



*Imagine*  
Ending HIV.  
It's Possible.

## Routinizing HIV Testing and Linkage to Care in Kentucky

### The Challenge: Normalizing HIV Screening in Kentucky

The federal, multi-agency Ending the HIV Epidemic in the U.S. (EHE) initiative, which began in 2020, is an ongoing effort to decrease the number of new HIV infections in the United States by 90% by 2030. As a project of Cicatelli Associates, Inc. (CAI), the Technical Assistance Provider-innovation network (TAP-in) is funded by the Health Resources and Services Administration's (HRSA) HIV/AIDS Bureau (HAB) to provide technical assistance (TA) to the 47 HRSA-funded EHE jurisdictions to help them achieve this goal.<sup>1</sup> With a mission to use the transformative power of education and research to foster a more aware, healthy, compassionate, and equitable world, CAI is a diverse 501(c)3 nonprofit organization dedicated to improving the quality of health care and social services delivered to marginalized and underserved populations.

EHE jurisdictions located in the South bear the most significant HIV burden, accounting for nearly half of all new HIV infections in 2022,<sup>2</sup> despite representing just 38% of the U.S. population.<sup>3</sup> Most of these new cases

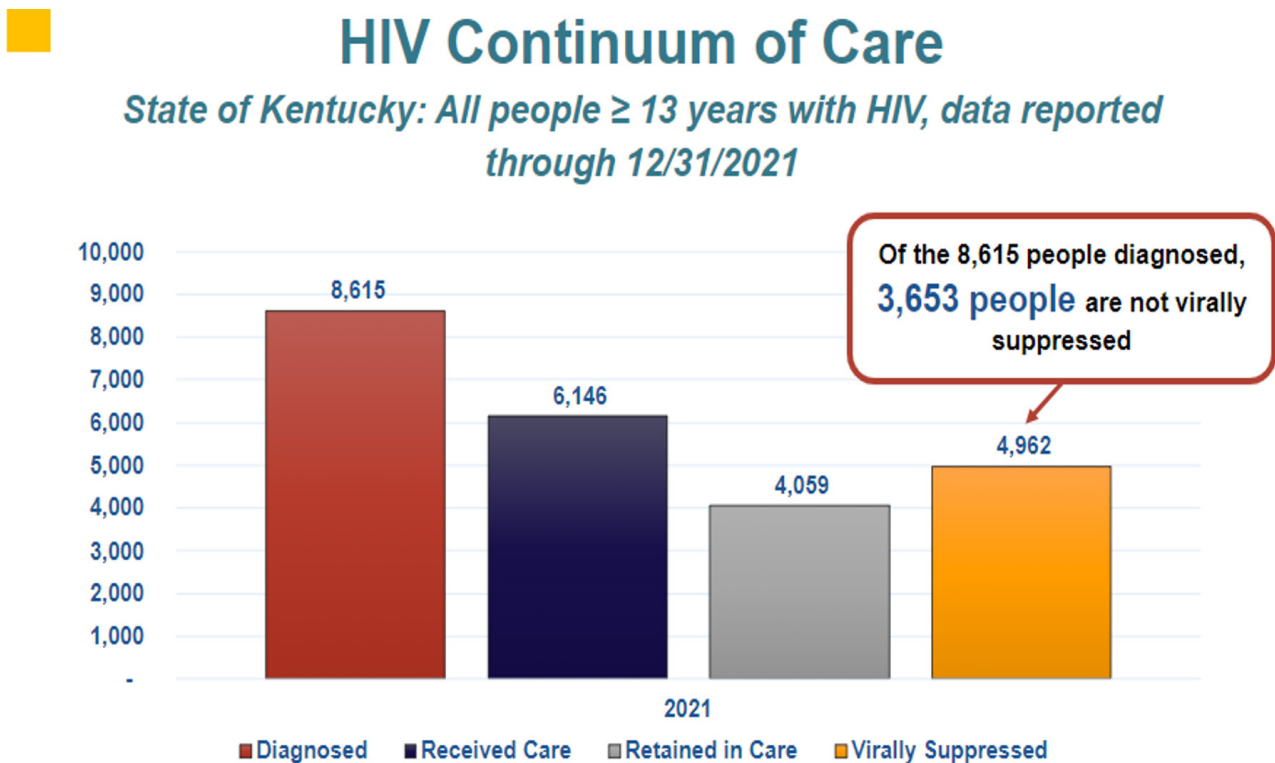
occur in gay, bisexual, and other men who have sex with men (GBMSM). In Kentucky, for example, 67% of the state's cumulative HIV cases are GBMSM – a population that often requires additional interventions, including education and targeted outreach such as media campaigns, and support to address their prevention and treatment needs. GBMSM in Kentucky face intersecting social factors that create significant barriers to HIV services, including poverty, lack of access to transportation, shortages of providers trained in HIV care, and stigma.<sup>3</sup> Persons with HIV (PWH) are often diagnosed at later stages of HIV when experiencing adverse social determinants of health. The impact can be seen in the jurisdiction's HIV continuum of care (Figure 1).<sup>4,5</sup> Of the 8,615 individuals diagnosed with HIV living in Kentucky at the end of 2021, 29% were not engaged in HIV care, 53% were not retained in care, and 42% were not virally suppressed – meaning their viral load was high enough to impact their health and potentially transmit HIV to others.<sup>5</sup>



The Kentucky Department for Public Health (KDPH) worked with CAI’s TAP-in project, including TAP-in partner UCLA and the Kentucky Primary Care Association (KPCA), to develop an EHE strategic plan to improve HIV testing and service delivery and uptake in Kentucky. The approach integrated routine opt-out HIV testing (ROOT), a cost-effective, evidence-based approach to normalize HIV testing and enhanced linkage to care for PWH. When setting their own goal for the program, the team considered the national

standards and recommendations for HIV testing from the [Centers for Disease Control and Prevention \(CDC\)](#), the [U.S. Preventive Services Task Force](#), and those promulgated by HRSA’s Bureau of Primary Health Care within reporting requirements of the [Health Center Program Uniform Data System \(UDS\)](#). Kentucky’s goal for ROOT is to have at least one documented HIV test for all persons ages 18-65 years (and more frequent testing for those at increased risk) and to rapidly link people testing positive to care.

Figure 1: Kentucky HIV Continuum of Care



## Methods: Implementing ROOT and Linkage to Care

KDPH used a phased approach (Figure 2) to roll out ROOT and enhanced linkage to care at federally qualified health centers (FQHCs).<sup>6</sup> These safety net providers serve urban and rural areas, offering clients access to health services and coordinated wraparound and specialty care, regardless of their insurance status or ability to pay. The program was piloted starting in January 2023 at **Grace Health**, a faith-based FQHC with 13 rural clinic locations in Appalachia in Eastern Kentucky, before being rolled out at **Community Medical** (3 rural locations in Western Kentucky), **Park DuValle Community Health Center** (5 urban locations in the Louisville area), **Kentucky Mountain Health Alliance** (3 clinic locations in Appalachia), and **Health First Community Health Center** (8 rural locations in Western Kentucky). While the levels of implementation among clinic sites vary, the FQHCs are working toward implementing ROOT across all their clinics.

The initial phase, at Grace Health, involved engaging FQHC leadership in the design and implementation of ROOT and enhanced linkage to care. TAP-in provided adaptable communications and resources to help participating FQHCs inform staff and partners about ROOT and enhanced linkage to care, encouraging buy-in, setting expectations, and building motivation. They also solicited clinical and administrative staff input on the FQHC's current HIV testing and linkage-to-care policies to identify bottlenecks, inefficiencies, and gaps in the referral and follow-up systems. The feedback informed the second phase, during which leadership and staff designed ROOT and enhanced linkage to care guidelines that reflected the needs of their community, creating a "warm hand-off" approach for persons diagnosed with HIV to clinical and support services provided by the FQHC itself as well as their community partners and the Ryan White Clinic in their area.

Implementation involved updates to FQHCs' infrastructure, from in-service ROOT training for medical and administrative staff and identification of in-house champions to conduct ROOT for clients, to creating workflows to enhance ROOT uptake, and establishing financial incentives for providers to encourage increased HIV screening among clients. In one example, the FQHC established an internal program where providers who regularly met certain quality metrics, e.g., HIV and multiple other health

screenings for their patients, were incentivized.

In collaboration with the Kentucky jurisdiction, TAP-in conducted one-hour virtual provider education meetings tailored to each clinic. As part of the invitation sent before these in-service trainings, TAP-in supported each clinic in developing and sending an email or letter, usually from the Chief Medical Officer to all staff about the project and its importance. Some in-services coincided with National HIV Testing Day. Typically, the trainings included a brief overview of EHE, a definition of ROOT tied to the national standards, and the rationale for ROOT and linkage activities grounded in their critical role in ending the HIV epidemic. Client cases were used to engage participants in a discussion about challenges and solutions to enhancing screening and linkage to care. KDPH always concluded each in-service with an explanation of the Ryan White providers in the area, key contacts, and the steps to connect with a linkage navigator. As one provider shared after attending two annual in-services, "After this training last year, we incorporated routine testing into all of our 15+ well-child visit encounter plans. This training has been pivotal in updating my practice and taking better care of my patients."

The final phase of implementation focused on ensuring the sustainability of ROOT and enhanced linkage to care through iterative upgrades to infrastructure, resources, and support, including:

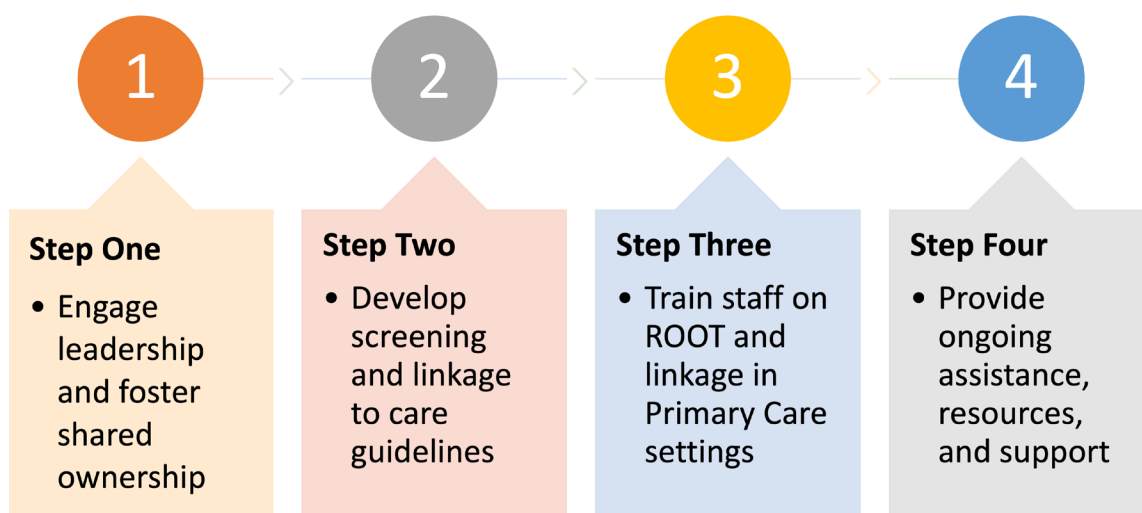
- Data monitoring for FQHCs that do not have the capacity in-house to identify and address gaps and celebrate successes in increased testing,
- Scripts to help primary care providers engage clients in routine HIV screening, and
- Resources, like fact sheets, to help staff with billing and coding and inform clients about ROOT.

**"ROOT opened the door to providing [clients] PrEP [pre-exposure prophylaxis] and other options that otherwise might have been missed opportunities."**

~ Grace Health Physician



**Figure 2: Implementation Phases of ROOT and Linkage to Care**



In line with the HRSA Health Center Program National Quality Leader badge for HIV prevention and care, the goal was to increase HIV testing at participating FQHCs by 10% during the first 6 months among clients ages 18-65. To track their progress, KDPH collected data on the number and proportion of FQHC clients

ages 18-65 with a clinical appointment who received an HIV test, and the number of clients who tested positive for HIV linked to care within 30 days. Additional qualitative data about FQHC's community outreach and provider education efforts were also collected.

## Findings

The implementation of ROOT and enhanced linkage to care has been a resounding success (Table 1). Notable findings include the following:

- Grace Health increased HIV testing by 51% and re-engaged one person with HIV into HIV services.
- Community Medical leadership championed ROOT's implementation across their clinics, supporting EHE staff in developing low-burden workflows and increasing HIV testing by 68.2%.
- Park DuValle's pharmacy-led HIV team streamlined its HIV testing and linkage to care procedures.
- Park DuValle identified eight newly diagnosed individuals and engaged them in HIV care.
- Kentucky Mountain Health Alliance incorporated ROOT and linkage to care into their new health system, increasing HIV testing by nearly 11%.<sup>5</sup>



**Figure 2: Implementation Phases of ROOT and Linkage to Care**

Measure	Percentage Increase in HIV Screening for People 18-65	Total Tests Administered	Persons with HIV Identified & Engaged in Care
Grace Health	47.2% (2023) 51.4% (through June 2024)	<ul style="list-style-type: none"> <li>10,486 (2023)</li> <li>8,410 (through June 2024)</li> </ul>	1 (2023) 0 (through June 2024)
Community Medical	68.25% (through May 2024)	63 (May-Dec 2023) 106 (Jan - May 2024)	0 (through May 2024)
Park DuValle	7% (through May 2024)	2,280 (Jan 2023 - May 2024)	8 (through May 2024)
Kentucky Mountain Health Alliance	10.67%	424 (through June 2024)	0 (through June 2024)

## Successes and Challenges

The program effectively ramped up Kentucky's EHE activities, evidenced by a 213% jump in EHE spending from Year 3 to Year 4. All participating FQHCs successfully elicited buy-in from their leadership. Several of them also incorporated ROOT and enhanced linkage to care across multiple programs, such as mobile clinics, and are seeking to establish HIV clinical care in-house. Several participating FQHCs expanded their reach and encouraged replication of their efforts through partnerships with other local FQHCs, health departments, and community-based organizations (CBOs). ROOT's educational component has also helped increase HIV knowledge in communities, which plays a significant role in reducing stigma and increasing engagement in HIV services, including treatment and care, as well as pre-exposure prophylaxis (PrEP) and other HIV prevention methods. Referrals to PrEP are being offered to HIV-negative individuals from populations

with higher HIV incidence. Park DuValle created a pharmacist-led PrEP program. KDPH and TAP-in staff were invited to share their experiences with this approach at the 2024 National Ryan White Conference and the Kentucky Public Health Association's 2024 Annual Conference.

Despite these successes, FQHC sites reported several challenges to launching ROOT and enhanced linkage to care. These included concerns from clinical and administrative staff about managing potentially increased workloads or clients receiving bills for the screening. Some clients also initially pushed back against ROOT due to the lack of knowledge and stigma around HIV and HIV services. To address the challenges, FQHCs leveraged frequent staff trainings and communication and developed tailored educational materials and messaging for clients.

***“When I explain that healthcare is harm reduction, whether you’re taking blood pressure medicine or getting tested for HIV, it puts a different lens on [ROOT] for other people.”***

~ Director of HIV Prevention and Education,  
Park DuValle Community Health Center



## Implications and Next Steps

The success of ROOT and enhanced linkage to care in Kentucky demonstrated that FQHCs are receptive to incorporating HIV testing into their standards of care. The approach helps mitigate community stigma around HIV, a major barrier to HIV testing and engagement (or re-engagement) in HIV services. The program also highlighted the importance of training for all staff to implement the program, address biases around HIV, and address the state's HIV workforce shortage, which previously had curtailed HIV service delivery. Together, these efforts help advance EHE, coordinating and expediting engagement of PWH into treatment and

care following diagnosis, and encouraging uptake of HIV prevention methods, notably PrEP, among persons from high-incidence populations who test negative for HIV. The next steps include the expansion of community outreach and HIV education efforts to further reduce stigma and its intersections with homophobia and racism. Based on the success of these new partnerships, KDPH would like to explore supporting interested FQHCs to become Ryan White-funded HIV care providers. They will continue to expand the implementation of ROOT and linkage to care protocols across Kentucky's FQHCs.

***“Our FQHCs developed a monthly meeting where the staff could come together and share their ideas. ROOT and linkage to care have always been at the forefront of the conversation.”***

~ KDPH HRSA EHE Grant Administrator





This project and product were supported by Grant #U69HA33964 from the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of HRSA.

---

<sup>1</sup> HIV.gov. (2023, December 4). EHE Overview. <https://www.hiv.gov/federal-response/ending-the-hiv-epidemic/overview>

<sup>2</sup> Centers for Disease Control and Prevention (CDC). (2024, April 22). Fast Facts: HIV in the United States. <https://www.cdc.gov/hiv/data-research/facts-stats/index.html>

<sup>3</sup> Sullivan PS, Johnson AS, Pembleton ES, Stephenson R, Justice AC, Althoff KN, Bradley H, Castel AD, Oster AM, Rosenberg ES, Mayer KH. Epidemiology of HIV in the USA: epidemic burden, inequities, contexts, and responses. *The Lancet*. 2021 Mar 20;397(10279):1095-106.

<sup>4</sup> Kentucky Cabinet for Health and Family Services, Department for Public Health, HIV/AIDS Section. Kentucky HIV/AIDS Integrated Epidemiological Profile 2022. Available at <https://www.chfs.ky.gov/agencies/dph/dehp/hab/Documents/IntegratedEpiProfile2022.pdf>

<sup>5</sup> Kentucky Cabinet for Health and Family Services, Department for Public Health, HIV/AIDS Section. Kentucky HIV Continuum of Care Report 2022. Available at <https://www.chfs.ky.gov/agencies/dph/dehp/hab/Documents/KyHIVContinuumCareReport2022.pdf>

<sup>6</sup> Johnson T, Tabor M, Armstrong L, Donohoe T, Murali R, Kratz J, Berry J. Enhancing routine, opt-out HIV testing and linkage to care at federally qualified health centers (FQHC). 2024 National Ryan White Conference on HIV Care and Treatment. 2024 August 21; Session ID: 25485.