassed the national 2020 goal of 80%.² Nevertheless, disparities were observed, with the following demographic groups not achieving the national 2020 goal of 80%: transgender people (70.8%), Blacks/African Americans (71.7%), Native Hawaii / Pacific Islanders (77.3%), persons aged 25-34 years (79.2%) and 35-44 years (77.0%), males with HIV due to injecting drug use (72.0%), persons with HIV due to perinatal transmission (72.7%), and persons whose HIV risk factors were not reported or identified (77.3%).



* Viral suppression is defined as a viral load result of < 200 copies/mL at the most recent viral load test in the year of measurement. It is based on persons who reside in Hawaii in the year measurement, who are ≤13 years old and with HIV diangosed prior to the year of measurement. The Hawaii to Zero goal is to **increase** the percentage of viral suppression to **at least 95%** by 2030, which aligns with the national 2030 goal. EHE: Ending the HIV Epidemic; NHAS: National HIV/AIDS Strategy. ** MSM: male-to-male sexual contact; IDU: injection drug use; Heterosexual contact: referring to heterosexual contact with a person known to have, or with a risk factor for, HIV infection; Other: referring to all other risk factors (e.g., blood transfusion, hemophilia) or risk factor not reported or not identified.

¹ Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2021. HIV Surveillance Supplemental Report 2023;28(4). Accessed on January 4 ,2024 and available at https://www.cdc.gov/hiv/library/reports/hiv-surveillance/vol-28-no-4/index.html

² Centers for Disease Control and Prevention. Division of HIV/AIDS Prevention strategic plan 2017-2020. Accessed on December 20, 2023, available at <u>http://www.cdc.gov/hiv/dhap/strategicplan/</u>.

Hawaii 2021 HIV Care Continuum, Statewide

HIV care continuum is a public health model which outlines the steps people living with HIV go through from diagnosis to achieving viral suppression. ¹ It presents data on 6 HIV care indicators based on three different populations as delineated in the following figure. Definitions for the 6 indicators and how each of those indicators is measured can be found in CDC's "Monitoring selected national HIV prevention and care objectives by using HIV surveillance data — United States and 6 dependent areas, 2021". ¹ Definitions for each indicator are also described in the footnotes to each of the HIV care continuum figures below. The data have been stratified by county to create an HIV care continuum for each county.



State of Hawaii 2021 HIV Care Continuum

* The first bar in blue, refers to the estimated number of persons living with HIV and the percentage of persons living with undiagosed or diagosed HIV. CDC estimated that in 2021 in Hawaii, the percentage of people living with undiagosed HIV infection was 10.9%, about 1 in 9, slightly below the national average at 13.2%. Based on this percentage, we estimated there were a total of 2,589 persons living with HIV in Hawaii in 2021, of whom 2,307 (89.1%) were living with diagnosed HIV and another 282 (10.9%) were living with undiagosed HIV.

** The second and third bars in orange refer to linkage to HIV medical care among persons newly diagnosed with HIV. Linkage to HIV medical care is defined as documentation of \geq 1 CD4 or viral load test results within 1 month or 3 months of HIV diagnosis. In 2021, a total of 73 persons were diagnosed with HIV infection in Hawaii, of whom 74.0% were linked to HIV medical care within one month and 80.8% within three months of HIV diagnosis.

*** The last three bars in green refer to receipt of HIV medical care, retention in HIV medical care and viral suppression among persons with HIV diangosed before 2021, aged 13 years or older before 2021 and resided in Hawaii at year-end 2021. Receipt of any HIV medical care is defined as documentation of \geq 1 CD4 or viral load test in the year of measurement. Retention of HIV medical care is defined as documentation of \geq 2 CD4 or viral load test in the year of measurement. Viral suppression is defined as the latest viral load test in the year of measurement. Viral suppression is defined as the latest viral load test in the year of measurement with a result of <200 copies/ml. In 2021, a total of 2,235 persons were included in Hawaii, of whom 91.8% received any HIV medical care, 63.8% were retained in HIV medical care, and 84.3% were virally suppressed.

¹ Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2021. HIV Surveillance Supplemental Report 2023;28(4). Accessed on January 4 ,2024 and available at https://www.cdc.gov/hiv/library/reports/hiv-surveillance/vol-28-no-4/index.html



Hawaii County 2021 HIV Care Continuum

* The first bar in blue, refers to the estimated number of persons living with HIV and the percentage of persons living with undiagnosed or diagosed HIV. CDC estimated that in 2021 in Hawaii, the percentage of people living with undiagnosed HIV infection was 10.9%, about 1 in 9, slightly below the national average at 13.2%. Based on this percentage, we estimated there were a total of 508 persons living with HIV in Hawaii County in 2021, of whom 453 (89.1%) were living with diagnosed HIV and 55 (10.9%) were living with undiagnosed HIV.

** The second and third bars in orange refer to linkage to HIV medical care among persons newly diagnosed with HIV. Linkage to HIV medical care is defined as documentation of \geq 1 CD4 or viral load test results within 1 month or 3 months of HIV diagnosis.³ In 2021, a total of 17 persons were diagnosed with HIV infection in Hawaii County, of whom 94.1% were linked to HIV medical care within one month and 94.1% within three months of HIV diagnosis.

*** The last three bars in green refer to receipt of HIV medical care, retention in HIV medical care and viral suppression among persons with HIV diangosed before 2021, aged 13 years or older before 2021 and resided in Hawaii County at year-end 2021. Receipt of any HIV medical care is defined as documentation of \geq 1 CD4 or viral load test in the year of measurement. Retention of HIV medical care is defined as documentation of \geq 2 CD4 or viral load tests performed at least 3 months apart in the year of measurement. Viral suppression is defined as the latest viral load test in the year of measurement with a result of <200 copies/ml. In 2021, a total of 437 persons were included in Hawaii County, of whom 92.9% received any HIV medical care, 58.6% were retained in HIV medical care, and 86.0% were virally suppressed.



Honolulu County 2021 HIV Care Continuum

* The first bar in blue, refers to the estimated number of persons living with HIV and the percentage of persons living with undiagosed or diangosed HIV. CDC estimated that in 2021 in Hawaii, the percentage of people living with undiagnosed HIV infection was 10.9%, about 1 in 9, slightly below the national average at 13.2%. Based on this percentage, we estimated there were a total of 1,640 persons living with HIV in Honolulu County in 2021, of whom 1,461 (89.1%) were living with diagnosed HIV and 179 (10.9%) were living with undiagnosed HIV.

** The second and third bars in orange refer to linkage to HIV medical care among persons newly diagnosed with HIV. Linkage to HIV medical care is defined as documentation of ≥ 1 CD4 or viral load test results within 1 month or 3 months of HIV diagnosis. In 2021, a total of 49 persons were diagnosed with HIV infection in Honolulu County, of whom 67.3% were linked to HIV medical care within one month and 73.5% within three months of HIV diagnosis.

*** The last three bars in green refer to receipt of HIV medical care, retention in HIV medical care and viral suppression among persons with HIV diangosed before 2021, aged 13 years or older before 2021 and resided in Honolulu County at year-end 2021. Receipt of any HIV medical care is defined as documentation of ≥ 1 CD4 or viral load test in the year of measurement. Retention of HIV medical care is defined as documentation of ≥ 2 CD4 or viral load tests performed at least 3 months apart in the year of measurement. Viral suppression is defined as the latest viral load test in the year of measurement with a result of <200 copies/ml. In 2021, a total of 1,413 persons were included in Honolulu County, of whom 91.7% received any HIV medical care, 67.9% were retained in HIV medical care, and 83.8% were virally suppressed.



* The first bar in blue, refers to the estimated number of persons living with HIV and the percentage of persons living with undiagosed or diangosed HIV. CDC estimated that in 2021 in Hawaii, the percentage of people living with undiagnosed HIV infection was 10.9%, about 1 in 9, slightly below the national average at 13.2%. Based on this percentage, we estimated there were a total of 90 persons living with HIV in Kauai County in 2021, of whom 80 (89.1%) were living with diagnosed HIV and 10 (10.9%) were living with undiagnosed HIV.

** The second and third bars present data on linkage to HIV medical care among persons newly diagnosed with HIV. Linkage to HIV medical care is defined as documentation of ≥ 1 CD4 or viral load test results within 1 month or 3 months of HIV diagnosis.³ In 2021, there was no person diagnosed with HIV infection in Kauai County. NA: not applicable.

*** The last three bars in green refer to receipt of HIV medical care, retention in HIV medical care and viral suppression among persons with HIV diangosed before 2021, aged 13 years or older before 2021 and resided in Kauai County at year-end 2021. Receipt of any HIV medical care is defined as documentation of \geq 1 CD4 or viral load test in the year of measurement. Retention of HIV medical care is defined as documentation of \geq 2 CD4 or viral load tests performed at least 3 months apart in the year of measurement. Viral suppression is defined as the latest viral load test in the year of measurement with a result of <200 copies/ml. In 2021, a total of 80 persons were included in Kauai County, of whom 90% received any HIV medical care, 51.3% were retained in HIV medical care, and 81.3% were virally suppressed.



Maui County 2021 HIV Care Continuum

* The first bar in blue, refers to the estimated number of persons living with HIV and the percentage of persons living with undiagnosed or diangosed HIV. CDC estimated that in 2021 in Hawaii, the percentage of people living with undiagnosed HIV infection was 10.9%, about 1 in 9, slightly below the national average at 13.2%. Based on this percentage, we estimated there were a total of 351 persons living with HIV in Maui County in 2021, of whom 313 (89.1%) were living with diagnosed HIV and 38 (10.9%) were living with undiagnosed HIV.

** The second and third bars in orange refer to linkage to HIV medical care among persons newly diagnosed with HIV. Linkage to HIV medical care is defined as documentation of ≥ 1 CD4 or viral load test results within 1 month or 3 months of HIV diagnosis. In 2021, a total of 7 persons were diagnosed with HIV infection in Maui County, of whom 71.4% were linked to HIV medical care within one month and 100% within three months of HIV diagnosis.

*** The last three bars in green refer to receipt of HIV medical care, retention in HIV medical care and viral suppression among persons with HIV diangosed before 2021, aged 13 years or older before 2021 and resided in Maui County at year-end 2021. Receipt of any HIV medical care is defined as documentation of \geq 1 CD4 or viral load test in the year of measurement. Retention of HIV medical care is defined as documentation of \geq 2 CD4 or viral load tests performed at least 3 months apart in the year of measurement. Viral suppression is defined as the latest viral load test in the year of measurement with a result of <200 copies/ml. In 2021, a total of 305 persons were included in Maui County, of whom 90.8% received any HIV medical care, 55.1% were retained in HIV medical care, and 84.6% were virally suppressed.