# The County's Role in Providing an HIV Care Continuum

# Introduction

Counties are at the forefront of public health and wellness, providing a wide spectrum of essential services to their residents and often working hand-in-hand with federal, state, and community partners.<sup>1</sup> Counties promote public health through 1,943 local health departments and serve as a crucial safety net for economically and socially disadvantaged residents. One of the essential services that many county health departments offer is the provision of critical resources for the prevention and treatment of HIV infection. This publication explores the county's role in supporting the HIV continuum of care, from the initial diagnosis of HIV infection and linkage to HIV medical care to the continued connection to care over the long term. It also includes data from a recent survey conducted by the National Association of Counties (NACo) about county HIV services, as well as real-world perspectives and observations from county health officials.

# **HIV in the United States**

In the United States (US), approximately 1.2 million people are living with HIV, including an estimated 156,000 people who are unaware of their HIV status.<sup>2</sup> Approximately 35,000 new HIV infections occur every year in the US, and nearly 40% of new HIV infections are transmitted by people who do not know that they have the virus.<sup>2,3</sup>

HIV infection has affected some populations more than others (Figure 1). Although gay, bisexual, and other men who have sex with men (MSM) continue to have the highest risk of HIV infection in the US, accounting for nearly 70% of all new infections, heterosexual people



FIGURE 1. HIV Incidence by Transmission Category

Derived from US Department of Health and Human Services. U.S. statistics. Fast facts. www.hiv.gov/hiv-basics/overview/data-and-trends/ statistics. Updated June 2, 2021. Accessed October 5, 2021.

represent 23% of all new HIV diagnoses, and people who inject drugs (PWID) account for 7% of new HIV infections.<sup>2</sup> Annually, the highest rate of HIV infections is among Black/African American individuals, who account for 41% of new infections, followed by Hispanic/Latino individuals, who account for 29%, and White individuals, who account for 25% (Figure 2).<sup>4</sup>





Adapted from Centers for Disease Control and Prevention. Estimated HIV incidence and prevalence in the United States, 2015–2019. *HIV Surveillance Supplemental Report* 2021;26(No. 1). www.cdc.gov/hiv/library/reports/hiv-surveillance.html. Published May 2021. Accessed November 3, 2021.

Additionally, rates of HIV infection are not evenly distributed throughout the US (Figure 3).<sup>2,5</sup> More than one-half of new HIV diagnoses occur in just 48 of the more than 3,000 counties in the US, Washington, DC, and San Juan, Puerto Rico (county data on HIV rates and cases are available at https://map.aidsvu.org/map).<sup>2</sup> Regionally, the highest rates are in the South, followed by the Northeast, West, and Midwest.<sup>2</sup> A federal initiative named Ending the HIV Epidemic (EHE) is currently focusing on regions in the US where HIV transmission is most common, providing 57 geographic areas (including the 48 counties described above) with additional expertise, technology, and other resources to develop and implement local EHE plans.<sup>6</sup> The EHE aims to reduce the number of new HIV infections in the US by 75% by 2025 and at least 90% by 2030.<sup>6</sup> Notably, in 2021, the Health Resources and Services Administration (HRSA) awarded \$99 million to the EHE through the Ryan White HIV/ AIDS Program to expand access to HIV care, treatment, medication, and support services.<sup>7</sup>

FIGURE 3. Rates of Persons Living With HIV in the US, 2018



Reprinted from AIDSVu. Local data: United States. https://aidsvu.org/ local-data/united-states. Updated 2018. Accessed October 5, 2021.

Fortunately, due to major advancements in antiretroviral therapy (ART), HIV has become a treatable chronic disease.<sup>8</sup> Starting treatment at diagnosis with medications that combat HIV and consistently taking these medications can allow many people living with HIV to lead long, healthy lives and prevent HIV transmission.<sup>9</sup>

# The HIV Continuum of Care

The HIV continuum of care refers to the important steps in patient engagement with HIV care.<sup>10</sup> The Centers for Disease Control and Prevention (CDC) tracks the following steps in the HIV continuum of care<sup>11</sup>:

- Diagnosis
- Linkage to care
- Receipt of/retention in care
- Viral suppression

#### HIV Treatment as Prevention: "Undetectable = Untransmittable"

ART can suppress HIV to very low levels in a person's blood. Studies have overwhelmingly proven that people with HIV who take ART as prescribed can maintain an undetectable level of the virus that cannot be sexually transmitted to others, even though the virus is still present in the person's body.<sup>12</sup> This concept is known as "Undetectable = Untransmittable," or "U = U."<sup>12</sup> In laboratory testing, an "undetectable" level is defined as fewer than 200 copies of the virus per milliliter of a person's blood (this is also known as "viral suppression").<sup>13</sup>

Most people living with HIV who start taking ART daily as prescribed achieve an undetectable level of HIV by approximately 6 months after beginning treatment.<sup>13</sup> Once laboratory testing has confirmed that a person has consistently sustained an undetectable level of virus, they cannot sexually transmit HIV to their HIV-negative partner(s), even if they have unprotected sex.<sup>13</sup>

U = U has been transformative for many people living with HIV.<sup>14</sup> People report that they feel more in control of their health, are motivated to keep taking their HIV medications, and are less fearful that they will transmit HIV to their partners. They also report less stigma about their HIV status.<sup>14</sup> Researchers have identified several important gaps in the HIV continuum of care that result in higher rates of HIV transmission and worse outcomes for people living with HIV<sup>15</sup>:

- 14% of people living with HIV are unaware that they are infected with the virus
- Another 23% of people living with HIV are aware that they are infected but are not receiving any HIV-specific care
- Approximately 11% of people living with HIV are receiving HIV care but have not achieved viral suppression

Considered together, these gaps show that nearly 50% of people living with HIV are not achieving and consistently maintaining viral suppression (Figure 4).<sup>15</sup> Ensuring that people have access to the HIV care continuum improves their health and prevents the transmission of HIV to others.<sup>10</sup>

FIGURE 4. Gaps in the HIV Care Continuum



Adapted from Li Z, Purcell DW, Sansom SL, Hayes D, Hall HI. Vital signs: HIV transmission along the continuum of care—United States, 2016. *MMWR Morb Mortal Wkly Rep.* 2019;68(11):267-272.

#### **Proven Strategies for Preventing HIV Infection**

- Pre-exposure prophylaxis (PrEP) is medications that people with an increased risk of HIV can take to prevent getting HIV from sexual activity or injection drug use; when taken as prescribed, PrEP reduces the risk of getting HIV from sex by about 99% and by at least 74% from injection drug use<sup>16</sup>
- Condom distribution programs are a public health strategy that helps to increase the availability, accessibility, and acceptability of condoms in an effort to prevent the spread of HIV and other sexually transmitted infections (STIs)<sup>17</sup>
- Needle and syringe exchange programs provide access to sterile syringes and injection equipment and often also offer HIV testing, linkage to medical care, and substance use treatment; syringe services programs have been shown to reduce HIV infection and other blood-borne infections such as hepatitis C virus (HCV) by an estimated 50%<sup>18</sup>

# The County's Role

In August 2021, NACo conducted a survey of 54 health officials from 58 counties across the US about the HIV services they provide. The majority of survey respondents were county health department officials or county healthcare providers who work in HIV testing or treatment services. Key findings of the 2021 NACo survey include:

- Most counties surveyed provide HIV testing (87%), and 39% offer at-home testing
- Nearly all counties surveyed provide prevention services, including:
  - Community outreach and education about HIV (87%)
  - Condom provision programs (84%)
  - Multimedia prevention and education strategies (67%)
  - PrEP or referrals to healthcare providers who prescribe PrEP (56%)
  - Needle exchange programs (47%)
- More than one-half (56%) of counties surveyed provide HIV treatment, including:
  - Access to free or affordable ART (76% of those that provide HIV treatment)
  - Access to case workers for people living with HIV (72% of those that provide HIV treatment)
  - Telehealth visits (56% of those that provide HIV treatment)
- Stigma regarding HIV testing and treatment from patients and primary care providers remains one of the largest barriers to residents accessing testing or treatment services

Counties also reported successful approaches to testing and treatment for HIV, including:

- Offering walk-in visits (however, during the COVID-19 pandemic, most county health services were limited to appointment-only visits)
- Providing low-cost or free HIV testing to anyone wanting a test and ensuring confidentiality and privacy
- Using rapid-result HIV tests (ie, results are available at same visit) and at-home testing kits
- Establishing mobile testing services and drivethrough testing sites

- Offering HIV testing at needle/syringe exchange sites
- Ensuring same-day linkage to HIV care and treatment after a positive HIV test result
- Having dedicated staff to support and follow up with newly diagnosed patients
- Increasing use of telehealth services
- Facilitating patient access to food pantries and transportation services



"Harris County Public Health (HCPH) has found success in partnering with Sunday Funday, an event in the heart of Montrose District (local LGBTQ community). HCPH has brought its Medical Mobile Unit to the event and provides free testing and conducts outreach regarding prevention through community health workers and printed materials. This provides convenient testing where our target population gathers."

> - Barbie Robinson, MPP, JD, CHC, Harris County Public Health in Texas

#### **Real-World Perspective**

"The Test and Treat/Rapid Access (TTRA) program is one of our best success stories. The TTRA protocol uses a warm hand-off, VIP approach to provide a medical visit, appropriate laboratory tests, and a filled prescription for ART medication(s) the same day a person tests positive for HIV or is reconnected to care after a treatment absence. An initial mental health visit is included in the TTRA process to facilitate the assessment and diagnosis of any mental health issues that might prevent a client from adhering to their ART treatment regimen. This protocol also offers immediate connection to a medical case manager for the purpose of coordinating ongoing care."

> - Kira Villamizar BS, MPH, Florida Department of Health in Miami-Dade County

# **Funding for HIV Services**

Medicare is the largest federal funder of HIV care and treatment, followed by Medicaid.<sup>19</sup> In addition, the HRSA's Ryan White HIV/AIDS Program provides a comprehensive system of HIV primary medical care, essential support services, and medications for low-income people with HIV.<sup>20</sup> The program funds grants to states, counties, cities, and local community–based organizations to provide care and treatment services to people with HIV to improve health outcomes and reduce HIV transmission among hard-to-reach populations. More than one-half of people diagnosed with HIV in the US receive services through the Ryan White HIV/AIDS Program each year, which amounts to more than 500,000 people.<sup>20</sup>

NACo survey respondents identified the following areas of HIV services that need additional funding:

- Approximately 42% said HIV prevention, particularly for PrEP and educational outreach
- 33% said HIV testing, specifically to improve testing access by supplying more at-home testing and expanding testing sites
- 30% said HIV treatment, especially for people with HIV who are uninsured or underinsured
- Several mentioned needing to increase the number of healthcare providers and staff who offer HIV treatment

# Effects of the COVID-19 Pandemic on HIV Prevention, Testing, and Treatment

The stay-at-home orders and social distancing recommendations related to the COVID-19 pandemic caused major disruptions to most aspects of HIV prevention, testing, and treatment.<sup>21</sup> Record-breaking unemployment, loss of health insurance, and food insecurity also likely contributed to reduced access to HIV testing and treatment.<sup>21</sup> One large commercial laboratory reported that 45% fewer HIV screening tests were administered in the US from March 2020 to September 2020, compared with the number of tests administered during the same months in 2019.<sup>22</sup> Likewise, prescriptions for PrEP fell substantially, and access to ART was limited by disruptions to HIV care.<sup>23,24</sup> For example, in one urban HIV clinic, the percentage of people with HIV who were virally suppressed (ie, taking ART as prescribed) fell by 30% during shelter-in-place orders.25

To ensure ongoing access to HIV testing and treatment services during the COVID-19 pandemic, many NACo survey respondents reported that their counties expanded telehealth and mobile linkage services.



 Nafissa Cisse Egbuonye, PhD, MPH, Black Hawk County Public Health in Iowa

# Conclusion

Counties—especially county health departments—play a key role in working sideby-side with federal, state, and local partners to tackle the HIV epidemic and support a robust HIV care continuum. As demonstrated by the findings from the NACo survey, many counties offer crucial HIV prevention, testing, and treatment services. Although the COVID-19 pandemic had negative effects on HIV services, counties made important efforts to maintain the HIV care continuum. County leaders are in a unique position to be aware of and help meet the multifaceted needs and challenges facing residents who have an increased risk of HIV or are living with HIV infection.

# References

- National Association of Counties. Counties Matter. www.naco.org/counties. February 2019. Accessed October 5, 2021.
- 2. US Department of Health and Human Services. U.S. statistics. Fast facts. www.hiv.gov/hiv-basics/overview/ data-and-trends/statistics. Updated June 2, 2021. Accessed October 5, 2021.
- Centers for Disease Control and Prevention. HIV testing. www.cdc.gov/hiv/testing/index.html. Updated June 9, 2020. Accessed October 5, 2021.
- Centers for Disease Control and Prevention. Estimated HIV incidence and prevalence in the United States, 2015–2019. *HIV Surveillance Supplemental Report* 2021;26(No. 1). www.cdc.gov/hiv/library/reports/ hiv-surveillance.html. Published May 2021. Accessed November 3, 2021.
- AIDSVu. Local data: United States. https://aidsvu.org/ local-data/united-states/. Updated 2018. Accessed October 5, 2021
- 6. US Department of Health and Human Services. What is *Ending the HIV Epidemic in the U.S.*? www.hiv.gov/ federal-response/ending-the-hiv-epidemic/overview. Updated June 2, 2021. Accessed October 5, 2021.
- US Department of Health and Human Services. HRSA Awards \$99 Million to End the HIV Epidemic in the United States. www.hrsa.gov/about/news/pressreleases/hrsa-awards-99-million-to-end-hiv-epidemic. March 4, 2021. Accessed November 3, 2021.
- 8. US Department of Veterans Affairs. Delivering HIV test results. www.hiv.va.gov/products/HIV-test-results.asp. January 2021. Accessed September 21, 2021.
- 9. Centers for Disease Control and Prevention. *Starting the Conversation: HIV Treatment & Care.* www.cdc.gov/ stophivtogether/library/topics/treatment/brochures/cdchiv-lsht-treatment-brochure-transmission-preventionprovider.pdf. Accessed October 5, 2021.
- US Department of Health and Human Services. HIV care. What is the HIV care continuum? www.hiv. gov/federal-response/policies-issues/hiv-aids-carecontinuum. Updated June 21, 2021. Accessed October 5, 2021.
- Centers for Disease Control and Prevention. Understanding the HIV Care Continuum. www.cdc.gov/ hiv/pdf/library/factsheets/cdc-hiv-care-continuum.pdf. July 2019. Accessed November 17, 2021.
- National Institute of Allergy and Infectious Diseases. HIV undetectable = untransmittable (U=U), or treatment as prevention. www.niaid.nih.gov/diseases-conditions/ treatment-prevention. Updated May 21, 2019. Accessed October 5, 2021.
- US Department of Health and Human Services. Panel on Antiretroviral Guidelines for Adults and Adolescents. Guidelines for the use of antiretroviral agents in adults and adolescents with HIV. https://clinicalinfo. hiv.gov/sites/default/files/guidelines/documents/ AdultandAdolescentGL.pdf. Updated December 18, 2019. Accessed September 21, 2021.

- Lawle ss F, Chanthala V, Santiago J, et al. Stigma reduction through U=U campaign. Presented at: 2020 National Ryan White Conference on HIV Care & Treatment; August 11-14, 2020; Virtual.
- Li Z, Purcell DW, Sansom SL, Hayes D, Hall HI. Vital signs: HIV transmission along the continuum of care— United States, 2016. *MMWR Morb Mortal Wkly Rep.* 2019;68(11):267-272.
- 16. Centers for Disease Control and Prevention. Preexposure prophylaxis (PrEP). www.cdc.gov/hiv/risk/ prep/index.html. Updated August 6, 2021. Accessed October 5, 2021.
- Centers for Disease Control and Prevention. Condom distribution as a structural level intervention. www.cdc. gov/hiv/programresources/guidance/condoms/index. html. Updated October 31, 2019. Accessed November 17, 2021.
- Centers for Disease Control and Prevention. Syringe services programs (SSPs) fact sheet. www.cdc.gov/ssp/ syringe-services-programs-factsheet.html. Updated May 23, 2019. Accessed November 17, 2021.
- Kaiser Family Foundation. U.S. federal funding for HIV/AIDS: trends over time. www.kff.org/hivaids/factsheet/u-s-federal-funding-for-hivaids-trends-over-time. Published March 5, 2019. Accessed November 15, 2021.
- 20.US Department of Health and Human Services. About the Ryan White HIV/AIDS Program. https://hab.hrsa.gov/ about-ryan-white-hivaids-program/about-ryan-whitehivaids-program. Updated December 2020. Accessed November 15, 2021.
- Ridgway JP, Schmitt J, Friedman E, et al. HIV care continuum and COVID-19 outcomes among people living with HIV during the COVID-19 pandemic, Chicago, IL. *AIDS Behav.* 2020;24(10):2770-2772.
- 22. Delaney KP, Jayanthi P, Emerson B, et al. Impact of COVID-19 on commercial laboratory testing for HIV in the United States. Presented at: Conference on Retroviruses and Opportunistic Infections; March 6-10, 2021; Virtual.
- 23. Huang YA, Zhu W, Kourtis A, Hall I, Hoover KW. Impact of COVID-19 on PReP prescriptions in the United States: a time series analysis. Presented at: Conference on Retroviruses and Opportunistic Infections; March 6-10, 2021; Virtual.
- 24. Mitchell KM, Dimitrov D, Silhol R, et al. The potential effect of COVID-19-related disruptions on HIV incidence and HIV-related mortality among men who have sex with men in the USA: a modelling study. *Lancet HIV*. 2021;8(4):e206-e215.
- 25. Spinelli MA, Hickey MD, Glidden DV, et al. Viral suppression rates in a safety-net HIV clinic in San Francisco destabilized during COVID-19. *AIDS*. 2020;34(15):2328-2331.

#### APPENDIX. Counties Represented in the NACo Survey Responses

## Alabama

Jefferson

#### Florida

Hillsborough (3 respondents) Miami-Dade Volusia

#### Idaho

Eastern Idaho Public Health Nez Perce

#### lowa

Black Hawk Crawford Mills Polk

#### Kansas Crawford Douglas

Ness

Kentucky Bell

# Maryland

Baltimore Baltimore City Dorchester Frederick (2 respondents) Garrett

Harford

Howard

Somerset

Talbot Wicomico

Montgomery

# Minnesota

Ramsey (2 respondents) Saint Paul-Ramsey

#### Missouri

Henry Reynolds Scotland Vernon

#### Nebraska

Polk Southwest Nebraska (9 counties)

## New Jersey

Camden

New York Montgomery Yates

#### North Carolina Alamance

Montgomery

#### North Dakota Barnes Burleigh Ramsey

Oregon

#### Clatsop Coos Lincoln Multnomah Washington

Vermont Bennington Lamoille

#### Wisconsin Milwaukee (city)

Wyoming Albany

Developed by Med-IQ in collaboration with the National Association of Counties. Supported by an educational grant from Gilead Sciences, Inc. Copyrighted