




COMPENDIUM OF EVIDENCE-INFORMED APPROACHES TO IMPROVING HEALTH OUTCOMES FOR PEOPLE LIVING WITH HIV

Center for Innovation and Engagement (CIE) Intervention Implementation Guides




CIE Center for Innovation and Engagement

*Compendium Authors**
Rosy Galván, Senior Director, Health Equity, NASTAD
Nicole Holmes, Manager, Health Equity, NASTAD
Tara Kovach, Impact Marketing + Communications

*Contributors**
Natalie Cramer, Deputy Executive Director, NASTAD
Sarah Cook-Raymond, Impact Marketing + Communications

**Authors and contributors for each specific guide can be found on the guide's inside cover.*

About CIE

The Center for Innovation and Engagement (CIE), a project of NASTAD, provides innovative, evidence-informed interventions that support linkage, re-engagement, and retention in care to help end the HIV epidemic. The initiative identifies, catalogs, disseminates, and supports the replication of evidence-informed approaches and interventions to engage people with HIV who are not receiving HIV health care or who are at risk of not continuing to receive HIV healthcare. Learn more at www.CIEhealth.org and www.TargetHIV.org/CIE.

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Acronyms

ACCEPT	Adolescents Coping, Connecting, Empowering, and Protecting Together
ADAP	AIDS Drug Assistance Program
AIDS	Acquired Immunodeficiency Syndrome
AISP	Actionable Intelligence for Social Policy
AMI	Area Median Income
APR	Annual Performance Report
ARTAS	Antiretroviral Treatment and Access to Services
ARV	Antiretroviral Therapy
ASO	AIDS Service Organizations
ATN	Adolescent Medicine Trials Network
BBCT	Bilingual/Bicultural Care Team
BSIS	Behavioral, Social and Implementation Sciences
BIA	Budget Impact Analysis
BIPOC	Black, Indigenous, and Other People of Color
CAB	Community Advisory Board
CAPER	Consolidated Annual Performance and Evaluation Report
CAPS	Center for AIDS Prevention Studies (University of California San Francisco)
CBO	Community-based Organization
CBSI	Clinic-Based Surveillance-Informed
CCRP	Certified Clinical Research Professional
CCSI	CrescentCare Start Initiative
CD4	Cluster of Differentiation 4
CEA	Cost-effectiveness Analysis
CERV	Client Review Verification Form
CFAR	Center for AIDS Research
CHW	Community Health Workers
CI	Confidence Interval
CIE	Center for Innovation and Engagement
CORE	Center of Relational Empowerment
COVID	Coronavirus Disease 2019
DID	Difference-in-Difference
DIS	Disease Intervention Specialist
DTG	Dolutegravir
EC	Eligibility Counselor
eCOMPAS	Electronic Comprehensive Outcomes Measurement Program for Accountability & Success
ED	Emergency Department
ED Alert	Emergency Department and Hospital-Based Data Exchange for Real-Time Data to Care
EDW	Enterprise Data Warehouse
eHARS	Enhanced HIV/AIDS Reporting System

EHE	Ending the HIV Epidemic
EHR	Electronic Health Records
EIN	Employer Identification Number
EIS	Early Intervention Services
EMR	Electronic Medical Records
EMSA	Eligible Metropolitan Statistical Area
EPIS	Exploration, Preparation, Implementation, and Sustainability
ES	Eligibility Specialist
FAP	Forensic AIDS Project
FQHC	Federally Qualified Health Center
FTC	Emtricitabine
FTE	Full-time Equivalent Employees
GIS	Geographic Information Systems
GSA	Gay Straight Alliance
HAB	HIV/AIDS Bureau
HASA	HIV/AIDS Services Administration
HD	Health Department
HHS	U.S. Department of Health and Human Services
HIPAA	Health Insurance Portability and Accountability Act
HIV	Human Immunodeficiency Virus
HMC	Harborview Medical Center
HMIS	Homeless Management Information Systems
HOPWA	Housing Opportunities for People Living with AIDS
HPA	Housing Placement Assistance
HRSA	Health Resources and Services Administration
HRT	Hormone Replacement therapy
HUD	Housing and Urban Development Agency
ID	Infectious Disease
IP	Inpatient
IT	Information Technology
LGBTQIA+	Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, Asexual, and all other individuals who fall outside of heteronormative sexual or gender categories
LOE	Level of Effort
LS	Linkage Specialist
MI	Motivational Interviewing
MINT	Motivational Interviewing Network of Trainers
MITI	Motivational Interviewing Treatment Integrity
NCM	Navigator Case Management
NASTAD	National Alliance of State and Territorial AIDS Directors
NHAS	National HIV/AIDS Strategy
NIDA	National Institute on Drug Abuse
NIH	National Institute of Health
NOFO	Notice of Funding Opportunity
NYCDOHMH	New York City Department of Health and Mental Hygiene

OHH	Office of HIV/AIDS Housing
OR	Odds Ratio
PHI	Protected Health Information
PHSKC	Public Health-Seattle and King County
PL	PositiveLinks
PLC	PositiveLinks Coordinator
PN	Patient Navigator
PWH	People with HIV
PWHA	People with HIV/AIDS
RA	Rental Assistance
RCT	Randomized Controlled Trial
RNA	Ribonucleic Acid
RUSH	Routine Universal Screening for HIV
RWHAP	Ryan White HIV/AIDS Program
SBCM	Strengths-Based Case Management
SF	San Francisco
SFPDP	San Francisco Pretrial Diversion Project, Inc.
SFTP	Secure File Transfer Protocol
SLW	Service Linkage Worker
SME	Subject Matter Expert
SMS	Short Messaging System
SNAP	Supplemental Nutrition Assistance Program
SOP	Standard Operating Procedure
SPH	Supportive Permanent Housing
SPNS	Special Projects of National Significance
SQL	Structured Query Language
SSRS	SQL Server Reporting Services
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
STRMU	Short-Term Rent, Mortgage, and Utility Assistance
SWOT	Strengths, Weaknesses, Opportunities, and Threats
TA	Technical Assistance
TAF	Tenofovir Alafenamide
TB	Tuberculosis
TDF	Tenofovir Disoproxil Fumurate
TIN	Tax Identification Number
TMI	Tailored Motivational Interviewing
TMC	Truman Medical Center
U = U	Undetectable = Untransmittable
US	United States
UCSF	University of California San Francisco
UVA	University of Virginia
UW	University of Washington
VL	Viral Load
ZIP	Zone Improvement Plan

Introduction

HRSA's Ryan White HIV/AIDS Program (RWHAP) provides a comprehensive system of HIV primary medical care, essential support services, and medications for low-income people with HIV. The RWHAP funds states, cities, counties, and local community-based organizations to provide care and treatment services to people with HIV to improve health outcomes and reduce HIV transmission.

NASTAD's CIE is funded by HRSA's HIV/AIDS Bureau (HAB), RWHAP Part F Special Projects of National Significance (SPNS), under a three-year cooperative agreement entitled "Evidence-Informed Approaches to Improving Health Outcomes for People with HIV." The purpose of this initiative is to identify, catalog, disseminate, and support the replication of evidence-informed approaches and interventions to engage people with HIV who are not receiving HIV healthcare or who are at risk of not continuing to receive HIV healthcare.

Purpose of the Compendium

This compendium consists of 10 implementation guides developed by CIE to share best practices and support the real-world replication of evidence-informed interventions. This compendium can be used by HIV primary care clinical providers, coordinators, administrators, and other clinic stakeholders.

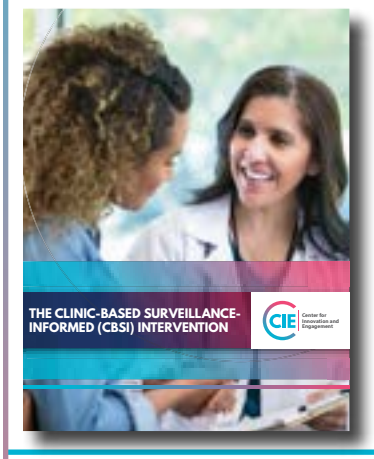
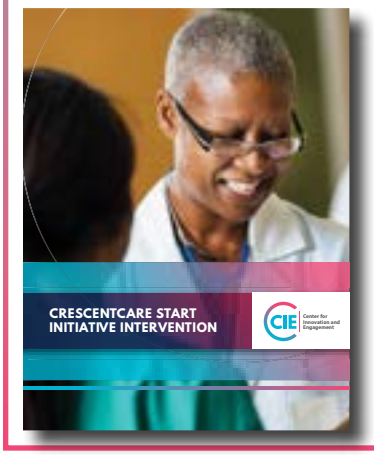
Selection of Evidence-Informed Interventions

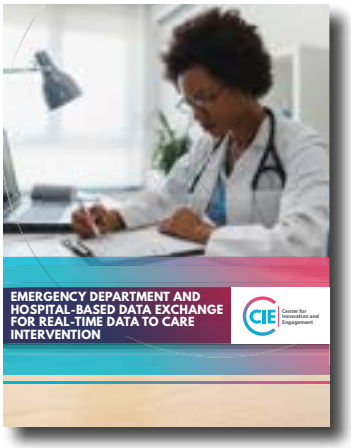
In collaboration with Northwestern University's Center for Prevention Implementation Methodology and evidence and dissemination experts, CIE identified and cataloged evidence-informed approaches and interventions by:

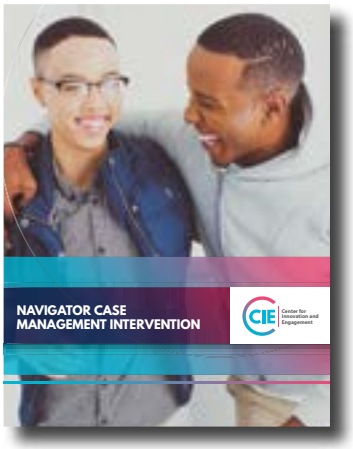
1. Conducting a systematic literature review for studies that demonstrate the effectiveness of an intervention, include a clearly defined approach, prioritize linkage, retention, or re-engagement components, and include statistically significant outcomes
2. Conducting key informant interviews with Request for Information (RFI) respondents who submitted innovative interventions for considerations that have not yet been published in scientific literature
3. Assessing registries, inventories, abstracts, and posters from HIV-related conferences to discover interventions
4. Developing and applying a rubric to measure the strength of evidence for each intervention
5. Developing and applying an impact scoring rubric to measure feasibility, acceptability, appropriateness, relevance, reach, sustainability, and transferability of each intervention
6. Selecting high priority interventions from those ranking in the top 50th percentile based on strength of evidence and strength of impact

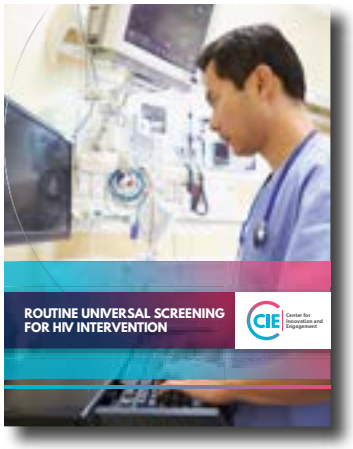
Evidence-informed approaches and interventions are tools, strategies, or models that have been proven as a means of providing statistically significant improvements in HIV care and treatment outcomes for people with HIV.

Summary of Interventions

Intervention	Description	Outcomes
Bilingual/Bicultural Care Team (BBCT) 	The BBCT intervention provides an opportunity to engage and retain Hispanic/Latinx adults with HIV in care by offering culturally and linguistically appropriate care services, leading to improved viral suppression.	• Clients scheduling and keeping appointments improved from a mean of 2.81 to 5.30 visits per year • Clients' viral suppression rate—among those who met the criteria for antiretroviral therapy (ART)—increased by 31.5 percent
Clinic-Based Surveillance-Informed (CBSI) 	The CBSI intervention allows clinics and health departments to work collaboratively to address gaps in linkage to and retention in HIV care. The intervention leverages surveillance data to more efficiently and accurately identify clients who are out of care and develop comprehensive mechanisms to link people with HIV into care.	• There was a shorter time to linkage to HIV care among clients in the intervention cohort • A greater proportion of clients were relinked to care (15 percent vs. 10 percent) • Clients showed significant improvements in viral suppression outcomes pre- and post-intervention (from 20 percent to 82 percent; P < .001) compared with historical controls (51 percent to 65 percent; P = .04)
CrescentCare Start Initiative (CCSI) 	CCSI aims to start all people who have been newly diagnosed with HIV on ART within 72 hours to increase treatment uptake and viral suppression outcomes.	• 92 percent (71/77) of clients were linked to care, saw a treating provider, and started ART within 72 hours of diagnosis • Four of the six patients that were not linked within 72 hours were linked to care within 30 days of diagnosis • Mean time to linkage in the historical cohort was 30 days (95 percent CI: 25.1–43.6 days) compared to 1.3 days (95 percent CI:1.09–1.51 days) in CCSI (p < 0.0001)

Intervention	Description	Outcomes
The Emergency Department and Hospital-Based Data Exchange for Real-Time Data to Care (ED Alert) 	The ED Alert intervention utilizes a real-time data exchange system of alert prompts that are used to re-engage people with HIV to care when they present to the emergency department (ED) or inpatient units (IP).	• Post-intervention participants were 1.08 times more likely (95 percent CI: 0.97–1.20) to have a viral load test within three months after an ED visit or IP admission and were 1.50 times more likely (95 percent CI: 1.27–1.76) to achieve viral suppression within six months than clients in the pre-intervention period
Leveraging Housing Opportunities to Promote Retention in Care for People with HIV 	The Leveraging Housing Opportunities to Promote Retention in Care for People with HIV intervention offers three types of housing-related supportive services (rental assistance, housing placement assistance, or supportive permanent housing) which provides tiered support to clients that results in a three-fold increase in the odds of being retained in HIV care.	• Clients were more likely to be retained in care when compared to a control group (94 percent vs. 82 percent) • Clients' odds of retention was nearly three times higher than the control in matched and unmatched analyses [odds ratio (OR) = 2.97, 95 percent confidence interval (CI) = 2.35–3.74; OR = 3.06, 95 percent CI = 2.45–3.81, respectively]

Intervention	Description	Outcomes
Navigator Case Management (NCM) 	NCM is a 12-month intervention for people with HIV who are experiencing incarceration and are leaving to return to the community. The intervention leverages harm reduction, prevention case management, and Motivational Interviewing techniques to promote healthy behaviors.	• Clients were twice as likely to be linked to care within 30 days of being released from jail and were almost twice as likely to be retained in care during the intervention period • Individuals who received treatment for substance use disorders were four times as likely to be linked to care upon release
PositiveLinks (PL) 	PL is a clinic-based mobile health intervention that promotes linkage and engagement to HIV care in rural areas and connects clients to a virtual local community, improving clinical outcomes for people with HIV.	• Clients showed improved CD4 counts, viral suppression, retention in care, and rates of visit constancy • Qualitative analysis of PL's community message board found it provided a sense of connection and social support • Continued significant improvements in engagement in care and viral suppression 24 months post-implementation.
Project ACCEPT (Adolescents Coping, Connecting, Empowering, and Protecting Together) 	Project ACCEPT is a gender-specific, group-based intervention to address challenges facing youth with newly diagnosed HIV and promote positive behavior change, ultimately leading to improved engagement and retention in HIV care.	• Clients had a 2.33 greater likelihood of HIV medication usage than the control group, which was sustained 12 months post-intervention • Clients showed increased appointment adherence, visit constancy, and overall medical visits compared to the control group

Intervention	Description	Outcomes
Routine Universal Screening for HIV (RUSH) 	The RUSH intervention facilitates linkage to and retention in care through an opt-out HIV testing program for people 16 and older who are in an ED or other clinical setting, resulting in improved retention in care and viral suppression rates. RUSH offers a low-cost, low-burden approach to improve retention in care as well as viral suppression in people with HIV.	• Client retention in care increased from 32.6 percent pre-intervention to 47.1 percent post-intervention • Client viral suppression rate increased from 22.8 percent pre-intervention to 34 percent post-intervention
Tailored Motivational Interviewing (TMI) 	The TMI intervention uses evidence-based motivational interviewing strategies to promote intrinsic behavior change in youth with HIV, leading to improved retention in care through an environment of acceptance, compassion, and autonomy.	• The youth cohort of 16- to 29-year-olds had large improvements in appointment adherence • Young people who were randomly assigned to a largescale, multisite, randomized controlled trial that followed the pilot showed a significant decline in viral load, with 33 percent having an undetectable viral load at a six-month follow-up compared with 22 percent in the control group

BILINGUAL/BICULTURAL CARE TEAM INTERVENTION

Center for Innovation and Engagement

Background

The Health Resources and Services Administration's (HRSA's) Ryan White HIV/AIDS Program (RWHAP) provides a comprehensive system of HIV primary medical care, essential support services, and medications for low-income people living with HIV who are uninsured and underserved. RWHAP funds states, cities, counties, 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.

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Acknowledgements

NASTAD Authors:

Alexander Perez, Manager, Health Equity

Rosy Galván, Director, Health Equity

Milanes Morejon, Manager, Health Equity

Intervention Development Team:

Maithe Enriquez, Nurse Practitioner

Rose Farnan, HIV Specialty Clinic Manager

Veronica Vazquez, Retentionist

An-Ling Cheng, Biostatistician

Contributors

Natalie Cramer, Senior Director, NASTAD

Tia Clark, Impact Marketing + Communications

Tara Kovach, Impact Marketing + Communications

Sarah Cook-Raymond, Impact Marketing + Communications

Nanette Benbow, Research Assistant Professor, Co-Director Third Coast CFAR Behavioral and Implementation Science (BCIS), Northwestern University

Dustin French, Professor, Medical Social Sciences, Feinberg School of Medicine, Northwestern University

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Stock photos. Posed by models.

Intervention Snapshot

	Priority Population	Adults with HIV who identify as Hispanic/Latinx and speak Spanish as their primary language
	Setting	HIV Specialty Clinic
	Pilot and Trial Sites	Truman Medical Center (TMC) in Kansas City, MO
	Model	The BBCT intervention's coordinated approach leverages existing community resources, expertise, and resilience to support organizations in addressing unique barriers faced by Hispanic/Latinx people with HIV. The adaptable model enables clinics and other service-delivery settings to better serve the Hispanic/Latinx community.
	RWHAP Ending the Epidemic (EHE) Opportunity	Black and Latinx populations continue to disproportionately face challenges in accessing HIV care. Intervention outcomes indicate that clinics that implemented the intervention experienced a significant increase in clients scheduling and keeping appointments, from a mean of 2.81 to 5.30 visits per year, while the viral suppression rate among clients who met the criteria for ARV therapy increased by 31.5 percent.
	Intervention Funding	RWHAP Part A funds were used to support direct care and treatment services. The funds were also used to provide core medical and support services for people with HIV.
	Staffing	Staff positions in the original intervention included a Peer Educator, RWHAP Case Manager, and HIV Primary Care Provider.
	Infrastructure Needed	Space for bidirectional training sessions to facilitate knowledge exchange Spanish-Language systems and resources Consistent data collection and evaluation systems

Intervention Overview & Replication Tips

Why This Intervention?

The Bilingual/Bicultural Care Team intervention increased retention in care and viral suppression for people with HIV who identify as Hispanic/Latinx and speak Spanish as their primary language.[1] These outcomes resulted from the provision of comprehensive culturally and linguistically appropriate HIV primary care services, which included leveraging a relationship with a Hispanic/Latinx–focused community-based organization (CBO).

The HIV specialty clinic that originally implemented the intervention experienced a significant increase in clients scheduling and keeping appointments, from a pre-implementation mean of 2.81 visits per year to a post-implementation mean of 5.30 visits per year (N = 43). Additionally, clients who met treatment-guideline criteria for antiretroviral (ARV) therapy experienced a 31.5 percent increase in viral suppression after implementation. Although the sample size was small, these are impressive achievements considering that all clients who received the intervention were Hispanic/Latinx adults with low incomes and that 84 percent of clients had at least one comorbid medical condition, including mental health disorders.[1] This site is also representative of other RWHAP-funded sites throughout the United States, making these findings generalizable to a wide audience.

Intervention at a Glance

This section provides an overview of the Bilingual/Bicultural Care Team intervention conducted in the HIV specialty clinic at the Truman Medical Center (TMC) in Kansas City, Missouri, to help readers assess the necessary steps for replication. The HIV specialty clinic at TMC is funded through RWHAP Part A funding. The intervention aims to reach adult Hispanic/Latinx people with HIV and retain them in care using a culturally and linguistically appropriate care team. The intervention was funded and evaluated under the Health Resources and Services Administration (HRSA) Ryan White HIV/AIDS Program (RWHAP) Part A grant.

 Step 1	**Assess Staff Resources and Gaps:** To provide comprehensive services to Hispanic/Latinx people with HIV in the communities you serve, develop an inventory of linguistic and cultural competencies among your staff (HIV outreach workers, case managers, peer educators, and medical personnel). Gauge the type of cultural competency gaps that exist within your existing team.
 Step 2	**Secure Stakeholder Buy-In:** Engage with relevant stakeholders such as staff and leadership personnel to gauge their agreement with the need to add new bilingual/bicultural staff and the availability of resources to hire these new staff to fill the gaps you have identified. Use this opportunity to define parameters for the type of experience and expertise that new staff should have, as well as any limitations that may hinder you from hiring staff who are representative of your communities.
 Step 3	**Engage and Work with Community/Service Partners:** Assess synergies and create partnerships and linkage opportunities with local agencies that work with Hispanic/Latinx people with HIV or offer the necessary ancillary services to address the community's needs. These may include specialty pharmacies, CBOs, AIDS Service Organizations (ASOs), or other agencies that provide supportive services to this specific population.
 Step 4	**Recruit Bilingual and Bicultural Staff:** Recruit providers, case managers, and peer educators who have the cultural or linguistic experience that fills the gaps you identified in your initial assessment. It is helpful for these staff to have lived experiences similar to those of the clients with whom they will engage.
 Step 5	**Train Staff and Facilitate Knowledge Exchange:** "Knowledge exchange" implies that training sessions are bidirectional. New staff are trained on the service-delivery infrastructure, policies, and other relevant content related to HIV care in your setting. Similarly, existing staff learn from the newly hired bilingual/bicultural staff's lived experiences and cultural knowledge.
 Step 6	**Engage and Retain Hispanic/Latinx People with HIV:** Using an integrated medical and social support network, begin more tailored outreach and engagement of Hispanic/Latinx people with HIV who require bilingual/bicultural support.

Cost Analysis

The HRSA RWHAP Part A grant sustained the Bilingual/Bicultural Care Team intervention. The federal program supports direct care and treatment services, and Part A is used to provide core medical and support services for people with HIV. Support services that enhance HIV care for people with HIV can also be funded through this category. HRSA's RWHAP's Fact Sheet provides more context on the different parts. Additionally, RWHAP's Policy Clarification Notice 16-02 provides more details on allowable costs. (See Additional Resources Box).

The total cost for implementing the Bilingual/Bicultural Care Team intervention at TMC's specialty clinic was estimated at roughly $330,000 annually (including indirect rate). The estimated average cost per client for this intervention based on TMC's implementation is about $3,800. Eight staff members carried out the intervention through its implementation. It is important to note that the cost data from developers at TMC's specialty clinic is still being analyzed. This high-level overview provides a snapshot of general costs based on available data. Organizations interested in estimating the cost of implementing this intervention in their jurisdiction are encouraged to utilize the CIE Cost Calculator Tool. (See Additional Resources Box).

$300,000

approximate total cost of the intervention per year

$3,800

estimated average cost per client

8

staff members

Resources Assessment Checklist

Before implementing the Bilingual/Bicultural Care Team intervention, your organization should walk through the following Resources Assessment (or Readiness) Checklist to assess your ability to do this work. If you do not have these components in place, you are encouraged to develop this capacity to conduct this intervention successfully. Questions to consider include the following:

- ❑ Does your staff understand HIV trends for Hispanic/Latinx people in your community?
- ❑ Does your staff understand the intersecting identities of the Hispanic/Latinx population and how these identities relate to social and structural barriers to accessing healthcare?
- ❑ Does your agency or existing community partner employ HIV outreach workers, case managers, and HIV primary care physicians? If not, can you obtain these staff either directly or via partnerships?
- ❑ Can your organizational structure accommodate Hispanic/Latinx people with HIV by offering flexible appointment times and linkages to ancillary services (e.g., housing, transportation, legal, and mental health services)?
- ❑ Do you have an existing relationship with a CBO, ASO, or other community partners that work closely with the Hispanic/Latinx community?
- ❑ Are representatives of these partner organizations willing to work with you to plan and implement this intervention, including the recruitment of linguistically and culturally competent staff?
- ❑ Does your organizational policy structure allow for flexibility in credentials or work style for staff who may be recruited as peer educators to accommodate diversity and community representation on your care team?
- ❑ Does your organization know where to recruit case managers or clinical providers who have the appropriate linguistic and cultural competency to serve the Hispanic/Latinx community?
- ❑ Does your organization have an in-house pharmacy service or a relationship with a specialty pharmacy? If not, can you establish a relationship with a specialty pharmacy?
- ❑ Do you have educational materials on HIV care and ancillary resources in English and Spanish? If not, do you have the capacity to develop or translate these resources?

Setting the Stage

According to the U.S. Centers for Disease Control and Prevention (CDC), there are an estimated 1.2 million people with HIV in the United States.[2] During 2018, approximately 75.7 percent of people with HIV received HIV medical care, 57.9 percent were retained in care, and 64.7 percent were virally suppressed.[3] CDC's estimates indicate that some populations, including Black and Latinx communities, continue to disproportionately face challenges in accessing care and achieving improved health outcomes. At each stage of the HIV care continuum, from diagnosis to viral suppression, some individuals are not entering care or are falling out of care. Improving client engagement and re-engagement in care is a national priority, with targeted retention measures established by the HIV National Strategic Plan (see Additional Resources Box), HRSA, and the Ending the HIV Epidemic (EHE) initiative, among others.

The Bilingual/Bicultural Care Team intervention is an innovative care model designed to re-engage and retain adult Hispanic/Latinx people with HIV in care. Hispanics and Latinx people in the United States experience a rate of HIV infection that is three times that of non-Hispanic whites. Hispanics have the second-highest rate of HIV infection among racial/ethnic minority groups in the United States and face disparities in HIV-related health outcomes.[4] This population tends to enter care later in the course of HIV disease and have a lower survival rate compared with non-Hispanic whites. Evidence for these disparities includes lack of access to quality care, nonadherence to HIV treatment, scarcity of ethnic minority clinicians, and an inability to navigate the healthcare system.[4,5,6]

TMC conducted a retrospective study to examine the impact of a Bilingual/Bicultural Care Team on select HIV-related health outcomes in adults with HIV. The HIV specialty clinic at TMC provides primary care to adults with HIV, many of who are Hispanic/Latinx first-generation immigrants with limited English language proficiency. In 2007, when about 14 percent of its client population comprised Hispanic/Latinx individuals, most clinic staff did not speak Spanish, which required Spanish-speaking clients to use an interpreter when receiving health services. Additionally,

clients were randomly assigned to a primary care provider or case manager, which diminished the social support available to them throughout their care. The clinic's HIV program manager coordinated a novel care team approach to better serve the clinic's Hispanic/Latinx clients to address these barriers to care.[1]

To facilitate the care team approach, the HIV program manager worked closely with a local community partner, The Guadalupe Center, to recruit three bilingual/bicultural care providers to engage with Hispanic/Latinx clients one day per week—a nurse practitioner, RWHAP case manager, and peer educator. This bilingual/bicultural care team provided HIV education, adult HIV primary care, social and psychological assessments, peer support to assist with health services navigation, referrals to subspecialty care and community resources, support to address barriers to care and adherence, and home visits to assess care needs. Additionally, the HIV program manager had all client education and case management materials adapted to make them culturally appropriate for Spanish-speaking clients.

After implementing the novel care team approach, clients whose primary language is Spanish transferred to the Bilingual/Bicultural Care Team with ease. The introduction of the culturally appropriate care team prompted a significant

increase in the number of clinical appointments scheduled and kept per client per year, from 2.81 mean visits pre-implementation to 5.30 mean visits after implementation. Before implementation, among the 38 Hispanic/Latinx clients who met treatment-guideline criteria for ARV therapy, only eight had suppressed viral loads, compared with 20 clients after implementation, a 31.5 percent increase in the viral suppression rate in this client population. A limitation to interpreting these data includes the small evaluative sample size (N = 43), which restricts statistical power and may influence how differences between groups were inferred. However, given the clinical relevance of these results and the RHWAP environment in which this intervention was implemented, the results can prove useful to other RWHAP-funded sites.

The nurse practitioner on the original Bilingual/Bicultural Care Team stressed that the improvement in outcomes speaks to the importance of meeting clients "where they're at"—i.e., that HIV care services should be representative of and sensitive to the complex needs of the communities that are being served.

WHEN DISCUSSING THE PEER EDUCATORS' ROLE IN CLIENT ENGAGEMENT, THE NURSE EXPLAINED THAT

"[The peer educators are] the ones with the experience of going through everything. So, it was important at the time we started the program to be able to really hire people who had some real understanding of what was going on and could pull that knowledge themselves."

Description of the Intervention Model

The Bilingual/Bicultural Care Team intervention helps create culturally and linguistically appropriate HIV care services for Hispanic/Latinx adults with HIV. This intervention successfully retained Hispanic/Latinx adults in HIV care and improved their health outcomes, including increasing viral suppression. The components of this intervention were funded through RWHAP Part A funds, which provide support to staff activities used to engage people into care, including core medical services (AIDS Drug Assistance Program, or ADAP, treatments, early intervention services, mental health services, case management, etc.) and supportive services (e.g., medical transportation, linguistic services, food banks, housing, non-medical case management, etc.). The intervention is implemented in three phases:

1. Assessing Gaps and Engaging Stakeholders

Establishing a Bilingual/Bicultural Care Team begins with identifying gaps in your service-delivery infrastructure and assessing stakeholder readiness in the areas of recruitment and outreach. Steps toward this goal are:

a. *Develop an Inventory of Staff Skills and Resources:* Understanding the cultural and linguistic gaps that may exist across your system of care begins with understanding the baseline set of skills and resources that are already available to your staff. The inventory should document language skills, cultural backgrounds, lived experiences, and staff training sessions, as well as interpretation services that your organization may already be using. It is crucial to identify which, if any, of your existing providers, case managers, and peer educators have the necessary language and cultural skills, and it is useful to identify other staff who may also possess these skills.

b. *Secure Buy-In from Leadership and Staff: T*his step involves engaging your organizational leadership and existing staff to ensure support for additional staffing and cross-cultural learning. This includes ensuring support for additional human resources and identifying roadblocks that may inhibit recruiting the most suitable personnel to address identified gaps. Existing staff should be receptive to cross-cultural learning, willing to aid in training new staff on processes or procedures, and ready to create a welcoming and supportive environment for Hispanic/Latinx community members at all stages of the HIV care continuum.

c. *Engage External Partners:* Ideal partnerships engage organizations that already work closely with the Hispanic/Latinx community in clinical and non-clinical settings or offer the ancillary services that are needed to holistically address the social and structural barriers experienced by this community. Partner organizations may include specialty pharmacies, CBOs, ASOs, or other organizations that provide supportive services to Hispanic/Latinx people with HIV. This network will be essential for identifying providers with appropriate cultural competency skills and experience to address service gaps. Similarly, establishing a relationship with a community-centered organization will strengthen a sense of trust with community members you may need help to reach.

   Partner organizations will be a crucial source of feedback on developing and implementing the intervention from a community-centered perspective. This relationship should be bidirectional—i.e., it will involve an exchange of support and services for clients and clinical and non-clinical staff. An effective partnership will increase the reach of your engagement and retention efforts while building trust within the community you serve.

2. Staff Recruitment and Training

Once you have a thorough understanding of your resources and gaps and have engaged stakeholders, staff, and community organizations, take the following steps to build your Bilingual/Bicultural Care Team:

a. *Recruit Bilingual/Bicultural Staff:* Building an effective Bilingual/Bicultural Care Team requires providers, case managers, and peer educators who have the appropriate linguistic and cultural experiences to appropriately engage with the Hispanic/Latinx community in your setting. Hiring peer educators and case managers who have lived experiences that resemble those of the community members you serve is a crucial component of improving client outcomes through this intervention. Lived experiences may vary based on the social dynamics in your setting. Ideally, the peer educators you recruit will be people with HIV who have an experiential understanding of the structural and social barriers faced by the community you serve. Peer educators should also possess appropriate cultural knowledge and familiarity with community assets, strengths, and resiliency factors. If you are not able to recruit medical providers with the appropriate linguistic and cultural skills, consider having a case manager or peer educator serve as a client-provider liaison to build and maintain a strong foundation of trust.

b. *Train Staff and Facilitate Knowledge Exchange:* Newly recruited staff should be trained in appropriate organizational processes and procedures. You may need to take some unique steps to ensure that new staff recruits are appropriately integrated into your existing care infrastructure. For example, in cases where peer educators do not have the same level of professional work experience as other staff, you may be required to conduct additional training on expected behavior in your setting about language, client interactions, attire, timeliness, etc.

   It is essential to establish ongoing "knowledge exchange" between newly recruited bilingual/bicultural staff and your existing team. This not only involves traditional training on service-delivery infrastructure, policies, and other relevant content in your setting but also requires learning from the lived experiences and cultural knowledge of the newly hired bicultural staff. Knowledge exchange can help to refine staff roles and ensure that the services you provide are culturally appropriate. It is important to engage all staff in the knowledge exchange to ensure that those involved in every HIV care continuum stage are welcoming to the Hispanic/Latinx community you serve.

". . . to be honest, I tell every single peer [educator] at every meeting, they continue to teach me. I learn from all of them. I've learned about how bad our transportation system is. I've learned about how difficult it is to get anywhere on time because of that. I've also learned that sometimes we just don't ask the right questions, or we don't go deep enough when we talk to patients."

– HIV SPECIALTY CLINIC MANAGER

3. Engaging and Retaining People with HIV in Care

After establishing a Bilingual/Bicultural Care Team and a support network of community partners, you are ready to engage Hispanic/Latinx individuals with a medical and social support network that will effectively retain them in HIV care. Although the precise flow of care will depend on the unique setup of your service-delivery infrastructure and each client's insurance status, a template for utilizing the care team should:

a. *Link Newly Diagnosed and Reengaged People with HIV to a Bilingual/Bicultural Case Manager and Schedule a Medical Appointment:* Engagement or re-engagement of clients is typically done by an outreach worker, who will establish contact and create space for the client to meet with a bilingual/bicultural case manager. The outreach worker must have the linguistic and cultural skills necessary to negotiate the initial encounter tactfully or will be aided by the case manager in doing so. Case managers must review and sign confidentiality agreements with clients regarding the use of their information for service delivery purposes, including discussions with other clinical or non-clinical staff about diagnoses, medical appointments, and retention efforts.

b. *Meet with a Bilingual/Bicultural Provider (doctor, nurse, or other practitioners):* It is essential that providers are flexible with clients about appointment times and coordinate with the case manager or peer educator to do an immediate follow-up after no-shows or tardiness. The important aspect is consistency in the cultural competency of both the clinical and non-clinical staff with whom the client engages throughout their visit. Where possible, avoid using third-party interpreter services or staff who do not possess relevant cultural experiences.

Staff Adaptation

If a bilingual/bicultural provider is not available, a case manager or peer educator may serve as a client-provider liaison.

c. *Meet with a Bilingual/Bicultural Peer Educator for HIV Care Education and Assessment of Social or Structural Barriers:* Where possible, the day before a client's scheduled medical appointment, a peer educator should be involved in reviewing the client's medical chart along with the case manager and provider. When clients do not speak English, peer educators should be directly involved in the clients' first and second medical appointments. The peer educator is also responsible for establishing a written agreement with the client that details the client's roles and responsibilities and ensures that the client understands their HIV care requirements.

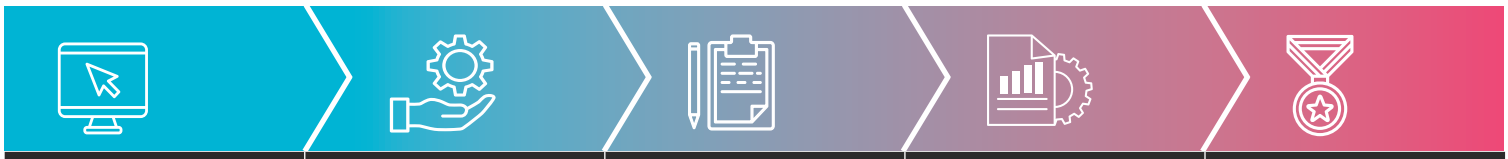
d. *Revisit the Bilingual/Bicultural Provider After Lab Results Are Finalized (may not be the same day):* When lab tests have been requested, the client will need to meet with the provider, case manager, or peer educator to discuss their lab results and coordinate ongoing care.

e. *Revisit the Bilingual/Bicultural Case Manager for Coordination of Ongoing HIV Care and Other Supportive Services:* This must include "meeting clients where they are," which involves assessing the social and structural barriers that may hinder the client's adherence to care and impede linking the client with appropriate supportive services (e.g., housing, transportation, mental health services, social support networks, neutral meeting spaces). It may be helpful for case managers to organize recurring meetings with peer educators and other relevant staff to discuss clients' new diagnoses and upcoming medical appointments, as well as clients who have been lost to care.

f. *Meet with a Pharmacist with the Support of a Bilingual/Bicultural Staff Member:* Peer educators or case managers are responsible for linking clients to a specialty pharmacy, which may be in-house or off-site. This will ensure that the client understands where and how to acquire their prescriptions and how to take their medication. Case managers or peer educators should routinely check in with pharmacy staff to gauge clients' adherence to prescription refills, which may help identify whether clients may benefit from additional support and outreach.

Logic Model

Logic models are effective tools to assist in planning, implementing, and managing an intervention. Below is a logic model highlighting the resources, activities, outputs, outcomes, and impact of the Bilingual/Bicultural Care Team intervention referenced throughout this guide.



Resources	Activities	Outputs	Outcomes	Impact
• Diversified funding: RWHAP, other government agencies, foundation grants, private and in-kind sources • Bilingual and bicultural providers, case managers, and peer educators with experience delivering culturally and linguistically competent services to Hispanic/Latinx communities • Incentives to facilitate best practices for client retention, such as providing transportation reimbursement or food • Partnerships with trusted providers and team members with established community relationships and knowledge of community resources • Connections with psychiatric centers for clients with mental health disorders and specialty pharmacies when in-house pharmacies are not available • Connections with ancillary services (e.g., housing) to facilitate appropriate client referrals	• Establish staff and community resources. Develop an inventory of cultural competencies and gaps within the team • Create partnerships and linkage opportunities with local agencies that work with Hispanic/Latinx communities or offer needed services • Recruit bilingual and bicultural providers, case managers, and peer educators with lived experiences that mirror those of the clients they will engage with • Facilitate knowledge exchange, so trainings are bidirectional when bilingual/bicultural staff and peer educators are incorporated into the existing care team • Use an integrated medical and social support network to tailor outreach to and engagement of Hispanic/Latinx people with HIV who require bilingual/bicultural support	• Hispanic/Latinx people with HIV engaged and retained in HIV primary care and ancillary services • Interaction with bilingual and bicultural staff at every level of the care experience (peer educators, case managers, clinical providers, pharmacists)	Among participating Hispanic/Latinx clients living with HIV: • Accessible appointment times and timely laboratory data for quicker linkages to appropriate care • A better understanding of their HIV care in a more accepting environment • Improved overall health through connections to other specialty services (e.g., dermatology; ear, nose, and throat; urology; endocrinology; cardiology; mental health) • Significant increase in the number of HIV specialty clinic appointments that are scheduled and kept Among HIV service providers: • A decreased need for interpreter services, leading to shorter clinic visits and expedited services • An increase in peer educator capacity and a reframing of staff expertise to prioritize lived experience	• Increased viral suppression among Hispanic/Latinx individuals with HIV • Increased clinic visits • Decreased hospitalizations

Your Planned Work

Your Intended Results

Staffing Requirements & Considerations

Staff Capacity

Roles on the Bilingual/Bicultural Care Team may overlap, depending on your setting's existing staff infrastructure and workload. The following staff implemented the intervention at the HIV Specialty Clinic at TCM:

- *Peer Educator:* Having the clients meet with a bilingual/bicultural peer educator is essential in ensuring successful client outcomes. The peer educator's responsibilities include:
  - Conducting an "HIV 101" knowledge assessment;
  - Assessing barriers to adherence;
  - Presenting the HIV treatment curriculum;
  - Walking the client through laboratory and radiology department registration as needed;
  - Meeting with clients monthly or more often as needed; and
  - Working one-on-one with clients who are experiencing challenges with treatment adherence.
- *RWHAP Case Manager:* The bilingual/bicultural case manager is responsible for coordinating ongoing HIV primary care and supporting client retention and adherence to treatment activities. Case managers are an essential component of the Bilingual/Bicultural Care Team's success because they help providers and peer educators with client follow-up, retention, general outreach, and medication acquisition where appropriate. The case manager's responsibilities include:
  - Establishing a baseline assessment of social and psychological needs;
  - Providing information about and referrals to community resources;
  - Conducting home visits as needed to assess care needs and family dynamics;
  - Walking the client through registration for hospital and clinical services as needed; and
  - Serving as a liaison between the client and other healthcare providers.
- *HIV Primary Care Provider (Doctor, Nurse Practitioner, etc.)*: It is important that the client meets with a bilingual/bicultural HIV primary care provider during their medical appointment. The health care provider helps promote trust and ensure that the client understands their health status. The provider's responsibilities include:
  - Providing HIV and adult primary care health services;
  - Educating clients about HIV disease progression, treatment, and drug resistance;
  - Assessing adherence to treatment for clients who are prescribed ARVs; and
  - Referring clients to subspecialty care as needed.

Staff Characteristics

Core competencies of all staff should include:

- Experience with and enthusiasm about working with underserved populations;
- Cultural and linguistic competency in serving vulnerable Hispanic/Latinx adults;
- Knowledge of the social determinants that drive psychological, social, and physical health outcomes for Hispanic/Latinx adults;
- Ability to foster an environment of trust and support for Hispanic/Latinx clients;
- Skill in creating and sustaining dynamic, coordinated partnerships with diverse entities (e.g., CBOs, ASOs, specialty pharmacies, community partners); and
- Excellent organizational and team-building skills.

Replication Tips for Intervention Procedures and Client Engagement

Successful replication of the Bilingual/Bicultural Care Team intervention involves working with trusted, diverse, bilingual/bicultural team members, creating a welcoming environment, building peer educator capacity, and offering co-located services and programs when possible.

- *Work with Trusted Community Providers:* Intervention success relies on working with staff who have established community relationships. Recruiting staff who already have close relationships with clients can also facilitate implementation. Below are examples of how these relationships might look:
  - The healthcare provider may have worked in the community for many years, and developed relationships with clients who know the provider is heartwarming and genuinely cares about them. Working with trusted providers builds trust and contributes to good retention rates because clients will want to meet with and connect with them.
  - The case manager may have pre-established relationships and networks with providers in the area who offer supplemental, hard-to-find resources (e.g., food pantries, free binders, shoes, clothing, gender-affirming items, connections with Syringe Service Programs, etc.).
  - The peer educator may have credibility in the community for their knowledge about HIV and familiarity with culturally specific barriers and resiliency factors that can help facilitate the intervention.
- *Hire Bilingual/Bicultural Providers, Case Managers, and Peer Educators:* While having bilingual staff on a care team is typically more helpful than using interpretation services, in the program at TCM having a Bilingual/Bicultural Care Team staff also improved both retention and viral suppression rates for Hispanic/Latinx clients. Bicultural care teams are more apt to provide culturally specific guidance. For example, a team member could help clients find safe and accessible transportation to medical or support service visits.

For your replication process, consider taking the following steps:

- **Work with bilingual/bicultural peer educators, case managers, and nurses when possible:** Receiving care from people who have similar lived experiences and reflect the diverse intersecting Latinx identities of the client populations helps clients feel that they can relate, share fears and barriers, and address stigma. For example, staff may identify as gay or lesbian, be from a similar cultural background (e.g., Mexican or Dominican), have a history of homelessness, or understand how religion may influence clients' lives.
- **Appoint an in-house, bilingual/bicultural RWHAP case manager:** The case manager can promptly address barriers and enroll clients in services to support their retention in care. Clients do not always know how to access healthcare outside of routine visits, such as going to the emergency room for stitches or a local health department for immunizations. In-house case managers can help clients navigate the complexities of the health care system.
- **Identify additional Spanish-language systems and resources:** Resources such as patient portals, where clients can view lab results, read pamphlets, and learn about auxiliary services offered by external providers, help to increase client retention in care.

- *Create a Welcoming Culture:* Making clients feel welcome and having consistent staffing helps people feel supported and understood, encouraging client retention. Strategies for creating a welcoming environment are to:
  - **Ensure that all staff are actively involved:** All staff, from front-desk greeters to case managers to nurses, are actively involved in creating a welcoming environment.
  - **Make clients feel special:** Roll out the "red carpet" for clients (e.g., make them feel celebrated, welcome, and unique) by introducing them to all staff, decorating your space with affirming and motivational bulletin boards, and asking questions such as "*¿De donde eres tu?*" ("Where are you from?"). Such humanizing touches help clients to get to know their care team more personally.
  - **Ensure that you are welcoming to clients with intersecting identities:** Include spaces on your forms for preferred names and pronouns, post information and imagery that signal your clinic is a safe space for Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, Asexual, and all other individuals (LGBTQIA+) who fall outside of hetero-normative sexual or gender categories, or offer free legal clinics for transgender individuals to aid them in updating gender markers on identity documents (e.g., birth certificates, drivers licenses) or to assist them in seeking retribution for legal issues.
  - **Make your space feel less like a doctor's office and more like an affirming community:** A smile, a warm greeting, and other personal touches, such as asking about a client's family or their favorite sporting event, can help to provide culturally competent care to Hispanic/Latinx people with HIV.
- *Support the Successful Integration of Peer Educators into the Care Team and Build their Capacity:* While peer educators offer invaluable lived experiences that help to increase client retention, they may not always have extensive professional work experience. Consider taking the following steps to integrate peer educators into the care team and build their capacity:
  - **Provide opportunities to both teach and learn from peer educators:** Peer educators need to learn your documentation and agency policies and procedures. Also, allow room for staff to learn from peer educators about policies or documentation practices that may need to be reassessed because they unintentionally create barriers for clients.
  - **Work to ensure leadership and staff buy-in:** Buy-in from leadership and existing staff will help peer educators to achieve success and feel supported in their role. Staff who do not have experience working with unlicensed team members may be resistant to incorporating peer educators into the team. Provide opportunities for conversations about privilege and reframe the concept of expertise to prioritize hiring people who have lived experiences similar to those of the clients you serve.
  - **Assess meeting schedules and other processes that may not work for peer educators:** For example, instead of weekly one-hour meetings, consider conducting quarterly one-day meetings that include skill sharing or other team-building activities.
  - **Support peer educators with professional development:** Find opportunities to identify broader career goals and to support peer educators who seek professional development opportunities. Encourage peer educators to present at conferences and community events.

". . . I was happy to be in this position because I know our Spanish-speaking patients need it, and I could see how happy it makes them to be able to talk to me for the simplest thing or something really complicated."

– CLINIC STAFF MEMBER

Co-located Service Adaptation

If having an in-house pharmacy is not feasible for your organization, develop close working relationships with pharmacies in your community.

- *Where Possible, Offer an In-House Pharmacy and Other Co-located Services:* In-house pharmacies offer clients a "one-stop-shop," thereby reducing barriers to acquiring medications. Pharmacies can also intervene by calling clinic staff to request follow-up with clients who have not picked up their prescriptions. Some strategies for maximizing relationships with pharmacies to support client care are:
  - **Ensure that pharmacies can fulfill clients' holistic healthcare needs:** For example, pharmacies should be able to fill prescriptions for hormones, provide condoms, and offer a variety of syringes for hormone replacement therapy (HRT), insulin, or safe injection drug use.
  - **Identify bilingual/bicultural pharmacy staff:** Bilingual and preferably bicultural pharmacy staff are needed to work with your clients to answer their questions, ask about their side effects, and build trusting relationships.

Staff Adaptation

Interpreters can be used when other options are not available, but having bilingual/bicultural staff at every step of the care process has been shown to maximize Hispanic/Latinx clients' outcomes.

  - **Encourage peer educators and case managers to walk clients to the pharmacy.** This easy step helps to bolster medication adherence, support, and advocacy.

- *Develop Consistent Data Collection and Evaluation Procedures:* As with any program, evidence-based intervention, or clinical strategy, it is essential to develop data collection systems to streamline information collection and measure the impact of your services. You can do this by taking these steps:
  - **Explore data collection media:** Identify media available to both clients and providers, and that facilitate data collection and analysis. For example, REDCap offers a HIPAA-compliant app that allows clients to directly enter their data using a link. Password-protected and encrypted Microsoft Excel workbooks can also be used as an option for tracking client outcomes, although additional staff policies will be needed to ensure client confidentiality.
  - **Develop a data management dictionary:** This document can help ensure that staff consistently code data throughout the intervention's implementation, even when staff turnover occurs.
  - **Assess client outcomes:** Assess outcomes at the beginning of the intervention to establish a baseline. Then, collect data at three months, six months, and 12 months after initiating the intervention. If viral suppression goals are not being met, work with clients to promptly identify and address barriers in a way that meets each client's individual needs.
- *Offer Events or Activities Outside of Care Coordination:* Supplement care services with programs such as women's empowerment retreats or chronic disease management courses focused on intersecting health issues. These events can help clients feel more connected to the clinic, reduce stigma, and create opportunities for clients to meet people with whom they can relate.

Securing Buy-In

Securing the support of leadership, staff, and other relevant stakeholders is an important step when implementing a novel intervention. Highlighting the advantages of implementing a novel intervention is one way to secure support. The following strategies may help to secure buy-in for the Bilingual/Bicultural Care Team intervention:

- **Inform stakeholders that organizations with diverse client populations are organically viable for this intervention:** Using an "in-reach" instead of an outreach approach allows organizations to begin implementing the intervention with clients already engaged in services but need additional support. An in-reach approach minimizes the resources and time needed to recruit new clients.
- **Ensure that your clinic provides client privacy and confidential spaces to receive care:** For example, the clinic and program name should not mention HIV. If the clinic is housed in a broader healthcare setting such as a hospital, use two-way mirrors when possible, to prevent other people from viewing and identifying clients in the waiting room.
- **Highlight the advantages your organization may receive by implementing the intervention:**
  - Your organization can create or maintain a positive reputation in the community by offering Spanish-speaking clients good experiences and affirming services. This can increase word-of-mouth referrals, and the number of clients served.
  - Hispanic/Latinx clients will have better viral suppression and greater retention in care and reduce local health inequities.
  - Working with peer educators offers staff opportunities to learn more about client barriers to care. Peer educators can provide great insights on what questions to ask, how to harness community resiliency factors, and how to talk to clients to identify barriers that may be more difficult for them to disclose to other clinical staff. For example, it could be beneficial to learn how a challenging transportation system makes it more challenging for clients to arrive at appointments on time.

Overcoming Implementation Challenges

There are always challenges when implementing a program or intervention. Anticipated challenges, as well as possible solutions, include:

- **Provider availability:** Using a care provider whose availability is limited can create barriers for clients. Clients can often be no-shows, and rescheduling appointments can be challenging when providers' schedules quickly fill up. Providers should plan to be at the clinic a minimum of three days a week and make prompt follow-up calls to clients who miss appointments.
- **Provision of behavioral health services:** Clients with mental health needs and concerns benefit from receiving care from a bilingual/bicultural mental health provider or psychiatrist.

Staff Adaptation

If funding allows, include bilingual/bicultural mental health staff on the care team, or develop strong partnerships with providers in your community to ensure warm referrals and coordinated care.

- **Client eligibility:** Clients who have private insurance or who earn more than the maximum allowable household income may not be eligible to access all aspects of the intervention, including case management services or specialty pharmacies. Become familiar with copayment assistance programs and assess whether your clinic can offer discounts or sliding-scale fees.
- **Client contact:** It can be difficult to contact clients who do not have consistent phone numbers. Develop contacts and data sharing agreements with your local health department's surveillance team so you can check health department records for your clients' updated phone numbers and addresses or learn whether they have moved to another state.
- **Timely receipt of lab results:** Having an in-house lab and phlebotomist helps ensure the rapid processing of lab results. You will also want to create a reminder system for providers to conduct and analyze client viral-load tests on an ongoing basis.

Promoting Sustainability

Successful replication of the Bilingual/Bicultural Care Team intervention may require exploring a variety of funding sources. This may be particularly true if your organization has a large client population with private insurance or if your client population needs services that are not covered through RWHAP. Finding small pots of money can help implement best practices for client retention, such as providing incentives, transportation reimbursement, or food.

Work with your local university or with foundations to assess available resources to support program services or evaluation.

Staff Adaptation

If your organization or funder does not allow reimbursement for peer educators, find out whether your state permits reimbursements for community health workers (CHWs) and develop processes to meet these reimbursement guidelines. (See Additional Resources Box).

SWOT Analysis

SWOT is an acronym for Strengths, Weaknesses, Opportunities, and Threats. A SWOT analysis is a structured planning method that can assess the viability of a project or intervention. By conducting a SWOT analysis before implementing an intervention, organizations can proactively identify challenges before they occur and think through how to best leverage their organizational strengths and opportunities to improve future performance. A SWOT analysis of the Bilingual/Bicultural Care Team intervention at TCM identified the following:

STRENGTHS

The intervention retains and increases the viral suppression of adult Hispanic/Latinx people with HIV in care by:

- Offering a coordinated and collaborative case management network that provides HIV primary care and ancillary support services in the clients' primary language,
- Providing social support through engagement with culturally competent peer educators and external service partners,
- Providing aligned agencies and organizations with a place to refer Hispanic/Latinx people with HIV, and
- Adapting case management and materials to meet the cultural and linguistic needs of the Hispanic/Latinx population.

WEAKNESSES

Agencies will find it challenging to implement the intervention without:

- Culturally and linguistically competent staff who possess the skills and credibility to effectively deliver or work with partners to deliver HIV primary care, case management, and ancillary services to Hispanic/Latinx people with HIV,
- Current relationships with, or leads on identifying, community stakeholders and partners who can help to deliver ancillary services and recruit culturally and linguistically competent staff,
- Current relationships with, or leads on identifying, specialty pharmacies with bilingual/bicultural staff,
- Stakeholder buy-in and funding to adequately support the care team and the adaptation of case management and educational materials, and
- Flexible, receptive clinical staff who are open to participating in knowledge exchange.

OPPORTUNITIES

The intervention offers opportunities to:

- Establish your organization as a leader in HIV resources not only for adult Hispanic/Latinx people with HIV but also for the broader community,
- Create a non-duplicative network of services with stakeholders and service partners who support the Hispanic/Latinx community,
- Build peer educator capacity and reframe the concept of expertise to incorporate lived experiences, and
- Provide ongoing staff knowledge exchange regarding the social and structural barriers unique to Hispanic/Latinx communities.

THREATS

Threats to the Bilingual/Bicultural Care Team's success include:

- Inability to secure funds to implement the intervention,
- Failure to secure buy-in from key stakeholders,
- Duplication of services provided by other agencies that result in client confusion or undermines relationships with community stakeholders/service providers,
- Organizational barriers to the recruitment of peer educators, and
- Restrictions on resources that can be offered to clients based on their insurance status.

Conclusion

The Bilingual/Bicultural Care Team intervention provides an opportunity to engage and retain Hispanic/Latinx adults with HIV by offering culturally and linguistically appropriate services. This coordinated approach to service delivery provides supportive and holistic care that encourages client retention and improves their HIV-related health outcomes. Findings from the retrospective study conducted by TMC on the impact of the Bilingual/Bicultural Care Team intervention showed that:

- The clinic experienced a significant increase in appointments that were scheduled and kept (from a mean of 2.81 visits to 5.3 visits per year), keeping in mind a small evaluative sample size (N = 43).
- The viral suppression rate among clients who met the criteria for ARV therapy increased by 31.5 percent.

This intervention also leverages existing community resources, expertise, and resilience to support organizations in addressing the unique barriers faced by Hispanic/Latinx people with HIV. Overall, the Bilingual/Bicultural Care Team intervention provides an adaptable model that enables clinics and other service-delivery settings to serve the Hispanic/Latinx community better, ultimately reducing HIV incidence and the risk of HIV-related morbidity and mortality.

Additional Resources

Ryan White HIV/AIDS Program Fact Sheet
hab.hrsa.gov/sites/default/files/hab/Publications/factsheets/program-factsheet-program-overview.pdf

Ryan White HIV/AIDS Program Services: Eligible Individuals & Allowable Uses of Funds Policy Clarification Notice 16-02
hab.hrsa.gov/sites/default/files/hab/program-grants-management/ServiceCategoryPCN_16-02Final.pdf

HIV National Strategic Plan
hiv.gov/federal-response/national-hiv-aids-strategy/national-hiv-aids-strategy-2021-2025

CIE Cost Analysis Calculator
CIEhealth.org/innovations

Bilingual/Bicultural Care Team Cost Analysis
CIEhealth.org/intervention/bilingual-bicultural-care-team#resources (Click on link under Cost Analysis section)

Example Cost Analysis Tool for Users of Bilingual/Bicultural Care Team Intervention
CIEhealth.org/intervention/bilingual-bicultural-care-team#resources (Click on Resources)

Technical Assistance Guide: States Implementing Community Health Worker Strategies
https://www.cdc.gov/dhdsp/programs/spha/docs/1305_ta_guide_chws.pdf

Endnotes

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THE CLINIC-BASED SURVEILLANCE-INFORMED (CBSI) INTERVENTION

Center for Innovation and Engagement

Background

The Health Resources and Services Administration's (HRSA's) Ryan White HIV/AIDS Program (RWHAP) provides a comprehensive system of HIV primary medical care, essential support services, and medications for low-income people living with HIV who are uninsured and underserved. RWHAP funds states, cities, counties, 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.

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NASTAD Authors:

Milanes Morejon, Manager, Health Equity

Rosy Galván, Director, Health Equity

Alexander Perez, Manager, Health Equity

Intervention Development Team:

Julie Dombrowski, Infectious Disease Specialist

Shireesha Dhanireddy, Physician and Medical Director

Gwen Barker, Health Services Manager

Amy Bennett, Epidemiologist II

Sam Benson, Research Health Sciences Specialist

Contributors

Natalie Cramer, Senior Director, NASTAD

Tia Clark, Impact Marketing + Communications

Tara Kovach, Impact Marketing + Communications

Sarah Cook-Raymond, Impact Marketing + Communications

Nanette Benbow, Research Assistant Professor, Co-Director Third Coast CFAR Behavioral and Implementation Science (BCIS), Northwestern University

Dustin French, Professor, Medical Social Sciences, Feinberg School of Medicine, Northwestern University

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Intervention Snapshot

	Priority Population	People with HIV who are not in care
	Setting	Ryan White HIV/AIDS Program Clinic
	Pilot and Trial Sites	Madison Clinic at Harborview Medical Center in Seattle, Washington, in collaboration with Public Health-Seattle & King County
	Model	The CBSI intervention uses clinical data to create a list of clients who appear to be out of care for at least one year and matches the list with HIV surveillance data to inform follow-up by the clinic. Staff investigate each eligible case, systematically attempt to contact each client, and assist clients with scheduling and completing medical visits. Upon re-engagement, staff support clients to stay engaged in care by continuing to address health and social needs such as referral to support services, connection to ancillary services, counseling, health systems navigation, and transportation.
	RWHAP Ending the Epidemic (EHE) Opportunity	People with HIV who receive ongoing, regularly scheduled care are more likely to have significantly lower viral loads, higher CD4 cell counts, reduced morbidity and mortality, and improved overall health than those who missed even one medical visit over a two-year period. Intervention outcomes indicate the feasibility of combining clinic and HIV surveillance data to identify clients who may be out of care and improve linkage and retention in care. The intervention further indicated significant improvements in viral suppression outcomes as the time to relinkage was shorter among clients in the intervention cohort and a greater proportion were relinked to care (15 percent vs. 10 percent in the adapted model).
	Intervention Funding	The intervention was funded and evaluated under a RWHAP Part A grant.
	Staffing	Staff positions in the original intervention included a Data Manager and Linkage Specialist.
	Infrastructure Needed	Electronic health records or an electronic medical record database to store and track the gathered information Data systems to extract client data from electronic health records and facilitate data sharing between health departments and providers while adhering to necessary data privacy regulations

Intervention Overview & Replication Tips

Why This Intervention?

The Clinic-Based Surveillance-Informed (CBSI) intervention is a clinic-based program implemented in a large HIV clinic in Washington State in a collaboration between the clinic and the local health department. The intervention used clinic data to create a list of clients who appeared to have been out of care and matched the list with HIV surveillance data to inform the clinic's outreach. Clients were considered out of care and eligible for the clinic relinkage intervention if they: (1) were living with HIV; (2) had not died or transferred care; (3) had completed at least one visit in the past 1,000 days; and (4) had not completed a visit for at least 12 months prior to the date on which their record was extracted.

The CBSI intervention demonstrated the feasibility of combining clinic and HIV surveillance data to identify clients who may be out of care and improve linkage and retention in care for people with HIV. A total of 753 patients were identified as out of care on November 1, 2012. Matching with surveillance data and initial investigations found 596 (79 percent) of these patients had moved, transferred care, or were incarcerated. Of the 157 remaining patients, 40 (25 percent) relinked to care before contact, and the linkage specialist successfully contacted 38 (24 percent).

The intervention further showed that a clinic-based relinkage program conducted in collaboration with a local health department could significantly decrease re-engagement time for clients in HIV care and increase the likelihood that clients will relink to care. Compared with a historical control group, the time to relinkage was shorter among clients in the intervention cohort (adjusted hazard ratio = 1.7 [1.2–2.3]), and a greater proportion of clients in this cohort relinked to care (15 percent vs. 10 percent).[1] Although the study showed modest effectiveness in relinking clients to care, these outcomes underscore the importance of leveraging clinic and public health data to improve data accuracy and precision, thereby enhancing relinkage activities.

The CBSI intervention is intended for use in clinics and private provider practices.

"[Before] surveillance [we] hit three sentinel events: your HIV diagnosis, your AIDS diagnosis, and your death. You really didn't go back to the record in between. Having these other opportunities to go back and list matches against other facilities has become really helpful. We're breaking those walls down now, and we're saying that really, it is in the best interest of the patient to communicate this information back."

– PUBLIC HEALTH-SEATTLE & KING COUNTY EPIDEMIOLOGIST

Intervention at a Glance

This section provides a breakdown of the CBSI intervention conducted at the Madison Clinic at Harborview Medical Center in Seattle, Washington, in collaboration with Public Health-Seattle & King County (PHSKC), to help readers assess the steps required for replication. The intervention was funded and evaluated under the Health Resources and Services Administration (HRSA) Ryan White HIV/AIDS Program (RWHAP) Part A grant.

 Step 1	**Assess Staff Resources and Gaps:** Ensure that your staff—HIV outreach workers, linkage specialists, surveillance staff—possess the skills needed to conduct a systematic review of electronic health records (EHR), manage data sharing between the health department and the clinic, locate people with HIV who are out of care, and offer assistance with linkage to needed services.
 Step 2	**Explore Existing or New Data Infrastructure:** Use a data system (e.g., an EHR system) to store and track the gathered information.
 Step 3	**Engage Stakeholders:** Meet with health department and medical staff to discuss conducting the intervention, develop data-sharing agreements, and obtain community input to increase the likelihood of developing and implementing a successful program acceptable to all parties involved.

 Step 4	**Generate a Local "Out-of-Care" Definition:** A local definition is how your organization identifies people out of care. An example is "No evidence of CD4 counts, viral load results, an HIV medical care visit, and/or a prescription for antiretroviral therapy (ART) within a 15-month period."
 Step 5	**Create a Client List:** Use the data system to make a list of clients who are out of care according to your local definition.
 Step 6	**Decide on Data-Sharing Methods:** Determine how to securely transfer client lists to the health department for data matching (e.g., use a safe data file transfer program; have conversations as needed about the frequency of data extraction and data-matching).
 Step 7	**Prioritize Client List:** Determine the size of the population that appears to need relinkage. Prioritize the list based on capacity and other factors, such as the number of staff available to locate clients and assist them with returning to and staying engaged in HIV medical care. Further prioritize your list based on priority populations, geographic location, and other locally relevant factors, such as clients who were viremic at their last medical visit.
 Step 8	**Designate Linkage Specialists:** Use your prioritized client list to determine the number of linkage specialists needed to implement the relinkage intervention.
 Step 9	**Establish a Communication Protocol:** Develop processes for contacting clients (e.g., phone calls, emails, texts, field visits) and outline steps to relink them based on their health and social needs.
 Step 10	**Relink and Retain Clients:** After making initial contact with clients, assess the factors associated with re-engagement and connect them to appropriate staff and services. Support clients with staying engaged in care by linking them to support services that address retention and adherence barriers.

Cost Analysis

The cost analysis was developed based on the economic peer-reviewed literature on best practices for Budget Impact Analysis (BIA) and Cost-Effectiveness Analysis (CEA).[2,3] To ensure standardization and translation across other cost analyses of HIV-related interventions, data collection tools were further informed by tools used in a previous cost analysis of HIV linkage and retention in care interventions, cost analysis study descriptions included in this project's original notice of award (funding opportunity announcement number HRSA-15-030), as well as feedback from HIV intervention developers and cost analysis experts collaborating with the Center for Innovation and Engagement (CIE) project.[4]

The following estimates are summarized from data gathered on different components of this intervention, including the costs of personnel, fringe benefits, supervision and training, clinical support services, number of people served, types of visits that can be linked to costs/patient outcomes, and other direct and indirect costs. For a complete description of the intervention cost data based on the implementation described in this manual, please refer to the link in the Additional Resources Box.

The CBSI intervention was sustained by a HRSA RWHAP Part A grant. The federal program supports direct care and treatment services, and Part A is used to provide core medical and support services for people with HIV. Support services that enhance HIV care for people with HIV can also be funded through this category. HRSA's Ryan White HIV/AIDS Program Fact Sheet provides more context on the different parts. Additionally, RWHAP's Policy Clarification Notice 16-02 outlines details on allowable costs. (See Additional Resources Box).

When the intervention was implemented, the estimated annual direct program cost was $78,760 and $122,078 including the 55 percent indirect rate expense of the intervention developer (Table 1). Staffing and personnel costs accounted for 97 percent of all direct costs. This included a part-time data manager, a health department Disease Intervention Specialist (DIS), a linkage to care specialist, and a medical director. Non-personnel costs accounted for 3 percent of direct program costs and included staff computer-related expenses and travel. There were no client-specific costs involved.

The Linkage Specialist (LS) conducted 406 case investigations of people potentially out of care, and attempted contacting 117 individuals. Out of the 406 individuals, 38 (9.3 percent) were contacted and enrolled over a 12-month period. At maximum capacity, intervention developers estimated they could enroll up to 60 clients a year.

$122,078

total cost of the intervention per year

10

clients served per project personnel

9.4

percent of clients served among all attempted contacts

Table 1 — Clients Served, Program Costs and Costs per Client

Cost Analysis Results		
Clients Served		
Percent of Clients Served Among All Attempted Contacts	9.4 percent	
Clients Served Per Project Personnel (full-time and part-time)	10	
Annual Program Cost	Including Indirect/ Overhead Rate	Direct Costs (Excluding Indirect Rate)
Total Cost of the Intervention Per Year	$122,078	$78,760
Annual Personnel Costs	$118,203	$76,260
Percent of Total Costs	96.8 percent	96.8 percent
Annual Costs for Materials/Supplies/Equipment	$3,875	$2,500
Percent of Total Costs	3.2 percent	3.2 percent
Annual Client-Specific Costs	$0	$0
Percent of Total Costs	0 percent	0 percent
Cost Per Client		
Cost Per Client Served	$3,213	$2,073
Personnel Cost Per Client Served	$3,111	$2,007
Cost Per Maximum Clients	$2,035	$1,313
Personnel Cost Per Maximum Number of Clients	$1,970	$1,271

The direct cost per client served was $2,073 and $1,313 per client at maximum capacity (Table 1). Considering only personnel implementation costs, the cost per client served was $2,007 and $1,271 per client at maximum capacity. A total of 9.5 clients were served per intervention personnel and 34.9 per intervention full-time equivalent employees (FTE).

Organizations interested in estimating the cost of implementing this intervention in their jurisdiction are encouraged to utilize the CIE Cost Calculator Tool. (See Additional Resources Box).

Resource Assessment Checklist

Before implementing the CBSI intervention, your organization should walk through the following Resource Assessment (or Readiness) Checklist to assess your ability to do this work. If you do not have these components in place, you are encouraged to develop this capacity to conduct this intervention successfully. Questions to consider include the following:

- ❑ Does your staff understand HIV trends in your community and interconnected social determinants of health that impact health outcomes?
- ❑ Are staff within your organization willing to work with you on planning and implementing this intervention?
- ❑ Does your organization have HIV outreach workers, linkage specialists, medical case managers, or other staff who can locate and relink clients to care? If not, are you able to obtain the necessary staff either directly or through partnerships?
- ❑ Does your organization have:
  - ❑ At least one staff person with sufficient training to use your clinic's data system (e.g., navigating through client-level information, extracting and synthesizing data)? If so, does this staff member have the flexibility to work with and re-engage a client who is out of care (e.g., quickly make an appointment)?
  - ❑ An EHR system or electronic medical record database from which to extract information about clients who are out of care and in which to store this information securely?
  - ❑ Data systems in place, or the resources necessary, to extract client data from the EHR and send it to the health department for matching with HIV surveillance data?
  - ❑ A standard system for documenting clients' HIV outcomes?
- ❑ Can your organizational structure provide both medical services and linkages to ancillary services (e.g., housing, transportation, legal, or mental health services)?
- ❑ Does your organization have an existing relationship with the local health department, or is the health department willing to begin a conversation about data sharing for linkage to and retention in HIV care?
- ❑ Does your jurisdiction have statutes in place that allow health departments to share clients' care status with providers?
- ❑ Does your organization have funding sources (e.g., Ryan White HIV/AIDS Program [RWHAP] Part C funding) to support clinic-based and surveillance-informed activities?

Setting the Stage

According to the U.S. Centers for Disease Control and Prevention (CDC), there is an estimated 1.2 million people with HIV in the United States.[5] During 2018, approximately 75.7 percent of people with HIV received HIV medical care, 57.9 percent were retained in care, and 64.7 percent were virally suppressed.[6] People with HIV who receive ongoing, regularly scheduled care are more likely to have significantly lower viral loads, higher CD4 cell counts, reduced morbidity and mortality, and improved overall health than those who missed even one medical visit over a two-year period.[7] Receipt of medical care is defined as a client taking one or more tests [CD4 or viral load] in the measurement year. Although significant strides have been made in ensuring that people with HIV effectively progress through the HIV care continuum, these figures demonstrate that retention continues to be a critical issue. Improving client engagement and re-engagement in care is a national priority with targeted retention measures established by the HIV National Strategic Plan (see Additional Resources Box), HRSA, and the Ending the HIV Epidemic (EHE) initiative, among others.

The Madison Clinic is the largest HIV specialty clinic in the northwestern United States, providing care to approximately 2,800 people. In 2012, when the Madison Clinic conducted the CBSI intervention, 7,104 King County residents were documented as having HIV.[8] At that time, most residents with HIV were men (89 percent), men who have sex with men (69 percent), between ages 25 and 39 years (59 percent), and U.S.-born and white (62 percent). People with HIV who are U.S.-born and Black were and continue to be a relatively small part of the HIV epidemic in King County. However, among foreign-born people with HIV in King County, 39 percent were Black, and 34 percent were Hispanic in 2012. Among all people diagnosed with HIV in King County, 75 percent had some laboratory evidence of medical care.[8] The CBSI intervention allowed the clinic to link people with HIV to care, taking into consideration these epidemiological trends.

In 2010, before implementing the intervention, the developers conducted a mix of qualitative interviews with clients, staff, and providers. This series of interviews included 20 people with HIV who were randomly selected from HIV surveillance records. Some providers were eager to get clients back into the clinic and to develop a routine way to identify those who were falling out of care. Other providers were concerned about information security and client perceptions of surveillance systems. Conversely, clients almost uniformly considered the intervention to be promising. More specifically, clients expressed an interest in receiving more linkage assistance, such as consistent follow-up and being connected to comprehensive services and quality care.[9]

Epidemiological trends and findings from qualitative interviews with clients and providers indicated a need for the CBSI intervention in the Seattle-King County area. Findings from the qualitative interviews led the Madison Clinic to design the CBSI intervention to incorporate an HIV-positive peer component and to ensure coordination with HIV care providers in relinking clients to care. Although the intervention is not currently sustained as originally designed, it continues to be integral to linkage and retention efforts both at the Madison Clinic and in King County. By scaling up surveillance activities and conducting comprehensive investigations of people identified as out of care, the intervention successfully relinked people to care and addressed the needs of populations that have been historically marginalized and have limited access to resources. Over time, intervention developers adapted the CBSI intervention to create the Moderate assistance (Mod) and Maximum assistance (Max) clinics, which provide differentiated models of care for clients depending on the level of support needed to re-engage and stay in care.

Description of the Intervention Model

The CBSI intervention aims to link people to a system of HIV medical care in which they can stay engaged and to improve the accuracy of the client engagement data available to clinics. The intervention aims to successfully re-engage and retain people with HIV who have not been linked to or engaged in HIV medical care.

The keys to success are to investigate each eligible case, systematically attempt to contact each client, and assist clients with scheduling and completing medical visits. This work can be done in coordination with case managers and medical providers. Upon re-engagement, staff can support clients to stay engaged in care by continuing to address health and social needs (e.g., referral to support services, connection to ancillary services, counseling, health systems navigation, transportation).

The CBSI intervention is implemented in five steps:

1. Determine Organizational Resources and Engage Stakeholders

a. *Assess Staff Resources and Gaps:* Identify staff who currently work as linkage specialists, HIV outreach workers, or in other similar roles. Also, identify staff who can navigate the EHR system and manage databases containing client-level data. Decide if existing staff can be cross-trained to fulfill these roles or if additional staff are needed. Having at least one staff person who is dedicated to the intervention is key to ensuring its success.

b. *Explore Existing or New Data Infrastructure:* A data system, such as an EHR system, is necessary to identify clients who are out of care and extract relevant information about them. The data system should allow designated staff to extract a list of clients who are out of care to provide to the health department's HIV Surveillance Program. Data in this list should match entries on the Enhanced HIV/AIDS Reporting System (eHARS), a browser-based, CDC-developed application that assists health departments with reporting, data management, analysis, and transfer of data to the CDC.[10]

c. *Engage Stakeholders:* Meet with the local or state health department to discuss conducting the intervention, identify potential security issues, develop a data-sharing agreement, create a data-sharing protocol, determine a data-transfer method, and identify data to be included in the list of out-of-care clients as well as formatting requirements for the list. During initial conversations with health departments, you should inquire about statute(s) that prevent or facilitate data sharing between health departments and providers.

   It is also crucial to integrate clients' perspectives into these processes. Before beginning linkage and retention activities, staff should brainstorm ways to meaningfully engage people with HIV and discuss the intervention with them. Gather community input through activities such as focus groups, one-on-one conversations, and meetings with community advisory boards.

"Surveillance work has been traditionally siloed, kept in a separate locked database, and separate locked room, with limited access to it. People who are out of care may also be exposed to other STDs such as gonorrhea and chlamydia. They may be hitting the system in many different ways. If these systems can't talk to each other, it's a big, huge barrier."

– PUBLIC HEALTH-SEATTLE & KING COUNTY EPIDEMIOLOGIST

2. Identify Eligible Clients

a. *Generate a Local Out-of-Care Definition:* To develop a relevant and actionable list of people with HIV who are out of care, you should first develop a local definition of *out of care*. Consider modifying the definition used at the Madison Clinic: Clients are considered to be out of care and eligible for the relinkage intervention if they (1) are living with HIV; (2) have not died or transferred care; (3) completed at least one visit in the past 1,000 days; and (4) have not completed a visit for at least 12 months prior to the extraction date. While definitions of out of care are based on national HIV care quality measures developed by agencies such as the CDC, there are opportunities to adapt them to reflect the local context.

   Suggested modifications of this definition include:

   - Extending the time since the last visit from at least 12 months to at least 15 months to exclude clients who are in care but come in only every 13 to 14 months,
   - Focusing on viral suppression at the last medical visit rather than on the absence of recent lab results, and
   - Adding three or more no-shows in the last year to the list of criteria.

b. *Create a Client List:* Search the data system for clients who meet the local out-of-care definition criteria. Create the list by performing queries on the EHR system or analyzing client-level information from a database used at the care site. Extract the list of clients who are out of care and ensure that the data are organized in an accessible format. Clients referred to the linkage specialist may also be included on this list. Exclude clients for whom evidence shows that they have moved, engaged in care elsewhere, relinked themselves to care, or self-reported being back in care when staff contacted them. This will facilitate generating an accurate list of out-of-care clients and, later, evaluate the intervention's true impact.

"There were a number of other ways that people would find their way onto my workload. I would take referrals from providers, social workers, and patient care coordinators who conducted intakes with clients. Sometimes, these were clients who were newly referred to care who then never showed up for their first appointment. I also got a list of people who were in-patient at Harborview Hospital with HIV or who had a positive HIV test. I would take a quick look through that list every day and see if there was anybody who was a patient at our clinic and hadn't been in, in a while."

– MADISON CLINIC OUTREACH WORKER

3. Share Data with the Health Department for Matching with HIV Surveillance Registry

a. *Create Data Use Agreement*: Before sharing data, it may be necessary to establish a data use agreement between the health department and the organization. The data shared are considered protected health information (PHI) and can thus be bound by HIPPA privacy rules. Discuss the protocol that the organization will need to follow to access and use data.

b. *Securely Share Data:* Establish a preferred method for securely transmitting client-level data between your organization and the health department. Examples of secure methods include a secure file transfer protocol (SFTP) or other web-based disease surveillance or case management system that facilitates data sharing and coordination. Once a data-sharing mechanism is in place, your clinic sends the list of clients who meet the local out-of-care criteria to the local or state health department. The health department then matches the list with its HIV surveillance data, using eHARS or another database that stores HIV surveillance data. The health department identifies clients who have transferred to HIV care elsewhere, have moved away, are deceased, or are incarcerated, and designates these cases as "outreach not indicated." The linkage specialist is not required to investigate these cases or attempt further outreach. This data-sharing process is beneficial for both your clinic and the health department.

   Jurisdictional statutes dictate whether laboratories must report CD4 and viral load results to the health department. Laboratory reports may include the names of medical providers or medical practices ordering laboratory tests and can be used to identify clients who may have transferred their care to other clinics. Surveillance staff match HIV case records with death records annually. Some health departments individually investigate all cases for which no CD4 or viral loads have been reported for a selected period of time (e.g., within one measurement year when using the CDC out-of-care definition).

   After the first list of out-of-care clients has been matched with health department surveillance data, the frequency at which lists will be created and matched with health department data will be determined. The frequency may be:

   - Clinic-driven (i.e., the clinic determines how frequently it will request updated lists from the health department),
   - Based on staff capacity, or
   - Determined during initial conversations with the health department or after clinic staff begins investigating the initial list of out-of-care clients.

"The key is to get just more than those matching elements. You want more than name, date of birth, and sex assigned at birth. As a surveillance program, you want more data. For example, the date the client was last seen in your clinic, current gender, their exposure risk—health departments are filling out their surveillance data at the same time."

– PUBLIC HEALTH-SEATTLE & KING COUNTY EPIDEMIOLOGIST

4. Review the List Received from the Health Department

a. *Prioritize the Client List:* Before reaching out to clients, explore how to prioritize your client list systematically. For example, you may prioritize the list by determining how many full-time equivalents (FTEs) are needed to re-engage a certain number of people with HIV into care. (One FTE is defined as the number of hours worked by one full-time employee. Two half-time employees are equivalent to one FTE).

   Alternatively, you may prioritize the list based on organizational priorities or local criteria (e.g., by selecting clients who were not virally suppressed at their last visit, focusing on priority populations, or clients in a particular ZIP code). For example, if one of your goals is to improve viral suppression for Black clients, consider prioritizing outreach to these communities and making a concerted effort to re-engage them in care. It is helpful to have a dedicated and practical client list to increase the efficiency and effectiveness of linkage-to-care efforts.

   The *Prioritizing an Out of HIV Medical Care List* tool offers a method of prioritizing the list of clients who are out of care and determining the level of staff effort required to re-engage them. (See Additional Resources Box).

5. Re-engage Clients in Care

a. *Designate Linkage Specialists:* Use the size of the population that appears to need relinkage assistance to determine the number of linkage specialists needed to implement the intervention. Before hiring new staff, ask current staff to determine the amount of time required for intervention activities and the success rate of these activities.

b. *Establish a Communication Protocol:* Before beginning outreach efforts, outline concrete steps for contacting clients. Depending on clinic policies, communication methods may include phone calls, text messages, emails, and corresponding with external providers or organizations. The protocol used by interventionists at the Madison Clinic includes the following steps, in priority order:

   1. Three attempts at phone contact using the phone numbers on record,
   2. One attempt by email if an email address is available,
   3. One attempt to contact outside agencies for which a *Release of Information Form* is on file in the medical or case management records, and
   4. One attempt to call the designated emergency contact.

"I would also look and see if clients had any active 'Releases of Information' for other service agencies or anything with their social worker. I talked with nurses and social workers, and I visited clients who showed up in-patient if they got admitted into the hospital. We introduce ourselves, try to get to know them a little bit, and remind them that we would really like them to come into the clinic, that we cared about them, and that we wanted to make that as easy as possible."

– MADISON CLINIC OUTREACH WORKER

If the linkage specialist communicates with someone other than the client (e.g., a family member, friend), they should state their name and request assistance in contacting the client. The linkage specialist does not discuss the reason for the call or identify either the clinic or the hospital, or other organization in which the clinic is located.

c. *Relink and Retain Clients:* To inform successful service delivery, first develop working definitions for relinkage and retention, and then create and execute a plan to relink clients to care. The Madison clinic defined *relinkage* as the completion of at least one visit within 12 months and *retention* as the completion of two or more visits that are three or more months apart. This care measure is consistent with HRSA/HAB HIV performance measures. The Madison Clinic used retention as an outcome measure for evaluating the original intervention. However, the linkage specialist did not use retention as a measure to assess their activities during the implementation of the intervention.

d. *Steps in a Relinkage Plan:*

    1. *Inquire About the Client's Absence from Care and Gauge Their Interest in Re-engagement:* When a linkage specialist contacts a client, they should state their name, affiliation, and reason for the call. The linkage specialist then asks whether the client has indeed been absent from HIV medical care for a year or more. If the client has been out of care, the linkage specialist states their interest in helping the client relink to care.

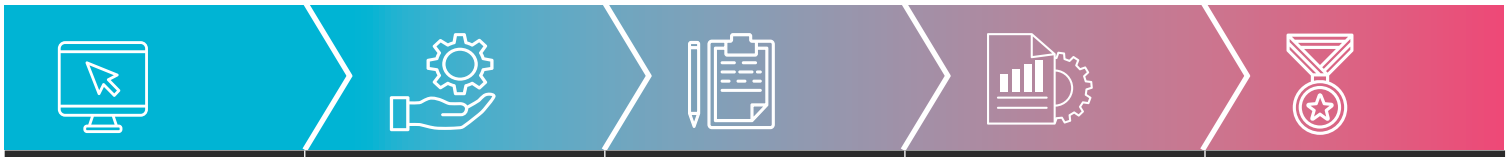
    2. *Connect with Appropriate Clinical Staff to Schedule Follow-Up Appointments for Clients:* The linkage specialist works with the client, their case manager, medical provider, and clinic triage and clerical

staff to schedule a follow-up appointment. Because the linkage specialist serves as the direct link between the client and providers, it is helpful for them to contact the providers directly to schedule client appointments. Providers may then prioritize the linkage specialist's clients and be willing to overbook to fit them in or give them a slot that had been blocked off. Throughout this process, it can also be helpful for the linkage specialist to be in contact with disease intervention specialists (DIS) at the health department to provide relevant updates and address barriers to scheduling follow-up appointments for clients.

    3. *Conduct Appointment Reminders and Follow-Up:* The linkage specialist reminds clients of appointments as needed and follows up with clients to confirm that they have attended their appointments.

Logic Model

Logic models are effective tools to assist in planning, implementing, and managing an intervention. Below is a logic model highlighting the resources, activities, outputs, outcomes, and impact of the Clinic-Based Surveillance-Informed intervention referenced throughout this guide.



Resources	Activities	Outputs	Outcomes	Impact
• RWHAP or a funding source that supports surveillance activities • Linkage specialist and data manager • Relationships and collaborations with local or state health departments, medical staff, and client population • Data system (e.g., EHR system)	• Engage stakeholders and obtain community input • Search data system and identify clients who are out of care • Securely transfer data to health department • Match data • Prioritize client list • Conduct client outreach • Schedule client appointments • Follow-up with client after appointment completion	• Data-sharing process • Better understanding of the true out-of-care population • Relinkage and retention of people with HIV who have been out of care	Among people with HIV: • Relinkage to services that meet their health and social needs • Decreased time to HIV care re-engagement • Improvement in HIV and overall health outcomes Within the organization implementing the intervention: • Enhanced relinkage activities • Enhanced infrastructure to inform outreach to people with HIV • Demonstrated investment in the client population and HIV relinkage efforts • Strengthened relationships with health department(s) and community stakeholders	• Reduced HIV morbidity and mortality • Reduced HIV transmission • Advanced health equity for people with HIV

Your Planned Work

Your Intended Results

Staffing Requirements & Considerations

Staff Capacity

The following staff implemented the CBSI intervention at the Madison Clinic:

- *Data Manager:* The data manager's responsibilities include:
  - Identifying clients in the clinic EHR system who meet the local out-of-care definition;
  - Consolidating and coordinating the transfer of client data to public health HIV surveillance epidemiologists for data matching; and
  - Sharing the updated list of out-of-care clients that is received from the health department with the linkage specialist.
- *Linkage Specialist*: The linkage specialist investigates each eligible case, attempts to contact clients, and assists clients with scheduling and completing medical visits. The linkage specialist also works across teams with case managers, medical providers, and clinic triage and clerical staff to relink and retain clients who are out of care. The linkage specialist's responsibilities include:
  - Searching the EHR for information about each client's status and attempting to contact each client;
  - Scheduling a follow-up appointment, reminding clients of appointments as needed, and following up to determine whether the relinkage appointment was completed; and
  - Following clients, until they have completed an appointment, declined to return to the clinic for care, or are referred to the health department for further outreach by DIS and other outreach workers. The linkage specialist's contact with clients may be primarily by phone. When needed, the linkage specialist may offer to meet clients outside of the clinic, assist with transportation, or, in the case of hospitalized clients, visit clients in the in-patient unit. The linkage specialist also attends training sessions and periodic meetings related to HIV care engagement and ART use.

Staff Characteristics

Core competencies of all staff should include:

- A personable demeanor and flexibility in identifying individual client needs;
- Ability to systematically apply definitions, track data, and conduct investigations;
- Experience with client navigation or prior work at community-based HIV organizations;
- Familiarity with the clinic and its dynamics;
- Fluency in Spanish and English (or other languages based on local needs);
- Demonstrated ability to work with diverse client populations affected by HIV, including persons with mental and behavioral health conditions;
- Experience working with clients and navigating health systems; and
- A client-centered orientation.

Replication Tips for Intervention Procedures and Client Engagement

Successful replication of the CBSI intervention involves building and sustaining relationships, establishing clear surveillance and linkage processes, and researching statutes.

- *Build and Sustain Relationships:* Data-informed interventions involve various stakeholders, including clinic and health department staff. Client-level data sharing can advance both local and national efforts to improve the health outcomes of people with HIV who are out of care. Systems and institutions may work in "silos" for various reasons (e.g., funding restrictions, statutes governing data sharing). By fostering partnerships between health departments and HIV clinics, the CBSI intervention and similar data-informed models can overcome "siloing" and increase the impact of relinkage and retention efforts.

  To create and sustain synergy between the health department and your clinic, consider:

  - Researching how your local or state health department has historically worked with your clinic or with similar clinics in your area;
  - Connecting with health department staff to ask about current linkage-to-care efforts and health department staff's willingness to replicate this intervention; and
  - Communicating how data-informed efforts, such as a Data to Care program, will benefit the health department's HIV care and prevention efforts, as well as your clinic's need for this collaboration at your clinic. A Data to Care program is a public health strategy that uses HIV surveillance data and other data sources to identify people with HIV who are not in care, link them to appropriate medical and social services, and ultimately support the HIV care continuum.
- *Establish Clear Surveillance and Linkage Processes:* The CBSI intervention has two specific components focusing on (1) surveillance and (2) relinkage. Clinics can effectively plan how to identify and relink clients who are out of care by developing actionable steps. To create these steps, clinic staff should have internal conversations about organizational goals and about operationalizing a data-informed framework that considers their existing infrastructure, funding streams, and resources.

- *Research Statutes.* Data privacy remains a key priority for HIV surveillance systems. As a result, local statutes that govern client-level data sharing between health departments and clinics may differ. Jurisdictions such as Washington State allowed HIV data sharing between health departments and medical care providers, which helped facilitate this intervention. Before implementing the intervention, explore statutes in the host jurisdiction and assess whether the law permits the local or state health department to share client-level HIV data to promote and enhance linkage and retention for people with HIV.

Securing Buy-In

This intervention's success is contingent on its acceptability to clients, medical care providers, and health departments. It is important to incorporate the perspectives of people with HIV who may receive relinkage services, staff engaged in service delivery, and health department surveillance teams. Assessing clients' and staff's perspectives about data-based surveillance interventions can also help further inform activities and build community support.

For these reasons, the Madison Clinic conducted qualitative interviews with clients and providers in 2010. The clinic interviewed 20 people who had HIV RNA levels >10,000 copies/mL in 2009-2010 and were randomly selected from HIV surveillance data. The clinic also interviewed 15 medical care providers.[9]

The interviews revealed that clients almost uniformly considered the intervention to be promising. More specifically, clients expressed an interest in receiving more linkage assistance, such as consistent follow-up and being connected to comprehensive services and quality care.[9] Some providers were eager to get clients back into the clinic and to develop a routine for identifying clients who were at risk of falling out of care. Other providers were concerned about information security and client perceptions of health surveillance systems.

Results from these interviews were presented to the Madison Clinic's planning council and community advisory board. These presentations focused on:

- How clinic-based and surveillance-informed activities would work;
- Staff roles; and
- The current standard of care (e.g., the CD4 count threshold that would warrant staff reaching out to clients).

Conducting assessments with clients and medical care providers may enable clinics to witness how affected communities and medical care providers accept the intervention. To promote engagement in HIV care, clinics should conduct assessments with a subset of the client population to gather their perspectives on health department-initiated contact.

Relationships with clinic leadership and leadership support are also integral to the success of the intervention. These relationships are especially useful if challenges arise that a data manager or linkage specialist cannot address. Leaders can vouch for the project as an important initiative that deserves support. Additionally, having strong relationships with clinic staff allows the linkage specialist to cross-collaborate and gather information about clients who may be on a provider's panel.

When staff connect with external social service organizations that offer wraparound services, clients receive several benefits. These connections allow staff to leverage existing relationships with providers and to tailor referrals based on the client's life experiences and needs.

Overcoming Implementation Challenges

The CBSI intervention is multifaceted, and its implementation can be complex. Anticipated challenges, as well as possible solutions, are noted below.

- **Lack of Administrative Support:** Seek ways to sustain linkage activities. If activities are not supported and sustained, they may cease to be an organizational priority due to the amount of time and effort required to relink clients into care.
- **Barriers to Care:** To address interconnected social determinants of health that can result in barriers to care, organizations should consider offering gift cards and connecting with local service agencies.
- **Data-Sharing Challenges:** Gathering information about current clinic policies, as well as lessons learned from other interventions, can improve the data-sharing process.

- **Lack of Referrals:** Educate doctors about the intervention to facilitate referrals.
- **Data Management:** Use a database that allows staff to gather, extract, and analyze client-level data.
- **Staff Burnout:** If the linkage specialist is unable to successfully link clients to care despite dedicated efforts, they may feel discouraged and disappointed. Find ways to increase staff morale and highlight their work to connect people with HIV to care. Conduct consistent check-ins with staff to address barriers in real-time and prevent burnout.
- **Undefined Staff Roles:** Be clear on roles and responsibilities and how these may sometimes overlap. For example, note who communicates with the health department if a client cannot be reached and who will manage and update the list of out-of-care clients.
- **Delayed Data Sharing:** Ensure that data extraction and surveillance data matching are conducted in a timely manner. By improving the timeliness of data sharing, organizations can ensure that, for example, they have the most up-to-date client information, which can facilitate prompt relinkage efforts.[11]
- **Long-Term Goals:** While completion of a medical visit is considered a marker for relinkage, it is beneficial to focus on sustained engagement in care. The linkage specialist can work with medical providers to collect information about barriers to sustained engagement in care to address those factors with clients.
- **Limited Engagement:** Matching and outreach activities may result in slight improvements in engagement and retention outcomes among the client population. However, it is important to recognize the value of engaging any number of people with HIV and to not solely rely on absolute numbers.

Adaptation of the Original Intervention

In response to Seattle-King County's commitment to reach the United Nation's HIV 90-90-90 goals[12] and the limited impact that two HIV care re-engagement interventions—including the CBSI intervention—had on achieving viral suppression, the CBSI intervention developers explored alternative service delivery models. They also determined that achieving additional improvements in viral suppression required a more significant focus on individual and structural-level changes.[12] They, therefore, used the CBSI intervention as a catalyst for the development of differentiated models of care at the Madison Clinic.

The clinic created the Moderate assistance (Mod) and Maximum assistance (Max) clinics to address barriers to HIV care caused by health care systems factors (e.g., appointment availability, need for advanced scheduling) and psychosocial barriers (e.g., substance use, unstable housing, mental and behavioral health disorders). Clients who are unsuccessfully relinked to care through clinic outreach efforts are referred to one of these clinics.

The Mod Clinic follows a flexible, walk-in model. A percentage of clients are seen in a triaged fashion. Clients can drop in to the Mod Clinic for acute needs and are offered expanded levels of care. Clients who achieve viral suppression but miss ongoing appointments can choose to visit the Mod Clinic, which offers a walk-in option for ART prescriptions.

The Max Clinic follows a high-intensity, low-threshold, incentivized care model to address the needs of clients with complex medical and social needs. It serves the subset of clients who:

- Were not virally suppressed at the time of their last viral load test,
- Are no longer taking ART, or
- Are not engaged in care after low-intensity outreach and support were offered.[13]

Table 2 — Adaptation Table

Original Model	Adaptation	Rationale
Clinical-Based Surveillance-Informed Uniform Model of Care	**Differentiated Models of Care**	Re-engagement services did not successfully reach people with unstable housing, substance use disorders, and psychiatric disorders. At the time of enrollment, most Max Clinic clients were actively using drugs or harmful levels of alcohol (86 percent), had received a diagnosis of a psychiatric condition (71 percent), were unstably housed (65 percent), and had a history of incarceration (42 percent).

The Max and Mod clinics are novel interventions that aim to meet the health and social needs of people with HIV who are out of care. The clinics also aim to help clients achieve sustained engagement in care and viral suppression. Both clinics show the possibilities in the realm of HIV care and how comprehensive, tailored services can improve relinkage and overall health outcomes.

Table 3 — Components of the Max Clinic That Differ From the Standard-of-Care Clinic Approach

Low-barrier access	• Walk-in access to medical care 5 afternoons a week • Walk-in access to medical and nonmedical case management 5 days per week • Text message and direct phone access to case managers
High-intensity support	• Case managers provide care coordination, navigation, and support[a] • Medical case managers have a low case load (~50 patients) compared with standard of care (~150 patients)
Incentives	• Food vouchers worth $10 up to once weekly • Snacks available at each visit • No-cost bus passes to provide unrestricted transportation support • Cell phones[b] • Cash incentives for visits with blood draws[c] • Cash incentives for viral suppression[d] (HIV RNA < 200 copies/mL)

Intensified care coordination	• Case managers serve as primary contacts for patients, providers, and for coordination between Max Clinic and other agencies, including:
	  • Release planning team in King County jails
	  • Housing and mental health case management agencies
	  • Day program with medication adherence support
	  • Office-based opioid treatment nurse managers and methadone providers

Transitional care coordination	• Staff receive automated alerts when patients are seen in the emergency room or admitted to a hospital in the University of Washington Medicine system • Max Clinic staff work with inpatient medical teams to plan transition to outpatient care and day-of-discharge Max Clinic visit

[a] Public health disease intervention specialists who specialize in HIV care re-engagement.

[b] Patients received cell phones if needed only in the first 2 years of the intervention.

[c] During the period of this analysis: $50 up to once every 2 months; at the time of this report: $25 up to every 2 months.

[d] During the period of this analysis: $100 up to once every 2 months and a 1-time $100 bonus for the third consecutive suppressed viral load; at the time of this report: $50 up to once every 2 months.

Table 4 — Intervention Outcomes

Original Model[a]	Adaptation[b]

• 15 percent of clients relinked to care
• 20 percent of clients contacted by the linkage specialist
• 42 percent of clients relinked to care and virally suppressed (historical controls)
• 43 percent of clients relinked to care and virally suppressed (intervention cohort)
	• Pre-to-post viral suppression improved in both Max Clinic clients and standard-of-care control-group clients:
	  • Max Clinic clients: From 20 percent to 82 percent (P < .001)
	  • Historical controls: From 51 percent to 65 percent (P = .04)
	• Max Clinic clients were > 3 times as likely as controls to achieve viral suppression (after adjustment for differences in unstable housing, substance use, and psychiatric diagnoses)

[a] Bove, J. M., Golden, M. R., Dhanireddy, S., Harrington, R. D., & Dombrowski, J. C. (2015). Outcomes of a clinic-based surveillance-informed intervention to relink patients to HIV care. *Journal of Acquired Immune Deficiency Syndromes (1999), 70*(3), 262–268. https://doi.org/10.1097/QAI.0000000000000707

[b] Dombrowski, J. C., Galagan, S.R., Ramchandani, M., Dhanireddy, S., Harrington, R. D., Moore, A., Hara, K., Golden, M. R. (2019). HIV care for patients with complex needs: a controlled evaluation of a walk-in, incentivized care model. Open Forum Infectious Diseases, 6(7), July 2019, ofz294. https://doi.org/10.1093/ofid/ofz294

Note: Mod Clinic outcomes were not completely evaluated or published at the time this manual was developed.

Promoting Sustainability

To successfully sustain this intervention, project outcomes must be consistently monitored and evaluated. Surveillance data-based programs require significant resources. These efforts can be evaluated by focusing on the number of clients who are ultimately relinked to care. To do this, complete ongoing process and outcome evaluations that include documentation of the following:

- Numbers of cases closed out by the linkage specialist;
- Number of clients who are truly out of care;
- Estimated number of clients whom intervention staff think would have re-engaged in care without the intervention; and
- Number of clients linked to care as a result of the intervention.

By taking proactive steps to measure the success of relinkage efforts, your clinic can identify areas of improvement that can increase the number of clients linked to care and address any barriers to care. Examples of potential strategies for improvement include dedicating more time to exploring the in-patient list and focusing on clients who are no-shows for appointments. You can also gather feedback from linkage specialists, providers, staff, and directly from clients in various ways (e.g., group or individual check-ins, surveys). By creating a consistent and intentional feedback loop, you can ensure that outreach efforts are effective and that concerns are prioritized and addressed as they arise.

The Madison Clinic used retention, the completion of two or more visits that are three or more months apart, as an outcome measure during its evaluation study.

These evaluation approaches can help you explore innovative and data-informed strategies to adjust the intervention, increase its impact, demonstrate how the intervention is working, and emphasize to stakeholders the importance of clinic-health department collaboration.

SWOT Analysis

SWOT is an acronym for Strengths, Weaknesses, Opportunities, and Threats. A SWOT analysis is a structured planning method that can assess the viability of a project or intervention. By conducting a SWOT analysis before an intervention, organizations can proactively identify challenges before they occur and think through how to best leverage their organizational strengths and opportunities to improve future performance. A SWOT analysis of the CBSI intervention at the Madison Clinic identified the following:

STRENGTHS

The intervention will increase relinkage and retention outcomes for clients who are out of care by:

- Forming a centralized system that bridges surveillance and clinic data,
- Filling gaps in medical records that contribute to health inequities,
- Presenting the health department or the clinic staff as resources for clients who are out of care,
- Creating a manageable caseload based on staff resources,
- Establishing strong relationships between clinic and health department staff,
- Demonstrating value-added for the clinic as a result of having a staff member (i.e., the linkage specialist) who is specifically working to familiarize themselves with clients who were at least marginally engaged in care; and
- Facilitating the extraction of a client's medical record and assessment of recent visits.

WEAKNESSES

Agencies will find it challenging to implement the CBSI intervention without:

- Data systems in place to collect, extract, and transmit client-level data,
- Dedicated staff with backgrounds in HIV, linkage, and EHR data systems,
- Resources for staff to contact clients (e.g., cell phones, social media platforms),
- Meaningful engagement from clinic leadership and providers,
- Relationships and ongoing communication with local social service agencies,
- Monitoring and evaluation measures and processes,
- Local data-sharing statutes or agreements with local or state health departments, and
- Ability to promptly schedule an appointment for a client once contact is made.

OPPORTUNITIES

The CBSI intervention offers opportunities to:

- Match out-of-care client lists with surveillance data,
- Leverage the broader healthcare landscape if the clinic is connected to a hospital system (e.g., emergency health department, in-patient units),
- Request more data to fill potential gaps in demographic information, and
- Streamline linkage and retention services using one linkage specialist who is connected to the broader clinical team.

THREATS

Threats to the success of the CBSI intervention include:

- Difficulty securing funding to sustain data systems and services,
- Limited staff capacity due to competing priorities and insufficient FTEs,
- Poor staff retention due to burnout,
- Inability to address complex barriers to care due to interconnected social determinants of health,
- Lack of a centralized system that fosters engagement between different organizations, and
- Reallocation of funding to meet other pressing and emerging needs.

Conclusion

To curtail the HIV epidemic and improve health outcomes for people with HIV, the Madison Clinic implemented the CBSI intervention, allowing clinics and health departments to work collaboratively and intentionally to address linkage and retention gaps. By leveraging surveillance data to more efficiently and accurately identify clients who are out of care and developing comprehensive mechanisms to link people with HIV into care, clinics play a pivotal role in improving health outcomes for marginalized populations. Moreover, surveillance-informed activities contribute to national efforts to end the HIV epidemic. They also demonstrate how enhanced data infrastructure within public health care systems advances health equity for people with HIV. Further, in adapting the CBSI intervention's linkage efforts to reduce service delivery gaps for clients with complex barriers to care, clinic providers and staff have more holistically addressed clients' interconnected health and social needs.

The CBSI intervention showed modest but statistically significant effectiveness in linking people with HIV to care. Compared with the historical cohort, the time to relinkage was shorter among clients in the intervention cohort (adjusted hazard ratio = 1.7 [1.2–2.3]), and a greater proportion was relinked to care (15 percent vs. 10 percent).[1] The second iteration of the intervention, which included the creation of a Max clinic, a clinic designed to engage patients who have extensive barriers to HIV care, showed significant improvements in viral suppression outcomes pre-and post-intervention (from 20 percent to 82 percent; $P < .001$) compared with historical controls (51 percent to 65 percent; $P = .04$).[13]

Additional Resources

Ryan White HIV/AIDS Program Fact Sheet
hab.hrsa.gov/sites/default/files/hab/Publications/factsheets/program-factsheet-program-overview.pdf

Ryan White HIV/AIDS Program Services: Eligible Individuals & Allowable Uses of Funds Policy Clarification Notice 16-02
hab.hrsa.gov/sites/default/files/hab/program-grants-management/ServiceCategoryPCN_16-02Final.pdf

HIV National Strategic Plan
hiv.gov/federal-response/national-hiv-aids-strategy/national-hiv-aids-strategy-2021-2025

Cost Analysis Summary for the Clinic-Based Surveillance-Informed Intervention
CIEhealth.org/intervention/clinic-based-surveillance-informed/#resources
(Click on link under Cost Analysis section)

CIE Cost Analysis Calculator
CIEhealth.org/innovations

Prioritizing an Out of HIV Medical Care List
https://ciehealth.org/intervention/clinic-based-surveillance-informed/#resources
(Click on link under Resources section)

Endnotes

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CRESCENTCARE START INITIATIVE INTERVENTION

CIE Center for Innovation and Engagement

Background

The Health Resources and Services Administration's (HRSA's) Ryan White HIV/AIDS Program (RWHAP) provides a comprehensive system of HIV primary medical care, essential support services, and medications for low-income people with HIV. RWHAP funds grants to states, cities, counties, and local community-based organizations to provide care and treatment services to people with HIV to improve health outcomes and reduce HIV transmission.

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NASTAD Authors:

Milanes Morejon, Senior Manager, Health Equity, NASTAD
Rosy Galván, Senior Director, Health Equity, NASTAD
Alexander Perez, Dissemination Consultant

Intervention Development Team:

Jason Halperin, MD, MPH, HIV/ID Innovation Medical Leader
Katherine Conner, MPH, COVID-19 Vaccine Manager
Isolde Butler, MD, MPH, Physician Site Supervisor
Nicholas Van Sickels, MD, Chief Medical Officer

Contributors

Natalie Cramer, Deputy Executive Director, NASTAD
Tara Kovach, Impact Marketing + Communications
Sarah Cook-Raymond, Impact Marketing + Communications

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Stock photos. Posed by models.

Intervention Snapshot

	Priority Population	People with HIV who have been newly diagnosed
	Setting	Federally Qualified Health Centers, Health Clinics, and Community-Based Clinics
	Pilot and Trial Sites	CrescentCare in New Orleans, LA
	Model	The intervention consists of a rapid antiretroviral therapy (ART) initiation model that streamlines clinic enrollment; ensures immediate and sustained access to HIV treatment; expedites benefits enrollment; and facilitates linkage to support services to increase retention in care and viral suppression.
	RWHAP Ending the Epidemic (EHE) Opportunity	People with HIV who are newly diagnosed face challenges with being promptly linked to and retained in HIV care. Intervention outcomes illustrate that 97 percent of CCSI clients were linked within 72 hours of diagnosis, and 99.2 percent of clients who received rapid-ART achieved viral suppression. The median time from diagnosis to viral suppression was 29 days. Further, 92 percent of clients in the CCSI group were retained in care compared to 80 percent who received Health Resources Services Administration (HRSA)'s Ryan White HIV/AIDS Program's Part C Early Intervention Services (EIS) at the CrescentCare clinic (P<.05).
	Intervention Funding	National Institute of General Medical Sciences of the National Institutes of Health, which funds the Louisiana Clinical and Translational Science Center grant, and Ryan White HIV/AIDS Program Part C funds for EIS and other emergency assistance.
	Staffing	Staff positions in the intervention included a Patient Navigator (a staff person available 24 hours a day to link people who have been newly diagnosed with HIV into care), Eligibility Specialist, clinic staff (e.g., Medical Assistants), and referring agencies (e.g., HIV testing sites).
	Infrastructure Needed	A referral system; a streamlined intake process; a data system to capture client-level data; extended hours; same-day provider appointment availability; an expedited benefits enrollment process; and access to 30-day antiretroviral medication packs or ability to facilitate immediate fills with pharmacy services.

Intervention Overview & Replication Tips

Why This Intervention?

The CrescentCare Start Initiative (CCSI) is a rapid-start intervention that involves the prompt initiation of antiretroviral therapy (ART) for people with HIV who were newly diagnosed. This intervention was implemented at CrescentCare, a federally qualified health center (FQHC) in New Orleans, LA, in partnership with the New Orleans Office of Health Policy and funded by the Ryan White HIV/AIDS Program.[1] By starting clients on antiretroviral medication within 72 hours of diagnosis, providing comprehensive care navigation, and expediting clinic intake, the CCSI intervention increased linkage and retention in care for people with HIV. Clients newly diagnosed at existing CrescentCare-run HIV testing sites and sexually transmitted diseases (STD) clinics were linked to care by a navigator available 24 hours a day.[2] The navigator connected the client with a provider, where an initial dose of ARV medication was administered and 30 days of medication was provided.[2] After this visit, clients had HIV labs drawn and were referred for case management, behavioral health, and eligibility specialists where necessary.[2] Clients were then linked to an HIV specialist and retention staff for ongoing care within four weeks.[2] The CCSI intervention used viral suppression, defined as an HIV RNA less than 200 copies/mm^3, and time to suppression, defined as days from diagnosis to viral suppression as indicators of continued engagement in care.[3] Replicators also defined retention as two provider visits separated by 90 days within 12 months.[3]

Rapid antiretroviral therapy initiates antiretroviral medication as soon as possible after an HIV diagnosis, ideally on the day of diagnosis and, if not, on the day of entry to care (rapid ART studies often use a metric of ≤ 7 days from diagnosis).[1] The intervention demonstrated the effectiveness of immediate linkage and rapid ART to improve health outcomes for people with HIV. Of the 130 clients referred to the program between December 2016 and February 2018, 126 (97 percent) were linked within 72 hours of diagnosis.[1] One-hundred and twenty-five clients (99.2

percent) who received rapid ART achieved viral suppression, and the median time from diagnosis to viral suppression was 29 days.[1] Further, 116 clients (92 percent) were retained in care, and 113 clients (90 percent) had a viral load test within the past six months.[1]

Moreover, there were significant differences in retention in care and viral suppression between clients served by the intervention and clients who received Early Intervention Services (EIS) through the Ryan White HIV/AIDS Program.[3] The latter consisted of clients who either had no previous treatment or were out of care, linked to ART between 4 days to 25 years after HIV diagnosis over and received similar services such as same-day linkage and ART.[3] Any client who was referred to ART or contacted the clinic after 72 hours of an HIV diagnosis was placed in the EIS cohort. Once clients in the EIS cohort made the initial contact or accessed care, staff followed the same protocol for rapid ART provision, in which they would be provided with a 30-day pack of antiretroviral medication. 126 clients (92 percent) in the CCSI group were retained in care compared to 55 clients (80 percent) in the EIS group ($P<.05$).[3] Further, 113 clients (90 percent) in the CCSI group were virally suppressed compared to 53 clients (77 percent) in the EIS group.[3] The median CD4 count for clients in the intervention group was higher than that of clients in the EIS group (444 cells/mm^3 and 271 cells/mm^3; $P<.05$).[3] The favorable linkage and retention outcomes demonstrate that starting clients on ARV medication the day of diagnosis before labs are obtained is a safe, well-tolerated, and effective intervention.[3]

The CCSI intervention is intended for use in an FQHC or other clinical setting with the capacity to offer same-day services, extended and weekend hours, wrap-around services, and community-based clinics that can ensure continuous ART coverage.[3]

Intervention at a Glance

This section provides a breakdown of the CCSI intervention conducted at CrescentCare in New Orleans, LA, in collaboration with the New Orleans Department of Health, to help readers assess the steps required for replication. The intervention was funded through a grant by the National Institute of General Medical Sciences of the National Institutes of Health, which funds the Louisiana Clinical and Translational Science Center, and supplemented by RWHAP Part C funding for EIS services as well as other emergency assistance funds.

 Step 1	**Engage Stakeholders:** Coordinate meetings with clients, RWHAP Part A planning councils, key public health leaders, testing and rapid ART sites, clinic leadership, and staff to discuss psycho-social and structural barriers to care and create common goals to link people with HIV into care.
 Step 2	**Assess Resources:** Ensure that your organization has the resources to provide ART through various existing funding streams (e.g., organization funding sources, AIDS Drug Assistance Programs, Medicaid).
 Step 3	**Hire and Train Staff:** Designate a Patient Navigator and an Eligibility Specialist. Provide comprehensive training. Incorporate a rapid start initiation model into the organizational workflow. Facilitate recurring meetings to gather feedback on the intervention and ensure the intervention is being implemented with fidelity and benefitting clients.
 Step 4	**Enhance Infrastructure:** Determine a process to gather client consent. Collaborate with staff to ensure the clinical space is set up to best meet client needs. Assess whether pharmacy services can be provided in-house.
 Step 5	**Link Clients to Medical Care:** Upon referral, connect clients to patient or linkage coordinators and providers within 72 hours of an HIV diagnosis. Provide HIV medical education to clients. Gather contact information and consent.
 Step 6	**Deliver Medical Care:** Conduct a whole health assessment (e.g., perform vitals and brief assessment). Facilitate early and sustained access to antiretroviral medication by providing an initial dose and 30-day supply . Discuss risks associated with the medication.

 Step 7	**Assess Labs after ART Initiation:** Draw a comprehensive HIV lab panel. Document and inform clients of any contraindications found (e.g., liver function).
 Step 8	**Link Clients to Benefits and Social Services:** Expedite insurance or payer source enrollment. Assess interconnected and intersectional client needs. Help clients stay engaged in care by linking them to support services that address retention and adherence barriers.
 Step 9	**Follow-up and Retain Clients in Care:** Provide ongoing client navigation, HIV education, and coordination with retention teams.

Cost Analysis

The CCSI intervention was sustained by a National Institute of General Medical Sciences of the National Institutes of Health, which funds the Louisiana Clinical and Translational Science Center grant. The funding opportunity announcement number for this project was U54-GM104940.[4] The intervention was also supplemented by a HRSA Ryan White HIV/AIDS Program grant RWHAP. The federal program supports direct care and treatment services, and Part C provides health care and support services in outpatient settings for people with HIV. HRSA's RWHAP Fact Sheet provides more context on the different parts. Additionally, the RWHAP's Policy Clarification Notice 16-02 outlines details on allowable costs.

A more detailed cost analysis of the CCSI intervention was not available when this guide was developed. However, you can use the CIE Cost Analysis Calculator to create an estimate of the cost of implementing the intervention at your organization. (See Additional Resources Box).

Resources Assessment Checklist

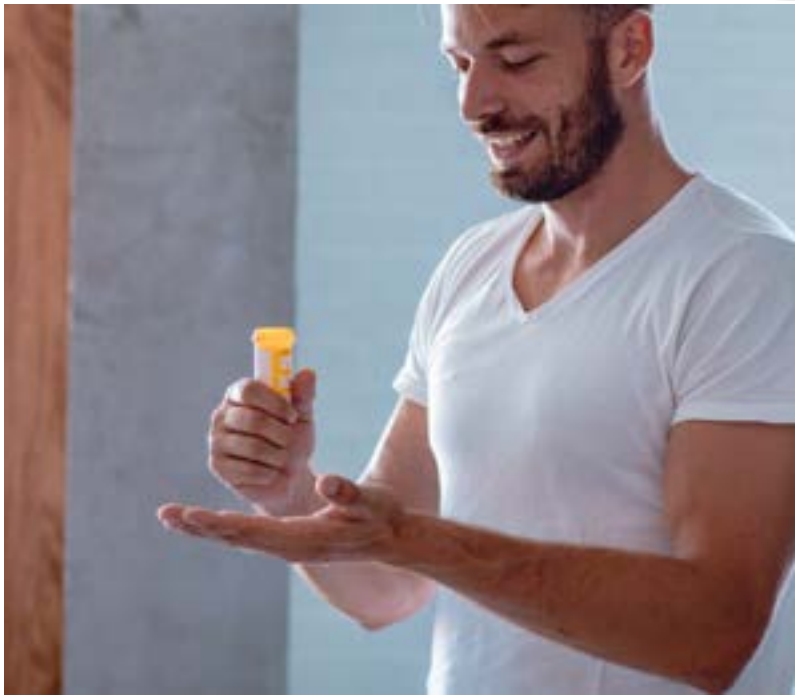
Before implementing the CCSI intervention, your organization should go through the following Resource Assessment (or Readiness) Checklist to assess the organization's capability to do this work. If you do not have these components in place, you are encouraged to develop the capacity to conduct this intervention successfully. Questions to consider include the following:

- ❑ Has your organization secured buy-in from people with HIV, clinic leadership and staff, testing or other wellness sites, and other key public health leaders?
- ❑ Do staff understand HIV trends and interconnected social determinants of health that impact health outcomes in your community?
- ❑ Are staff willing to work with replicators on planning and implementing the intervention?
- ❑ Does your organization have patient or linkage navigators who can link clients to care and providers who deliver specialized HIV services?
- ❑ Does your organization have flexible scheduling options (e.g., weekend and evening hours)?
- ❑ Does your organization have the resources to have a dedicated, full-time navigator?
- ❑ Does your organization have a standard operating procedure (SOP) or medical checklist to ensure non-HIV care specialists can deliver a consistent model of care?
- ❑ Does your organization have the capacity to provide antiretroviral medication within 72 hours of an HIV diagnosis and beyond initiation (e.g., provide a 30-day pack and refills, serve clients outside of traditional operating hours)?
- ❑ Can your organization establish a pathway for guaranteed access to ART through health care coverage or RWHAP services?
- ❑ Can your organizational processes facilitate access to medical and support services (e.g., behavioral and mental health services, housing, transportation, and legal support)?
- ❑ Does your organization have staff who can dedicate time and effort to ensuring clients are re-engaged in care (e.g., providing ongoing HIV education following up with clients after visits)?

Setting the Stage

According to the U.S. Centers for Disease Control and Prevention (CDC), there are an estimated 1.2 million people with HIV in the United States.[4] The CrescentCare Start Initiative was implemented in 2016 and intervention developers evaluated data gathered through 2018. Approximately 75.7 percent of people with HIV received HIV medical care, 57.9 percent were retained in care, and 64.7 percent were virally suppressed.[5] People with HIV who receive ongoing, regularly scheduled care are more likely to have significantly lower viral loads, higher CD4 cell counts, reduced morbidity and mortality, and improved overall health than those who missed even one medical visit over a two-year period.[6] Receipt of medical care is defined as a client taking one or more tests [CD4 or viral load] in the measurement year. Although significant strides have been made to ensure that people with HIV effectively progress through the HIV care continuum, these figures demonstrate that retention remains a critical issue. Improving client engagement and re-engagement in care is a national priority with tailored retention measures established by the National HIV/AIDS Strategy (see Additional Resources Box), HRSA, and the Ending the HIV Epidemic in the U.S. (EHE) initiative, among others.

CrescentCare is a community health center located in New Orleans, Louisiana, which aims to provide quality, person-centered healthcare, and support services.[7] The southern region of the U.S. has been disproportionately impacted by the HIV epidemic, and innovative models of care are integral to prevention and care efforts. In 2018, 51 percent (N=19,396) of new HIV diagnoses were in the South.[8] Among people diagnosed with HIV in the South during the same period, 52 percent were Black or African American.[4] In 2018, there were 980 new HIV diagnoses in Louisiana, of which 28 percent (N=279) occurred in New Orleans and 22 percent (N=216) in Baton Rouge. New Orleans also ranked sixth (24.6 per 100,000, N=313) in HIV diagnosis rates among the large metropolitan areas in the nation during this period. Seventy-four percent (N=233) of people newly diagnosed were assigned male at birth,



23 percent (N=71) were assigned female at birth, and 3.2 percent (N=10) were transgender women.

Further, 67 percent (N=211) were Black or African American. Among this population, 24 percent (N=77) were between the ages 13 to 24 years and 37 percent (N=116) were between the ages 25 to 34 years.[9] Among people newly diagnosed, 78.9 percent were linked to care.[10] Among all people with HIV in LA in 2018, 78 percent received care, 67 percent were virally suppressed.[10] These statistics highlight HIV health inequities and the need to invest in, develop, and sustain programs that remove barriers to HIV care. Rapid ART is an example of an approach that can work to address these issues.

While there have been concerns about rapid ART, including ART toxicities and lack of a medication payer source, studies have shown that rapid ART can significantly improve the health outcomes of people with HIV, reduce transmission rates, improve linkage to care, and reduce time to viral suppression.[1] Moreover, studies have consistently shown the impact of rapid ART on long-term viral suppression among those who initiate rapid ART across RWHAP clinics, Federally Qualified Health Centers (FQHC), and health departments.[1]

The CrescentCare Start Initiative (CCSI) intervention ensures that everyone is offered rapid ART from the onset, thereby reducing potential prescribing biases and barriers to care, including for clients who have been historically marginalized.[1] This is evidenced by the demographic breakdown of clients enrolled in the CCSI intervention from December 2016 through February 2018.[3] Among the intervention population, 74.6 percent (N=94) were cisgender men, 64.3 percent (N=81) were Black or African American, 57.9 percent (N=73) were gay, bisexual or other men who have sex with men, and 27.8 percent (N=35) were under 25 years.[3] The CCSI intervention directly serves clients who have historically been impacted by the HIV epidemic, which is integral to implementing any rapid ART intervention and the acceleration of equitable efforts to end the HIV epidemic.

Description of the Intervention Model

The CCSI intervention aims to link people to antiretroviral therapy within 72 hours of an HIV diagnosis as a way of improving viral suppression rates and overall health outcomes. The intervention aims to successfully engage and retain people with HIV who were newly diagnosed in HIV medical care.

The keys to success for this intervention are to establish working relationships with clients, staff, and clinic sites and ensure early and sustained access to ART. This work can be done by connecting clients with accessible patient or linkage coordinators, prioritizing same-day clinic visits, and providing insurance navigation and support with other needs. Upon successful engagement in care, staff can support clients to remain in care by providing close follow-up, patient navigation as needed, and ongoing HIV education. The implementation of a rapid ART program involves intentional planning, coordination, teamwork, and funding.[1] The following information has been adapted from the Standard Operating Procedure (SOP) manual (See Additional Resources Box). The CCSI intervention is implemented in six steps:

1. Determine Organizational Resources and Engage Stakeholders

a. *Engage Stakeholders:* Facilitate conversations with leadership, clinicians, phlebotomists, and non-clinical staff (e.g., front desk and janitorial staff). Discuss the benefits of a rapid ART initiation model and address key concerns, including providing rapid ARV medications before labs. Present the model to HIV, sexually transmitted diseases, and sexually transmitted infections (STD/STI) testing sites, sexual wellness centers, and other relevant programs associated with the health center.

- Prepare relevant literature and information about the benefits of a rapid ART intervention. For many clinicians, prescribing ARV before intake laboratory results requires a significant shift in practice and may take time to adopt.1 Providing information upfront can help assuage any concerns that they may have.
- When discussing the need for the intervention, discuss psycho-social-structural barriers to care at the implementation site. Review current processes for linking people with HIV who have been newly diagnosed and how the intervention can address gaps and reduce time to viral suppression (e.g., determine the average amount of time it takes for clients to get on ARV medication from the moment they meet with a case manager).
- Leverage RWHAP Part A planning councils and center the perspectives of people with HIV and other key public health leaders. The intervention must also meet the needs of the client population and address key structural barriers to HIV care and retention. Identify champions at the organization who can connect with a wide range of stakeholders (e.g., have conversations with staff on how this will change their current workflow). Implementing a rapid ART initiation model will require a cultural shift as it will impact staff's responsibilities—discussing barriers and solutions upfront can help mitigate potential issues in the future.

b. *Assess Funding Sources:* Discuss existing and potential funding streams that can support a rapid ART intervention, such as leveraging RWHAP funds and enrolling clients in Medicaid or drug assistance programs. Client needs will vary depending on whether they are uninsured, underinsured, or privately insured, so it is important to have these conversations with the Finance team to determine consistent and sustainable funding streams and prevent ART disruptions for clients.
   - In the original intervention, every uninsured client or those with a high deductible received a 30-day ARV pack through RWHAP programming funds.[1] Clients who were insured by Medicaid were processed immediately. Replicators have shared that it may be challenging to cover the cost of starter packs in states without Medicaid expansion. However, some mechanisms can be leveraged to develop initial supplies of ARV, such as RWHAP "stopgap" medication funding and pharmaceutical patient assistance programs.[1] Programs can provide immediate access to medications for all recommended first-line ARV regimens until medication payer sources are firmly in place.[1]

c. *Identify and Train Key Staff:* Intervention success is dependent on a full-time Patient Navigator (PN) and an Eligibility Specialist (ES). Provide comprehensive training to the Patient Navigator and other providers to integrate pertinent client information into electronic medical records and provide clients with relevant information regarding their diagnosis and the ARV initiation processes. The ES will facilitate access to healthcare coverage enrollment and other support services. Additionally, identify a set of clinical providers (e.g., primary care providers and HIV specialists) and patient or linkage coordinators who will work with CCSI clients.
   - Facilitate recurring meetings to gather intervention feedback and ensure the intervention is being implemented with fidelity.
   - While the PN will support clients initially, clients should be connected to linkage and retention teams for ongoing care management.

d. *Explore and Enhance Existing Infrastructure:* Various systems need to be in place to implement the intervention, including a referral mechanism, an informed consent process, and

a data system. The implementation site should also determine how the physical space will facilitate linkage to care and rapid ART (e.g., availability of clinical space to assess clients, the flexibility of clinic hours).

- *Develop a Referral System:* Establish an appropriate referral method that fits organizational processes and can streamline referrals and services from external partners. CCSI intervention referrals came from various places, including the CrescentCare Sexual Health Center and Healthcare for the Homeless. Identify who will be the main points of contact at the implementation site and referring organizations.
- *Determine an Appropriate Process to Obtain Client Consent:* The PN can meet clients in an office space to have them fill out consent forms and avoid the waiting room.
- *Secure a Physical Space for Appointments:* Collaborate with staff to ensure the clinical space is set up to best meet clients' needs. Discuss whether patient rooms will be available during the weekends and how this will impact staff workflow, such as janitorial staff and others preparing the rooms for client visits.
- *Leverage Data Systems:* A data system, such as an Electronic Health Record (EHR) or Electronic Medical Record (EMR) system, is necessary to capture relevant client information and follow them through their course of care. After obtaining informed consent, the PN should enter all pertinent client information into the EMR or EHR. Identify additional information that should be captured (e.g., sexual orientation and gender identity, confirm insurance). Ensure the PN has access to all data systems to reduce the number of interactions clients will have with other staff during their visit.
- *Assess Pharmacy Services:* Determine whether pharmacy services can be provided in-house. Clients should be able to gain access to 30-day prescription refills in addition to their first dose of ARV medication.
- *Develop a Standard Operating Procedure (SOP) Manual:* This resource should outline all steps that PN, clinical and non-clinical providers, and ES should follow to link and retain clients in care. Gather input from key staff and ensure the process is also aligned with standard clinic protocols. Disseminate the manual across the agency. The manual should be a supplementary resource for provider training efforts and be reviewed and updated consistently (e.g., yearly).

2. Link Client to Medical Care

Once the implementation site receives referrals, the first component of the CCSI visit is linkage to medical care by the Patient Navigator or in-clinic for a medical visit. The intake process for the CCSI intervention should be streamlined for a focused HIV visit with a provider with prescribing privileges. This visit may take approximately 30-minutes.

a. *Communicate with the Referral Source:* Respond to referrals received from the main point of contact (e.g., the counselor from a testing site). A PN should be available 24 hours a day to coordinate linkages for people with new HIV diagnoses.

b. *Schedule an Appointment:* If the client is in the EHR or EMD system, the PN can schedule appointments with a clinical provider for labs and an Eligibility Counselor (EC). Optimize provider availability where possible. Otherwise, follow organizational protocols to register clients into the clinic. If provider appointments are limited, consult with providers about flexibility in scheduling or other options. The client may get a lab panel or see an Eligibility Specialist while waiting on the clinical provider to become available.

    - If the client is on-site upon HIV diagnosis, the PN can facilitate the intake process at that time. The PN can escort the client through registration, consent to treatment protocols, and gather medical insurance information. The PN can also stay with the client until they are linked to a clinical provider. It is important for clients to be informed about their diagnosis. The PN can utilize this time with the client to deliver

"HIV 101" medical education, which clinical providers can elaborate on during the visit.

- If the client receives their diagnosis while at a clinic visit, the PN might not need to be involved. In this case, the PN can be informed about the client, but they are not expected to attend the visit unless requested. The clinical provider seeing the client will facilitate access to rapid ART and schedule a same-day appointment with an Eligibility Specialist.

3. Deliver Medical Care

Visits with a physician or a nurse are an integral part of the CCSI intervention. This visit may take approximately 30-minutes.

a. *Complete Intake:* A nurse or other clinical staff person (e.g., Medical Assistant) should perform a limited intake with the client before their medical visit. During the intake, take vitals, perform a brief assessment, and confirm an HIV diagnosis. If you are unable to confirm the diagnosis, the PN or nurse can reach out to the referral source or perform a rapid HIV test. Document the results of the most recent HIV test in the EMR or EHR. If staff cannot confirm previous HIV test results and would like to capture this in the EMR or EHR, the nurse, medical assistant, or clinical provider can list "Unknown" for the Previous HIV Test. Primary care providers can commit to seeing clients for the initial visit, and an HIV specialist can be assigned to clients for ongoing management. In certain settings, the primary care provider can also serve as the HIV specialist depending on the organizational structure.

b. *Meet with Client:* After a brief intake, the client can meet with the clinical provider to link them to rapid ART. During the visit, assess ARV readiness and conduct a brief mental health assessment or check-in. Ensure HIV medical education is readily available to the client and dedicate time to providing this information (especially if they did not meet with a PN before the visit).

- Correspond with a behavioral health specialist, social worker, or another provider if needed. A case manager or social worker can meet with the client before completing the visit to address their psychological needs.

c. *Obtain Consent for Treatment:* If not previously obtained, get consent for treatment from the client. Discuss the low but possible risks associated with ARV medication. Further, share that they will be initiating ARV before genotype and safety-lab results.

- The medications referenced by CCSI intervention developers have been found to be safe and effective. However, if a client has severe pre-existing kidney disease, alternate choices for HIV treatment may be indicated by the provider. Additionally, the provider should choose a different regimen if a client is pregnant based on established guidelines. This can be confirmed after labs are performed.
- It is important to note that clients have full autonomy and agency. Thus, the client can decline therapy through shared decision-making at any point.

d. *Prescribe Medication:* Provide clients with a 30-day supply of medication or starter pack. Providers should confirm that ARV medication will be stocked on the clinic floor. Bottles should have pre-made labels affixed to them, allowing providers to write the name and date during the visit. Provide the client with the first dose during the visit and document the dispersal of medications in the log.

- In the original intervention, providers were encouraged to use tenofovir alafenamide/emtricitabine (TAF/FTC) + dolutegravir as the initial regimen due to the regimen's effectiveness, tolerability, empiric coverage of hepatitis, and approved use in clients with a creatine clearance greater than or equal to 30 mL/min.
- The recommended rapid ARV regimen for most clients are three combinations with tenofovir (TAF or TDF) plus emtricitabine (or lamivudine) plus an integrase inhibitor (bictegravir, dolutegravir, or boosted darunavir).[1]
- In some programs, immediate access to ARV medication is provided through 5-7-day medication starter packs to build a bridge until a payer source kicks in for a full supply of medications.[1]
- The process for prescribing medication to clients insured by Medicaid may differ based on the requirements needed to expedite ART for people who have been newly diagnosed. Establish the protocols that need to be followed to fill the prescription. This may require the nurse, physician, PN, or another staff person to alert the pharmacy of a newly diagnosed client insured by Medicaid. The main referring point of contact may need to complete and send a new enrollment sheet with demographics and insurance information on behalf of the client to the pharmacy. Upon receiving this information, the pharmacy should fill the new prescription immediately and aim to have it ready for the client within 15 minutes. The pharmacy should contact the provider or other staff person once the Rx is ready for pick-up. If you establish a similar protocol, designate a staff person to retrieve and sign the prescription on behalf of the client. If the client must pick up the medication, the PN can accompany them and facilitate this process.

e. *Complete Discharge:* After the client meets with the provider, the nurse or Medical Assistant can discharge the client. Schedule a follow-up appointment for the client with the HIV provider within four weeks and ensure future visits are longer in duration. During the discharge process, notify the Eligibility Specialist that the client has completed the appointment. After the visit, follow-up with the necessary staff person at the clinic (e.g., Medication Coordinator) to ensure a timely resupply of medication. This process may vary by implementation site. The PN can assist with all appointments through the second provider visit.

4. Perform Labs

This visit may take approximately 15-minutes.

a. *Get a Comprehensive HIV Lab Panel:* The phlebotomist should draw an HIV lab panel for new clients and include any other tests as needed (e.g., pregnancy tests and sexually transmitted disease screenings). Designate a provider who can review lab results after the visit. The provider should assess whether the client can stay on ARV based on the results (e.g., ensure the client's glomerular filtration rate is >30mL/min, which is the cut-off for

Descovy use). Labs should be received within 48 hours for review. Ensure an HIV specialist is available to review all client encounters regularly.

- If any laboratory contraindications to the ARV medication are found, clients should be called immediately, and this information should be documented in the EHR or EMR.
- Clients might not always have continuous access to phone services. If laboratory abnormalities are found, ensure clinical providers, case managers, and the Patient Navigator can contact them promptly to return to the clinic. Consider sending a generic text message to the client asking them to call or come into the clinic.

5. Link Client to Benefits and Social Services

This visit may take approximately 30-minutes, depending on client needs.

a. *Connect Client with an Eligibility Specialist (ES):* The visit with the ES can come immediately before or following the medical visit. If the client is unable to meet with the ES, prioritize a follow-up visit within seven days.

b. *Conduct Eligibility Visit:* The ES should perform a brief check-in with the client. For example, perform third-party payer screening and initiate the appropriate applications for Medicaid, marketplace, or HIV drug assistance programs. The ES or another staff person should also complete a RWHAP client eligibility documentation, which helps determine client eligibility for RWHAP services. This must be completed within 30 days of the provider visit and uploaded into the client's EMR.

c. *Connect Client with Social Service Staff:* The nurse, medical assistant or provider should schedule an intake visit with the Social Service team if no same-day appointments are available. This visit will be helpful for clients who could benefit from other support services (e.g., housing, SNAP). It is imperative to assess, and address interconnected and intersectional social determinants of health that can hinder access to and retention in care. Some organizations may not have a social service team and thus, staff should connect clients to the appropriate staff person or other agencies.

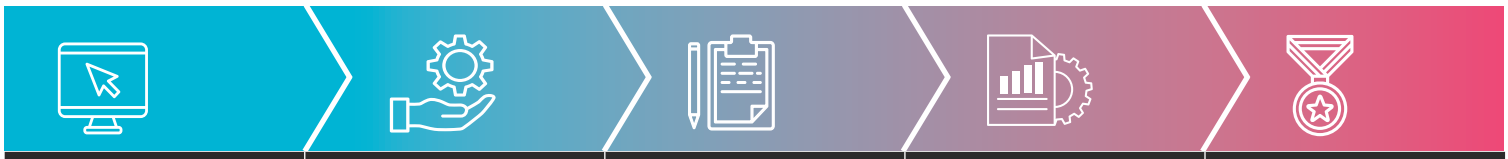
6. Follow-up with Client

a. *Check-in with Client After the Visit:* The PN should reach out to the client to assess how they are doing and answer any questions. Refer the client to the appropriate staff depending on the needs they express (e.g., to a clinical provider for medical concerns). Remind the client about their follow-up appointment and determine if they require any support to get there (e.g., transportation). If any changes are needed for the follow-up appointment, document and share them with the clinical provider. Coordinate with retention teams as needed to ensure that the client receives ongoing HIV education and patient navigation.

- The PN can remain with the client through care enrollment, medication pick-up (if applicable), and initial follow-up. Ensure that all enrollment paperwork is complete and the client has all the resources they need as they move forward.

Logic Model

Logic models are effective tools to assist in planning, implementing, and managing an intervention. Below is a logic model highlighting the resources, activities, outputs, outcomes, and impact of the CrescentCare Start Initiative (CCSI) intervention referenced throughout this guide.



Resources	Activities	Outputs	Outcomes	Impact
• RWHAP (e.g., AIDS Drug Assistance Program) funds or another funding source that supports rapid ART activities • Relationships and collaborations with referring agencies and departments such as testing sites, sexual wellness centers, and community-based organizations • Patient Navigator, Eligibility Specialist, Social Services staff, clinical providers (e.g., primary care and HIV specialists), and accessible patient or linkage coordinators • Data system (e.g., EHR) • Pharmacy services, and early and sustained access to ARV medication • Expedited healthcare coverage or payer source • Infrastructure that facilitates implementation (e.g., flexible clinic hours, clinical space for intakes)	• Engage stakeholders and obtain community input • Identify and train key staff • Conduct intake for the CCSI intervention, get consent and deliver ART education • Schedule an appointment with a clinical provider and assess ARV readiness (aim for same-day clinician visits) • Administer the first dose of ARV and provide a 30-day supply (prescribe medication as needed) • Schedule a follow-up appointment four weeks after the initial appointment • Perform and assess laboratory tests • Connect client with Eligibility Specialist and social services teams • Determine and address interconnected client needs	• A collaborative and streamlined process for engaging and treating people with HIV • Establishing rapid antiretroviral therapy as an initiation model. • A network of providers and organizations committed to serving clients who have been newly diagnosed	Among people with HIV: • Access to ARV medication within 72 hours of an HIV diagnosis • Linkage to services that meet health and social needs • Decreased time to HIV care engagement • Increased rates of long-term viral suppression • Improvement in HIV and overall health outcomes Within the organization implementing the intervention: • Increase in referrals • Enhanced infrastructure to link and retain people with HIV • Demonstrated investment in the client population and HIV relinkage efforts • Strengthened relationships with health department(s) and community stakeholders	• Reduction in HIV morbidity and mortality • Reduction in HIV transmission • Reduction in time between diagnosis and viral suppression • Advancement of health equity for people with HIV

Your Planned Work

Your Intended Results

Staffing Requirements & Considerations

Staff Capacity

The following staff implemented the CCSI intervention at CrescentCare:

- *Patient Navigator (PN).* The PN is available 24 hours a day to link people who have been newly diagnosed with HIV into care. Their responsibilities include:
  - Responding to referrals from testing sites and other departments or organizations
  - Facilitating intake and enrollment of clients into the CCSI intervention
  - Delivering HIV medical education and gathering client consent
  - Scheduling provider appointments and linking them to other services
  - Documenting client information into the EMR or EHR
  - Accompanying clients to obtain their prescriptions if needed
  - Following up with clients after their initial appointment and noting any needs before their next visit
  - Linking clients to benefits and social services if an Eligibility Specialist is unavailable
  - Connecting clients to retention teams for ongoing HIV case management
  - Participating in ongoing training
- *Eligibility Specialist (ES).* The ES supports clients with benefits enrollment and refers them to other teams (e.g., Social Services team) for other support services. Their responsibilities include:
  - Meeting with clients and conducting a brief check-in
  - Conducting third-party payer screenings and initiating appropriate applications (e.g., Medicaid, Marketplace)
  - Assessing RWHAP eligibility and processing enrollment forms
  - Scheduling social service appointments as needed to address other needs
- *Nurse or Medical Assistant.* Their responsibilities include:
  - Performing limited vitals before the visit with a medical provider who will prescribe ARV medication
  - Confirming HIV diagnosis
  - Discharging clients and scheduling follow-up appointments
- *Primary Care Providers or HIV Specialists.* Their responsibilities include:
  - Performing a health assessment (including behavioral and mental health assessment)
  - Assessing ARV medication readiness and sharing medical information
  - Ordering lab work such as comprehensive HIV panel and reviewing results
  - Following up with clients about any contraindications and proposing alternative courses of care
  - Administering the first dose of ARV medication during the visit
  - Corresponding with pharmacy services and expediting fill of 30-day supply of ARV medication
  - Referring clients to other providers such as social workers or behavioral health specialists if needed
  - Documenting information in the EMR or EHR

Staff Characteristics

Core competencies of all staff should include:

- A personable and affirming demeanor and flexibility in identifying individual client needs
- Knowledgeable about HIV and rapid ART interventions
- Willingness to adapt approaches to service delivery
- Ability to collaborate with multiple stakeholders
- Experience with client navigation and benefits enrollment
- Previous work at a community-based health clinic
- Familiarity with the clinic and its dynamics
- Fluency in other languages based on local needs
- Commitment to delivering culturally responsive care
- Demonstrated ability to work with diverse client populations impacted by HIV
- A client-centered and trauma-informed orientation

Replication Tips for Intervention Procedures and Client Engagement

Successful replication of the CCSI intervention involves building and sustaining relationships between testing and rapid ART intervention sites, ensuring accessible linkage staff, and enhancing clinic infrastructure to facilitate early and sustained access to ART for people with newly diagnosed HIV.

- *Invest in the Referral Network:* Rapid ART interventions serve as an integral tool to link and retain people with HIV in care. The referral network is a crucial component of this model, so it is imperative to establish and strengthen relationships with stakeholders before implementing the intervention. During these conversations, clinics can consider doing the following:
  - Establish common goals that will advance the work of all stakeholders. For example, a testing site may consider this an opportunity to ensure that their clients will be linked to HIV care and not be lost to follow-up. The clinic may utilize this model to increase the number of referrals they receive from partners. Organizations can work in tandem and leverage the CCSI intervention to enhance these care efforts.
  - Determine a streamlined process for referring people who have been newly diagnosed with HIV to the clinic. The CCSI intervention is designed to become a part of an organization's workflow. Organizations should evaluate their current processes for referring and linking clients and tailor the intervention accordingly.
  - Maintain open lines of communication and meaningfully gather feedback from stakeholders.
- *Empower Clinic Staff.* The success of the intervention is also contingent on the accessibility of patient or linkage coordinators, Eligibility Specialists, and providers. These key staff are responsible for linking clients into HIV care and facilitating access to ARV medication within 72 hours of an HIV diagnosis. This requires them to be flexible (e.g., coordinating same-day clinician visits, promptly responding to referrals, reviewing lab results once they are available), patient, and willing to address any client barriers as they arise. Clinics should dedicate time to acknowledge staff achievements and prioritize staff needs to prevent burnout.
- *Prioritize Shared Decision-Making Between Client and Provider.* Clients have full agency and autonomy over their HIV care. Racism, stigma, the legacy of medical mistreatment and discrimination against Black, indigenous, and other people of color in the United States has led to mistrust and distrust of healthcare systems. Thus, providers should work to disrupt power dynamics inherent within clinical

settings by delivering affirming care and prioritizing client needs and concerns during clinical decision-making processes.

- *Address Interconnected and Intersectional Social Determinants of Health.* Access to rapid ART interventions is an issue of equity. There have been structural and systematic inequities that have contributed to the disproportionate impact of the HIV epidemic on certain populations. In addition to linking clients to care and facilitating access to ART, clinics should also identify and address the interconnected and intersectional social determinants of health that may prevent clients from engaging and staying in care. These barriers may include lack of health insurance coverage, limited access to reliable transportation, lack of culturally responsive and trans-affirming care, housing instability, mass incarceration, unemployment, poverty, and other health conditions (e.g., diabetes, behavioral and mental health challenges). HIV is one part of a person's life, and clinics should determine strategies and approaches to connect clients with holistic services and resources needed to thrive and stay in care.

Securing Buy-In

The CCSI intervention requires that clinics engage a wide range of stakeholders, including people with HIV, referring sites, and clinic staff. Rapid ART interventions are beginning to be widely implemented across RWHAP clinics, as studies have shown that these models can significantly improve ART uptake and viral suppression rates. However, it is important to incorporate the perspectives of people with HIV, clinic staff engaged in service delivery, leadership, and referring sites to maximize intervention outcomes. While the intervention effectively links and retains people with HIV who have been newly diagnosed in care, stakeholders may have questions and feedback about the model (e.g., logistics around administering ART prior to lab results) and funding, among other topics. To facilitate these conversations and secure buy-in for implementation, organizations should gather information and address stakeholders' questions about rapid ART models. This can be done through surveys, focus groups, or key informant interviews. Additional recommendations on securing buy-in include:

- **People with HIV.** Organizations can engage people with HIV who utilize the services at the clinic, including current or former clients and community advisory councils. Replicators can inquire about the client population's receptiveness to starting ARV medication within 72 hours of an HIV diagnosis. Additionally, the organization can use this as an opportunity to curate direction on additions or adaptations needed to facilitate meaningful engagement and retention in care (e.g., transportation services).

- **Clinic Staff and Leadership.** Clinic leadership, staff, and providers are integral to the CCSI intervention. To gather buy-in, organizations can explain how the intervention will improve the clinic workflow (e.g., the Patient Navigator will be the main point of contact for referrals, and the intake process will be streamlined).

Share how rapid ART interventions can enhance linkage and retention efforts by highlighting outcomes in the existing literature, including the safety and effectiveness of administering ARV medications before lab results. Organizations can further note how these activities can advance EHE goals at the clinic. Present data on service delivery gaps at the clinic (e.g., low referral rates) and how the intervention provides solutions to meet these gaps. Clinic leadership should also discuss or propose funding streams to support the CCSI intervention with minimal disruptions to existing services (e.g., share opportunities to cover these services with RWHAP funding).

- **External and Referring Sites.** The success of the CCSI intervention is contingent on referrals from other sites and departments. Thus, the perspectives of referring sites should be considered before and during implementation. Meet with partner sites and share how the CCSI intervention can enhance their service delivery models (e.g., the intervention provides clients with a resource for immediate linkage to HIV services). Further, organizations can gather their input to inform a personable, streamlined, and effective referral process.

  Organizations should develop a process for gathering feedback and addressing questions from these different stakeholder groups. This will generate the buy-in and support needed to implement the intervention with fidelity, achieve organizational and client goals, and obtain optimal HIV care outcomes.

Overcoming Implementation Challenges

The CCSI intervention is multifaceted, and its implementation can be complex. Anticipated challenges, as well as possible solutions, are noted below.

- **Limited Organizational Infrastructure:** Discuss opportunities to extend hours in a way that complements the organization's workflow (e.g., including weekends). Designate the Patient or Linkage Navigator as the main point of contact for the intervention and ensure provider availability (e.g., same-day appointments).
- **Disruptions in ARV Coverage:** Leverage the Eligibility Specialist to ensure clients have initial access to a 30-day dose pack and continuous access to ARV. Present a pathway for guaranteed access to ART through healthcare coverage enrollment or RWHAP services (e.g., ADAP).
- **Barriers to Care:** To address interconnected social determinants of health that can result in barriers to care, organizations should connect clients with Social Service teams and partner agencies.
- **Lack of Referrals:** Solidify an effective referral process with other teams and organizations. Conduct ongoing check-ins with referring sites to facilitate the process if necessary.
- **Provider Commitment:** Ensure providers (primary care physicians, HIV specialists, nurses, and medical assistants) are support of the intervention.
- **Limited Resources:** Invest in patient navigation and immediate access to and cost coverage for the first 30 days of medication.
- **Staff Burnout:** Find ways to increase staff morale and highlight their work to connect people with HIV to care. Conduct consistent check-ins with staff to address barriers in real-time and prevent burnout.
- **Undefined Staff Roles:** Utilize a Standard Operating Procedure (SOP) manual. Be clear on roles and responsibilities and how these can sometimes overlap. For example, note who communicates with the referring sites and which provider(s) will review the lab results and correspond with clients.
- **Long-Term Goals:** While access to rapid ART is one of the key components of the intervention, it is beneficial to focus on sustained engagement in care to achieve optimal HIV care outcomes. The Patient or Linkage Navigator, Eligibility Specialist, and social service teams can work with other clinic staff to collect information about and address barriers to sustained engagement in care.

Promoting Sustainability

To successfully sustain this intervention, project outcomes must be consistently monitored and evaluated. The CCSI intervention offers many evaluation opportunities to ensure that people with HIV who have been newly diagnosed access the resources they need to start rapid ART and achieve optimal health outcomes. To do this, complete ongoing process and outcome evaluations that include documentation of the following:

- Number of clients who are being referred to the clinic
- Number of clients who receive a medical visit and obtain access to ARV within 72 hours of diagnosis
- Number of clients who return for follow-up within four weeks
- Client demographics (e.g., race, gender, sexual orientation, insurance status) to ensure priority populations are being engaged and retained
- Retention indicators
- Qualitative feedback from clients about barriers to HIV care and overall experiences with the intervention

This information can help inform improvements needed for successful intervention replication, and data can also be leveraged during stakeholder meetings (e.g., with federal partners, clinic leadership). An organization can also gather feedback from referring sites, the Patient or Linkage Navigator, and clinic staff. By creating consistent, intentional, and responsive feedback loops, organizations can ensure that outreach efforts are effective while concerns are prioritized and addressed as they arise. Evaluation approaches can help explore innovative and data-informed strategies to tailor the intervention, increase its impact, demonstrate how the intervention is working, and emphasize to stakeholders the importance of integrating a rapid ART intervention.

SWOT Analysis

SWOT is an acronym for Strengths, Weaknesses, Opportunities, and Threats. A SWOT analysis is a structured planning method that can assess the viability of a project or intervention. By conducting a SWOT analysis before implementing an intervention, organizations can proactively identify challenges before they occur and think through how to best leverage their organizational strengths and opportunities to improve future performance. A SWOT analysis of the CCSI intervention at CrescentCare identified the following:

STRENGTHS

The intervention increases linkage and retention outcomes for clients who have been newly diagnosed with HIV by:

- Streamlining the referral and intake process for clients who have been newly diagnosed
- Providing a full-time Patient or Linkage Navigator 24 hours a day to respond to referrals
- Offering same-day appointment accessibility
- Ensuring clients have immediate and sustained access to ARV (within 72 hours of a diagnosis)
- Procedure and medical checklist
- Addressing interconnected social and health needs that hinder access to HIV care
- Establishing strong relationships between clinic staff, leadership, and referring sites; and
- Leveraging RWHAP funding resources to support a novel intervention

WEAKNESSES

Agencies will find it challenging to implement the CCSI intervention without:

- A Patient or Linkage Navigator, an Eligibility Specialist, providers, clinic staff (e.g., medical assistants), and referring sites
- A comprehensive and easy-to-navigate referral system
- Ability to promptly schedule an appointment for a client once they receive an HIV diagnosis
- Access to 30-day dose pack of tenofovir alafenamide/ emtricitabine and dolutegravir (TAF/FTC and DTG) in-clinic
- Client follow-up with a provider within four weeks of diagnosis
- Relationships and ongoing communication with referring sites and other teams (e.g., pharmacy services, phlebotomists)
- Provider commitment to this model of care
- Secured funding streams support linkage activities and ensure rapid ART coverage

OPPORTUNITIES

The CCSI intervention offers opportunities to:

- Increase ARV medication uptake among people with HIV who have been newly diagnosed
- Leverage referring sites or a broader healthcare network to increase intervention enrollment
- Tailor the intervention to meet the unique health needs of priority populations
- Streamline linkage and retention services using one linkage specialist who is connected to the broader clinical team

THREATS

Threats to the success of the CCSI intervention include:

- Hesitancy from providers and others around providing ARV before labs are obtained
- Difficulty securing funding to sustain services (potentially leading to disruptions in ART coverage)
- Limited organizational infrastructure (e.g., lack staff capacity, restrictions in scheduling or offering extended hours)
- Inability to address barriers to care due to interconnected social determinants of health
- Lack of a centralized system that fosters engagement between different organizations
- Reallocation of funding to meet other pressing and emerging needs

Conclusion

To curtail the HIV epidemic and improve health outcomes for people with HIV who have been newly diagnosed, the CrescentCare clinic implemented the CCSI intervention, allowing the clinic and referring sites to work collaboratively and intentionally to address linkage and retention gaps. The CCSI intervention allows clinics to establish and leverage a referral system, triage clients within 72 hours of an HIV diagnosis through the support of a Patient or Linkage Navigator and clinic staff, provide immediate and sustained access to ART; expedite healthcare coverage and benefits enrollment, and provide access to support services to address interconnected social determinants of health.

For many organizations, prescribing ARV before intake laboratory results requires a significant shift in practice and thus necessitates careful adaptation.[1] However, rapid ART initiation models are needed to ensure people with HIV who have been newly diagnosed have access to the resources and treatment they need to achieve viral suppression. Further, these models have demonstrated that starting clients on the day of diagnosis or linkage, before labs are obtained, is a safe, well-tolerated, and effective intervention.[3] Federally Qualified Health Centers and other community-based clinics are uniquely positioned to implement rapid ART interventions. This model can increase referrals, high rates of linkage to care, earlier viral suppression, and sustained impact over time.

Among the 77 clients newly diagnosed with HIV and referred to CCSI between December 5, 2016 and August 6, 2017, 92 percent (N=71) were linked, saw a clinical provider, and started ART within 72 hours of diagnosis.[2] Four of the six clients not linked within 72 hours of diagnosis were linked to care within 30 days of diagnosis.[2] When CCSI was compared to a cohort of 29 clients diagnosed and linked utilizing EIS services between December 2015 and August 2016, the meantime to linkage in the historical cohort was 30 days (95% CI: 25.1-43.6 days) compared to 1.3 days (95% CI: 1.09–1.51 days) in CCSI ($p<0.0001$).[2] The median time to viral suppression (<200 copies/mm^3) in the historical cohort was 68 days (95% CI: 60–92 days) compared to 30 days (95% CI: 27–34 days) in CCSI ($p<0.0001$).[2] These data demonstrate the effectiveness of rapid ART models and the potential in helping to advance health equity for people with HIV at RWHAP clinics, FQHCs, health departments, and beyond.

Additional Resources

The National HIV/AIDS Strategy (2022–2025)
https://www.whitehouse.gov/wp-content/uploads/2021/11/National-HIV-AIDS-Strategy.pdf

CrescentCare Start Initiative Standard Operating Procedure Manual
https://ciehealth.org/wp-content/uploads/2021/01/CCSI_SOP_Final_4-2018.pdf

CrescentCare Southeast Education and Training Center—Webinar
https://ciehealth.org/wp-content/uploads/2021/01/CrescentCare-Southeast-AIDS-Education-and-Training-Center-Webinar.pdf

CrescentCare—2018 National Ryan White Conference on HIV Care & Treatment Presentation
http://ciehealth.org/wp-content/uploads/2021/01/CrescentCare-2018-Ryan-White-Conference-Presentation.pptx

CrescentCare Start Initiative an Intervention to End the Epidemic Presentation
https://s3.amazonaws.com/media.guidebook.com/upload/146358/2F4wP69gRh0uXulyHcFRzLZTfRxekKChq4Zx.pdf

CrescentCare Start Initiative–2020 Conference on Retroviruses and Opportunistic Infections—Poster and Webcast
https://www.croiconference.org/abstract/rapid-start-leads-to-sustained-viral-suppression-in-young-people-in-the-south/

CIE Cost Analysis Calculator
www.CIEhealth.org/innovations

Rapid Start Leads to Sustained Viral Suppression in Young People in the South—CROI Poster
www.CIEhealth.org/intervention/crescentcare#resources (Click on Resources)

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EMERGENCY DEPARTMENT AND HOSPITAL-BASED DATA EXCHANGE FOR REAL-TIME DATA TO CARE INTERVENTION

Center for Innovation and Engagement

Background

The Health Resources and Services Administration's (HRSA's) Ryan White HIV/AIDS Program (RWHAP) provides a comprehensive system of HIV primary medical care, essential support services, and medications for low-income people living with HIV who are uninsured and underserved. The RWHAP funds states, cities, counties, 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.

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NASTAD Authors:

Alexander Perez, Manager, Health Equity

Bishar Jenkins, Fellow, Health Equity

Rosy Galván, Director, Health Equity

Intervention Development Team:

Julie Dombrowski, Infectious Disease Specialist

Tigran Avoundjian, Research Assistant

Contributors

Natalie Cramer, Senior Director, NASTAD

Tara Kovach, Impact Marketing + Communications

Sarah Cook-Raymond, Impact Marketing + Communications

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Stock photos. Posed by models.

Intervention Snapshot

Priority Population	General Population
Setting	Emergency Department (ED). However, this intervention may be adapted to fit the needs of your healthcare setting.
Pilot and Trial Sites	University of Washington Medical System, Harborview Medical Center (HMC), and the University of Washington Medical Center in partnership with Public Health—Seattle and King County (PHSKC).
Model	The intervention consists of a real-time data exchange system activated when people with HIV with a detectable viral load (>200 copies/mL) present to Emergency Departments. The data exchange system cross-evaluates client data with public health department data to begin re-engaging clients into care.
RWHAP Ending the Epidemic (EHE) Opportunity	People with HIV and lower CD4 counts disproportionately access EDs for medical care due to insurance status, comorbid conditions including substance use disorder or housing insecurity, and changes in their health status. Intervention outcomes indicate that clients that present to the ED during the alert window are 1.50 times more likely to reach viral suppression within six months.
Intervention Funding	RWHAP Part A and Part C funds were used to support linkage activities within the medical center complex. Data exchange development and evaluation of the intervention was funded by the University of Washington's Institute of Translational Health Sciences. Facilities and resources were provided by the Harborview Medical Center, University of Washington Medical Center, and Northwest Hospital & Medical Center.
Staffing	Staff positions in the original intervention include HIV Re-Linkage Specialist (or Disease Intervention Specialist), Database System Team, Data Manager, and Administrative Coordinator.
Infrastructure Needed	Electronic health records with the capacity to generate an alert Software (e.g., SQL Server Integration Services) to build the data exchange system Re-linkage team

Intervention Overview & Replication Tips

Why This Intervention?

The goal of the Emergency Department and Hospital-Based Data Exchange for Real-Time Data to Care (ED Alert) intervention is to re-engage people with HIV to care and to improve viral suppression rates. This is achieved by utilizing a real-time data exchange system that connects clients with health department linkage specialists when presenting to the emergency department (ED). The outcomes of this intervention yielded considerable success in increasing the frequency of visits to providers in the three months post-intervention, consistent viral load (VL) testing, and the attainment of viral suppression over a six-month period following a provider visit in the post-intervention period. The University of Washington Medical Center partnered with Public Health—Seattle & King County (PHSKC) in Washington to create a real-time data exchange system that is activated when people with HIV with a detectable viral load (>200 copies/mL) present to the ED at hospitals within PHSKC. The data exchange system cross-evaluates client data with public health department data to begin the process of re-engaging these clients into care.[1]

Outcomes of the intervention indicate that clients who present to the ED during the Monday–Friday 8:00 am–6:00 pm alert window are 1.50 times more likely (95 percent CI: 1.27–1.76) to reach viral suppression within six months than clients in the pre-intervention period. While the study demonstrates that care engagement and viral suppression rates post-intervention were similar to that of clients who presented to the ED outside of the alert window, it is important to highlight the efficacy of deploying real-time data exchange systems as a vehicle for clients to achieve key clinical markers, such as viral suppression.

This intervention is best applied to an existing data exchange system of relinking people with HIV to care. A program evaluator from the partnering health department stated,

"This intervention cannot be the only tool in your toolbox. It's a part of a bigger system of how we identify people who are out of care and how we do [effective] outreach."

Intervention at a Glance

This section provides a breakdown of the ED Alert intervention. The intervention is intended to re-engage people with HIV to care when they present to an ED using a real-time data system.

 Step 1	**Characterize Your Health Data:** Implementing a data exchange intervention requires a clear characterization of the data elements available through the health system in your jurisdiction. This means having a well-defined picture of available client data, reporting frequency, data sources, variables of interest for the data exchange, existing data-sharing agreements, and the type of software needed to support data exchange activities.
 Step 2	**Stakeholder Buy-In:** The implementation of this intervention requires approvals between partnering organizations to ensure the safeguarding of client data. This includes the establishment of data sharing agreements, standard operating procedures, and privacy protocols. Since this intervention is applied within the clinical ED setting, obtain support from nursing staff to ensure that re-linkage efforts can coincide with the ED care that staff are providing to clients. Gauge organizational capacity to hire the necessary staff to implement the intervention and ensure support from clinical staff.
 Step 3	**Assess and Address Gaps in Staffing and Workflow:** The role of re-linkage specialists (disease intervention specialists and health department HIV re-linkage specialists) and reliable Information Technology (IT) administrators are critical to implementing this intervention. Ensure that you have staff members who can oversee the development of the data exchange system and there is sufficient buy-in from the in-house IT department to help facilitate the development of the system. IT staff should be familiar with the health data infrastructure in your jurisdiction and be available to assist with technical issues as they arise.
 Step 4	**Setup the Data Exchange:** The goal of the intervention is to use a real-time data exchange system that gathers available health system data (e.g., electronic medical records) to determine whether a client who presents to the ED has a previous positive HIV laboratory test and a viral load of >200 copies/mL. An automated alert is then developed that notify health department HIV re-linkage teams. Ensure that you can identify people who are not virally suppressed or have not received a viral load test within a three- to six-month period and reliably extract this data to develop an alert system.
 Step 5	**Develop the Alert:** Understand the characteristics of your client population to determine what metrics are critical to include in the alert algorithm. There is some flexibility in how to approach this aspect of the intervention. Determine the most consistent barriers for care engagement within your population base and develop an electronic medical alert system around clinical outcomes most affected by those barriers. Determine an alert window (e.g., 8:00 am–5:00 pm Monday–Friday) that will maximize your opportunity to relink clients to care and that aligns with your staffing capacity.

 Step 6	**If Needed, Recruit a Re-linkage Team:** If an existing re-linkage team or specialist, such as a disease intervention specialist (DIS), is not already in place, prioritize the hiring of health department linkage specialists who will comprise the re-linkage team. This team will begin re-linkage to care once an alert is received through the data exchange system. While this intervention was not created to serve a specific population, it is important that the re-linkage team is representative or shares the lived experiences of the population(s) served to ensure the intervention's success.
 Step 7	**Train ED and Re-linkage Staff:** Staff training necessitates an understanding of the data exchange system and how alerts are triggered, and how to engage clients with various lived experiences. It is important that staff are trained in trauma-informed approaches as ED visits can occur due to both medical and circumstantial client experiences.
 Step 8	**Re-engage and Retain People with HIV:** Implement the intervention to re-engage people with HIV into care and facilitate the attainment of viral suppression within a specific time interval after care re-engagement.

Cost Analysis

Data exchange development and evaluation of the ED Alert intervention was supported by funding from the University of Washington's Institute of Translational Health Sciences' TL1 Training Grant (#5 TL1 TR002318-02) and the facilities and resources from the Harborview Medical Center, University of Washington Medical Center, and Northwest Hospital & Medical Center. Within the medical center complex, RWHAP Part A and Part C funds were available and primarily used to support linkage activities. HRSA's RWHAP Program Fact Sheet provides more context on the different funding Parts. Additionally, RWHAP's Policy Clarification Notice 16-02: Eligible Individuals and Allowable Uses of Funds, outlines details on allowable costs. (See Additional Resources Box).

A comprehensive cost analysis for this intervention was not available when this manual was developed. However, you can use the CIE Cost Calculator to create an estimate for implementing the intervention at your organization. (See Additional Resources Box). Replicators are encouraged to utilize the Logic Model provided to inform the input parameters needed to determine intervention costs.

Resources Assessment Checklist

Before implementing the ED Alert intervention, your organization should walk through the following Resources Assessment (or Readiness) Checklist to assess your capacity to do this work. If you do not have these components in place, you are encouraged to develop this capacity to conduct the intervention successfully. Questions to consider include the following:

- ❑ Is an existing system to relink people with HIV to care available within your healthcare setting or partnering health department?
- ❑ Does your organization have staff available with experience in SQL servers or similar software to establish alert criteria and to build the data exchange system?
- ❑ Does your organization or local health department have access to HIV surveillance data?
- ❑ If your organization is not directly affiliated with the health department, is there an established rapport between your organization and the local health department?
- ❑ Do you have an established connection with an HIV care clinic if one is not already embedded in your organization?
- ❑ Do you have the resources to hire a program evaluator that will oversee ongoing monitoring and evaluation of client outcomes?
- ❑ Are there allocated funds within the public health department, or other sources to support implementing this intervention (e.g., RWHAP funds, CDC funds, special funding categories, etc.)?
- ❑ In your existing re-linkage efforts, are there mechanisms in place to connect persons to care outside of the 9 am–6 pm weekday schedule? If not, would it be feasible for your organization to establish after-hours clinic services?
- ❑ Is there a staff person who can solely focus on championing the program and amplifying the project's goals to external stakeholders?

Setting the Stage

According to the U.S. Centers for Disease Control and Prevention (CDC), there are an estimated 1.2 million people with HIV in the United States. During 2018, approximately 75.7 percent of people with HIV received HIV medical care, 57.9 percent were retained in care, and 64.7 percent were virally suppressed.[2] People with HIV who receive ongoing, regularly scheduled care are more likely to have significantly lower viral loads, higher CD4 cell counts, reduced morbidity and mortality, and improved overall health than those who missed even one medical visit over a two-year period.[3] While significant strides have been made in ensuring people with HIV effectively progress through the HIV care continuum (see Additional Resources Box), these figures demonstrate that retention continues to be a critical issue. A detectable viral load and lower CD4 counts are associated with increased morbidity and mortality. Subsequently, these clients may experience changes in their health status that would necessitate an ED visit. Emergency room visits are an opportune setting to re-engage people with HIV into care, especially as there is also evidence that people with HIV disproportionately access the ED for medical care due to insurance status and comorbid conditions, including substance use disorder or housing insecurity.[4]

The ED Alert intervention uses an innovative, real-time data exchange system. The intervention was designed as a partnership between the University of Washington Medical System, Harborview Medical Center (HMC), and the University of Washington Medical Center. The Madison Clinic, based at Harborview Medical Center, is the largest RWHAP-funded HIV specialty clinic in Washington State and provides care to approximately 2,800 people with HIV. Public Health—Seattle and King County (PHSKC) real-time data exchange scans the UW Medicine Enterprise Data Warehouse (EDW) every five minutes to identify clients presenting in the ED and inpatient (IP) units. Alert-eligible visits were defined as visits for clients who (1) were in the hospital on a weekday between 8:00 am–6:00 pm; (2) had any previous positive HIV laboratory tests; and (3) had a last recorded viral load that exceeded 200 copies/mL prior to their visit. If a client is eligible, the data exchange

sends a short messaging system (SMS) notification to the PHSKC HIV care re-linkage team to facilitate linkage to care. The re-linkage team receives client information using a SQL Server Reporting Services (SSRS) report, which is available through the UW Medicine network and updated in real time. The re-linkage team reviews the SSRS report as soon as possible after receiving an SMS alert, typically within a few hours. Client information remains on the report until the client is discharged. After reviewing the alert and client information, the re-linkage team contacts the nurse caring for the client to check on the client's health status, and, when possible, meets with the client while they are in the ED or hospital to discuss HIV care re-engagement, identifies barriers to care, assists with making a follow-up appointment, and links the client to supportive services.

The re-linkage team maintained a brief Excel spreadsheet with information about client interactions, but they did not systematically track alerts. During the evaluation period, the data exchange sent SMS notifications only for clients registered in the ED or admitted to the hospital between 8:00 am–6:00 pm Monday through Friday. However, the data exchange collected data for clients presenting to the ED or IP during

after-hours or weekends. These data remained in the database for three days after the prompting of the initial alert. The data were collected to make an extra effort to contact clients who presented outside of the normal hours and did not have the opportunity to connect with the re-linkage team. After July 2017 (post-evaluation period), the ED added a database of Madison clinic clients and began cross-referencing clients on a surveillance-based data to care list within the UW Medicine list. "No VL test in the past 12 months" was added as an additional alert-eligible parameter. The creation of this database helped prioritize clients who experienced multiple barriers to re-engagement in care. These barriers included housing insecurity, lack of consistent and reliable transportation, and navigating comorbid conditions.

A pre-/post-design was used to evaluate the impact of real-time data exchange. The post-intervention period was defined as the two years after the data exchange was implemented. The pre-intervention period was defined as the two years before the data exchange was implemented, with a six-month washout period. An intent-to-treat approach was used in the evaluation design (i.e., effects were estimates on the whole of HIV care outcomes among populations of unsuppressed people with HIV with an ED visit or IP admission regardless of contact with the re-linkage team). UW Medicine Enterprise Data Warehouse client data were linked to PHSKC's electronic HIV/AIDS reporting system (eHARS) using a probabilistic matching algorithm (fastLink). Information was matched using first and last name, gender, race, ethnicity, date of birth, and social security number. The intervention manually matched clients with an alert-eligible visit in the EDW who did not have a match in eHARS using fastLink (N = 27). After manual review, all clients with an alert-eligible visit had a matching record in eHARS. The program evaluator also manually reviewed all matches identified by the matching algorithm for false matches. No false matches were identified.

Overall, 90 percent of alert-eligible visits occurred at HMC. In the post-intervention period, clients were 1.08 times (95 percent CI: 0.97, 1.20) more likely to reach viral load test after an ED visit/IP admission than clients in the pre-intervention period. Clients were 1.50 times (95 percent CI: 1.27, 1.76) more likely to reach viral suppression in the six months after an eligible visit in the post-intervention period compared to clients in the pre-intervention period. Viral load testing after an ED visit or IP admission increased among clients with visits in and outside of the alert window, and there was no significant difference-in-difference (DID) in these increases (DID: 1.00, 95 percent CI: 0.84,

1.18). Similarly, there was no DID in the increase in viral suppression within six months between clients in both groups (DID: 1.01; 95 percent CI: 0.84, 1.20). Overall, clients with ED visits or IP admissions in the post-intervention period were 50 percent more likely to reach viral suppression in the six months after their visit compared to clients in the pre-intervention period. It is important to note that the differences identified here may be attributed to secular trends based on comparisons with client data for those admitted outside of the alert window.

The program evaluator reiterated that the intervention's success was due to a larger ecosystem between the UW Medicine System, UW Medical Center, and Public Health—Seattle & King County, which was supportive of efforts to re-engage people with HIV to care. The program evaluator highlights that it is important to understand individual clients' lived experiences and determine re-engagement success based on a qualitative, contextual understanding of their barriers as opposed to metrics such as re-engagement after three or six months. For example, 39 percent of clients who presented to the ED or IP unit during the alert window reported a lifetime usage of substance use, prompting the re-linkage team to apply a harm reductionist approach in their re-engagement efforts to support clients by meeting their holistic needs.

Cross-evaluating ED and IP hospitalization data with HIV surveillance may be a promising strategy to prioritize data to care investigations to serve vulnerable populations that are most in need of re-engagement assistance.[1] This clinical encounter provides an opportunity for health department staff conducting HIV care re-engagement work to engage clients who may be difficult to contact due to housing insecurity or inconsistent telephone numbers. This intervention integrates HIV surveillance data with ED and IP data in real time to improve the efficiency and quality of HIV data to care interventions.[1]

Description of the Intervention Model

The ED Alert intervention uses a real-time data exchange system to identify clients who are out of care and whose last recorded viral load exceeds 200 copies/mL and connect them with linkage specialists while in the ED. Implementing this intervention ensures that clients who are not in HIV care can successfully re-engage in care and reach viral suppression, thereby improving health outcomes. The implementers of this intervention utilized a mixture of research funding to evaluate the intervention described here but leveraged RWHAP Part A and Part C funding to support activities related to service linkage. RWHAP Part A funding can be useful to potential replicators for activities related to core medical services (e.g., the AIDS Drug Assistance Program), treatments, early intervention services, mental health services, substance use disorder outpatient care, etc.) and supportive services (e.g., medical transportation, food banks, housing, psychosocial support, etc.). These can also be supplementally supported by RWHAP Part C funding should your organization be eligible to receive those funds. The intervention can be divided into four overarching phases:

1. Characterize Your Health Data System and Secure Buy-In

a. *Understand the Collaborative Health System's Data Structure:* Familiarize yourself with the data structure of electronic health records (EHRs) to understand how to extract key data about clients who activate the alert system and assess how often the exchange system will run. Identify a specific software (e.g., SQL Server Integration Services) to build the data exchange system and make the data accessible for the disease intervention specialists through automated reports.

b. *Evaluate Data Use Agreements*: The ED alert system was created through a partnership between the UW Medical System and Public Health—Seattle & King County. Replicating this intervention requires negotiating data use agreements between the jurisdictional health department and the healthcare system to ensure that the health department can collect client data from the healthcare system when a client presents to the ED. Establishing a data-sharing agreement includes identifying

potential security issues, creating a data-sharing protocol, and determining data transfer methods, among other things. NASTAD offers data-sharing agreement templates and guidance that may help you establish an agreement with your local health department if one is not already in place. (See Additional Resources Box).

c. *Secure Buy-In*: The success of implementing this intervention necessitates leadership buy-in. Partnerships of this magnitude require approvals between each institution to develop the data matching process and to ensure the safeguarding of client data to reduce liability between participating institutions. Identify an agency champion who can coordinate care team members to identify and address client alerts and mediate discussions between IT personnel and the re-linkage team. Appoint a dedicated IT point of contact to address system issues as they arise and ensure ongoing technical assistance where needed. Involve leadership and staff in brainstorming ways to ensure meaningful engagement of people with HIV through focus groups, one-on-one conversations, and meetings with community advisory boards if possible.

d. *Identify or Recruit Staff Where Appropriate:* Ensure there is a dedicated re-linkage team or individual available to engage with clients in real time once an alert is received. The PHSKC team repurposed their existing health department disease intervention specialists to work on this intervention specifically, but in cases where this is not possible, recruit a DIS or re-linkage specialist for this role. All re-linkage team members should be familiar with motivational interviewing strategies, Anti-Retroviral Treatment and Access to Services (ARTAS) strategies, and harm reduction approaches to ensure effective engagement with clients. (See Additional Resources Box). It is important to note that implementing this intervention in Seattle allowed for quick re-engagement due to the proximity of the health department HIV re-linkage team to the Harborview ED. Coordinating the location of your re-linkage team based on your unique needs will be an essential consideration in identifying or recruiting members of your

team. You may also consider a dedicated administrative coordinator tasked with liaising between relevant parties involved in the delivery of the intervention (e.g., ED staff, IT staff, HD staff, etc.) as a way of reducing the burden for those engaged in direct service. A data manager may also be a useful addition to help monitor ED alerts, manage novel HIV program data, and work on data structure issues that may be out of reach for IT staff.

2. Build the Alert Tool and Operationalize its Use:

a. *Build the Alert Tool and Determine Usage*: The UW Medical Center designed an alert tool to activate the disease intervention specialists to begin the process of re-linkage to care. Prioritize a collaborative approach to ensure that the health department receives important clinical data with alert reports and to determine how frequently alerts will be sent from the medical center. It is important to establish alert system criteria by prioritizing persons who are out of care and have a detectable viral load (>200 copies/mL) or other eligibility criteria determined by federal or state regulations.

b. *Activate Disease Intervention Specialists:* PHSKC established guidelines with their disease intervention specialists to identify how to respond to alerts. The original intervention re-linkage team at PHSKC manually reviewed

surveillance data each time an alert was received to ensure the client in question was truly out of care. Your relationship with the health department or surveillance unit may differ, so ensure that an appropriate process is in place to match alert data with surveillance data as needed. Consider pursuing a flexible and adaptable approach to re-linkage efforts since each client is unique, and their lived experiences inform their ability to remain engaged in care. Rather than applying a prescriptive approach, allow the re-linkage team to use discretion and leverage each client's strengths to navigate re-linkage on a case-by-case basis.

3. Integrate the Data Exchange System into the Existing Re-linkage Infrastructure:

a. *Train ED Staff and the Re-linkage Team on Alert Processes:* Integrating a novel data exchange and alert system requires that all relevant staff are trained on the intervention process, including providers, re-linkage specialists, and other individuals with additional roles (e.g., data managers, administrative staff, etc.). This should include knowing the characteristics of clients who would trigger an alert, knowing what staff need to be reached when a client needs re-engagement services, knowing when a client cannot reasonably be engaged in care (e.g., restrictive autonomous capacity), understanding the referral process, and any other necessary procedures relevant to your clinic infrastructure. Establish a procedure to train new staff if there is turnover. Leverage your agency champion or administrative coordinator to check in with the different teams to ensure a streamlined workflow. If re-linkage staff are not trained in motivational interviewing, ARTAS, or harm reduction strategies, take the time to make sure they are certified before engaging with clients.

b. *Incorporate Additional Alert Criteria Responsive to Client Needs:* Engage clients whose multiple marginalized lived experiences converge into concrete barriers for continued engagement in HIV care.[5] After designing and utilizing the new data exchange system, integrate additional criteria into the alert system algorithm to include anyone who has previously been seen at your clinic as a way of triaging clients experiencing the most barriers to care.

4. Conduct Real-Time Re-linkage Efforts:

a. *Apply the Re-linkage to Care Model*: Upon receiving an alert from the data exchange system, the re-linkage team arrives at the ED to begin the process of relinking a client to care. Identify the head nurse in charge during that shift to determine if the client's medical status is stabilized and if it is feasible to speak with the client.

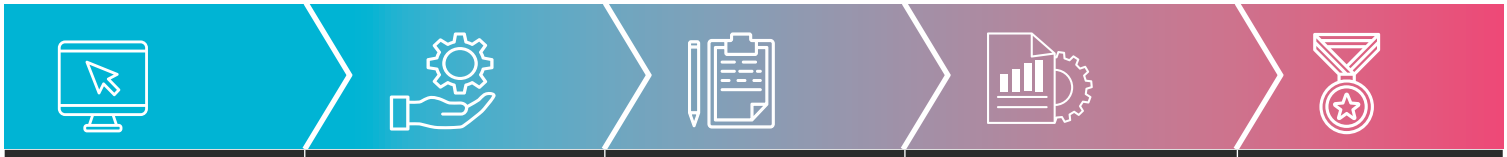
b. *Build Rapport with Clients and Identify Their Needs:* Understanding clients' lived experiences and affirming these experiences and their identities are the foundation for building rapport. This is an important component of re-linkage efforts, as sometimes the cause of people being out of care is not having opportunities to have holistic clinical experiences or address the potential barriers they face. Microaggressions (e.g., trans-exclusionary clinical practice, provider bias, and stigma towards substance use) can also impede engagement in care and treatment adherence. After rapport is established, triage client needs and refer to appropriate services inside or outside your clinic.

c. *Follow up with Clients After Their ED Visit*: Conduct additional outreach with clients' HIV providers or other agencies' clients when referred. Assess persistent barriers to care engagement and provide additional services when needed. Evaluate clinical metrics (e.g., viral load, CD4 count) after follow-up with providers.

d. *Reach Clients who Present to the ED Outside of the Alert Window:* After developing the data exchange system, transmit client alerts after-hours and keep them on the alert list for three days. Follow up with the care provider and the client if the client is discharged from the hospital. Flag medical record identifications for clients who present outside of the alert window to ensure the re-linkage team can act quickly to relink them to care if they present to the ED again.

Logic Model

Logic models are effective tools to assist in planning, implementing, and managing an intervention. Below is a logic model highlighting the resources, activities, outputs, outcomes, and impact of the PositiveLinks intervention referenced throughout this guide.



Resources	Activities	Outputs	Outcomes	Impact
• Diversified funding: RWHAP, other government funding, foundation grants, private and in-kind resources; • Connections with supportive services (e.g., housing, substance use support) to facilitate client referrals; • Data-sharing agreements with key health system partners (e.g., HD, ED); • IT staff with the capacity to link databases and create alerts, including a dedicated data manager; • Dedicated linkage workers (e.g., disease intervention specialists) with training in motivational interviewing, ARTAS, and harm reduction principles; and • A dedicated administrative coordinator to streamline communications.	• Establish data exchange between the ED and other key health system partners, including the health department; • Establish the anticipated caseload, data management system, and strategy; • Repurpose or recruit staff dedicated to facilitating linkage to care and support services, administrative coordination, or data management where necessary; • Train staff on intervention strategies, with ongoing booster training as necessary; • Create staff and client feedback loops to ensure intervention integrity and sustainability; and • Implement intervention and re-engage clients into care.	People with HIV are: • Identified, linked, and retained in care and other support services when they might not otherwise seek out or be offered re-linkage assistance; and • Referred to support services as needed.	Among people with HIV: • Streamlined re-linkage efforts during ED visit; • Same-day linkage to care and support services where feasible; and • Holistic care received in an ED setting. Within the implementation agency: • Increase in services offered via low-resource methods; • Significant increase in the number of scheduled and kept HIV care appointments; • A decrease in the capacity needed for retention outreach efforts; and • A more streamlined set of coordinated care services.	• Increased retention in care; • Increased viral suppression; • Decreased number of people with HIV who have high viral loads that can lead to opportunistic infections and increased transmission to others; and • Normalization of HIV medical care in ED settings.

Your Planned Work

Your Intended Results

Staffing Requirements and Considerations

Staffing for the ED Alert intervention is crucial to its success. The following staff positions were utilized in the original intervention:

- *HIV Re-linkage Specialist (also known as a Disease Intervention Specialist):* The re-linkage specialist monitors the alert system for incoming alerts from the medical center and conducts re-linkage efforts with clients in the ED. These specialists can hold roles within the health department before assuming the position, as their experiences in the health department setting can inform their ability to navigate HIV care coordination. This individual should know of existing social services available in the jurisdiction or have an interest in identifying such resources for client referrals. Given this intervention was designed to strengthen efforts at re-engaging populations that have experienced systemic inequality, this individual should be a creative thinker to provide the best care for clients and meet their holistic needs outside of HIV care that may contribute to viral suppression and other health outcomes.
- *Database System Team:* This team is comprised of individuals familiar with electronic health records systems who can extract data for research and programmatic activities. This team designs the system while the program evaluators conduct data management.
- *Data Manager:* This individual manages programmatic data and should have the capacity to adjust the alert parameters on an as-needed basis. Server maintenance and monitoring of data alerts are key responsibilities for this staff member.
- *Administrative Coordinator:* This individual manages communications between ED staff, the re-linkage team, the data manager, and the database systems team to help reduce the workload of individuals with competing priorities. The administrative coordinator can help bolster intervention fidelity by routinely checking in with different teams to gather feedback and ensure workflow is streamlined.

Staff Characteristics

Core competencies of all staff should include:

- Excellent organizational and team-building skills;
- Experience working with people with HIV and a sensitivity to the overlapping systems of oppression that contribute to treatment barriers;
- An appreciation and understanding of harm reduction approaches, motivational interviewing strategies, and the Anti-Retroviral Treatment and Access to Services intervention, which is based on a strengths-based case management model;
- Connections with community-based organizations and resources that serve as referral sites for clients;
- The ability to draw upon creative thinking when deciding how and where to re-engage people with HIV to care, with an understanding that each client may require a different approach to re-engagement;
- Proficiency in constructing and maintaining data systems; and
- A commitment to active listening to understand why clients are not in care.

"The dedicated health department data manager speaks to the importance of social support and working with staff who understand community needs: 'Beyond just being able to connect people to an HIV care provider, I think the skill set definitely needs to focus on identifying all of those external barriers that affect their ability to stay engaged in HIV care . . . either knowledge of existing social services or support services that are available, or a willingness to identify those resources and actively seek out help.'"

Replication Tips for Intervention Procedures and Client Engagement

The following considerations will enable your organization to replicate the ED Alert intervention more successfully:

- *Established Relationships with ED Staff:* The success of this intervention requires a relationship with the hospital staff, including on-call nurses and emergency room doctors. It is important staff understands the initiative's benefits and their aid in building clinical capacity. Developing a connection with the HIV care clinic in the hospital system is also important as infectious disease doctors and staff can serve as stand-ins until linkage specialists from the health department arrive.
- *ED Staff Training:* If your organization is seeking to implement this intervention, designing a motivational interviewing and informed consent training for nursing and front desk staff is beneficial. Nursing and front desk staff are often the first people that clients interact with in the clinical setting, and these interactions can either promote or impair how clients view providers, which has an impact on retention in care.
- *Assembled Linkage Team:* This intervention should be implemented in concert with existing re-engagement efforts in your organization. Existing staff, who understand the HIV care continuum, understand barriers to care, and are familiar with supportive community-based organization networks for people with HIV which are essential components of the intervention. This ensures continuity of services and does not require additional training for the linkage team.
- *Triaged Approach to Care:* For health systems that are not in proximity to the health department, it can be difficult to respond in a timely fashion when a client presents to the ED. This intervention can be adapted because in-person client interaction might not be necessary with every alert. The on-call infectious disease doctor could speak to the client before the health department staff arrives at the hospital. There are some instances where a telephone call or a video conference could suffice in re-engaging a client to care. The COVID-19 pandemic is prompting an expansion of telehealth services, which includes telephone and video appointments. As such, adopting client re-engagement via phone and video is consistent with the move toward expanding options in how HIV care is delivered.

Securing Buy-In

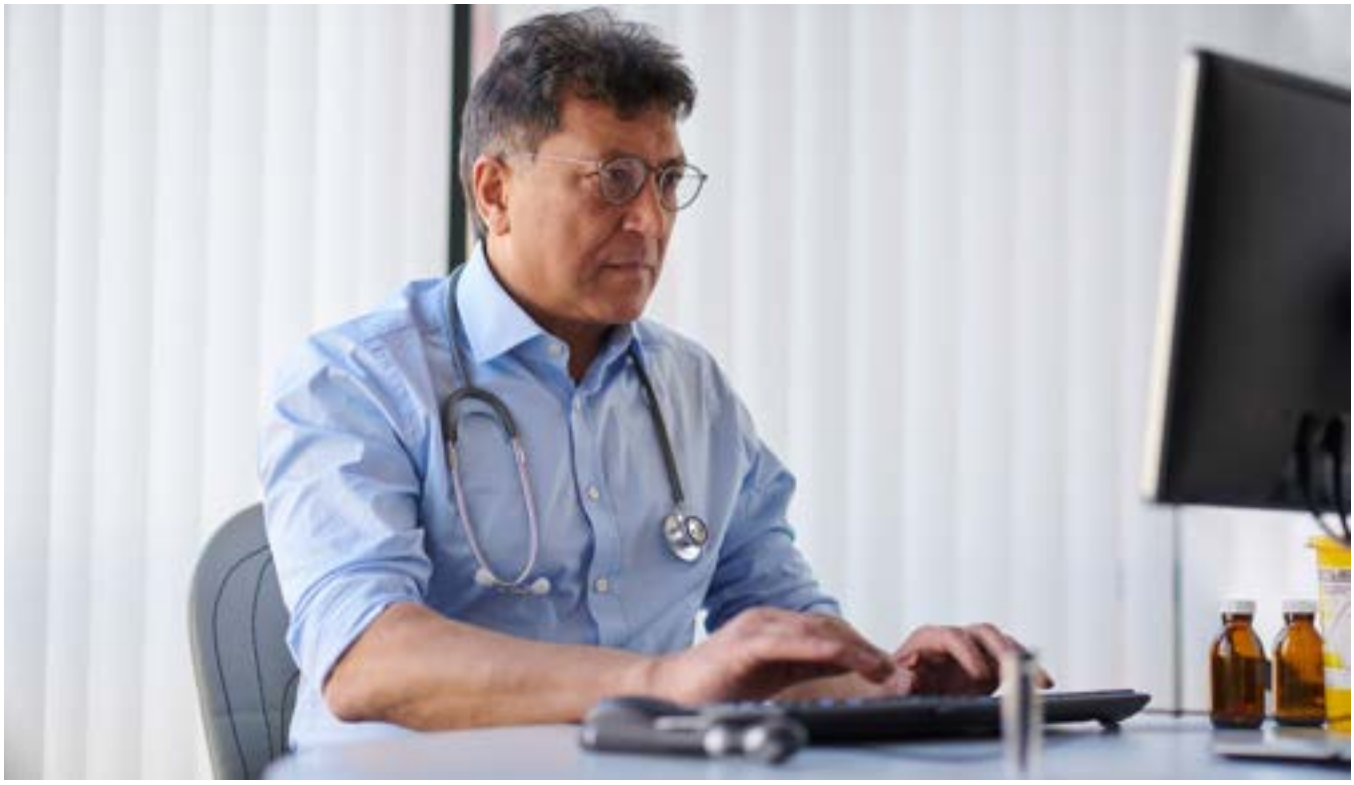
The success of the ED Alert intervention depends on garnering buy-in from leadership and ED staff who will interact with clients the most during their hospital stay. Some recommendations include:

- **Highlight the importance of ED staff roles** and ensure that front desk staff, nursing staff, and emergency room doctors understand the intervention's value and how staffs' roles relate to the intervention goals.
- **Incorporate the perspectives of people with HIV** who may receive re-linkage services and the health department re-linkage team to further inform activities and build community support.
- **Build and maintain relationships with leadership across all stakeholders to ensure their support.** These relationships are especially useful if challenges arise that a data manager or linkage specialist cannot address. Leaders can vouch for the project as an important initiative that deserves support. Additionally, having strong relationships with ED staff allows the linkage specialist to cross-collaborate and gather information about clients who may be on a provider's panel.
- **Intentionally connect staff with social service organizations that offer wraparound services.** This ensures clients receive several benefits and allows staff to leverage existing relationships with providers to tailor referrals based on their life experiences and needs.
- **Decrease the time burden for clinical staff whenever possible by leveraging dedicated staff.** This can be achieved by having a dedicated linkage specialist, hiring a dedicated administrative coordinator, and working with providers and staff to identify opportunities to avoid extra work. Staff will be more interested in adopting a new intervention if they consider the intervention to be something that organically embeds itself into their responsibilities.

Overcoming Implementation Challenges

Barriers to implementing the ED Alert intervention can vary based on the replicating site's existing infrastructure and workflow. However, some anticipated challenges and suggestions to overcome them are noted below:

- **Lack of Buy-In:** It is not possible to effectively implement this intervention without obtaining buy-in at the leadership and managerial levels across all key stakeholders required for data exchange and re-linkage activities. Identify a champion within the organization who believes in the intervention, can highlight the benefits of the intervention and can promote it to leadership while maintaining momentum and staff morale.
- **Lack of Administrative Support:** In cases where a dedicated administrative coordinator or data manager are not available, staff may find it difficult to balance and maintain the monitoring of alerts and client data while also being involved in direct service. Be clear on all staff roles and responsibilities and recruit dedicated people to fill these roles to streamline workflow and promote sustainability.
- **Staff Turnover and Ongoing Training:** The re-linkage specialist, administrative coordinator, and data manager are important for program continuity. Hire dedicated staff for each of these roles solely responsible for their specific duties. Train other staff as part of succession planning should there be staff turnover. Ensure that the collaborative health system has existing staff in place to maintain the data exchange system.
- **Data-Sharing Challenges:** Gather information about current clinic policies and lessons learned from other interventions to improve the data-sharing process.
- **Delayed Data Sharing:** Ensure data extraction and surveillance data matching is conducted in a timely manner. By improving the timeliness of data sharing, your organization can ensure that, for example, you have the most up-to-date client information, which can facilitate prompt re-linkage efforts.[6]



Promoting Sustainability

To ensure the long-term sustainability of the intervention, consider taking a multipronged approach:

- *Explore Diverse Funding Sources:* Successful replication of the ED Alert intervention may require organizations to explore various funding sources, particularly those supporting an ongoing health system data exchange and linkage services for clients with varying insurance coverage.
- *Promote Flow of Information between ED and Re-linkage Team:* During initial conversations with leadership and stakeholders, discuss anticipated barriers to effective data exchange, client caseload, data variables to be collected and shared, strategies for effectively managing data, and processes to match data with health department surveillance records should this be done manually. This ensures data are accurate and timely and promotes a healthy flow of information between ED providers and the re-linkage team.
- *Consistently Monitor and Evaluate Project Outcomes:* By taking proactive steps to measure the success of re-linkage efforts, a clinic can identify areas of improvement that can increase the number of clients linked to care and address any barriers. Clinics can also gather feedback directly from linkage specialists, providers, staff, and clients in various ways (e.g., group or individual check-ins or surveys). By creating a consistent and intentional feedback loop, clinics can ensure outreach efforts are effective and concerns are prioritized as they arise.

Efforts can be evaluated by focusing on the number of clients who are ultimately relinked to care. To do this, complete ongoing process and outcome evaluations that document the following:

- Number of cases closed out by the linkage specialist;
- Number of clients who are truly out of care;
- Estimated number of clients who intervention staff think would have re-engaged in care without the intervention; and
- Number of clients linked to care because of the intervention.

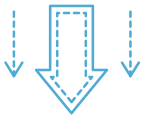
SWOT Analysis

SWOT is an acronym for Strengths, Weaknesses, Opportunities, and Threats. A SWOT analysis is a structured planning method that can assess the viability of a project or intervention. By conducting a SWOT analysis in advance of an intervention, organizations can proactively identify challenges before they occur and think through how to best leverage their organizational strengths and opportunities to improve future performance.

STRENGTHS

The ED Alert intervention increases viral suppression in people with HIV and retains them in care by:

- Coordinating a data exchange with key health system partners to ensure real-time identification of people with HIV who have fallen out of care,
- Re-engaging people with HIV to care and supportive services on the same day of their ED visit,
- Employing a dedicated linkage worker to address alerts promptly,
- Addressing the late HIV diagnoses gap experienced by people of color who may not otherwise be engaged or retained through traditional medical care,
- Filling gaps in medical records that may contribute to health inequities, and
- Establishing strong relationships between the ED and health department staff.



WEAKNESSES

Agencies will find it challenging to implement this intervention without:

- Necessary funding for the maintenance of the data exchange system,
- Buy-in from leadership and community stakeholders,
- Dedicated linkage workers or administrative personnel,
- Local data-sharing agreements with local or state health departments,
- Comprehensive and secure data exchange systems,
- Dedicated staff with backgrounds in HIV, linkage, and EHR data systems, and
- Ability to reach the client and coordinate their care once they are identified in real time.

OPPORTUNITIES

The ED Alert intervention offers opportunities to:

- Re-engage people with HIV into care by matching out-of-care client lists with surveillance data in real time,
- Leverage the broader health information landscape to close the out of care gap, and
- Streamline linkage and retention using a dedicated linkage team.

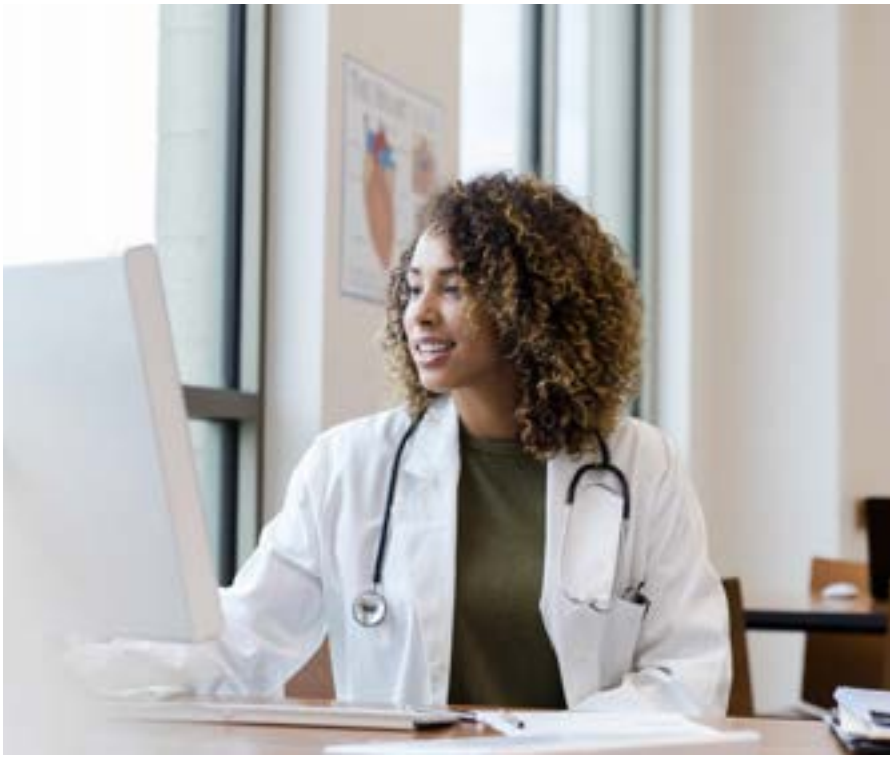
THREATS

Threats to the success of the intervention may include:

- An inability to secure funding for the data exchange system,
- Not retaining staff who design and oversee the data exchange system,
- An inability to identify, recruit, or secure buy-in from leadership and ED staff (nurses, front desk workers, etc.),
- A lack of willingness to integrate efforts with health departments to re-engage people with HIV to care, and
- A lack of available social support services to help address barriers to retention for people with HIV.

Conclusion

The ED Alert intervention applies a data-to-care approach to identify people with HIV who are out of care and whose viral load exceeds 200 copies/mL. This intervention utilizes a real-time data exchange system of alert prompts used to re-engage people with HIV to care when they present to the ED or IP units. This intervention found that post-intervention participants were 1.08 times more likely to have a viral load test within three months after an ED visit or IP admission and 1.50 times more likely to reach viral suppression within six months than clients in the pre-intervention period. Emergency room visits are opportune to re-engage people with HIV to care, especially as there is evidence that people with HIV disproportionately access the ED for medical care due to insurance status and comorbid conditions.



Additional Resources

Ryan White HIV/AIDS Program Fact Sheet
hab.hrsa.gov/sites/default/files/hab/Publications/factsheets/program-factsheet-program-overview.pdf

Ryan White HIV/AIDS Program Services: Eligible Individuals & Allowable Uses of Funds Policy Clarification Notice 16-02
hab.hrsa.gov/sites/default/files/hab/program-grants-management/ServiceCategoryPCN_16-02Final.pdf

HIV National Strategic Plan
hiv.gov/federal-response/national-hiv-aids-strategy/national-hiv-aids-strategy-2021-2025

CIE Cost Analysis Calculator
CIEhealth.org/innovations

HIV Care Continuum
https://www.hiv.gov/federal-response/policies-issues/hiv-aids-care-continuum

NASTAD Data Sharing Agreement Templates and User Guide
nastad.org/resource/data-sharing-agreement-dsa-templates-and-user-guide

Anti-Retroviral Treatment and Access to Services (ARTAS)
cdc.gov/hiv/effective-interventions/treat/artas?Sort=Title%3A%3Aasc&Intervention%20Name=ARTAS

Endnotes

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[6] Hall, H. I., Mokotoff, E. D., & Advisory Group for Technical Guidance on HIV/AIDS Surveillance (2007). Setting standards and an evaluation framework for human immunodeficiency virus/acquired immunodeficiency syndrome surveillance. *Journal of Public Health Management and Practice, 13*(5), 519-523. https://pubmed.ncbi.nlm.nih.gov/17762698/

LEVERAGING HOUSING OPPORTUNITIES TO PROMOTE RETENTION IN CARE FOR PEOPLE WITH HIV INTERVENTION

Center for Innovation and Engagement

Background

The Health Resources and Services Administration's (HRSA's) Ryan White HIV/AIDS Program (RWHAP) provides a comprehensive system of HIV primary medical care, essential support services, and medications for low-income people with HIV who are uninsured and underserved. RWHAP funds states, cities, counties, 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.

NASTAD's Center for Innovation and Engagement (CIE) is funded by HRSA's HIV/AIDS Bureau (HAB), RWHAP Part F, Special Projects of National Significance (SPNS), under a three-year cooperative agreement entitled Evidence-Informed Approaches to Improving Health Outcomes for People Living with HIV. The purpose of this initiative is to identify, catalog, disseminate, and support the replication of evidence-informed approaches and interventions to engage people with HIV who are not receiving HIV health care or who are at risk of not continuing to receive HIV health care.

Acknowledgements

NASTAD Authors:

Rachel Browning, Manager, Health Equity, NASTAD
Alexander Perez, Dissemination Consultant
Rosy Galván, Director, Health Equity, NASTAD

Intervention Development Team:

Eleonora Jimenez-Levi, MS, Director Housing Services Unit
Christopher Beattie, MPH Evaluation Specialist

Contributors

Natalie Cramer, Deputy Executive Director, NASTAD
Tara Kovach, Impact Marketing + Communications
Sarah Cook-Raymond, Impact Marketing + Communications

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Stock photos. Posed by models.

Intervention Snapshot

Priority Population	People with HIV experiencing homelessness and their families
Setting	Health Departments and Community-Based Organizations
Pilot and Trial Sites	New York City Department of Health and Mental Hygiene (NYC DOHMH) in partnership with 22 community-based organizations
Model	The intervention consists of a tiered supportive housing model and access to other support services (e.g., mental health counseling, food access, etc.) to increase retention in care and viral suppression.
RWHAP Ending the Epidemic (EHE) Opportunity	People with HIV experiencing homelessness face challenges to remain in care and increase viral suppression. Intervention outcomes illustrate that NYC DOHMH clients experienced higher retention rates in care (94 percent) than the control group (84 percent). Additionally, clients' odds of retention were three times higher compared to other people with HIV and AIDS.
Intervention Funding	United States Housing and Urban Development Agency (HUD) Housing Opportunities for People Living with AIDS (HOPWA)
Staffing	Staff positions in the intervention included a Housing Services Unit Director, HOPWA Program Manager, Program Analyst, HOPWA Fiscal Manager, HOPWA Fiscal Analysts, Policy Analyst, Data Quality Assurance Team, and Monitoring and Evaluation Team.
Infrastructure Needed	Homeless Management Information System (HMIS) and other data systems which capture HIV and AIDS-related surveillance data to assist with client demographics and HIV-related service verification HOPWA Administrative team to monitor the activities of eligible HOPWA subrecipients

Intervention Overview & Replication Tips

Why This Intervention?

The Leveraging Housing Opportunities to Promote Retention in Care for People with HIV intervention increased retention in care and viral suppression for New York City residents with HIV (hereinafter referred to as NYC HOPWA clients) who are eligible for the United States Housing and Urban Development Agency's (HUD) Housing Opportunities for People Living with AIDS (HOPWA) program. The intervention was implemented by the New York City Department of Health and Mental Hygiene (DOHMH). DOHMH received 55 million dollars from the HUD HOPWA program.[1] HOPWA allocates funding and resources to states and jurisdictions to develop long-term, comprehensive strategies to meet the housing needs of low-income individuals with HIV and AIDS. HOPWA identified DOHMH as a designated-sub grantee due to New York City's high prevalence of people with HIV and AIDS. DOHMH oversees 22 HOPWA subrecipients within their jurisdiction, reaching 2,400 individuals with housing and other support services.[1]

Although the intervention was funded through HOPWA it represents an example for RWHAP funded housing programs that are interested in maximizing impact and streamlining services despite having strained resources to meet the needs of people with HIV.

The outcomes of the intervention were the result of a tiered supportive housing model, which includes (1) Rental assistance (RA) which provides cash subsidies to establish or maintain permanent housing, (2) Housing placement assistance (HPA) which provides service plan development, escorts to appointments, apartment inspections, advocacy, and coordination of services to ensure clients secure permanent housing, and (3) Supportive permanent housing (SPH) which provides affordable, long-term housing that includes comprehensive support services (e.g., service plan development, advocacy, escorts to appointments, health education, and mental health and drug use counseling). Evaluators matched eligible NYC HOPWA clients (N=1,375)

against a random 20 percent sample of other people with HIV (N=13,489) in New York City. NYC HOPWA clients engaged in the intervention experienced higher retention rates in care (94 percent) than the control group (84 percent). Additionally, clients' odds of retention were three times higher compared to other people with HIV and AIDS in matched and unmatched analysis [odds ratio (OR) = 2.97, 95 percent confidence interval (CI) = 2.35–3.74; OR = 3.06, 95 percent CI = 2.45–3.81, respectively].[1]

Intervention at a Glance

This section provides an overview of the Leveraging Housing Opportunities to Promote Retention in Care for People with HIV intervention, conducted by the New York City DOHMH, to help readers assess necessary steps for replication. Funding for NYC's HOPWA Program is administered by the HUD's Office of HIV/AIDS Housing (OHH). (See Additional Resources Box). HUD provides funding to eligible metropolitan statistical area (EMSA) jurisdictions and other entities through competitive and formula grants. NYC DOHMH is a HUD EMSA jurisdiction and formula grantee. The intervention has two aims: (1) to reach individuals with HIV and AIDS who are experiencing homelessness with other support services, and (2) provide tiered supportive housing to increase capacity to retain these individuals in care, ultimately resulting in viral suppression. DOHMH provides housing support through three supportive housing services: rental assistance, housing placement assistance, and supportive permanent housing.

Step 1

Determine HOPWA Funding Eligibility:

Organizations may apply for HOPWA funding through one of the following grants:

Formula Program Grants:

- HUD allocates 90 percent of HOPWA funding to eligible cities on behalf of their metropolitan areas and eligible states through formula grants.[2]
- Eligible applicants can include EMSAs with more than 500,000 people and at least 2,000 individuals with HIV, or states with more than 2,000 people with HIV outside of an EMSA.[2]
- Applicants are required to complete a Consolidated Plan from HUD's OHH to be considered for receipt of a formula grant. Consolidated Plans must receive approval from OHH before a jurisdiction can become a grantee.[2] (See Additional Resources Box).

Competitive Program Grants:

- HUD allocates 10 percent of HOPWA funding to applicants through a national competition.[2]
- Eligible participants can include states, local governments, and non-profit organizations.[2]
- Funding is prioritized for the renewal of grants for existing grantees that are providing permanent housing services. Once all existing grantee renewals have been allocated the remaining funding will become available through a notice of funding opportunity (NOFO), posted on HUD Exchange.[2] (See Additional Resources Box).
- Notice of Funding Opportunities (NOFO) are developed for HUD Special Projects of National Significance (SPNS) or New Long-Term Projects:
  - HUD SPNS: Projects that utilize innovative and effective models to provide housing and other support services to eligible, underserved populations.[2]
  - New Long-Term Projects: Projects that provide housing and other support services to eligible participants in areas that do not qualify for formula grantee funding.[2] (See Additional Resources Box).

Step 2

Determine HOPWA Client Eligibility:

HOPWA clients must have a confirmed HIV diagnosis, proof of residency in the jurisdiction, and meet HUD's area median income (AMI) requirements.[2] Jurisdictions may choose to include other eligibility requirements to meet the needs of clients. New York City's HOPWA eligibility requirements include residency in the city, a confirmed HIV diagnosis, and a gross income that does not exceed 50 percent of the AMI as outlined by HUDs family size requirements for NYC.[1]

Step 3

Implement a Community Mapping Tool:

HUD's eCon Planning Suite provides a free, publicly accessible mapping tool called Community Development Planning (CPD) Maps. Use CPD Maps to visually display and identify the specific needs of high-priority populations. Utilize CPD Maps to complete a Consolidated Plan (formula grantees) or develop a competitive application (competitive grantees).[3] CPD Maps allows you to retrieve data on variables such as average household size, median income percentage, race and ethnicity, percentage change in population by age, and percentage change in housing units.[4] Additionally, there is a "target jurisdiction" comparison feature which allows you to compare your jurisdiction data against national data and up to two other "reference geographies."[4] In the Guide to the Data-Driven Planning Toolkit in CPD Maps, HUD provides comprehensive instructions on utilizing CPD Maps to aid in the Consolidated Plan development process and retrieve data from the system.

Step 4

Convene Key Stakeholders to Provide Feedback:

Present CPD Map findings to leadership, housing advisory groups, and community members. Utilize this activity to identify unique challenges and assist in planning and developing the request for the Consolidated Plan or Competitive Plan depending on your jurisdiction's eligibility.

Step 5

Develop or Evaluate Existing Housing Service Model:

NYC's HOPWA program has been successful because it prioritizes comprehensive and long-term supportive housing. Housing service models should be tiered to provide options that will ultimately result in individuals receiving comprehensive support and long-term permanent housing.

Step 6

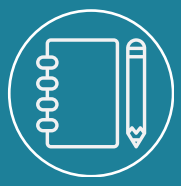
Develop a Consolidated Annual Plan and Annual Action Plan (Formula Grantees only):

The Consolidated Annual Plan assists state and local jurisdictions with assessing their affordable housing, community development needs, and market conditions to make investment decisions. This critical document facilitates conversations with community members to identify housing and community development priorities.[3] The plan should outline the jurisdictional needs (e.g., number of households, justification of spending, cost of implementation) based on existing data. The Consolidated Annual Plan is updated every five years and submitted to OHH. The grantee must also complete an Annual Action Plan, which provides a summary of activities the grantee intends to implement to achieve the goals outlined in the Consolidated Annual Plan. Once completed both plans should be submitted to HUD's OHH.

Step 7

Identify Subrecipients with Service Eligibility:

Identify subrecipients who can implement the housing service model and provide other support services (e.g., assessment and case management, substance abuse treatment, mental health treatment, nutritional services, job training and placement assistance, and assistance with daily living)[2] through a notice of funding opportunity (NOFO). The NOFO should include eligibility criteria to evaluate each applicant. Subrecipients should have (1) experience with and focus on providing housing and other support services to people with HIV, (2) the ability to assess their performance and outcomes, (3) experience managing interdisciplinary programs, (4) cultural awareness and humility about intended clients, (5) previous success managing similar programs, (6) audit reports that illustrate effective financial management, (7) a valid unique identifier [e.g., Employer Identification Number (EIN), Tax Identification Number (TIN)], and (8) a history of prioritizing racial equity and social justice within their organization. Each subrecipient should sign a grant agreement which outlines service delivery, financial management, and reporting expectations.[5] Additional guidance is provided in HUD's Grantee Oversight Resource Guide. (See Additional Resources Box).



Step 8

Establish Confidentiality Policies and Data Sharing Agreements:

Have confidentiality policies in place and train all staff to protect client information.[5] In addition, determine if subrecipient data-sharing agreements are needed. Data from subrecipients will enhance the monitoring and evaluation process.

Step 9

Develop an Oversight Plan:

Develop a HOPWA Grantee Oversight Plan to ensure that subrecipients are consistently meeting metrics. Plans should include a combination of site visits and remote monitoring (e.g., financial reports and data inputted into databases, sharing programmatic successes, etc.). Monitoring should be followed by providing timely feedback or observations to subrecipients.[5] (See Additional Resources Box).

Step 10

Explore Existing or New Data Infrastructure:

HUD requires all grantees to utilize a Homeless Management Information System (HMIS). These information systems can include agency created or procured systems from local vendors. NYC's HOPWA program purchased and utilized the HMIS Electronic Comprehensive Outcomes Measurement Program for Accountability and Success (eCOMPAS), a database developed by RDE Systems, LLC. The eCOMPAS database is fully compatible with HUD's federal reporting system and provides tools to enhance contract management, quality and outcome management, and client feedback and satisfaction. Additionally, identifying other data systems which capture HIV and AIDS-related surveillance data assists with client demographics and HIV-related service verification. Having strong data quality control measures in place enhances the program's ability to effectively monitor and evaluate client outcomes and service utilization.

Step 11

Recruit and Train Staff:

Generate staff descriptions and hire key team members (see Staffing Requirements and Considerations). Ensure all staff are familiar with HUD's grantee requirements by completing all mandated trainings by HUD, conducting a data analysis training to establish baseline knowledge among staff, completing HOPWA's Financial Management Online Training course, and reviewing the HOPWA Grantee Oversight Resource Guide and Program Administration Toolkit.[3]

Step 12

Conduct Staff Training with Subrecipients:

Ensure all subrecipients have undergone the mandated subrecipient HUD training specific to their roles. Provide additional training on reporting and data documentation procedures, structural determinants of health, and service delivery expectations. Subrecipients should also receive specific training on completing HUD's Housing Assessment Plan. The Housing Assessment Plan is utilized by subrecipients to determine client eligibility, capture client level data pertaining to housing and supportive service needs, and gather client demographic information.[6] (See Additional Resources Box).

Step 13

Implement the Intervention:

Launch the intervention and disseminate reporting requirements to subrecipients. Ensure quality control measures are in place. Provide implementation technical assistance to subrecipients as needed.

Step 14

Monitor and Evaluate the Intervention:

Utilize feedback from stakeholder engagement to continuously make improvements to the request for proposals (RFP). Implement the oversight plan to determine if subrecipients are meeting their metrics. Quarterly, utilize eCOMPAS (or another database) to monitor the performance of subrecipients. Additionally, quarterly, provide subrecipients with reports on clients who are out of care and those who are not virally suppressed. Conduct monthly check-ins with subrecipients to evaluate client enrollment in services and reassess the needs of clients.

Step 15

Celebrate and Acknowledge Effort:

Schedule regular events to celebrate grantee and subrecipient staff. Acknowledging staff can lead to higher morale, increased involvement in feedback evaluations, and strengthened relationships between the grantee and individuals providing direct services to clients.

Step 16

Submit End of Year Reports to OHH:

Formula grantees complete the HOPWA Consolidated Annual Performance and Evaluation Report (CAPER) annually. The CAPER report highlights programmatic successes and details how the grantee spent federal funds to meet the goals outlined in the Consolidated Plan and Annual Action Plan.[7] (See Additional Resources Box).

Competitive grantees should submit the Annual Performance Report (APR) within 90 days after the end of each operating year. The APR is a management tool used to evaluate program performance and the performance of sub-recipients. Sub-recipients and the grantee should complete the APR, and then the grantee should consolidate the data and submit a final APR to OHH.[8] (See Additional Resources Box).

Cost Analysis

Funding for NYC's HOPWA Program is administered by HUD's OHH. HUD provides funding to EMSA jurisdictions and other entities through competitive and formula grants (eligibility requirements for each grant are described in the Intervention at a Glance and Intervention Description sections of this guide).[2] NYC DOHMH is a HUD EMSA jurisdiction and formula grantee. HOPWA funds may be used for a wide range of housing, social services, program planning, and development costs. These include, but are not limited to, the acquisition, rehabilitation, or new construction of housing units; costs for facility operations; rental assistance; and short-term payments to prevent homelessness. An essential component in providing housing assistance for these priority populations is the coordination and delivery of support services.[2] Consequently, HOPWA funds may be used for services including, but not limited to, assessment and case management, substance abuse treatment, mental health treatment, nutritional services, job training and placement assistance, and assistance with daily living.[2] Low-income persons (at or below 80 percent of area median income) that are medically diagnosed with HIV and their families are eligible to receive HOPWA-funded assistance.[2]

A more detailed cost analysis of the HOPWA intervention was not available when this guide was developed. However, you can use the CIE Cost Analysis Calculator to create an estimate of the cost of implementing the intervention at your organization. (See Additional Resources Box).

Resources Assessment Checklist

The NYC DOHMH has been a HOPWA grantee for over 20 years. Throughout the program, they have refined their processes to implement a comprehensive supportive housing model. Additionally, being geographically located in New York City and having support from local government has afforded them additional resources that may not be available within other HOPWA programs. Before implementing the intervention, your organization should walk through the following Resource Assessment (or Readiness) Checklist to determine a model for your jurisdiction. If you do not have these components in place, you are encouraged to develop capacity to conduct this intervention successfully. Questions to consider include the following:

- ❑ Will client eligibility criteria need to be expanded or be more specific to increase enrollment?
- ❑ What is the current supportive housing model offered? Do these options ultimately lead to permanent, long-term housing?
- ❑ Does your organization have a policy analyst? Do they have strong writing skills and a background in HIV and housing policy? If not, can you hire for this position?
- ❑ Have you identified key stakeholders and advisory groups who can provide feedback on the planning process and help identify challenges?
- ❑ Does your organization have the capacity to purchase the eCOMPAS database or another Homeless Management Information System (HMIS)? Or will they create their own HMIS?
- ❑ Does your organization have the capacity to hire new staff or expand current staff roles to meet the following needs: program and budget management, data quality management and analysis, monitoring and evaluation, grant writing and policy analysis, community outreach and engagement?
- ❑ Is a mapping tool being utilized? Is this information shared with stakeholders to aid in the planning process? If not, do staff have the capacity to learn basic GIS analytics?
- ❑ How will your organization make potential subrecipients aware of the notice of funding opportunity announcement?
- ❑ Have you identified or have existing relationships with other agencies providing housing to people with HIV who are experiencing homelessness? Do these agencies prioritize hiring individuals from the communities you are hoping to serve? Do they offer other support services including, but not limited to, assessment and case management, substance abuse treatment, mental health treatment, nutritional services, job training and placement assistance, and assistance with daily living?[2]
- ❑ Have you secured buy-in from leadership and staff within your organization?

New HOPWA grantees should pay particular attention to:

- ❑ Does your organization meet the eligibility requirements to apply for HOPWA's formula or competitive grant?
- ❑ What are the client eligibility criteria?
- ❑ Does your organization have the capacity to hire new staff or expand current staff roles to meet the following needs? If not, can your organization hire a consultancy agency to help meet these deliverables?
  - ❑ Develop and implement funded agency application process and selection
  - ❑ Develop the Annual Action Plan and Consolidated Plan (or competitive grant if applicable)
  - ❑ Develop and implement a community engagement strategy
  - ❑ Create report templates for funded agencies
  - ❑ Prepare your organization for HUD audits
  - ❑ Draft the HOPWA CAPER
  - ❑ Provide oversight of the service delivery of funded agencies
  - ❑ Develop privacy, data use and sharing agreements

Setting the Stage

According to the U.S Centers for Disease Control and Prevention (CDC), an estimated 1.2 million people are living with HIV in the United States.[9] Approximately 75.7 percent of people with HIV received HIV medical care, 57.9 percent were retained in care, and 64.7 percent were virally suppressed.[10] Improving client engagement and re-engagement in care is a national priority, with targeted retention measures established by the HIV National Strategic Plan (See Additional Resources Box), HRSA, and the Ending the HIV Epidemic (EHE) initiative, among others.[11] At each stage of the HIV care continuum, from diagnosis to viral suppression, individuals are not entering care or are falling out of care. CDC estimates indicate that some populations, including people experiencing homelessness, continue to disproportionately face challenges in accessing care and achieving improved health outcomes.[1]

The New York City Housing Opportunities to Promote Retention in Care for People with HIV intervention is an innovative service delivery model designed to re-engage and retain low-income individuals with HIV, who are experiencing homelessness in care. Individuals in the United States with HIV who are experiencing homelessness (1) tend to have lower CD4 cell counts and higher viral loads at diagnosis, (2) have higher rates of comorbid infections like hepatitis, tuberculosis, and Pneumocystis carinii pneumonia than those who are stably housed, (3) are less likely to adhere to medication even with access to antiretroviral (ARV) therapy (ART) because immediate needs like food and shelter are not met, and (4) are less likely to be prescribed ARV medication as readily, due to concerns and biases that patients will not be adherent.1 Despite substantial federal and local investments in HIV-related housing services and promoting HIV care and treatment, few studies have examined the effects of housing-related services on outcomes along the HIV care continuum.[1]

The NYC DOHMH received 55 million dollars from HUD HOPWA program.1 HOPWA allocates funding and resources to states and jurisdictions to develop long-term, comprehensive strategies to meet the housing needs of low-income individuals with HIV.[2] The NYC DOHMH is a designated

HOPWA grantee, given the high prevalence of people with HIV within their jurisdiction. They oversee 22 HOPWA subrecipients, reaching 2,400 individuals with housing and other support services.[1] Subrecipients are in Westchester County, Orange County, Manhattan, Brooklyn, Queens, the Bronx, and Staten Island.[1] Subrecipients include the HIV/AIDS Services Administration (HASA), the Department of City Planning, and other community-based organizations. Eligibility requirements include NYC residency, an HIV diagnosis, and a gross income that does not exceed at least 50 percent of the median income as outlined by HUDs family size requirements for NYC.[1] Subrecipients implemented the tiered supportive housing model by providing at least one of the following services: rental assistance (RA), housing placement assistance (HPA), and supportive permanent housing (SPH). RA provides cash subsidies to establish or maintain permanent housing.[1] HPA offers service plan development, escorts to appointments, apartment inspections, advocacy, and coordination of services to ensure clients secure permanent housing.[1] SPH provides affordable, long-term housing and other comprehensive support services (e.g., escorts to appointments, health education, and mental health and substance use counseling).[1] Subrecipients also provide support services to

meet client needs. People with HIV participating in a community referendum played a vital role in providing the NYC DOHMH with information on the housing needs, service delivery gaps, and solutions to address structural barriers.

The intervention was evaluated by analyzing data from NYC DOHMH's HIV Surveillance Registry, or "The Registry," programmatic data (eCOMPAS), other NYC HIV program data, and a merged dataset. The Registry includes population-based data, including name-based data, laboratory results, and vital status.[1] The eCOMPAS data system includes client-level data from subrecipients including demographics, enrollment information, services received, and self-reported data on medical and HIV treatment histories.[1] Other NYC HIV program data included name-based data from other NYC DOHMH subrecipients providing HIV-related services.[1] The merged dataset matched NYC HOPWA client data against data from the Registry. Data were matched based on the following variables: age, race/ethnicity, concurrent diagnosis, and programmatic data, such as the services enrollment date and services received.[1] Evaluators matched NYC HOPWA clients (N=1,375) against a random 20 percent sample of other people with HIV (N=13,489) in New York City. To be included in the project analysis NYC HOPWA clients had to: (1) be at least 18 years of age, (2) have an HIV diagnosis before January 2011, (3) have their diagnosis reported to the NYC DOHMH by September 2012, (4) receive HIV medical care in NYC in 2010, (5) be presumed living as of December 2011 (per vital statistics), (6) be enrolled in the intervention as of January 1, 2011, and (6) have accessed any of the three HOPWA service categories (RA, HPA, SPH).[1] Individuals included in the analysis were more likely to be: non-U.S born, Black (non-Hispanic/Latinx), formerly incarcerated, have a concurrent diagnoses of HIV or AIDS, and enrolled in other local HIV public assistance programs not administered by DOHMH.[1] NYC HOPWA clients engaged in the intervention experienced higher retention rates in care (94 percent) than the control group (84 percent).[1] Additionally, client's odds of retention were three times higher compared to other people with HIV in matched and unmatched analysis [odds ratio (OR) = 2.97, 95 percent confidence interval (CI) = 2.35–3.74; OR = 3.06, 95 percent CI = 2.45–3.81, respectively].[1] Limitations to interpreting the data were that "enrollment" did not guarantee that clients received services, (2) research may not have fully controlled for measured variables when determining the effect of the intervention, (3) researchers were unable to account for unmeasured variables not reported to NYC DOHMH (e.g., private vs. public insurance, educational level, employment status, income, mental health, hospitalization, substance use history).[1]

The Leveraging Housing Opportunities to Promote Retention in Care for People with HIV intervention represents an attempt to assess engagement in HIV care and treatment among people receiving HIV housing services, in comparison to an alike group in the larger HIV population.[1] Housing as healthcare is an essential means to engage people with HIV, who are experiencing homelessness. The intent of this implementation guide is to highlight the advantages of replicating the Leveraging Housing Opportunities to Promote Retention in Care for People with HIV intervention, some aspects of the intervention may not be feasible for all replicators. Replicators are encouraged to utilize information from this guide to enhance their own HOPWA programs and planning. The section that follows outlines how the Leveraging Housing Opportunities to Promote Retention in Care for People with HIV intervention has evolved and sustained itself over the years.

Description of the Intervention Model

The Leveraging Housing Opportunities to Promote Retention in Care for People with HIV intervention helps provide stable housing and other support services (e.g., assessment and case management, substance abuse treatment, mental health treatment, nutritional services, job training and placement assistance, and assistance with daily living)[2] to increase engagement in HIV medical care. The intervention successfully retained individuals experiencing homelessness in HIV medical care and improved their health outcomes. The intervention was funded through a formula grant from HUD's HOPWA program. This funding provided support to the NYC DOHMH and 22 other subrecipients which provide access to rental assistance, housing placement assistance, permanent housing, and support services (e.g., assessment and case management, substance abuse treatment, mental health treatment, nutritional services, job training and placement assistance, and assistance with daily living).[2] The intervention is implemented in six phases:

1. Determine Funding and Client Eligibility

Establishing an effective and innovative HOPWA program begins with determining the organizations eligibility to apply for HUD's HOPWA funding and client eligibility. Steps towards this goal are:

a. *Determine HOPWA Funding Eligibility:* Accessing HUD funding for HOPWA requires an organization to be eligible for either a formula or competitive program grant. Organizations eligible for formula program grants can include EMSAs with more than 500,000 people and at least 2,000 individuals with HIV or states with more than 2,000 HIV cases outside of EMSAs.[2] Organizations eligible for competitive program grants can include states, local governments, and non-profit. Organizations who receive competitive program grants must also determine if there is a formula grant HOPWA program in their jurisdiction.[2] If so, the competitive grantee must provide services outside of the formula grantee's jurisdiction to avoid duplication of services in an EMSA.[2]

b. *Determine HOPWA Client Eligibility:* Eligibility requirements can vary by jurisdiction to meet client needs and improve service delivery. At a minimum, HUD criteria includes: an individual or a member of a household with a confirmed HIV or AIDS diagnosis, proof of financial need, residency in the jurisdiction, and meets HUD's median area income requirements.[2] Other criteria to be determined by the jurisdiction, may include evidence of engagement in HIV medical care or proof of enrollment in other assistance programs.

2. Build Data Infrastructure

Although available resources may vary by organization, take the following steps to build data infrastructure:

a. *Implement a Community Mapping Tool:* An essential component of the HOPWA program is understanding the specific needs of people with HIV who are experiencing homelessness in a jurisdiction. Utilize geographic information systems (GIS) to display and identify the needs of key populations and establish community development strategies. The use of mapping tools illustrates the relationships between multiple sets of variables (e.g., zip codes and mortality rates) and compare these variables amongst different geographic areas. HUD's eCon Planning Suite provides a free, publicly accessible mapping tool called CPD Maps. Use CPD Maps to visually display and identify the specific needs of priority populations. Utilize CPD Maps to complete a Consolidated Plan

(formula grantees) or develop a competitive application (competitive grantees).[3] CPD Maps is fully integrated with and increases the ease of transferring mapping data into the Consolidated Plan.[12] Review HUD's Guide to the Data-Driven Planning Toolkit in CPD Maps, which provides comprehensive instructions on retrieving data and utilizing CPD Maps to complete the Consolidated Plan. (See Additional Resources Box).

Organizations may also choose to use additional data sources to enhance mapping findings. These data sources may include the CDC's Epi Info platform, which provides basic GIS visualization capabilities alongside other software tools. (See Additional Resources Box). Agencies using mapping tools should provide the following information in the Consolidated Plan: estimated number of people with HIV who reside in the EMSA, estimated number of people who earn an income at or below the area median income (AMI) as specified by HUD, and estimated number of low-income people with HIV needing housing assistance. Once findings are gathered, share them with stakeholders to gather additional input on client needs.[13]

b. *Explore Existing or New Data Infrastructure:* HOPWA provides access to the Homeless Management Information System (HMIS), but you may consider purchasing the eCOMPAS data system for program planning and implementation. HUD provides specific guidance on procurement for grantees in the HOPWA Oversight Resource Guide. (See Additional Resources Box). The NYC DOHMH has been using eCOMPAS since 2008 and has utilized the following software features: Annual Performance Report (APR) and Consolidated Annual Performance and Evaluation Report (CAPER) submission tool, electronic assessment system, digital dashboard, electronic contract management module, housing management inventory module, visual analytics report, housing eligibility and recertification portal. The electronic assessment system enhances subrecipient's ability to report client level services and HIV medical data (i.e., viral suppression, retention in care, etc.). Consider using multiple data systems to evaluate client outcomes compared to the general population of other homeless individuals with HIV. Determining other data systems that capture HIV and AIDS-related surveillance data in addition to eCOMPAS will aid with client demographics, service verification and demonstrating differences in HIV outcomes between HOPWA clients and the general population.

3. Engage Stakeholders

Although available resources may vary by organization, take the following steps to engage stakeholders:

a. *Disseminate Mapping Findings to Key Stakeholders:* Presenting mapping findings to organizational leadership, advisory groups, and potential consumers can aid in the identification of unique challenges or gaps in current or proposed service delivery. Consider presenting findings by convening community town hall meetings with representatives of client population(s) and other key stakeholders. Gathering feedback from stakeholders can also assist with the development (e.g., scope, language, etc.) of the Consolidated Plan and the organization's Annual Action Plan.

b. *Evaluate Existing Housing and Support Services:* The goal of all HOPWA programs is to transition clients into long-term, permanent housing. Assess the presence and accessibility of housing services (tenant-based rental assistance, permanent housing, short-term rent, and utility assistance) within their jurisdiction. Support services are also a fundamental component of ensuring people with HIV are retained in care. Evaluate the existing support services (e.g., assessment and case management, substance abuse treatment, mental health treatment, nutritional services, job training and placement assistance, and assistance with daily living)[2] by researching the support services offered by other agencies within their jurisdiction.

c. *Develop a Consolidated Plan and Action Plan:* Being a successful HOPWA grantee requires being able to clearly illustrate how project activities will meet client needs.

The Consolidated Plan will need to outline the jurisdictional needs (e.g., number of households, spending justification, implementations) based on existing data. To receive HOPWA funding, grantees must submit and have their Consolidated Plan approved by HUD's Office of HIV Housing. The grantee must update their Consolidated Annual Plan every five years and complete an Annual Action Plan. The Annual Action Plan provides a summary of activities the grantee intends to implement to achieve the goals and objectives outlined in the Consolidated Annual Plan.[3] The Annual Action Plan should also be made available for community members and key stakeholders to provide feedback. Consider convening advisory groups, holding community town halls, public hearings, and posting the Annual Action plan on the organization's website. Community members should have at least thirty days to provide feedback.[14]

4. Identify Subrecipients

It is now time to identify subrecipients who will assist with the program delivery:

a. *Identify Subrecipients:* Subrecipients are identified through a formal process, such as a notice of funding opportunity (NOFO) and request for proposals (RFP). To ensure a robust number of applicants, consider using various methods (e.g., posting on social media pages, direct outreach, making announcements at community forums, listservs, etc.) to make agencies aware of funding.[14] When releasing the RFP, utilize a rubric system to score applications. Items to be evaluated include: a description of the agency; financial and programmatic background; performance history as a HOPWA subrecipient if applicable; clearly identified services to be provided and demonstrated evidence of ability to implement proposed services; analysis of client needs; action plan; budget; evidence of fiscal responsibility; willingness to adhere to HUD guidelines and regulations as they relate to HOPWA; and the operationalization and integration of social justice and racial equity in the proposed housing response.[14, 15] Consider agencies that have experience with providing housing and other support services to people with HIV, the ability to assess performance and outcomes, experience managing programs serving clients with intersectional identities, staff with lived experience and overall cultural awareness about the intended clients, previous success managing similar programs, audit reports that illustrate effective financial management, and a valid unique identifier [i.e., Employer Identification Number (EIN), Tax Identification Number (TIN)].[5]

Staff Adaptation

If the grantee does not have capacity to develop a NOFO, RFP, and scoring rubric, consider contracting with a consultant to fulfill this activity.[16] If utilizing a consultant, the consultant should work alongside programmatic staff to ensure alignment between activities outlined in RFPs and proposals and programmatic goals and work plans.

b. *Establish Confidentiality Policies and Data Use and Sharing Agreements:* A critical aspect of service delivery is ensuring access to subrecipient client data. Confidentiality policies should be in place to ensure client information is protected. All staff within grantee and subrecipient agencies should be aware of these policies and receive training on maintaining client confidentiality. Establishing data use and sharing agreements enhances the monitoring and evaluation process. If your organization does not have the technical capacity to formulate these agreements, consider contacting other HOPWA grantees for resources.[17]

Staff Adaptation

If your organization does not have the capacity to establish confidentiality policies, data use and sharing agreements, and privacy notifications, utilize a consultancy group such as Actionable Intelligence for Social Policy (AISP) to support the process.[17]

5. Staff Recruitment and Training

Once gaps have been assessed, organizations will need additional staff for program enhancement and implementation. Take the following steps to build an administrative team and capacity among partnering agencies:

a. *Recruit and Train Administrative Staff:* An effective administrative team requires individuals who have exceptional customer service skills, an understanding of social determinants of health and their impact on clients, and a general understanding of HUD's HOPWA program. Administrative teams should be able to fulfill the following activities: program and budget management, data quality management and analysis, monitoring and evaluation, grant writing and policy analysis, and community outreach and engagement. Additionally, individuals with lived experience, or who have provided direct services at other HOPWA-funded organizations, offer an invaluable perspective on program implementation. These individuals can offer guidance on the feasibility of program activities required of funded agencies.

Staff Adaptation

The Leveraging Housing Opportunities to Promote Retention in Care for People with HIV intervention is expansive and requires specific staffing for smooth implementation. The need for specific roles and additional hires varies depending on your jurisdiction size and HOPWA implementation plan. If funding is limited, consider reassigning existing team members to the HOPWA program and merging the program and fiscal analyst positions into one position. The housing director and program manager can also work together to complete the Consolidated Plan, Annual Performance Report, and other HUD reporting requirements.

b. *Conduct Staff Training with Funded Agencies:* Working with funded agencies increases program engagement and prioritizes individuals who have experience working with community members. Ensuring funded agencies have received adequate training will enhance service delivery by decreasing data documentation errors and implementing the program to fidelity across all agencies. They will also need to undergo mandated training (e.g., HOPWA Financial Management Training course, HOPWA Oversight Training, etc.) offered through HUD as a part of their funded agency agreement. Additional training should include an overview of structural determinants of health, service delivery expectations, environmental review training, client confidentiality, privacy measures, review and utilization of the client housing assessment plan, lead-based paint requirements, income and eligibility verification measures, and data documentation training (eCOMPAS).

6. Engage and Retain People with HIV in Care

Although housing models vary by jurisdiction, monitoring, evaluation, and staff acknowledgment efforts should be consistent across all models. An implementation template should include:

a. *Monitor and Evaluate the Intervention:* The administrative team should establish methods to gather feedback from clients and stakeholders and to make continuous improvements to the RFP. Additionally, funded agencies should be monitored to ensure each agency is meeting its deliverables. Evaluate client HIV-related care data quarterly and provide partnering agencies with reports on clients who are out of care and who are not virally suppressed. Conduct monthly check-ins with partnering agencies to evaluate client housing assessment plans to reassess the client's need for services. Provide technical assistance and meet with sub-contractors to ensure goals are met.

b. *Celebrate and Acknowledge Effort:* Staff engagement is a critical component of programmatic sustainability. Being intentional about recognizing and celebrating staff can lead to higher morale, increased involvement in feedback evaluations, and strengthen relationships between staff and subrecipients. These activities can include annual staff appreciation celebrations, providing food during training, providing promotions for staff, inviting staff and subrecipient staff to present at conferences or contribute to scientific research papers.

Logic Model

Resources	Activities	Outputs	Outcomes	Impact
• Partnerships with subrecipients providing diverse housing services for people with HIV, who are experiencing homelessness • Connections with key stakeholders, advisory groups, and community members to provide insight on needs and service model development (Consolidated Plan) • Access to multiple client-level databases • Sufficient funding to purchase the eCOMPAS database • Availability of staff to fulfill HOPWA specific roles and responsibilities • Available level of effort to conduct mapping activities and coordinate proposals/ plans as needed	• Create and implement a mapping tool to determine the unique needs of potential consumers • Identify community-trusted subrecipients providing housing and other support services • Identify multiple client-level databases to increase case management and establish data sharing agreements • Develop an Oversight Plan to monitor subrecipient activities, client outcomes, and program successes • Recruit a HOPWA administrative staff that fulfill the following needs: Program and budget management, data quality management and analysis, monitoring and evaluation, grant writing and policy analysis, community outreach and engagement	• Retention in HIV primary care • People with HIV, who are experiencing homelessness engaged in housing and other support services • Accessible and reliable referral system to meet the needs of clients and "graduate" clients to permanent housing • Sense of pride among subrecipients and increase in morale	Among participating clients with HIV, who are experiencing homelessness: • Reliable referral system to increase access to receive permanent housing • Improved overall health with connections to other support services • Increased ability to address social determinants of health Among the grantee and subrecipients: • Increased ability to evaluate client retention in care in comparison to engagement in housing • Increased ability to conduct matched analysis • Increased partnership and streamlined referrals with a wide variety of organizations offering services to people with HIV • Increase ability to streamline contract management, quality and outcome management, and client feedback and satisfaction activities required by HUD through eCOMPAS	• Increase retention in care for people with HIV, who are experiencing homelessness • Increased engagement in long-term, permanent housing for clients • Increase in client usage of support services.

Your Planned Work

Your Intended Results

Staffing Requirements & Considerations

Staff Capacity

Leveraging Housing Opportunities to Promote Retention in Care for People with HIV intervention has been implemented for over 20 years and has had time to identify key staffing roles to optimize intervention outcomes. When looking to replicate this intervention one should strive to meet these staffing roles. Alternatively, if capacity is a concern, one should consider if existing staff can meet the responsibilities required by these roles. As a part of the intervention, developers hired staff who had previous experience working within subrecipient agencies. Having prior experience working in the community allows staff to utilize their experiences to provide thoughtful guidance to the administrative team. The following staff implemented the intervention at the NYC DOHMH:

- *Director, Housing Services Unit:* Provides oversight of the HOPWA program and communicates with HUD as needed. The responsibilities of the Director include:
  - Provide oversight of the HOPWA grant;
  - Identify and hire additional staff, as needed;
  - Provide oversight and direction to the administrative team; and
  - Attend subrecipient site visits.
- *HOPWA Program Manager:* Provides oversight of the program analysts and ensures the service model is implemented correctly. Specific responsibilities include:
  - Manage and oversee the work of program analysts and fiscal manager;
  - Ensure consistency between technical assistance provided by program analysts and subrecipient activities;
  - Provide support to subrecipients during the contract process;
  - Ensure the project team is familiar with the HOPWA framework, grant expectations, and consistent program messaging; and
  - Attend subrecipient site visits
- *Program Analysts:* Consider reassigning administrative staff to fulfill this role. Analysts provide oversight on day-to-day service delivery. These individuals report to the HOPWA Program Manager. Responsibilities include:
  - Monitor service delivery;
  - Deliver technical assistance training to subrecipients to ensure adherence to service delivery model and eCOMPAS;
  - Document activities in eCOMPAS;
  - Ensure that intended consumers are benefitting from the program; and
  - Conduct subrecipient site visits.
- *HOPWA Fiscal Manager:* Provides extensive knowledge to the administrative team on HUD's HOPWA fiscal requirements and compliance measures. This individual reports to the HOPWA Program Manager and should have prior experience working with auditors. The fiscal manager's responsibility is to lead and participate in internal and external HUD audits.
- *HOPWA Fiscal Analysts:* Must work closely with Program Analysts to develop annual budgets that reflect the program model. Responsibilities include:
  - Coordinate reimbursements;
  - Develop budgets and determine spend down, personnel, overhead, etc.;
  - Monitor expenses; and
  - Work with program analysts three times per year to negotiate partner agency contracts, make mid-year budget

**It is vital to give vendors the ability to modify the budget to efficiently spend funds to address changing needs.*

- *Policy Analyst:* This position requires a person with strong writing skills who has extensive knowledge in housing and HIV policy. These skills improve the project team's ability to successfully advocate for the program when faced with potential limitations (e.g., funding cuts to partnering agencies, reallocation of funding, etc.). Specific responsibilities include:
  - Report summaries of work and service continuation plans to HUD;
  - Complete the HUD HOPWA grant application;
  - Develop RFPs;
  - Connect with community members for participatory involvement in the annual plan and RFP development processes; and
  - Provide ideas to the administrative team on utilizing existing housing and HIV policies to maximize service delivery.
- *Data Quality Assurance Team:* Provide technical expertise to ensure data is documented correctly. Additionally, this team will aid the administrative team in thinking about the operations of the grant from a systems perspective. The data quality assurance teams' responsibilities include:
  - Ensure information and processes are synchronized, so data are translated in paper and electronic chats on eCOMPAS; and
  - Ensure data collection is clean and consistent.
- *Monitoring and Evaluation Team:* Consider reassigning an existing research and evaluation team to this role. This team works with subrecipients and the administrative team to ensure data are being inputted correctly and develop strategies to improve subrecipient documentation measures. The team should also have a thorough understanding of structural determinants of health (e.g., racism, poverty, gender inequality, etc.). Additional responsibilities include:
  - Provide data analysis and quality assurance support;
  - Extract data and note discrepancies to initiate programmatic follow-up with subrecipients to identify gaps, errors, etc.;
  - Lead the feedback loop setup for timely course correction;
  - Publish research for advocacy and to reinforce the need for additional funding;
  - Track indicators to identify new areas for research and methodologies for data collection as well as assess the project's impact on emerging trends, etc.; and
  - Attend subrecipient site visits.

Agencies interested in replicating the intervention may have limited resources and may be unable to hire for the positions outlined above. At a minimum, consider having the following positions in place to effectively run a HOPWA program:

- Housing Director
- HOPWA Program Manager
- HOPWA Fiscal Manager
- HOPWA Fiscal Analyst (at least one)
- HOPWA Program Analyst (at least one)
- Research and Evaluation Staff Person (at least one)

If funding is limited, consider combining the Program and Fiscal Analysts positions into one position. Additionally, in lieu of the Policy Analyst position, the Housing Director and Program Manager can work together to complete the Consolidated Plan, Annual Performance Plan, and other HUD reporting requirements.

Staff Characteristics

Core competencies of all staff should include:

- Excellent technical assistance and training skills;
- Understanding of HUD and HOPWA requirements;
- Ability to facilitate engaging presentations to stakeholders about HUD and HOPWA requirements;
- Baseline data analysis skills;
- Strong customer service skills;
- Working knowledge of structural determinants of health (racism, discrimination, poverty, etc.) and their impact on client health outcomes;
- Baseline knowledge of social epidemiology;
- Knowledge of treatment as prevention;
- The ability to view clients as individuals and work to humanize data to advocate for clients effectively;
- Understanding of the needs of clients living in your service jurisdiction;
- Knowledge that addressing housing instability can positively affect health outcomes for people with HIV and AIDS ("Housing as Healthcare");
- Willingness to work with clients to address individual barriers through HOPWA services; and
- Lived experience or nuanced understanding of the experiences of people with HIV experiencing homelessness.

When discussing the importance of recruiting staff the NYC DOHMH explained:

". . . several of our staff come from agencies that we formally funded, so they have first-hand experience delivering housing services and working with consumers directly, and now they're coming to the side of administrator, and they give really thoughtful insight when we issue guidance about elements that we need to consider when that guidance is implemented. And I think that's always such a huge benefit for our program, that people are given an opportunity to gain employment here and professional growth."

– NYC DOHMH DIRECTOR, HOUSE SERVICING UNIT

Replication Tips for Intervention Procedures and Client Engagement

Successful replication of the Leveraging Housing Opportunities to Promote Retention in Care for People with HIV intervention involves working with trusted subrecipients, gathering community feedback, and utilizing multiple databases to enhance case management when possible.

Work with Trusted Subrecipients:

Depending on the size of your jurisdiction, partnering with other community-based, city, or state-level agencies will be essential to implementing an effective HOPWA program. Ideally, these agencies should have strong relationships with clients. For your replication process, consider taking the following steps:

Identify subrecipients that hire staff with lived experience: Staff with lived experience should represent within all levels of the subrecipient agencies and the HOPWA administrative team. Receiving services from people who have similar lived experiences helps agencies build a positive rapport with clients and aid in retention. Individuals with lived experience will provide a unique perspective on barriers for clients, community engagement strategies, and feasibility of intervention approaches.

Identify subrecipients with prior experience as HOPWA recipients: Subrecipients with previous experience as HOPWA grantees will be familiar with HOPWA's reporting processes and subrecipient expectations. This experience can reduce the amount of assistance needed to ensure subrecipients are properly documenting data and service delivery expectations are met.

Identify subrecipients that provide additional support services: In addition to identifying subrecipients that can assist with providing housing services organizations, agencies who can offer other support services (e.g., assessment and case management, substance abuse treatment, mental health treatment, nutritional services, job training and placement assistance, and assistance with daily living)[2] are essential. Utilizing mapping tools and gathering community feedback helps identify unique client needs that expand beyond housing stability.

Provide training to subrecipients: HUD provides live and accessible pre-recorded trainings for subrecipients based on their jurisdictional requirements and needs. Grantees should prioritize the following trainings for subrecipients (See Additional Resources Box):

- Moving On Webinar Series:
  - Introduction
  - Resources
  - Moving On for Public Housing Agencies (PHAs)
  - Assessment Processes
  - Creating a Culture of Supportive of Moving On
  - Services in Supportive Housing
  - Tracking and Evaluations
- The HOPWA Institute:
  - HIV Housing Care Continuum
  - Housing-Based Case Management & Support Services
  - Income & Rent Calculation-in 25 Minutes!
  - Core Principles of Financial Management
  - HOPWA Rental Assistance: Building Programs That Work! (If applicable)
  - Rural Challenges - Operating HOPWA Housing Programs in Rural Communities (If applicable)
  - Effect Approaches to Monitoring
  - Spotlight on STRMU (If applicable)
  - HOPWA and Ryan White: Federal Panel on HIV and Health
- HOPWA Modernization: Moving On Strategies
- HOPWA Intake, Initial, and Annual Recertification—Using Remote, Virtual, and other Methods
- HOPWA APR Training Modules
- HOPWA CAPER Training Modules
- The Impact of Housing on Health and Using your HIV Housing Care Continuum

Additional training should be provided to agencies focusing on data documentation, navigating eCOMPAS, and service delivery expectations (e.g., rapid data entry, eligibility qualifications, etc.)

Work with subrecipients that offer permanent housing: Some subrecipients may offer one or two supportive housing services (temporary short-term housing, short-term rent, utility assistance, tenant-based rental assistance, and permanent housing). When determining which agencies to work with, ensure that some partners provide permanent housing and other housing services. Housing service models should include comprehensive long-term support options and short-term options to respond to immediate needs. Having a tiered model with an established referral process provides the ability for clients to receive warm hand-offs between subrecipients while guiding them through their journey to permanent housing.

Gather Community Feedback

Providing supportive housing services requires utilizing a client-centered approach. Feedback will assist with developing awareness about the unique client needs gathering input about service delivery. Community members serve as key informants on barriers to service accessibility, stigma, gaps in services within the jurisdiction, and help to identify trusted agencies. For your replication process, consider taking the following steps:

Create spaces to receive community feedback: Hold public hearings, implement client satisfaction surveys, conduct in-person and online community outreach, utilize focus groups, and establish community advisory boards among other strategies. When creating these spaces, consider participants accessibility (e.g., preferred language, transportation vouchers, wheelchair ramps, etc.) and compensating people for their involvement.[14]

Join national housing stakeholder workgroups: HOPWA programs can vary significantly depending on the size of the jurisdiction, available resources, and support from local government officials. Joining national housing stakeholder workgroups can provide a space for knowledge exchange, identifying contractors to provide technical assistance, and developing housing advocacy strategies. These types of workgroups can help to build a community of practice where strategies across institutions and jurisdictions are shared.

Identify technical assistance contractors: The NYC DOHMH is a well-resourced agency and has the capabilities to hire staff as necessary to fulfill HOPWA program needs. It may be appropriate for other agencies with fewer resources to consider utilizing contractors to assist with program and budget management, grant writing and policy analysis, monitoring and evaluation, and data quality control.

Establish an advisory group: This group should consist of clients, people with lived experience, and other providers. This group will provide a critical role by guiding the development of the Consolidated Plan and Annual Action Plan.

Attend site visits: Replicators should encourage all administrative staff to attend site visits to connect with clients, develop a better understanding of client needs and observe the standard of services being provided. Site visits can provide space for the administrative team to better advocate on the client's behalf, as some clients may not feel comfortable advocating for themselves at the risk of losing access to housing or other support services.

"... consumers get to see who is behind the scenes ... It can be a really beautiful exchange or ends up being a good opportunity for us to advocate if the housing conditions for a given consumer are not meeting quality standards. One of the first ones I went to happened to be a situation of that kind, and the consumer felt just very apologetic and grateful for housing, and they didn't feel like they should complain about the mold and the leaking that was happening."

– NYC DOHMH DIRECTOR, HOUSE SERVICING UNIT

Utilize Multiple Databases to Enhance Case Management

Utilizing multiple datasets helps evaluate the program and optimize case management. People with HIV may be accessing services from various providers. Having access to these data is essential to determine client retention and engagement and monitor HIV-related medical data. Consider the following replication recommendations:

Procure eCOMPAS or other Homeless Management Information System (HMIS): The primary database the NYC DOHMH used to gather data from subrecipients is eCOMPAS. RDE Systems is the eCOMPAS developer and provides free consultation with agencies interested in utilizing the database. The consultation includes an assessment of the current data infrastructure and client and staff buy-in. RDE will then determine pricing based on agencies database preferences and available funding. RDE works with agencies to ensure staff readiness and sustainability, address data migration concerns, and provide optimal security of client data. RDE provides training to the agency's Information Technology department at launch and throughout the duration of database usage. RDE addresses data migration concerns by assessing electronic health record integration and secure data sharing. Additionally, RDE offers security and privacy features that extend beyond standard HIPPA compliance through the Federal Risk and Authorization Management Program (FedRAMP) certification and Zero-Knowledge encryption.

At a minimum, consider purchasing the following features from eCOMPAS or other database: electronic contract management module, housing management inventory module, and electronic assessment system. The electronic contract management module and housing management inventory module are helpful when monitoring the subrecipient activities . The electronic assessment system enhances subrecipient's ability to report client level services and report data on HIV related medical data (i.e. viral suppression, retention in care, etc.)

Establish partnerships to access medical data: Having access to client-level HIV-related surveillance data is helpful to determine the number of clients retained in care, viral suppression, and CD4 count.1 Utilizing HIV surveillance data in combination with eCOMPAS can illustrate how stable housing leads to retention in care.

Establish confidentiality policies and data sharing and use agreements: Depending on capacity, utilizing a consultancy group may be necessary to complete this step.[17] If you share data, a data agreement and client confidentiality policies should be in place.

When discussing the importance of utilizing eCOMPAS and multiple databases:

"[The impact of HOPWA housing on health outcomes] that's been the biggest advocacy piece on why housing is so important, that it's not just about putting a roof over someone's head; it's stabilizing all major quality of life indicators. And we [NYC DOHMH] could not do that if we didn't have eCOMPAS. We certainly couldn't do that if we couldn't match the data to surveillance . . ."

– NYC DOHMH DIRECTOR, HOUSE SERVICING UNIT

Securing Buy-In

Securing the support of leadership, staff, and other relevant stakeholders is a critical step when implementing an intervention. Highlighting the advantages is one way to secure support. The following strategies may help to secure buy-in for the Leveraging Housing Opportunities to Promote Retention in Care for People with HIV intervention:

Implement activities to encourage community feedback on the Annual Action Plan and Consolidated Plan:

- Utilize public hearings or convene focus groups to gather feedback from community members on the Annual Plan. Utilize social media, listservs, radio announcements, and print media ads to make the public aware of the event(s). Consider hosting these events virtually and in-person to reduce barriers for community members. Compensate (e.g., gift cards, transportation vouchers, etc.) attendees for their participation.
- Utilize your organization's social media and website for people to provide feedback on the Annual Plan. Compensate (e.g., gift cards, transportation vouchers, etc.) people for their participation by collecting email addresses.
- Convene an advisory board of key stakeholders to gather feedback from a diverse audience to understand client needs, provide input on the annual plan, and continuously update the RFP.
- Liaise with community leaders to identify additional opportunities for community feedback through formal and informal channels (e.g., block parties, suggestion boxes, etc.)

Highlight the advantages your organization may receive by implementing the intervention:

- The ability to use client-level HIV medical data to assess if supportive housing leads to higher rates of retention in care and viral suppression.
- Increase housing service coordination within the jurisdiction.
- Increase ability to conduct matched analysis.
- Increase ability to streamline contract management, quality and outcome management, and client feedback and satisfaction activities required by HUD through eCOMPAS.
- Ability to use evaluation data to increase advocacy efforts focused on permanent housing for people with HIV.
- Designation as a HOPWA grantee increases the potential of receiving continuation funding from HUD.
- Conference and training opportunities to present on the implementation and outcomes of the intervention.

Highlight the advantages funded agencies may receive by implementing the intervention:

- The ability to use client-level HIV medical data to assess if supportive housing leads to higher rates of retention in care and viral suppression.
- Access to a network of other providers to meet distinct client needs, increasing the referral process for other services.
- Receive routine reports on client retention (e.g., HIV medical care, support services, housing service).
- Access to technical assistance to optimize the organization's service delivery and staff capacity.
- Increase visibility of the agency as a HOPWA subrecipient.

Overcoming Implementation Challenges

There are always challenges when implementing a program or intervention. Anticipated challenges, as well as possible solutions, include:

- **Federal funding and governmental changes:** Federally funded programs such as HOPWA are susceptible to significant fluctuations between fiscal years based on shifts in governmental administrations or priorities. This can impact the amount of available funding a jurisdiction receives, ultimately impacting the services that the jurisdiction is able to provide. Having support from state and city government to fund programming can offset a reduction or loss of federal funds.
- **Housing as an indicator of higher retention:** Enrollment does not guarantee that services were received, nor does it indicate a particular dose of treatment. Future programs should identify if there is a specific threshold of service utilization for which the evidence of the intervention's effectiveness becomes clearer (i.e., receiving a certain number of type of services results in increased outcomes).
- **Promoting staff engagement:** Even in smaller jurisdictions, housing programs tend to involve a wide range of stakeholders, organizations, and staff. This can involve extensive and ongoing coordination which may be challenging. Keep staff motivated by holding ceremonies for funded agencies that expressly acknowledge the work of case managers. These celebrations allow space for vendors to connect, gather feedback from administrators and case managers, reconnect to the program's goals and mission, and acknowledge the work of staff who are often people of color and are the lowest paid. Ceremonies can include food, goodie bags, gift certificates, and other incentives. Future programs should also consider equitable methods of acknowledgement, such as wage increases, providing professional development opportunities and yearly bonuses for staff.
- **Creating mechanisms to receive feedback:** Being actively involved in diverse community workgroups and discussions can aid in identifying research evaluation ideas, analyzing data, and ultimately developing new strategies. Make sure that communities feel heard and that their suggestions are integrated across programming to promote engagement and sustainability.

Promoting Sustainability

NYC DOHMH is the largest HOPWA grantee in the United States, with over 20 years of experience implementing the program. Program longevity is partially due to support from local government officials and advocates and being in a jurisdiction with significant resources for people with HIV. Other jurisdictions without the same level of support can implement this intervention by identifying other funding resources, scaling down the number of support services offered, decreasing the number of subrecipients, and working with housing advocates to promote policies that impact people with HIV who are experiencing homelessness. Replicators are encouraged to connect with neighboring jurisdictions that have implemented HOPWA or other housing programs to learn their processes and best practices. This may offer unique ideas on how to best leverage resources to implement a housing intervention that is sustainable and effective. Regarding analysis of the intervention, replicators should strive to determine if all clients enrolled in the HOPWA program are actually receiving services, and if so, that the service dosage (i.e., the number and type of services, duration, quality, etc.) is clearly defined and consistent across subrecipients. Replicators should also strive to record additional variables that may impact the effectiveness of the intervention (e.g., private vs. public insurance, educational level, employment status, income, mental health status, hospitalization, substance use history, etc.).[1]

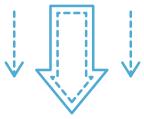
SWOT Analysis

SWOT is an acronym for Strengths, Weaknesses, Opportunities, and Threats. A SWOT analysis is a structured planning method used to assess the viability of a project or intervention. By conducting a SWOT analysis in advance of an intervention, organizations can proactively identify challenges before they occur and think through how to best leverage their organizational strengths and opportunities to improve future performance.

STRENGTHS

The Leveraging Housing Opportunities to Promote Retention in Care for People with HIV intervention retains people experiencing homelessness with HIV in care by:

- Triangulating client data, using multiple databases to monitor client service engagement and evaluate client retention,
- Including the voices of clients and other key stakeholders in the development of the Consolidated and Annual Plan,
- Acknowledging and celebrating staff for their work and commitment to implement the intervention, and
- Utilizing eCOMPAS, a database to easily perform data management, contract management, quality improvement, and client satisfaction activities.



WEAKNESSES

Agencies will find it challenging to implement the Leveraging Housing Opportunities to Promote Retention in Care for People with HIV intervention without:

- Access to client level HIV medical data
- Current relationships or leads on identifying key stakeholders and community members to guide the planning process,
- Provide sufficient training and technical assistance to subrecipients on the intervention model, data documentation, and reporting procedures,
- Identify or hire staff to aid with monitoring, evaluation, and implementation oversight for subrecipients, and
- Access to a database that the grantee and subrecipients can use to store and share programmatic and client level data.

OPPORTUNITIES

The Leveraging Housing Opportunities to Promote Retention in Care for People with HIV intervention offers opportunities to:

- Create a network of services with stakeholders who support people with HIV who are experiencing homelessness,
- Identify specific intervention service doses (i.e., frequency, quality, duration, etc.) that result in increased retention and viral suppression,[1]
- Identify and hire staff with lived experience from subrecipient agencies to join the administrative team, and
- Build and strengthen relationships with stakeholders and community members to collaboratively advocate for housing opportunities for people with HIV.

THREATS

Threats to the Leveraging Housing Opportunities to Promote Retention in Care for People with HIV intervention's success include:

- Inability to develop a strong Consolidated Plan or lack of funding for new competitive grantee applicants,
- Changes at the executive level of the federal government may result in funding allocation changes,
- Leadership changes in your local jurisdiction may result in the reprioritization of activities,
- Failure to secure-buy in from stakeholders and staff,
- Inability to identify subrecipients that provide permanent housing and other support services,
- Inability to establish data use and sharing agreements to obtain client-level HIV and other supportive service-related data, and
- High staff turnover with the administrative team and subrecipient agencies.

Conclusion

The Leveraging Housing Opportunities to Promote Retention in Care for People with HIV intervention is an attempt to assess engagement in HIV care and treatment amongst people receiving HIV housing services, in comparison to an alike group in the larger HIV population. This innovative service model includes housing and other support services that enable client retention and improve HIV-related health outcomes. Findings from the study conducted by the NYC DOHMH on the impact of the intervention showed that:

- Clients engaged in the intervention experienced higher retention rates in care (94 percent) than the control group (84 percent).[1]
- Clients' odds of retention were three times higher compared to other people with HIV in matched and unmatched analysis [odds ratio (OR) = 2.97, 95 percent confidence interval (CI) = 2.35–3.74; OR = 3.06, 95 percent CI = 2.45–3.81, respectively].[1]

This intervention also leverages NYC DOHMH's 20 years of experience with HOPWA implementation, stakeholder engagement, and access to multiple client-level databases to identify and address the unique challenges faced by people with HIV who are experiencing homelessness. Overall, the Leveraging Housing Opportunities to Promote Retention in Care for People with HIV intervention illustrates how organizations can utilize tiered supportive housing models to increase retention in HIV care for people who are experiencing homelessness.

Additional Resources

HIV National Strategic Plan
https://www.hiv.gov/federal-response/hiv-national-strategic-plan/hiv-plan-2021-2025

United States Department of Housing and Urban Development (HUD) Housing Opportunities for Persons with AIDS Eligibility Requirements
https://www.hudexchange.info/programs/hopwa/hopwa-eligibility-requirements/#:~:text=HOPWA%20formula%20grants%20are%20made,basis%20of%20a%20national%20competition

United States Department of Housing and Urban Development (HUD) Housing Opportunities for People with AIDS (HOPWA) Grantee Oversight Resource Guide
https://www.hudexchange.info/resource/1003/hopwa-grantee-oversight-resource-guide/

United States Department of Housing and Urban Development (HUD) HOPWA CAPER Form: HUD-40110-D
https://www.hudexchange.info/resource/1011/hopwa-caper-form-hud-40110-d/

United States Department of Housing and Urban Development (HUD) HOPWA Annual Progress Report (APR): HUD-40110-C
https://www.hudexchange.info/resource/1012/hopwa-annual-progress-report-apr-form-hud-40110-c/

United States Department of Housing and Urban Development (HUD) eCON-Planning Suite: Guide to the Data-Driven Toolkit for CPD Maps (Click on Guide to the Data-Driven Toolkit for CPD Maps)
https://www.hudexchange.info/programs/consolidated-plan/guides/#cpd-maps

Centers for Disease Control and Prevention Epi Info
https://www.cdc.gov/epiinfo/index.html

United States Department of Housing and Urban Development (HUD) eCON Planning Suite Trainings
https://www.hudexchange.info/programs/consolidated-plan/econ-planning-suite-trainings/

United States Department of Housing and Urban Development (HUD) Trainings Webpage
https://www.hudexchange.info/search/?km=10&ct=Trainings&dsp=&q=HOPWA

[Search using specific training titles found in Staffing Requirement and Considerations]
CIE Cost Analysis Calculator
http://ciehealth.org/innovations

Endnotes

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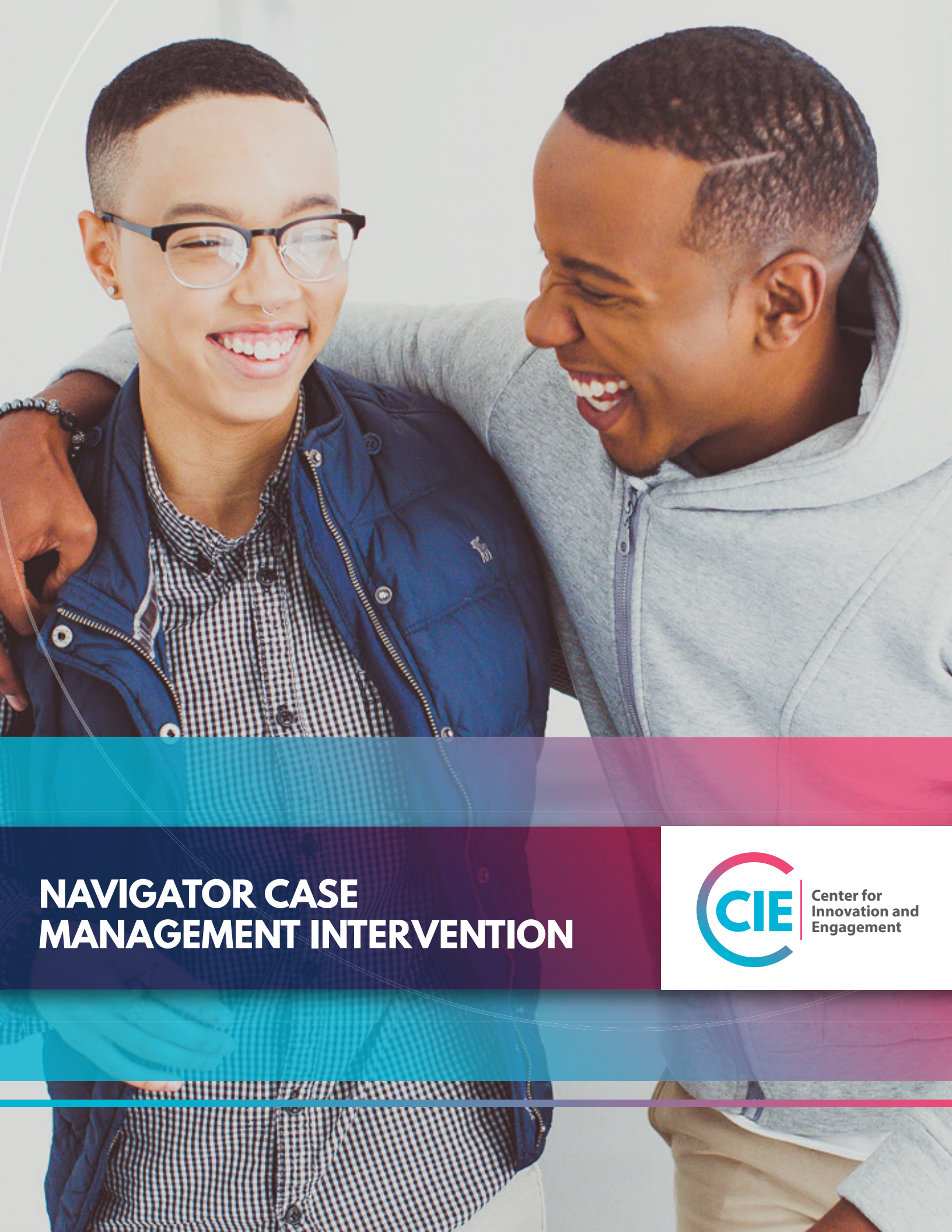

NAVIGATOR CASE MANAGEMENT INTERVENTION

Center for Innovation and Engagement

Background

The Health Resources and Services Administration's (HRSA's) Ryan White HIV/AIDS Program (RWHAP) provides a comprehensive system of HIV primary medical care, essential support services, and medications for low-income people living with HIV who are uninsured and underserved. RWHAP funds states, cities, counties, 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.

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NASTAD Authors:

Milanes Morejon, Senior Manager, Health Equity

Rosy Galván, Senior Director, Health Equity

Intervention Development Team:

Janet Myers, Professor USCF School of Medicine

Ali Riker, Director of Programs, SF Sheriff Dept.

Contributors

Natalie Cramer, Deputy Executive Director, NASTAD

Tia Clark, Impact Marketing + Communications

Tara Kovach, Impact Marketing + Communications

Sarah Cook-Raymond, Impact Marketing + Communications

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Stock photos. Posed by models.

Intervention Snapshot

	Priority Population	People with HIV who are currently incarcerated and are leaving jail
	Setting	Jail
	Pilot and Trial Sites	San Francisco County Jail
	Model	The NCM intervention addresses the challenges faced by incarcerated individuals who are returning to the community by using a patient navigation-enhanced case management approach to support engagement in HIV care. The model leverages the expertise of patient navigators who assist case managers with monitoring clients' adherence to care and who mentor and counsel clients before and after their release from jail.
	RWHAP Ending the Epidemic (EHE) Opportunity	An estimated one in seven people with HIV leave prison or jails each year in the United States, and many struggle to access care and treatment upon release, with as many as 95 percent experiencing a gap in HIV treatment. Intervention outcomes indicate that clients were twice as likely to be linked to care within 30 days of being released from jail and were almost twice as likely to be retained in care during the intervention period. Additionally, individuals who received treatment for substance use disorders were four times as likely to be linked to care upon release.
	Intervention Funding	The intervention was funded and evaluated by a National Institute on Drug Abuse grant.
	Staffing	Staff positions in the original intervention included a Deputy Director, Case Manager, Outreach Coordinator, and Patient Navigator.
	Infrastructure Needed	Systems to facilitate care coordination, including linkage and referral to health and social services and relationships with local jails

Intervention Overview & Replication Tips

Why This Intervention?

Navigator Case Management (NCM) is a 12-month linkage intervention for people with HIV who are incarcerated, leveraging harm reduction, prevention case management, and Motivational Interviewing techniques to promote healthy behaviors. NCM was originally implemented in the San Francisco County adult jail system[1] and used Project START's principles to facilitate post-release care services for clients with HIV who had a history of drug or alcohol use and who were incarcerated.[2] Project START is based on the research of an individual-level multi-session intervention for young men being released from prison and returning to the community. Project START is a client-centered HIV, sexually transmitted infection, and hepatitis risk-reduction and engagement-in-care intervention for people being released from prison or jail. Patient navigators used START's principles to support people with HIV who were receiving care while incarcerated through the Ryan White HIV/AIDS Program. They facilitated reentry into care in the community, provided referrals, and also counseled clients about how to avoid reincarceration.[3]

The NCM intervention utilized a peer navigation model by leveraging the expertise of patient navigators. They assisted case managers with monitoring clients' adherence to care and mentored and counseled clients before and after their release from jail. Patient navigators were people with HIV who provided peer support, and they had similar backgrounds and experiences to clients. They were thus an integral part of the care management team as they were able to relate to the client populations they were serving. Patient navigation can be an effective model of HIV care coordination that can facilitate greater continuity in care and treatment, particularly for people who have been recently released from the criminal justice system.[4] NCM also provided post-release planning support, education, legal

support, transportation assistance for medical and social service appointments, and referrals (e.g., mental health and substance use services, housing, food, employment, social benefits, health insurance) to clients. By facilitating access to these multilayered services, the NCM intervention aimed to reduce recidivism rates, substance use, and HIV transmission and help clients obtain and maintain housing, establish and sustain connections with providers, and achieve HIV medication adherence.[1]

Study Findings

The NCM intervention's effectiveness and impact in linking and engaging people with HIV were demonstrated in a randomized controlled trial (RCT) implemented from 2010 to 2013 in the San Francisco County Jail. People with HIV who were incarcerated and who were likely to be released during the RCT recruitment phase were the focus of the study. Clients were randomly assigned to the control group that received standard case management or the intervention group that received navigation-enhanced case management. Standard case management consisted of discharge planning and up to 90 days of as-needed case management based on specifications developed and adopted in San Francisco. Clients enrolled in the study were surveyed while in jail to develop a baseline. Clients were surveyed again at two, six, and 12 months after release. The NCM intervention resulted in greater linkage to care within 30 days of a client's release from jail (odds ratio [OR]=2.15; 95 percent confidence interval [CI]=1.23, 3.75) and consistent retention over 12 months (OR=1.95; 95 percent CI=1.11, 3.46). A client's receipt of substance use treatment while in jail also resulted in early linkage (OR=4.06; 95 percent CI=1.93, 8.53) and retention (OR=2.52; 95 percent CI=1.21, 5.23). For this study, linkage to care was defined as having at least one documented non-urgent visit to a community medical provider within 30 days of being released from jail. Retention was defined as having had a non-urgent medical care visit between each of the follow-up visits (two, six, and 12 months).

A separate qualitative analysis of interactions between clients and patient navigators found that the clients' and patient navigators' shared life experiences fostered easy-to-build relationships and trust.[4] Patient navigators were sensitive to what life was like for their clients because they had previous experiences with incarceration and drug use and had HIV. The patient navigators' lived experiences made them indispensable to the intervention and highlighted the need for organizations to invest in similar public health interventions for priority populations. The NCM intervention helped to address gaps in transitional care for people leaving jail and demonstrated how patient navigation could support linkage and retention-in-care efforts and mitigate health and other structural inequities experienced by people with HIV who have been incarcerated.

"[The intervention] was really providing intensive support to help people navigate to services that they may or may not be connected to. There are a lot of other case managers in the setting. But it was an opportunity for navigators to support people."

– PRINCIPAL INVESTIGATOR

Intervention at a Glance

This section describes the NCM intervention conducted in the San Francisco County Jail to help readers assess the steps required for replication. This intervention is intended for use in care settings, including clinics, community-based organizations, and jails.

Step 1

Engage Stakeholders

Meaningfully gather input from potential clients, providers, case managers, jail staff, and community-based organizations to gauge interest and identify shared outcomes.

Step 2

Assess Gaps and Resources and Hire Staff

Decide the priority populations that will be served by discussing existing service delivery gaps and health inequities both in and out of the jail setting. Identify and hire patient navigators and assign case managers who can work collaboratively on client cases.

Step 3

Conduct Pre-Release Care Planning Activities

Conduct a psychosocial needs and risk assessment and design an individualized, client-centered care plan that includes short and long-term goals for each client. Provide HIV education and counseling to clients. Connect clients to Ryan White HIV/AIDS Program AIDS Drug Assistance Program (ADAP) resources.

Step 4

Monitor Legal Status of Clients

Use the client's conditions of release from jail to inform post-release care plan activities.

Step 5

Conduct Post-Release Care Plan Activities

Assist clients within 24 hours after they are discharged from jail. Accompany clients to the central intervention site for an orientation and their identified housing. Coordinate clients' assessments to confirm information gathered during intake and identify needed support. Develop a care plan for each client.

Step 6

Implement the Care Plan

Provide ongoing support, coaching, and mentoring to clients. Secure transportation for clients to medical and social service appointments. Help clients obtain food and housing services. Provide insurance navigation and assist clients with creating their first medical appointments.

 Step 7	**Follow-up and Monitor Client Progress** Communicate with the intervention team regarding client progress. Reassess clients' needs and respond to emerging needs. Coordinate reoccurring individual and group meetings for clients.
 Step 8	**Graduate Clients** Discuss the completion of the intervention and transition plan goals with clients and the broader intervention team. Highlight the client's achievements.

Cost Analysis

The NCM intervention was funded and evaluated by a National Institute of Health (NIH) National Institute on Drug Abuse (NIDA) grant. HRSA's RWHAP can also be used to fund core medical and support services to people with HIV who are incarcerated or were formerly incarcerated. (See Additional Resources Box). HRSA HAB's RWHAP Technical Expert Panel Executive Summary on Addressing the HIV Care Needs of People with HIV in State Prisons and Local Jails can provide more context. (See Additional Resources Box). Additionally, RWHAP's Policy Clarification Notice 18-02 outlines details on allowable costs. This resource provides guidance to HRSA RWHAP recipients and subrecipients on the use of program funds to provide HRSA RWHAP core medical services and support services: 1) on a transitional basis to people with HIV (PWH) who are incarcerated in Federal and State prison systems; and 2) on a short-term and/or transitional basis to PWH who are incarcerated in other correctional systems (e.g., local prisons and jails) or under community supervision (e.g., parole or home detention).

The NCM intervention cost analysis was not available when this guide was developed. However, you can use the CIE Cost Calculator to create an estimate of the cost of implementing the intervention at your organization. (See Additional Resources Box).

Resources Assessment Checklist

Before implementing the NCM intervention, your organization should walk through the following Resources Assessment (or Readiness) Checklist to assess your ability to do this work. If your organization does not have these components in place, you are encouraged to further develop your capacity to conduct this intervention successfully. Questions to consider include:

- ❑ Have you identified the needs of the clients you plan to assist?
- ❑ Does your organization have a relationship with the jail (e.g., staff, medical teams, leadership)?
- ❑ Has your organization previously supported people who have been incarcerated?
- ❑ Can your organization serve as the central location for clients after they are released from jail?
- ❑ Can your organization offer flexible hours (e.g., drop-in)?
- ❑ Does your organization serve as a nexus between the courts, prosecution, and defense? If not, are you connected to an organization that can advocate for clients and liaise with judges and jail staff?
- ❑ Does your organization integrate a harm reduction lens into its work with people who have been incarcerated and who use substances (e.g., offer naloxone, make referrals to local syringe access services)? Harm reduction assumes that eliminating a potentially harmful behavior (e.g., substance misuse, sexual behaviors that put one's health at risk) may not be possible and seeks to decrease the negative consequences that may occur as a result of continuing the behavior.[5]
- ❑ Does your organization have connections to local organizations, agencies, and health centers to which you can refer clients after they are discharged from jail?
- ❑ Are transitional care programs available for clients?
- ❑ Does your organization have case managers who can assist with pre-and post-release planning and activities?
- ❑ Can your organization hire patient navigators who are representative of the client population?
- ❑ Does your organization have mechanisms in place to support people with lived experience working as patient navigators (e.g., investing in the development and retention of people with HIV, incarceration history, in recovery, etc.)?
- ❑ Have you designated a case manager to supervise and support the patient navigators?
- ❑ Has your staff received the proper training to deliver services and support to clients who are navigating the correctional system?
- ❑ Are financial resources available to sustain the intervention (e.g., state and city funding)?

Setting the Stage

According to the U.S. Centers for Disease Control and Prevention (CDC), there are an estimated 1.2 million people with HIV in the United States.[6] During 2018, approximately 75.7 percent of people with HIV received HIV medical care, 57.9 percent were retained in care, and 64.7 percent were virally suppressed.[7] People with HIV who receive ongoing, regularly scheduled care are more likely to have significantly lower viral loads, higher CD4 cell counts, reduced morbidity and mortality, and improved overall health than those who missed even one medical visit over a two-year period.[8] Receipt of medical care is defined as one or more tests (CD4 or viral load) in the measurement year. While significant strides have been made in ensuring people with HIV effectively progress through the HIV care continuum, these figures demonstrate that retention continues to be a critical issue. In 2014, approximately 38 percent of people with HIV were not in care, and, therefore, more likely to not be virally suppressed.[8] Furthermore, there are interconnected factors that contribute to poor engagement in care, including race, age, gender, socioeconomic status, comorbidities, unmet psychosocial needs, and client distrust in physicians and health care institutions.[9] Improving client engagement and reengagement in care is a national priority with targeted retention measures established by the HIV National Strategic Plan (see Additional Resources Box), HRSA, and the Ending the HIV Epidemic (EHE) initiative.

Access to HIV treatment and linkage services before and after release from jail is a health equity issue. Of the more than two million people incarcerated in the United States, more than 20,000 have HIV.[1] Although Black, African American, and White people use drugs at similar rates, the imprisonment rate of of Blacks and African Americans for drug-related charges is almost six times that of Whites.

HIV prevalence rates among Blacks and African Americans are also disproportionately high. They constitute approximately 12 percent of the U.S. population, but they comprise 44 percent of people with newly diagnosed HIV.[10] In some prison systems, Blacks and African Americans constitute the highest proportion of people with HIV.[9] Although public health interventions centered on HIV care and treatment within correctional settings have increased over time, more programs are necessary to address the interconnected needs of people with HIV who have been incarcerated, both during their incarceration and after their release. Additionally, more programs are necessary to reform the systems that imprison disproportionate rates of people with intersecting identities.[9]

An estimated one in seven people with HIV leave prisons and jails each year in the United States. Many struggle to access care and treatment upon release, with as many as 95 percent experiencing a gap in HIV treatment.[1] It is important to apply a holistic approach to support people with HIV who use substances and are being released from jail through intentional, care-related, post-release planning, and intensive case management programs.

Description of the Intervention Model

The NCM intervention was developed during a five-year research study that was collaboratively implemented by the Center for AIDS Prevention Studies at the University of California, San Francisco (CAPS), the San Francisco Pretrial Diversion Project, Inc. (SFPDP), and the Forensic AIDS Project (FAP), a division of the San Francisco Department of Public Health. The intervention is an enhanced case management program that utilizes patient navigators to assist people with HIV, leaving the San Francisco County Jail to access medical and support services in the community. The patient navigation model initially developed for cancer care has been increasingly used with people with HIV in which the navigator, usually a nonclinical paraprofessional or peer, acts as a "coach" to the client.[1] Patient navigators use a strengths-based philosophy to support clients in leveraging their resources, talents, and strengths to best access available services.[1] Patient navigators do not replace traditional case managers and their role is similar to peer navigators.

The NCM intervention uses a strengths-based philosophy to support clients in leveraging their assets, skills, and resilience to best access available services (e.g., mental and substance use services, HIV treatment, housing, and employment). The intervention is based on harm reduction, motivational interviewing, and general social work principles to facilitate adherence to a comprehensive care plan designed to address each client's intersecting needs. The model's key components include an integrated team approach, intensive case management services, ease of accessibility to services for clients by utilizing drop-in hours, and meeting with clients in the community environments where they are most comfortable.

The demographics of clients served in the NCM intervention highlight the need for linkage and retention programs tailored to specific populations and address underlying health inequities. In the original intervention study, participants were mostly male (81.5 percent), averaged 43 years of age, had at least a high school education (55.6 percent) and were mostly Black/African American (43.7 percent), followed by White (28.9 percent),

and Latinx (15.2 percent). Approximately half of the participants identified as heterosexual (49.3 percent). The most-reported modes of HIV transmission were sex with a man with HIV (41.3 percent), followed by sharing needles (29.7 percent), and sex with a woman with HIV (21.2 percent). Ninety-four percent of participants reported substance use in the 30 days before being jailed. Crystal methamphetamine was the primary drug used (63.1 percent). The mean number of detentions in the year before the index detention was 1.76, and the mean length of the index incarceration was 98.3 days, making the intervention mostly applicable for jail facilities with long-term detention.

While each jail is different and approaches to better serve these client populations vary (see Additional Resources Box), the NCM intervention allows interventionists to address people's unique needs who are disproportionately impacted by the HIV epidemic and the criminal justice system. Discharge planning and intensive case management programs can help ease a client's transition from jail back to the community.[1] By supporting clients after release and connecting them with medical and social services, the NCM intervention can increase the level of engagement in HIV care and improve overall health outcomes for people with HIV.[11] The intervention is divided into eight overarching phases:

1. Engage Stakeholders

Successful implementation of the intervention will differ depending on whether the organization has pre-established relationships with the local jail(s). The organization implementing NCM should facilitate conversations with social service agencies, care sites, and jail medical providers to discuss the feasibility of implementing the intervention. Case managers can obtain feedback from potential clients to gauge interest and determine a patient-navigation intervention's value. Use data collected through interviews, focus groups, surveys, and other methods to help assess clients and tailor the patient navigation intervention to meet those needs.

2. Assess Gaps and Resources and Hire Staff

a. *Define Population:* Define the population that you will serve. The priority population should be reflective of the local context. Replicators can develop eligibility criteria including people with HIV not held in high-security jails; people arrested in a local jurisdiction (e.g., not transfers); people reporting previous or current drug or alcohol use; or people detained for a minimum of 48 hours.

b. *Hire Patient Navigators*: Employing patient navigators with whom clients can relate and who can assist clients both before and after they are released from jail is the key to successfully replicating the NCM intervention.

The intervention team should select and hire patient navigators who share characteristics with the clients you intend to serve (e.g., people with HIV, similar cultural backgrounds, past histories of incarceration, and substance use recovery). It is imperative that patient navigators also have resources available (e.g., supervising case managers) to support them individually and in their role. Patient navigators are meant to enhance case management for people with HIV—before and after their release from prison—by working in tandem with case managers.

3. Conduct Pre-Release Care Planning Activities

a. *Deliver Comprehensive Assessment:* Before a client is released from jail, the case manager provides discharge planning and education for clients. The case manager delivers a psychosocial needs and risk assessment to inform the client's individualized care plan. The initial assessment is used to collect client demographics and information about their physical health, mental health, substance use, health-seeking behaviors, and medication use. The case manager can obtain medical data that may be of interest to the intervention team (e.g., viral load, CD4 counts) from electronic records. During the client's intake and pre-release HIV prevention counseling session, case managers and patient navigators should aim to:

- Build rapport with the client.
- Describe the services provided by the NCM intervention.
- Conduct a comprehensive psychosocial needs assessment.
- Assess the client's needs for immediate post-release services and benefits (e.g., enrollment in ADAP) and conditions of release (e.g., court return, probation, parole). The assessment should also include intersecting service needs (e.g., housing for clients with disabilities, coordination of transgender affirming healthcare).
- Review the pre-release discharge plan, if available.
- Identify different forms of communication (e.g., email, phone) and determine the best method for contacting the client.

- Obtain the client's signature on release of information forms. Ascertain whether each contact is aware of the participant's HIV status.
- Assess the client's risk for viral hepatitis and other sexually transmitted diseases and develop a plan to prevent HIV transmission (e.g., viral load suppression, safer sex practices).
- Provide health education and identify relevant community resources regarding HIV, viral hepatitis, sexually transmitted diseases, and other conditions (e.g., diabetes, hypertension, mental health).
- Incorporate relevant risk reduction elements into the pre-release care plan.
- Develop a release plan that describes how the client will connect with the intervention team after their release from jail.
- Discuss the program completion process and requirements.

b. *Access Medical Records:* With the client's consent, gather documentation to help the intervention team link the client to appropriate services. This documentation may include a diagnosis letter, tuberculosis clearance, medication list, follow-up appointments, or an existing release plan.

c. *Coordinate Ongoing Pre-Release Sessions:* Following the client's initial session with the case manager, staff should attempt to consistently engage clients while they are incarcerated. Check-in intervals will vary depending on the client's needs and the length of time they are expected to be incarcerated.

4. Monitor Legal Status of Clients

The client's case may change, impacting their discharge and care plan in the long run. Staff should consider the following during pre-release planning:

a. *Pending (Unsentenced) Cases:* Staff can closely track all court return dates and communicate with court personnel to remain advised of the client's release date.

b. *Sentenced Cases*: Staff can confirm the client's release date and check the client's court record to see if the court specified that the jail sentence can be served in residential treatment or if the court-mandated that the client be excluded from early release programs.

c. *Residential Treatment:* If the sentence permits the client to participate in a treatment alternative to custody, intervention staff should identify an appropriate program and facilitate the linkage. If the client is accepted in the program, intervention staff should communicate with the sheriff's department or the appropriate law enforcement agency to (1) ensure the department or agency has the necessary paperwork and (2) monitor when the department or agency transports the client to the treatment program.

d. *Early Release Programs*: Staff should consult with the person overseeing these programs to remain advised of the client's early release date.

5. Conduct Post-Release Care Plan Activities

a. *Assist Clients Within 24 Hours Post-Release*: An important goal of the intervention is to meet clients as they are released from jail. Achieving this goal supports the client as they transition back to the community, reduces potential transportation barriers, increases the likelihood of follow-through with the post-release care plan, and fosters a continued working relationship with the intervention team. The case manager and navigator should meet clients after release (e.g., meeting them at the probation department or post-release facility) and take them to the NCM office for orientation.

Depending on your local jurisdiction and jails, clients released in court on their recognizance or who are sentenced to credit-for-time-served may not be released until late at night. Whenever possible, staff should work with the sheriff's department or the appropriate law enforcement agency in your jurisdiction to expedite the client's release and stay after business hours to meet the client when they are released so they can accompany the client to their identified housing.

If the client's release is expected to be too late for staff to stay on duty, the NCM case manager can meet with the client in custody

to review the housing and transportation plan and schedule an orientation for the next business day. When appropriate, the NCM case manager can arrange a one-night hotel stay for the client, give the client the hotel name, and ensure the client's parole officer accepts this plan. The case manager should leave transportation vouchers and prescription medications or written prescriptions in the client's in-jail property, which they can access upon their release from jail.

When staff cannot meet a client at the gate upon the client's release, and a client does not come to the NCM office within 24-hours post-release, staff should attempt to contact the client using the outreach information gathered during the initial pre-release needs assessment. This effort may entail contacting friends and family, conducting outreach in certain neighborhoods and establishments, collaborating with medical or other social service providers, and monitoring jails if the client is incarcerated again.

b. *Meet with Clients:* The case manager and patient navigator should meet with recently released clients to review goals and their seven-day post-release plan. Ideally, clients are matched with one patient navigator. However, restrictions (e.g., the maximum number of hours a patient navigator can work without the risk of losing their benefits eligibility) may cause the intervention team to alternate the person performing this role. Staff should give the client a printed schedule of appointments—including an individual counseling session with the case manager within 30 days of their release from jail and weekly check-in groups for all clients who choose to participate. The case managers should also review a release checklist, which includes:
   - Insurance or ADAP;
   - Medications;
   - Prescriptions;
   - TB records;
   - Letter of diagnosis;
   - Custody letter verifying incarceration dates for those whose benefits have been suspended;
   - Medical appointments; and
   - Housing plan.

c. *Conduct a Client Assessment:* Clients commonly experience major changes after they are released from jail. The case manager should confirm information gathered during the pre-release intake and conduct a full client assessment again, post-release. During the client assessment, the case manager should:
   - Determine whether the client's contact information has changed.
   - Work with the client to assess immediate service linkages, legal issues, and needs for benefits and discuss the client's existing support system.
   - Work with the client to identify short-term and long-term goals related to their health, employment, housing, and education, among others. This goal-setting should include determining if anything will limit the client's ability to work with patient navigators.

d. *Develop a Post-Release Care Plan:* The post-release care plan is an extension of the pre-release care plan. Information such as the risk reduction strategies identified in the pre-release care plan should be included. The case manager should work with the client to develop the care plan, which serves as the map for short-term and long-term service planning. The care plan is a realistic reflection of the client, case manager, and patient navigators strive to accomplish together. The care plan contains broad goals (e.g., increased linkages to medical care) and specific tasks (e.g., accompanying patient navigators to all medical appointments).

6. Implement the Care Plan

a. *Coaching, Mentoring, and Support:* Implementing the care plan requires the client to actively participate with the patient navigators and case managers to receive coaching, mentoring, and support. Depending on the goals and tasks the client and the case manager identified, the care plan may include:

- Implementing cognitive-based interventions to reduce the likelihood of recidivism;
- Providing guidance on symptom monitoring (e.g., reducing harm related to drug use), leisure activities, social skills, harm reduction planning, and identifying situations that are not aligned with their goals;
- Scheduling client appointments and accompanying clients to appointments, including those outside of the usual follow-up time;
- Providing referrals to appropriate community resources including safe housing, employment agencies, mental health counseling, harm reduction services, and substance use treatment;
- Collaborating with other service providers and coordinating services, including regularly scheduled case conferences with other case managers on mutual clients;
- Placing clients into residential or outpatient treatment programs;
- Advocating for client housing;
- Developing transportation plans, including providing travel assistance;
- Creating travel plans that accommodate parole requirement;
- Facilitating linkages to benefits, advocates, and representative payee services;
- Facilitating access to HIV-related medications after release and before appointments with community HIV primary care providers; and
- Following up with legal services (e.g., criminal and civil) as needed.

If a client is reincarcerated, the NCM case manager should visit the client in jail as soon as possible to begin discharge planning and offer support. Staff should also cancel outstanding appointments, and address housing issues (e.g., moving and storing the client's belongings). With the client's consent, inform family, friends, and other providers about their incarceration status.

7. Follow-up and Monitor Client Progress

a. *Conduct Periodic Assessments:* The case manager should conduct ongoing monitoring of the care plan during the client's follow-up visits. Additionally, the patient navigators, who accompany clients to appointments with external providers, should inform the case manager about changes in the client's situation that may impact the client's care plan's relevancy or validity. The NCM team should decide the frequency for conducting assessments. For example, a comprehensive evaluation of the client's medical, psychosocial, and financial situation might be conducted quarterly or more often if needed.

b. *Securely Store Information:* Case managers and patient navigators should safely record and keep client information in a central location that can be accessed during the client's follow up visits. Patient navigators and case managers should appropriately document the following information for each client in a central database and review it on an ongoing basis for completeness and accuracy:

- Client demographics and identification;
- Client contact information;
- Contact information for the client' other providers;
- The date and length of time of each NCM staff's client contact;
- Tasks completed with or on behalf of a client during each client contact;
- Changes in the client's psychosocial status or disposition;
- Pre-release plan, seven-day release plan, and post-discharge care plans; and
- Notations of hospitalizations, stays in substance use treatment facilities, or reincarcerations.

c. *Coordinate Individual Meetings with Clients:* NCM staff should decide the frequency of client check-ins (e.g., three contacts per week for the first-month post-release). Subsequent contact frequency can be determined based on the complexity or severity of the client's needs (e.g., after the first month, clients who need less support can meet every other week). Meetings can occur in the office or community settings based on client preference (e.g., coffee shops). To facilitate client meetings:

- Ensure the NCM model is organized such that staff availability can be adjusted as clients' circumstances change.
- Encourage clients to drop in the office throughout the week or during predetermined hours.
- Provide incentives (e.g., grocery store gift cards) to clients for attending scheduled appointments with the NCM team and community providers.

d. *Coordinate Group Meetings with Clients:* Invite current and "graduated" NCM clients to participate in a weekly support and education group. Patient navigators can co-facilitate the group, and case managers can attend. In addition to providing support, the group can help build a sense of community among the clients and the NCM team. Specifically, the group can provide an open forum and safe space for clients to voice their experiences navigating service systems and dealing with other social issues.

8. Graduate Clients

a. *Develop a Process to Graduate Clients:* The standard length of participation in NCM case management is twelve months post-release from jail. The key steps in discharging a client from the NCM intervention are:

1. Include "graduation" on the care plan as a default item.
2. Clearly communicate the discharge timeline. For example, staff should discuss termination with the client six months before termination. And, staff should review the transition plan goals with the client one month before termination.
3. Consult with other providers about the client's impending termination date and plan for the client's transition. When possible, introduce clients to the providers to whom they are being referred. Scheduling a joint session with both the NCM team and the new case manager, if applicable, can assist the client transition process.
4. Acknowledge the client's accomplishments during their participation in the NCM intervention and review the client's progress toward achieving the goals identified in their care plan.
5. Recognize the relationships developed between the client, support group members, and the NCM team.
6. Identify resources the client plans to use after their relationship with the NCM team ends.
7. Complete paperwork required to transfer clients to another case management provider and other relevant services.
8. Document the transition plan in the client's chart and give the client a copy.
9. Present resources available through NCM (e.g., a drop-in group).

b. *Highlight Accomplishments:* Because clients may "graduate" from the program within any number of circumstances, this milestone

may be acknowledged or postponed in the following ways:

- For clients who reside in the community:
  - During the last scheduled NCM session, present a graduation certificate that states the client's name, congratulate them for their hard work and accomplishments, and thank them for participating in the program.
- For clients who are incarcerated in jail:
  - If a client has been reincarcerated and is expected to be discharged within 30 to 60 days, NCM staff can postpone the graduation date until their release to assist the client in post-release care planning and to coordinate a successful transition plan.
  - If a client is expected to stay in jail for more than 60 days, the NCM case manager can review the client's accomplishments during the past year while visiting them in jail. This graduation visit is intended to motivate the client to continue working towards goals identified during the past year and remind them that they are more than their incarceration status. During this visit, the NCM case manager will review the client's transition plan. If possible, a representative from the case management agency to which the client will be referred accompanies the NCM case manager. The NCM case manager will give the client a graduation certificate and put the transition plan in the client's jail property. For clients incarcerated in state or federal prison, NCM staff should send a letter acknowledging the client's accomplishments during the past year. The client can use this letter to document their changed behavior and personal growth as a tool to advocate for increased access to programs and other "privileges." The letter can also be used to remind the client of the goals they have been working towards. Include a copy of the client's transition plan and contact information for provider referrals with the letter.

c. *Client Termination or Withdrawal from Participation:* Clients can also choose to withdraw from the program informally, becoming "inactive" clients. Clients can also be temporarily or permanently terminated from the NCM intervention for unsafe behavior. In the case of a deceased client, the NCM team should be available to provide support to the client's family, friends, and other caregivers and make bereavement resources available.

Logic Model

Logic models are effective tools to assist in planning, implementing, and managing an intervention. Below is a logic model highlighting the resources, activities, outputs, outcomes, and impact of the NCM intervention referenced throughout this guide.

Resources	Activities	Outputs	Outcomes	Impact
• Funding source that supports linkage interventions for clients who are incarcerated before and after their discharge from jail • Staff members (patient navigator, case managers) with knowledge and expertise in harm reduction, HIV education, the criminal legal system, and the intersecting identities of the clients being served • Relationships and collaborations with jail staff, medical providers, clients, and community organizations • Systems to facilitate care coordination, including linkage and referral to health and social services	• Engage stakeholders and obtain community input • Conduct client assessments before and after their discharge from jail • Monitor client's legal status • Assist clients within 24 hours of their discharge from jail • Connect clients to resources within the community (e.g., education, legal support, housing, employment, food assistance, mental health, and substance use services) • Coach and mentor clients • Deliver comprehensive evaluations • Provide ongoing support to clients through individual and group counseling • Graduate clients and acknowledge achievement	• Comprehensive understanding of clients' health and social needs among the case management team • Providers, community organizations, and jails are informed about the intervention's benefits • Implementation of a robust care plan for clients after discharge • Clients are linked to responsive health and social services • Clients have relationships with patient navigators	Among people with HIV: • Improved self-efficacy to start and stay in HIV care • Decreased time to HIV care re-engagement • Increased retention in care • Improvement in HIV and overall health outcomes • Return to a supportive community post-release • Reduced reincarceration rates • Reduced unwanted substance use • Reduced HIV transmission among client networks Within the implementation agency: • Enhanced infrastructure to provide pre-and post-release services to people with HIV who experience incarceration • Demonstrated investment in HIV relinkage efforts and clients impacted by mass incarceration and the criminalization of drug use • Sustained connections with providers	• Reduce HIV morbidity and mortality • Reduce HIV transmission • Advance health equity for people with HIV and those who use substances • Address barriers to HIV care addressed for people who have been incarcerated

Your Planned Work

Your Intended Results

Staffing Requirements and Considerations

Staff Capacity

Organizations can implement the NCM intervention by leveraging existing case management teams within jails and organizations and centering the lived experiences of clients who serve as patient navigators. Successful replication of NCM involves careful attention to each staff member's roles, carefully planning the training, supervision, and compensation for patient navigators, emphasizing "client first" principles, and employing multiple means of intervention promotion. All staff should be familiar with strengths-based social work and harm-reduction principles. The following staff implemented the NCM intervention in San Francisco, CA:

- *Deputy Director:* The deputy director's responsibilities include:
  - Developing policies and procedures for the program and overseeing adherence to program protocols;
  - Assisting case managers, patient navigators, and the outreach coordinator in the implementation of client care plans;
  - Providing supervision and training to all staff, including patient navigators;
  - Producing cumulative reports on the program's ability to achieve outcomes and objectives outlined in the study protocol; and
  - Monitoring the length of incarceration for participants in jail by checking court appearance schedules and communicating with clients' attorneys.
- *Case Manager:* The case manager is primarily responsible for conducting HIV prevention sessions with clients two weeks before their jail release in addition to:
  - Screening, assessing, and completing client care plans;
  - Assisting in recruiting, hiring, and training patient navigators and facilitating regular staff skill-building meetings;
  - Conducting at least one individual care planning and service linkage session with each client as soon as possible after their release from jail;
  - Providing ongoing management of active client caseloads;
  - Assisting the deputy director and the clinical case manager with developing an information management system and all project forms and protocols;
  - Developing relationships with HIV and other community-based service providers;
  - Working with the NCM team to ensure all active clients are regularly seen and are progressing with their care plans;
  - Overseeing the maintenance of case files and records;
  - Working with the NCM team to provide crisis intervention, as needed;
  - Maintaining contact with jail staff;
  - Providing ongoing supervision to patient navigators; and
  - Maintaining security clearance.
- *Outreach Coordinator:* This individual's responsibilities include:
  - Serving as the point person for patient navigators and providing ongoing support;
  - Negotiating the schedules and client loads for patient navigators;
  - Ensuring maintenance of daily case notes;
  - Handling most of the communication with housing providers and hotel managers to ensure timely payments and to provide crisis intervention for clients; and
  - Providing training and supervision for patient navigators on effective outreach methods.

- *Patient Navigator:* This person is, ideally, an individual with HIV who is in substance use recovery and has experience with the criminal justice system. Responsibilities of the person in this role include:
  - Serving as a member of the case management team and providing clients with mentorship and emotional and practical support;
  - Assisting each client in adhering to the care plans developed before their release;
  - Teaching clients how to address barriers to care;
  - Assisting the NCM team with client advocacy and case management;
  - Accompanying clients to appointments;
  - Developing relationships with HIV and other community-based service providers;
  - Writing client case notes;
  - Working with the NCM team to provide crisis intervention, as needed;
  - Following up with clients who have fallen out of contact; and
  - Participating in staff development activities, including education and training opportunities.

Since the NCM intervention utilizes an integrated team approach to case management, there are inherent overlaps in the various team members' roles and responsibilities. However, the patient navigator's role is distinct from that of other staff. They are closely supervised and do not have the same organizational, administrative, and clinical responsibilities. Their day-to-day tasks are focused on developing relationships with clients, helping clients get to their appointments, and taking care of the client's other practical and emotional needs. All patient navigator contact with clients will occur in the community. Patient navigators often serve as a model of someone who has been able to successfully "navigate the system." The relationships clients have with the patient navigators are qualitatively different from those they have with the other NCM staff, contributing to a more comprehensive understanding of clients' experience by the NCM team.

The most overlap in responsibility occurs with the case manager and patient navigator roles. Case managers provide ongoing support to patient navigators. Consistent and open communication between these two staff members is key to completing client-centered tasks. Table 1 shows the overlap in the case manager to patient navigator roles.

Staff Characteristics

Core competencies of all staff should include:

- An affirming demeanor and flexibility in identifying individual client needs;
- Experience with case management or working with clients and navigating health systems;
- Commitment to cultural sensitivity, cultural responsiveness, and harm reduction;
- Familiarity with the criminal justice system and its dynamics;
- Fluency in Spanish and English (or other languages based on local needs);
- Demonstrated ability to work with diverse client populations affected by HIV, including persons with mental and behavioral health conditions; and
- A client-centered orientation.

Table 1 — Case Manager and Patient Navigator Roles

Task	Case Manager	Patient Navigator
Conduct in-jail intake and prevention education sessions	X	
Monitor status of client's legal case	X	
Visit clients in jail	X	
Meet clients at the jail gate when they are released	X	X
Develop post-release care plans	X	
Conduct ongoing monitoring of the care plans	X	X
Conduct formal client reassessments	X	
Accompany clients to appointments in the community	X	X
Accompany clients to court appearances	X	X
Meet with clients post-release	X	X
Confer with other providers working with clients or speak to clients' family or support system, with clients' consent	X	X
Formally link clients to other providers, with clients' consent	X	
Follow-up with clients who have fallen out of contact		X
Visit clients in treatment facilities or hospitals	X	X
Document all client contact in the program database	X	X

Supervision for Patient Navigators

The NCM outreach coordinator provides supervision for patient navigators and helps them identify situations where they should call other team members for additional assistance. The patient navigators should also maintain ongoing contact via phone and in-person check-ins with the case managers throughout their shifts. Ongoing communications enable the case manager to provide guidance and problem-solving assistance to patient navigators in real-time. Additionally, patient navigators should meet with the case manager for individual supervision in addition to a monthly group supervision session with all patient navigators. Since patient navigators may be in the same social circles as the clients or may also be in different stages with their substance use, reinforcement of boundaries is essential to this model's success. Patient navigators must have consistent support as they learn their roles.

Patient Navigator Compensation

Depending on their financial situations, many patient navigators may be receiving various Social Security benefits, which restrict the amount of compensation they can receive without putting the benefit (e.g., housing) in jeopardy. Therefore, it is important to provide benefits counseling to patient navigators as part of their hiring and training process. In previous models, patient navigators were scheduled for no more than two five-hour shifts a week, enabling them to work for the program and maintain their full Social Security benefits. Prioritize the employee's self-determination in deciding which option works best for their needs. Additionally, patient navigators must be equitably compensated for their time and efforts (e.g., be paid a living wage, be provided with gift cards to purchase food and other items).

Replication Tips for Intervention Procedures and Client Engagement

Successful replication of the NCM intervention involves careful attention to each staff member's roles, carefully planning the training, supervision, and compensation for patient navigators, emphasizing "client first" principles, and employing multiple means of intervention promotion.

- *Appropriately Divide Responsibilities & Identify Overlap and Collaboration Between Staff*. The NCM intervention consists of many one-time and ongoing tasks divided among the roles of the intervention team. Recognizing how these roles differ and where they overlap can make replication less difficult.
- *Carefully Plan Training, Supervision, and Compensation for Patient Navigators.* Below are patient navigator training topics to be led by the deputy director and case manager. When appropriate, tailor these topics to the laws and regulations of your state/city/organization. Training can also include other topics that are relevant to your organizational structure:
  - Criminal justice
  - HIV education and prevention
  - Harm reduction
  - Navigating the local service system
  - Patient navigator roles
  - Confidentiality
  - Boundaries
  - Conflict de-escalation and resolution
  - Addressing medical emergencies
  - Needs and risk assessments
  - Stages of Change
  - Motivational Interviewing
  - Anti-sexual harassment (all-agency training)
  - Effective communication and professional responsibilities
  - Self-care
  - Time management
  - Creating and maintaining a healthy workload
  - Workplace ethics

- *Incorporate and Emphasize "Client First" Principles*. The Navigator Program emphasizes Harm Reduction and Social Work principles and utilizes approaches such as *Motivational Interviewing* and *Assertive Community Treatment*. These are described below:
  - *Harm Reduction*—An approach to behavior change that "meets people where they're at." Harm reduction assumes that elimination of potentially destructive behavior (e.g., substance abuse, sexual behaviors that put one's health at risk) may not be possible and seeks to decrease the negative consequences that may occur as a result of continuing the behavior.

- *General Social Work Principles*—According to the National Association of Social Work Code of Ethics, the primary mission of social work is to enhance well-being and help meet the basic needs of all people, with particular attention to the needs and empowerment of people who are vulnerable, oppressed, and living in poverty.
- *Motivational Interviewing*—A focused, client-centered approach to counseling that helps clients identify, explore, and deal with ambivalence.
- *Assertive Community Treatment*—A mental health treatment approach developed to enable frequently and chronically hospitalized psychiatric patients to live more successfully in the community. The NCM intervention uses key aspects of assertive community treatment that include:
  - An integrated team-based approach to client care;
  - Intensive case management; and
  - The flexibility of drop-in hours and the ability to meet clients in their own environments (rather than in the office).
- *Employ Multiple Means of Intervention Promotion*. Using a variety of promotional mediums can lead to higher intervention enrollment. Depending on the type of organization, some methods may work better than others. Providers within jails, such as medical staff or case managers, can refer clients to the intervention. While the use of marketing materials may depend on the policies that jails have in place, consider including marketing materials in the medical offices. Examples include flyers and referrals. Organizations that function as or work closely with medical facilities that serve people with HIV who are incarcerated may find success with:
  - Posting flyers in the waiting room;
  - Receiving client referrals from medical providers; and
  - Presenting to medical providers during meetings.

Securing Buy-In

This intervention is well-suited for organizations that provide services with a public health-focused mission. Organizations can secure successful buy-in from stakeholders and clients through careful consideration of previous and present staff experience. More specifically, organizations can:

- **Leverage peers:** Utilize a team of professionals that has previously worked with the priority population, shows a genuine interest in learning from communities, and shares lived experiences with the priority population. The peer navigators' commitment to social justice is key.
- **Assess organizational readiness:** Prepare the organization to adapt the intervention based on changes in client or staff needs. If feasible, open a drop-in center to allow both clients and navigators time together outside intervention activities to build trust and relationships. Drop-in hours can also provide clients with additional opportunities to receive support from someone with similar lived experiences. This provides them with the opportunity to discuss common challenges such as stigmatization within healthcare settings and to celebrate successes.
- **Engage clients:** Client buy-in is anchored by patient navigator recruitment and bolstered by clients' interaction with patient navigators, who play an important role in helping clients experience positive outcomes. Flexible working conditions for patient navigators can prevent a decrease in client benefits. For example, the current or changing needs of a client may mandate longer hours for a patient navigator and can thus decrease the effectiveness of the intervention due to the patient navigator's burnout. Having clients work with more than one patient navigator can alleviate work-related stress.
- **Emphasize commitment to social justice:** Ultimately, successful replication of the intervention is facilitated by each collaborating organization's commitment to the issues and their client's self-determination. Because peers have pertinent first-hand knowledge, employing them as patient navigators is an appropriate gateway to working with a criminal justice-involved population—even if the organization has worked with this population before.

"I was a junior investigator … and every time I walked into the room I would be so starstruck working with all these amazing people that have been doing this work for so long."

– PRINCIPAL INVESTIGATOR

Overcoming Implementation Challenges

There are always challenges when implementing any program or intervention. Anticipated challenges, as well as possible solutions, include:

- **Implementing a Peer-based Model:** Challenges related to continuous staffing, service provision methods, and choosing appropriate training models may occur when using a peer-based model. You can address this type of challenge by involving people who have previously worked with peer-based interventions to troubleshoot potential issues. Consider engaging people who work within your organization, at other organizations, or as consultants. Researching examples of peer-based interventions may also be useful.
- **Funding:** Organizations that have robustly funded HIV services may be at an advantage. However, a lack of funding or change in funding can threaten success with sustaining the intervention. Securing smaller, diverse funding sources can assist with facilitating best practices for client retention, such as providing incentives, transportation reimbursement, or food. Work with a local university or foundation to assess available resources to support program services or evaluation.
- **Geographically Distant Navigators and Clients:** This intervention may be more difficult to implement in a large city if there is a vast geographical distance between navigators and clients. Suppose your organization does not have multiple locations that your clients can access. In that case, this challenge may be remedied by offering flexible hours to allow for more convenient scheduling and travel time. Providing transportation assistance may also prove effective.
- **Commitment to Social Justice Among All Involved:** A commitment to criminal justice-related work is an important factor in this intervention. However, the systems in place within the jails and in the broader community (e.g., social service agencies) can be triggering and retraumatizing for both staff and clients. Many social justice issues have yet to be systemically addressed by the state and federal government and other institutions (e.g., mass incarceration of Black/African American and Latinx populations; criminalization of people who use drugs). All involved parties (e.g., stakeholders, staff, health service providers, jail staff) should meet before the intervention is implemented to discuss its planning and execution. This will ensure that the intervention team agrees, and that potential social justice issues and solutions are explored early in the process. Additional meetings during and after intervention implementation can also help evaluate the success of their efforts.

Promoting Sustainability

Successful replication and sustainability of the NCM intervention will require that some organizations explore various funding sources. Identifying alternative funding sources is ideal for maintaining intervention elements dependent on short-term or one-time financial support. It may also be necessary to develop a plan to modify the intervention based on available funding.

Organizations must also prepare to address staffing due to high turnover rates common in social and human services work. Develop a plan for temporarily covering staff workload and promptly hiring new staff as needed. Planning for staff turnover will reduce the disruption of services and help to maintain intervention operations over time.

It is also important to recognize the intervention's overall fit in light of changing organizational or client needs. Ongoing evaluation is important to program success. Sustaining parts of the intervention that proved successful and eliminating components that were not successful can improve outcomes in the future.

SWOT Analysis

SWOT is an acronym for Strengths, Weaknesses, Opportunities, and Threats. A SWOT analysis is a structured planning method that can assess the viability of a project or intervention. By conducting a SWOT analysis before an intervention, organizations can proactively identify challenges before they occur and think through how to best leverage their organizational strengths and opportunities to improve future performance. A SWOT analysis of the NCM intervention in the San Francisco County adult jail system identified the following:

STRENGTHS

The intervention increases relinkage and retention outcomes for clients who are out of care by:

- Establishing a network between clients, organizational staff, leadership, and providers in jails,
- Enhancing existing case management linkage efforts,
- Employing staff who are representative of the client population,
- Identifying the priority population(s), that will be served based on local context,
- Responding to client needs both before and after their release from jail,
- Collaborating with community organizations, jails, and other external stakeholders who have resources to support clients' engagement and retention in HIV care,
- Designating case managers who can lead client pre-release care planning and implementation,
- Presenting professional development opportunities for patient navigators, and
- Operationalizing an organization's commitment to addressing criminal and social justice issues.

WEAKNESSES

Agencies will find it challenging to implement the NCM intervention without:

- Case managers and intervention leads with experience in peer navigation models,
- Patient navigators who can both promote the intervention and support clients,
- Organizations that can support the delivery of a peer model-based intervention,
- Coordinated efforts at the city or state level to provide HIV care services to people who have been incarcerated,
- Input from potential clients and providers and leadership at jails,
- Comprehensive client assessments before and after their release from jail,
- Support for patient navigators,
- Connections to broader health and social services in the community, and
- Staff who understand harm reduction principles, strengths-based case management, and how social determinants of health impact clients.

OPPORTUNITIES

The NCM intervention offers opportunities to:

- Facilitate a client's ability to confidently and fluently navigate the healthcare system,
- Reduce client reincarceration rates and negative health outcomes,
- Employ peer navigators with lived experience,
- Invest in people with HIV who have been incarcerated and disenfranchised by many social systems,
- Integrate public health efforts within jails to improve HIV health outcomes,
- Expand the reach of support services,
- Enhance relationships among the provider and peer community through client-centered care, and
- Provide ongoing and intentional support for 12 months, thereby increasing HIV engagement and retention.

THREATS

Threats to the success of the NCM intervention include:

- Policies or protocols that hinder intervention implementation within jails,
- Changes and availability of funding that does not cover peer navigation or client support,
- Changes in organizational priorities,
- Parole requirements that hinder client success, and
- Lack of commitment to criminal justice work.

Conclusion

The NCM intervention involves individualized and comprehensive risk-reduction care planning along with peer navigation upon the client's release from jail. The intervention allows organizations and jails to leverage harm reduction, prevention case management, and Motivational Interviewing techniques to promote healthy behaviors among people with HIV who have been incarcerated. This holistic model utilizes the expertise of patient navigators and case managers to facilitate linkage to care in the community while meeting clients' interconnected health and social needs. In the original research study, clients in NCM were twice as likely to be linked to care within 30 days of their release from jail compared with those in the control group (OR = 2.01; 95 percent CI = 1.21, 3.35). Clients receiving the NCM intervention were also almost twice as likely to be retained in care during the intervention year (OR = 1.71; 95 percent CI = 1.02, 2.87). Individuals who received treatment for substance use disorders were four times as likely to be linked to care upon release (OR = 4.06; 95 percent CI = 1.93, 8.53). The NCM intervention has proven to be effective in linking people with HIV, who have been incarcerated, into care and serves as a model to assist people who have been impacted by both the criminal injustice system and the HIV epidemic.

Additional Resources

Ryan White HIV/AIDS Program Fact Sheet
https://ryanwhite.hrsa.gov/sites/default/files/ryanwhite/resources/program-factsheet-program-overview.pdf

Ryan White HIV/AIDS Program Technical Expert Panel Executive Summary on Addressing the HIV Care Needs of People with HIV in State Prisons and Local Jails
https://ryanwhite.hrsa.gov/sites/default/files/ryanwhite/resources/hrsa-justice-tep.pdf

Ryan White HIV/AIDS Program Services: Eligible Individuals & Allowable Uses of Funds Policy Clarification Notice 16-02
hab.hrsa.gov/sites/default/files/hab/program-grants-management/ServiceCategoryPCN_16-0

CIE Cost Analysis Calculator
CIEhealth.org/innovations

Creating a Jail Linkage Program: Training Manual
https://targethiv.org/ihip/creating-jail-linkage-program-training-manual

Endnotes

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POSITIVELINKS INTERVENTION

Center for Innovation and Engagement

Background

The Health Resources and Services Administration's (HRSA's) Ryan White HIV/AIDS Program (RWHAP) provides a comprehensive system of HIV primary medical care, essential support services, and medications for low-income people with HIV who are uninsured and underserved. The RWHAP funds states, cities, counties, 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.

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NASTAD Authors:

Milanes Morejon, Senior Manager, Health Equity

Rosy Galván, Director, Health Equity

Alexander Perez, Manager, Health Equity

Intervention Development Team:

Rebecca Dillingham, MD/MPH, Principal Investigator and Founder

Karen Ingersoll, PhD, Co-Investigator and Founder

George Reynolds, Developer

Ava Lena Waldman, MHS/CCRP, Project Manager

Jason Schwendinger, BS, Lead Developer

Contributors

Natalie Cramer, Senior Director, NASTAD

Darrell Walker, Impact Marketing + Communications

Tia Clark, Impact Marketing + Communications

Tara Kovach, Impact Marketing + Communications

Sarah Cook-Raymond, Impact Marketing + Communications

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Intervention Snapshot

	Priority Population	People in rural areas who face barriers to HIV care
	Setting	Ryan White HIV/AIDS Program Clinic
	Pilot and Trial Sites	University of Virginia (UVA) Health's Ryan White HIV Clinic
	Model	The intervention is a clinic-centered engagement in care program that employs a tailored smartphone application (app) to provide virtual care coordination, self-management tools, and social support to people with HIV to reach their care goals. Developed around *warm technology*, it facilitates communication, builds interpersonal relationships, and supports shared decision-making between clients and providers while also addressing disparities such as design modifications for people with low literacy levels and increased access to health care resources.
	RWHAP Ending the Epidemic (EHE) Opportunity	While significant strides have been made in ensuring that people with HIV effectively progress through the HIV care continuum, retention remains a critical issue. In the rural southern U.S., inequities in HIV care disproportionately affect vulnerable populations who experience racial inequality, poverty, trauma, lack of social support, substance use disorders, and barriers to transportation or clinic access. Intervention outcomes indicate improved CD4 counts, viral suppression, retention in care, and rates of visit constancy.
	Intervention Funding	The PositiveLinks intervention was funded by a HRSA RWHAP Part A grant and other institutional funding. The federal program supports direct care and treatment services, and Part A is used to provide core medical and support services for people with HIV.
	Staffing	Staff positions in the original intervention include PositiveLinks Implementation Manager, PositiveLinks Coordinator, Care-Site Providers, Mobile Developer or Care-Site IT Security Stakeholders, and Program Evaluator.
	Infrastructure Needed	Hardware, software, and computer systems that integrate with existing electronic medical record systems

Intervention Overview & Replication Tips

Why This Intervention?

PositiveLinks (PL) is a clinic-centered engagement in care program that employs a tailored smartphone application (app) with a private digital social support community to help people with HIV reach their care goals. The PositiveLinks platform is a complete integrated solution comprising the smartphone app (for iOS and Android), HIPAA-compliant secure messaging, patient dashboards, and administrative portals that can be linked to patient lab records. The PositiveLinks platform has been tested and shown positive outcomes with a diverse community of members across age, ethnicity, sex, gender identity, HIV risk factors, education, and employment levels.

PositiveLinks enhances engagement in care and a broader virtual community with alerts, reminders, and text messaging.[1,2] PositiveLinks is built on an approach called *warm technology* that uses the power and reach of communication technology and keeps the focus firmly on human connection and support. Warm technology enables PositiveLinks to provide holistic support to a private and protected intentional community, tailored to its members. Rather than replacing more intimate forms of communication, PositiveLinks increases the connection among community members, and between members and their care providers, in a cost-effective way.

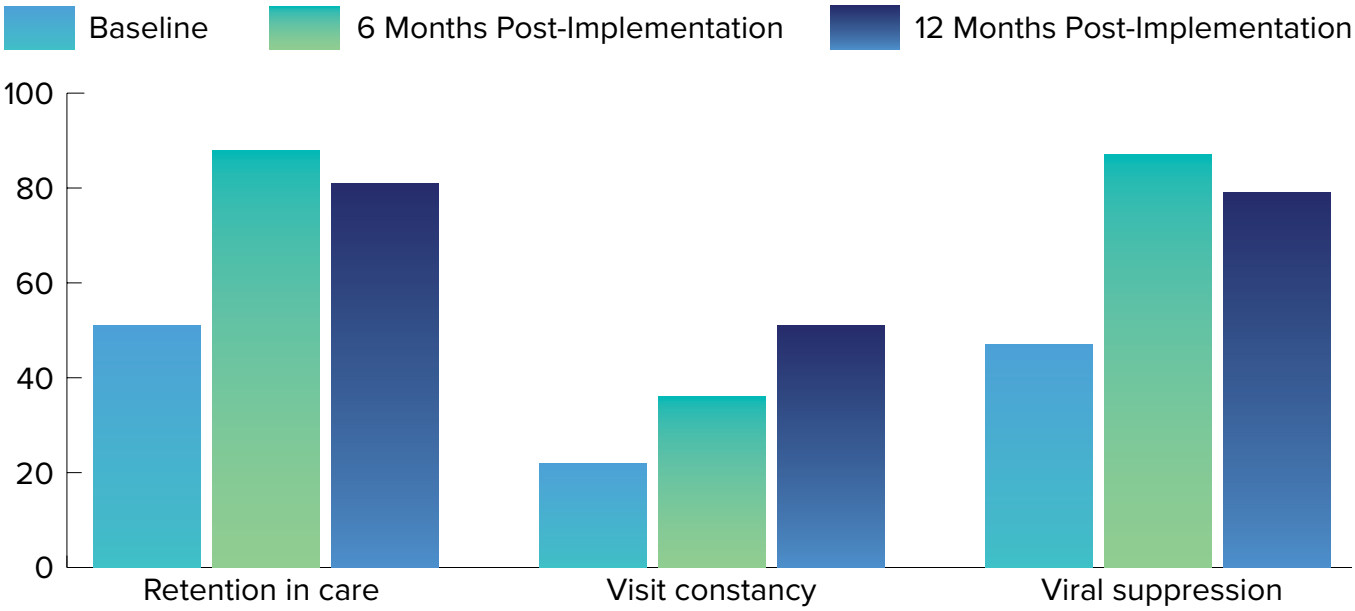
PositiveLinks is deployed by a clinic or community-based organization (CBO) whose enrolled clients are referred to as members, encouraging clients to see themselves as part of a larger community.

In the rural southern U.S., inequities in HIV care disproportionately affect vulnerable populations. As such, the Ending the HIV Epidemic (EHE) initiative prioritized seven states with a substantial rural burden. Smartphone apps such as PositiveLinks effectively address multiple barriers to optimal care, including social and geographic isolation, and offer a replicable strategy to bridge gaps in HIV care for people living in rural areas.[1,3] An evaluation of the PositiveLinks program demonstrated that a clinic-affiliated smartphone app paired with care coordination can produce significant changes in engagement in care and clinical outcomes for people with HIV in rural communities. In a pilot study, PositiveLinks

improved CD4 counts, viral suppression, and retention in care (defined as having a minimum of two HIV medical care encounters at least 90 days apart within a year).[1]

The intervention also improved rates of visit constancy (defined as the proportion of four-month time intervals in which one visit with an HIV care provider was completed in a year) (Figure 1). Participant interviews and qualitative analysis of the app's community message board found that the app provided a sense of connection and social support.[1] In 2020, the intervention developers reported continued significant improvements in engagement in care and viral suppression as far out as 24 months post-implementation.[4] PositiveLinks was designed to address clients' intersecting needs and lifestyles, which significantly contributed to its success.[2]

Figure 1 — PositiveLinks: Percent Retention in Care, Visit Constancy, and Viral Suppression, Baseline vs. 6- and 12-Months Post-Implementation (n=77)



Source: Dillingham, R., Ingersoll, K., Flickinger, T. E., Waldman, A. L., Grabowski, M., Laurence, C., Wispelwey, E., Reynolds, G., Conaway, M., & Cohn, W. F. (2018). PositiveLinks: a mobile health intervention for retention in HIV care and clinical outcomes with 12-month follow-up. *AIDS Patient Care and STDs, 32*(6), 241–250. https://doi.org/10.1089/apc.2017.0303

"I think in our rural-based clinic that serves the western half of Virginia, 52 counties, this was a real opportunity to build community in a way that we hadn't truly anticipated when we started this, but which has definitely exceeded our hopes and dreams."

– POSITIVELINKS PROGRAM DIRECTOR

Intervention at a Glance

This section describes the general process for implementing PositiveLinks at your site. This mHealth platform was developed and tested at the University of Virginia (UVA) Ryan White HIV Clinic, a RWHAP–funded clinic in Charlottesville, Virginia, and has been implemented as usual care service at the UVA Ryan White Clinic and partner sites since 2017. The steps below will help you understand the steps required for implementing the PositiveLinks platform and tailoring it to fit your needs. The PositiveLinks implementation team will work in tandem with and provide technical assistance, including training, to organizations at each and every step. The PositiveLinks intervention was funded and evaluated by the HRSA RWHAP Part A grant.

 Step 1	**Assess Readiness and Capacity** To identify intervention priority populations, discuss service delivery gaps and health inequities both within and outside the care site. Gather input from potential users, including clients, providers, and clinical staff, to gauge interest in using the app and identify desired app features. Determine the required number of staff and their roles and how to sustain the intervention financially.
 Step 2	**Explore Information Technology (IT) Infrastructure** Meet with IT staff to understand the Data Security and Compliance review and approval processes often required for implementing a mobile-based platform. Identify a member of the IT team to provide technical assistance and security support for the review and approval processes. Consider whether your organization will integrate the platform with current systems such as electronic medical records (EMRs).
 Step 3	**Develop a Plan and Protocols for Sites and Partners** Determine the type of data the sites will collect, the frequency of internal and external reporting, the app components that are feasible to implement, and the processes for monitoring and evaluation. Create a comprehensive recruitment strategy and identify an initial cohort of clients. Create and share an implementation plan with stakeholders to ensure that all parties understand intervention milestones, deliverables, and deadlines.
 Step 4	**Recruit and Train Staff** Generate job postings to and hire key staff, such as a PositiveLinks Coordinator (PLC). Determine site training needs for Strengths-Based Case Management (SBCM) and Motivational Interviewing (MI), two key supports for implementing this intervention. Conduct provider and administrator training and have providers demonstrate proficiency on the PositiveLinks platform.
 Step 5	**Implement the Intervention** Launch and disseminate information about the PositiveLinks program to clients. Enroll and train clients on using the PL app. PLC will provide ongoing training as needed to clients and providers on using the platform.
 Step 6	**Monitor and Evaluate the Intervention** Facilitate conversations with staff, providers, and clients to gather feedback on the intervention. Note outcomes at specific time intervals. Use data to modify client and provider engagement strategies to optimize use of the platform as necessary.

Cost Analysis

The PositiveLinks intervention was funded by a HRSA RWHAP Part A grant and other institutional funding. The federal program supports direct care and treatment services, and Part A is used to provide core medical and support services for people with HIV. Support services that enhance HIV care for people with HIV can also be funded through Part A. HRSA's RWHAP Fact Sheet provides more context on the different parts. Additionally, RWHAP's Policy Clarification Notice 16-02 outlines details on allowable costs. (See Additional Resources Box).

If you would like to conduct a cost analysis of implementing this intervention locally, please see the Additional Resources Box at the end of this document to access a cost calculator to input your local data and an instruction manual.

Resources Assessment Checklist

The following is a list of key decisions your organization will make and tasks to complete in its pre-implementation phase. Additional tools and resources for pre-implementation of PositiveLinks can be found in the Decision Task Checklist, Pre-Implementation Reflection, and Site Readiness Checklists provided by the team at UVA Health's RWHAP-funded clinic in central Virginia. (See Additional Resources Box).

Stakeholders

- ❑ Have you identified a strong intervention champion on the case management team or at the leadership level?
- ❑ Have you engaged clients, site staff, providers, and partners to integrate their feedback about the intervention?
- ❑ Have you gathered information from clients about barriers to engagement in care and viral suppression?

Technology and Computer Systems

- ❑ Have you discussed the feasibility of implementing a mobile-based platform and an accompanying portal with IT staff?
- ❑ Will the care site provide smartphones? Phone cases? Data plans?
- ❑ Will the intervention include integration with EMRs or another client portal?
- ❑ Is an IT staff member or team available to consult and provide ongoing technical assistance as needed?

Staff Capacity and Responsibilities

- ❑ Do you have support from key care site leadership staff to facilitate PositiveLinks at your site?
- ❑ Do staff understand the benefits and goals of PositiveLinks?
- ❑ Does your organization have mechanisms in place to recruit a PLC internally or externally?
- ❑ Does your organization need to hire an evaluator for the project, or can a staff member at the care site take on evaluation responsibilities as part of their existing duties?
- ❑ Does your care staff have the capacity to schedule and complete PositiveLinks-related training sessions? Have they received this training in the past?
- ❑ Have you identified any additional training needs?
- ❑ Does your organization have a culture of using SBCM (a counseling strategy that builds on a person's successes)[8] or MI (a counseling method that focuses on facilitating and engaging intrinsic motivation within clients to change behavior)?[9] For example, do staff have experience with SBCM or MI? Do you have the resources to train and support staff in using SBCM or MI with clients?
- ❑ Have you performed a workflow assessment at your care site?

Security and Privacy Protocols

- ❑ Does your organization have the capabilities and resources to provide smartphones and to cover the related costs (e.g., phone cases, data plans) if necessary?
- ❑ Have you documented that PositiveLinks products are HIPAA-compliant?
- ❑ Have you identified policies and procedures at your site that must be in place before implementation of the PositiveLinks intervention?

Security and Privacy Protocols *(continued)*

- ❑ Will you require clients to encrypt or use secure passwords on their smartphones?
- ❑ Do you have a protocol in place to replace smartphones that are lost or broken?
- ❑ Are all components of the app feasible for use by your clients?
- ❑ Do you have a protocol in place for responding to an app feature malfunction?

Project Budget

- ❑ Do you have funding to support all the intervention components (e.g., smartphones, app development, portal maintenance, staff time, care coordination)?
- ❑ Is a sustainability plan built into the proposed funding source for this intervention?

Monitoring and Evaluation Plan

- ❑ Have you established the desired measurable outcomes?
- ❑ Have you decided what data you will collect? At what intervals? Who will be responsible for data collection?
- ❑ Have you decided how data will be collected?

Outreach Plan

- ❑ Have you identified specific roles related to the PositiveLinks intervention for partner organizations within your system of care?
- ❑ Have you established referral protocols, memorandums of agreement (MOAs), or memorandums of understanding (MOUs) with existing community partners?
- ❑ Has your care site identified client recruitment plans?

Setting the Stage

According to the U.S. Centers for Disease Control and Prevention (CDC), there are an estimated 1.1 million people with HIV in the United States.[10] During 2018, approximately 75.7 percent of people with HIV received HIV medical care, 57.9 percent were retained in care, and 64.7 percent were virally suppressed.[11] People with HIV who receive ongoing, regularly-scheduled care are more likely to have significantly lower viral loads, higher CD4 cell counts, reduced morbidity and mortality, and improved overall health than those who missed even one medical visit over a two-year period.[12] (Receipt of medical care is defined as a client taking one or more tests [CD4 or viral load] in the measurement year).

Although significant strides have been made in ensuring that people with HIV effectively progress through the HIV care continuum, these figures demonstrate that retention continues to be a critical issue. In 2014, approximately 38 percent of people with HIV were not in care and were, therefore, more likely to not be virally suppressed.[12] Interconnected factors contribute to poor engagement in care, including race, age, gender, socioeconomic status, comorbidities, unmet psychosocial needs, and client distrust in physicians and health care institutions.[1] In the rural southern United States, inequities in HIV care disproportionately affect vulnerable populations who experience racial inequality, poverty, stigma, trauma, lack of social support, and substance use disorders.[1] Improving client engagement and reengagement in care is a national priority with targeted retention measures established by the HIV National Strategic Plan (see Additional Resources Box), HRSA, and the Ending the HIV Epidemic (EHE) initiative, among others.

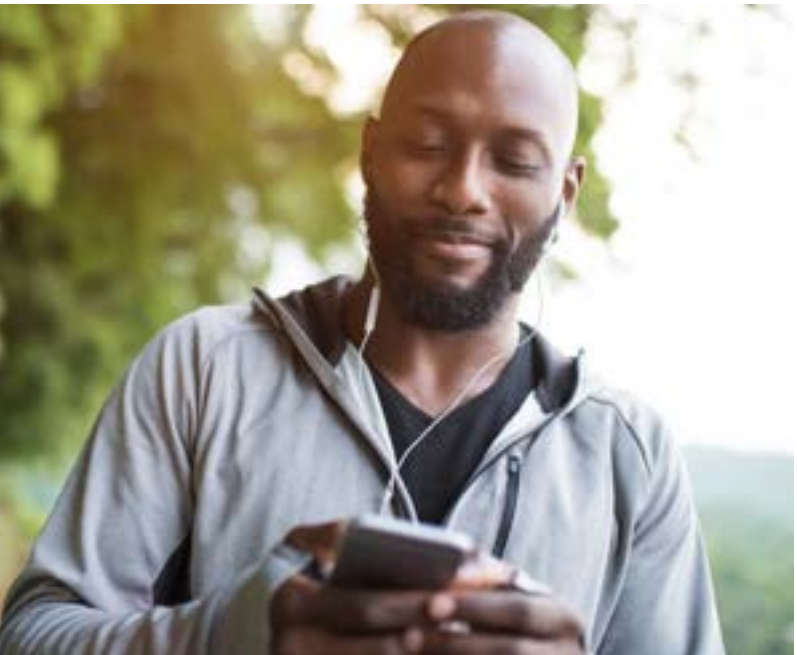
According to the Virginia Department of Health, in 2018, 24,906 Virginia residents were known to have HIV.[13] The majority were Black or African American (58 percent); gay, bisexual, or other men who have sex with men (48 percent); aged 45–64 years (53 percent), and had some evidence of medical care in 2018 (68 percent).[13,14] Of the 77 participants in the original PositiveLinks intervention, 64 percent were men, 49 percent Black or African American; 34 percent White, non-Hispanic; and 8 percent Hispanic. More than half of participants reported incomes below 50 percent of the federal poverty level. Participants traveled an average of 37 miles (47 minutes) to the HIV clinic; the maximum distance traveled was 200 miles (127 min). PositiveLinks used different approaches to address disparities, including incorporating design modifications for people with low literacy levels and increasing access to health care resources for rural populations.[1]

Description of the Intervention Model

PositiveLinks provides virtual care coordination, self-management tools, and social support to people with HIV. These efforts ensure that people with HIV who are not linked to or engaged in HIV medical care can successfully improve their health outcomes and address barriers to transportation or clinic access. PositiveLinks should be implemented with the intention of making it part of the standard of care for people with HIV. The PositiveLinks intervention developers created a manual that includes detailed guidelines for planning, implementing, and integrating PositiveLinks into practice. (See Additional Resources Box). The following is a summary of the intervention's six overarching phases:

1. Assess Readiness and Capacity

a. *Identify Priority Populations*: Before implementing PositiveLinks, determine which groups will benefit most from the intervention. To gain a broader understanding of potential service delivery gaps, determine the percentage of clients meeting benchmarks for linkage and retention in medical care. Collect and analyze baseline data to decide which groups have lower rates of viral suppression and greater gaps in care. Use institutional knowledge and data, current academic literature, and state and national data on linkage, retention, and medical adherence to determine the intervention's priority populations. Conduct focus groups with clients to understand how they use smartphone-based technology and assess how interest in and usage of the PositiveLinks app may vary based on factors such as age, gender, and educational attainment level.



b. *Determine Care Site Staffing Roles and Hiring Needs:* Ensure that staffing is adequate to provide technical assistance for the app, coordinate care, and monitor outcomes or feedback from clients and providers. Establish a relationship with an IT team member to provide initial technical assistance for the app and its data-sharing processes. A PositiveLinks liaison, such as a PLC, serves as the front-facing staff member for the program and is integral to the intervention's success. Ideally, your care site will hire a full-time PLC, but it is also possible for two staff members to share the PLC position. The PLC should be available consistently to provide ongoing client support within the clinic or wherever services are delivered. During pre-implementation activities, decide which institutional stakeholders need to be consulted about staffing requirements and whether the team already has a PLC candidate or will need to hire one. This requires maintaining open lines of communication with hiring managers and confirming whether any staff roles or responsibilities will change as a result of implementing PositiveLinks at the care site.

c. *Secure a Funding Source for the Intervention:* Your budget development process will vary depending on your organization and whether you plan for full or limited implementation of the intervention. Correspond with internal stakeholders (e.g., budget managers, clinic directors) to explore existing funding streams and funding opportunities. Ideally, the budget should include funding to support one full-time PLC, a percentage of administrative time to manage the PLC, and part-time support of an evaluator or data manager. The budget should also include smartphone-related costs (e.g., phones, cases, data plans) and the costs of computer equipment to perform intervention tasks, transportation for clients, incentives to increase client engagement, staff training, and certification.

d. *Engage Stakeholders:* Collect information from potential clients, clinic staff, and providers (e.g., via surveys, focus groups, meetings) about challenges clients are experiencing with achieving sustained viral suppression and remaining engaged in HIV care, frustrations with the health care system, and the interconnected social determinants of health that can hinder the achievement of positive health outcomes. Initial conversations with stakeholders can focus on:

   - Identifying and understanding the barriers to achieving health goals;
   - Introducing the concept of warm technology; and
   - Demonstrating what PositiveLinks can offer to address some of those barriers (e.g., decreasing social isolation or enhancing existing linkage efforts).

   Inquire about the overall success of current site programs and how these efforts can integrate with PositiveLinks. Whether at the case management, operational, or leadership level, strong champions for the program are also important. These conversations can help to match expressed needs with the capacities of the PositiveLinks platform. Once your care site's PositiveLinks app has been developed, ask stakeholders to test early versions of the app, and give feedback on usability.

2. Explore Information Technology Infrastructure

a. *Determine Hardware, Software, and Computer System Needs:* PositiveLinks may be integrated with EMR systems. An example is Epic, a cloud-based system that is used across a broad range of healthcare practices. Assess whether your site uses similar systems or client portals that can integrate with PositiveLinks. If your site does not have access to secure electronic messaging with clients, PositiveLinks provides a method of protecting communication within the app that is more secure than SMS texting.

b. *Ensure App Accessibility:* Discuss different ways to modify the app to meet the accessibility needs of your client population. Smartphones offer a range of settings to optimize the app's accessibility by integrating text-to-speech or speech-to-text compatibility, enabling adjustments to text size, color, and brightness, and including captions in videos.

c. *Establish Smartphone Policies:* Before implementation, ensure that resources are available to purchase the required technological resources. Offer potential clients who already have a PositiveLinks–compatible smartphone (i.e., an iOS or Android phone) the option to use the app on their device. Depending on available resources, explore providing clients with smartphones. This may require establishing smartphone contracts and providing data plans, stipends, and equipment protection. Establish a relationship with a phone company and choose a data carrier that optimizes price and area coverage.

Adaptation

If system integration is not feasible, the PLC or another PositiveLinks administrator can enter data manually via the PositiveLinks portal.

d. *Research IT Security Protocols and Address Security Concerns:* Take appropriate measures to ensure client security and privacy to meet HIPAA requirements in technological systems and operations. Approval processes vary by institution, and it is essential to have conversations with IT staff about security protocols from the outset. Work with IT staff to:

   - Discuss the security level of your site's computers and databases.
   - Gather information on the steps needed to fulfill your organization's IT, compliance review, and approval processes before implementing the intervention.
   - Decide whether clients who use the PositiveLinks app on their own smartphones will be required to encrypt their phones.
   - Designate the personnel who will be authorized to work on the PositiveLinks web portal.

e. *Select App Features:* The PositiveLinks platform is meant to be modular, allowing components to be customized to fit each site's needs. For example, one site preferred not to incorporate a messaging feature because they already had a messaging system that worked well for their clients. You can customize the app to meet your clients' and organization's needs without eliminating core features (e.g., self-monitoring, social support) or tailored resources and information. Platform content is managed by your PositiveLinks staff via a web portal. Administrators may add or edit client and provider accounts on the portal, so it is important to establish which staff roles have access to specific information within the portal.

   App features for clients' use may include the following:

   - **Check-in Queries**: Push notifications at set times guide clients to the PositiveLinks home screen. Once there, clients will be asked to answer questions such as *"Did you take your medications today? (Yes/No)"* (replies can be customized) and *"What is your stress level? (Scale of 1–10)"*
   - **"How Am I?":** Clients can view their responses to medication, mood, and stress check-ins over time. The landing screen shows a monthly calendar accompanied by weekly averages for medication adherence. A range of emojis displays daily mood responses (e.g., very happy, happy, OK, unhappy, very unhappy). Daily stress responses are displayed by color-coded bars (e.g., green bars indicate low stress; yellow bars, medium stress; red bars, high stress). Responses may be displayed for a calendar month or a selected day.
   - **Lab Results:** Lab values are graphically displayed to enable clients to see patterns over time and track their most recent levels. Ideal ranges for CD4 count and viral load are also shown. Clients can choose to see their lab results for specific dates. CD4 and viral load data are either transferred from the EMR or manually entered by PositiveLinks administrators on the PositiveLinks portal.

- **Community Posts:** This is a private digital support community where clients can anonymously post new topics or respond to existing posts. During enrollment, each client selects an alias, or username, by which they are known to the PositiveLinks community. They can select an avatar to represent themselves. PositiveLinks administrators and coordinators may view community posts, but providers may not.
- **Appointment Reminders:** Notifications display on the home screen within the app to remind clients of appointments. Appointment information is either transferred from the client's EMR or manually entered by PositiveLinks administrators. Appointment data include the date, time, and location of the appointment and the provider's name. Clients may also use this feature to add their own reminder notifications. They can select the appointments tab to view upcoming appointments either on a calendar or as a list.
- **Documents:** Clients can upload photos of documents to share with their providers. These may include documents required for clinic eligibility, insurance, or housing purposes; images; photo IDs; and paystubs. Clients may select which providers can view the uploaded documents.
- **Messages and Contacts:** Clients can send and receive secure messages from the care team in a format similar to SMS texting or online chat. Staff can set up this feature to be notified by email when a client sends a message. The contacts feature is used by sites to curate a site-specific list of care-team members (e.g., front desk, HIV care providers, mental health providers, medical case managers) for their clients.
- **Resources:** This feature allows your site to customize a collection of web-based resources (e.g., audio and video files, website links) to provide information relevant to your clients. Topics may include stress management, social support, mindfulness, stigma, and health and social resources for lesbian, gay, bisexual, transgender, queer, intersex, and asexual (LGBTQIA+) people.
- **Questions:** This feature provides answers to common questions that people with HIV have. It connects clients to high-quality, accurate, detailed information and websites or the care team members.

- **Quizzes:** This feature allows sites to create quizzes on HIV-specific topics that enable clients to reflect on their own experiences. Clients can see their quiz responses and the correct response if they respond to a question incorrectly. Responses can also help sites assess potential knowledge gaps (e.g., if many clients missed questions about how resistance to antiretroviral therapy works, staff can upload resources on this topic).
- **Weekly Summaries:** This is a weekly notification that displays on the app home screen, summarizing medication adherence, mood, and stress check-ins for the past seven days. This feature helps clients track their progress and reflect on their responses.
- **Achievements:** To motivate clients to maintain behaviors and continue using the app, achievement badges display on each client's profile for engagement behaviors and for reaching specific benchmarks (e.g., 100 percent adherence).

Web portal features for providers' use may include the following:

- **Availability:** Providers can indicate their availability to clients (e.g., available, out of office).
- **Member Search:** Providers can search for clients by member username or last name to locate their member dashboards, calendar summaries, documents, and messages between the provider and the client.
- **Summary Page:** This feature displays a client's name and their monthly calendar of check-in responses.
- **Dashboard:** This feature shows graphical displays of clients' check-in responses for medication, mood, and stress over three time periods: one week, one month, and cumulative (since enrollment).
- **Documents:** Providers can upload photos of documents to a client's user account and can view and share them with the client and other providers.
- **Appointments:** Providers and other staff can view upcoming client appointments.
- **Lab Results:** Providers can see a client's CD4 and viral load results.
- **Services (Restricted Access):** Certain provider roles (e.g., community health workers) can document their interactions with clients for tracking purposes or reporting the delivery of services to clinic administrators or other stakeholders.
- **Messages/Chat:** Providers can securely send messages to and receive messages from clients in a format similar to SMS texting.
- **Resources:** Providers can see the resources available to clients in the app.

f. *Create a Workflow.* Before implementing PositiveLinks, create a workflow to determine roles, responsibilities, budget, and other day-to-day project management. This will help to determine how best to integrate PositiveLinks in a way that strengthens a site's continuity of care. New care systems take careful planning and strategizing, and it is important to intentionally think through how PositiveLinks will complement or change existing workflows. Follow up with key stakeholders (e.g., HIV primary care providers, nurses, social workers, case managers, mental healthcare providers, community health workers, front desk staff, clients) to determine how the app will enhance or change their work. Conversations may focus on how a dashboard shared by clients and providers can be useful for care and how the intervention can become a seamless part of standard practice. Consider allowing staff to test the beta version of the app.

3. Develop a Plan and Protocols for Sites and Partners

a. *Create a Monitoring and Evaluation Plan*: Determine the appropriate time points for and duration of client enrollment, monitoring, and evaluation. Create a list of outcomes and measures to determine whether and to what extent goals are met (e.g., a 30 percent increase in viral suppression rates). The evaluator (if one is hired) can collect

additional demographic data and information on retention indicators and lab values to track client outcomes.

b. *Produce an Outreach, Marketing, and Recruitment Strategy*: Recruitment strategies work best through a referral system among care site staff, the community, and clients. Maintaining good relationships with community organizations is imperative. To address potential gaps and avoid missed opportunities, develop clear marketing and educational materials for both the care site and community partners. To increase client engagement in the intervention, ensure that marketing and educational materials feature affirming and inclusive messaging. Proactively request feedback from partners and address any issues that arise in a timely manner. If your organization is working with partner agencies to offer PositiveLinks as a resource, create MOUs or MOAs to clearly define and delineate the staff roles at the care site and partner organizations.

c. *Finalize an Implementation Plan*: Ensure that all parties are knowledgeable about milestones, deliverables, and deadlines by creating an implementation plan and sharing it with stakeholders. Optionally, create a project management tool, such as a Gantt chart, that can be used to track intervention implementation progress.

4. Recruit and Train Staff

a. *Begin Recruitment:* Finalize staff roles and responsibilities and set up an accessible job application process. To ensure that you have a pool of diverse and representative job candidates to choose from, leverage your existing networks and systems (e.g., job boards, client relationships) in the broader community to fill positions either internally or externally. Consider members of your priority population who may have previously been involved with the clinic. These individuals' experiences may help them to relate to and bond with clients.

b. *Train Staff, Administrators, and Providers*: Ensure that staff complete the PositiveLinks training program, conducted by the PositiveLinks Implementation team. This training may be delivered either in person or remotely using a video-based system such as Zoom. It can be supplemented by online learning modules and certification. Before implementing PositiveLinks, site staff should demonstrate proficiency in using the app and portal's features and administrative components.

   It is helpful if staff engaging with clients are trained in SBCM and MI. The best results with PositiveLinks are seen in organizations with an integrated culture of SBCM. Practitioners of SBCM at the care site include receptionists, social workers, medical case managers, retention and linkage specialists, nurses, phlebotomists, and care providers.

5. Implement the Intervention

a. *Reach Out to Clients*: Brainstorm innovative ways to reach out to clients who may benefit from the intervention (e.g., referral by providers at the care site). The PLC can then reach out to the potential clients to provide information about PositiveLinks and schedule a time and date for enrollment.

b. *Enroll Clients and Provide Orientation:* The PLC should allocate a time frame for enrollment (ideally between 45 minutes and two hours). A wider time frame allows the PLC to address individual needs and technical literacy skills, as some clients may not have used a smartphone before. Before enrolling, potential clients should clearly understand the intervention, be aware of potential risks and benefits, and agree to participate. Completion of the PositiveLinks Services and Program Agreement form is an important step in this process.

   The PLC may enroll clients in person or remotely, in a private space if possible. The enrollment process might look like this:

   - The potential client learns about PositiveLinks or is referred by a provider at a care site and expresses interest in the program.
   - The PLC contacts the potential client by email, phone, or in-person to schedule a consent and enrollment session and determine whether the client has a smartphone.
   - The PLC facilitates a meeting with the client, shares the program's benefits and risks, acquires consent, and, if needed, provides the client with a smartphone.
   - The PLC orients the client to the smartphone and data plan (if applicable), explains how to use the app's features, and helps them choose their profile preferences. This includes confirming that the client understands how to engage with the digital support community, which provides access to valuable social support and anonymous connection to other people with HIV.

c. *Use PositiveLinks to Engage and Retain Clients in Care*: PositiveLinks communication tools allow the care sites to integrate supportive methods into routine care, extend the reach of health services, and increase communication with clients beyond typical in-person appointments. Upon program launch, *encourage* clients to use the app and share feedback. Consider incentivizing clients to use the app by coordinating fun and engaging activities such as weekly quizzes and monthly raffles.

6. Monitor and Evaluate Intervention

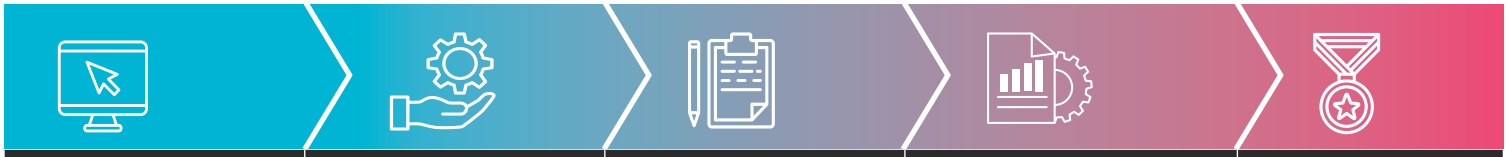
a. *Monitor Client Outcomes and App Use*: Conduct ongoing monitoring of client self-reported data. Respond to changes that may be noticed on member dashboards, displaying patterns daily or weekly and over a range of time. Automated reports of "actionable data" are available from the administrative portal to support such monitoring. Staff can track client outcomes (e.g., lab values and visit consistency) and engagement levels with the app (e.g., percentage of check-in responses, community engagement, quiz engagement, client messaging, total app logins).

"We were really trying to think about how to extend strengths-based case management to a population that had [challenges engaging in care] for a variety of reasons, both geographic and resource-related for coming in for visits."

– POSITIVELINKS PROGRAM DIRECTOR

Logic Model

Logic models are effective tools to assist in planning, implementing, and managing an intervention. Below is a logic model highlighting the resources, activities, outputs, outcomes, and impact of the PositiveLinks intervention referenced throughout this guide.



Resources	Activities	Outputs	Outcomes	Impact
• RWHAP, EHE, research, or another funding source that supports technology-based linkage interventions • Organizational culture steeped in SBCM and MI approaches • Relationships and collaborations with health system leadership, IT, clinical staff, and client population • EMR system (optional)	• Engage stakeholders and obtain community input • Develop recruitment and implementation plan • Gather feedback from clients and key staff to assess platform suitability give organizational goals and culture • Train staff and providers to use the app • Recruit and enroll clients • Provide ongoing support to all users • Monitor and evaluate client outcomes, responses, and feedback from the broader PositiveLinks community • Assess need for app enhancements to tailor the platform to meet the organization's goals	• Mobile phone app reflective of organizational and client needs • Providers and clients informed about the benefits of the app • Consistent use of the app by the PositiveLinks community to input and access information • Client engagement with the clinic support community • Appointments available for clients' acute needs within 24 hours	Among people with HIV: • Client satisfaction with a self-monitoring mechanism to improve health • Regular attendance at appointments • Increased satisfaction with health care and social resources • Improved ability to identify stressors and coping strategies • Improved self-efficacy to start and stay in care • Improved trust in the health system • Improved access to acute care • Decreased time to HIV care reengagement • Improvement in HIV and overall health outcomes • Decreased social isolation and internalized HIV stigma Within the implementing agency: • Enhanced infrastructure to better serve clients • Demonstrated investment in the client population and HIV relinkage efforts • Expansion of ARTAS counseling to clients • Improved retention in care • Improved HIV clinical outcomes	• Reduced HIV morbidity and mortality • Reduced HIV transmission • Improved health equity for people with HIV

Your Planned Work

Your Intended Results

Staffing Requirements & Considerations

Staff Capacity

The following staff implemented PositiveLinks at University of Virginia (UVA) Health's RWHAP-funded clinic and its partner sites:

- *PositiveLinks Implementation Manager:* In the original intervention, staff reported to a PositiveLinks Program Director and Senior Implementation Specialist. Supervision structure is contingent on the organization's size and staff resources (e.g., there may already be data managers). In smaller organizations, staff may report to the Clinic Director or the person who oversees case management services. PositiveLinks leadership responsibilities include:
  - Overseeing the program;
  - Providing ongoing support and mentorship;
  - Managing high-level components of the project; and
  - Articulating how PositiveLinks fits within their site's strategic vision for holistic client care and engagement that goes beyond the typical care site visit.
- *PositiveLinks Coordinator (PLC):* The PLC is integrated within the case management team, has a consistent presence in the clinic, and establishes meaningful relationships with providers and other key clinic staff. The PLC is the primary point of contact for providers and clients. This should be a full-time position, although it may be separated into a data management and analysis role and a direct service-delivery role. In this situation, however, it is critical that the two PLCs collaborate closely and act based on reported data. While one PLC is enough, it will be important that another staff person is cross-trained and can step in if the PLC is unavailable. (See Additional Resources Box). The PLC's responsibilities include:
  - Managing enrollment, training, and accounts;
  - Providing technical support to clients, providers, and care-site staff;
  - Collecting, reviewing, and analyzing data;
  - Training site staff on counseling, health education, and care coordination;
  - Observing the community message board and all cohort messages;
  - Weekly monitoring and reporting on client and provider use of the platform;
  - Conducting engagement and retention follow-up with clients who are not using the app;
  - Maintaining accurate, timely content in the Resources and Questions features of the app;
  - Creating weekly quizzes for clients;
  - Providing support for data management and analysis;
  - Documenting any technical issues related to PositiveLinks and communicating with the implementation team for troubleshooting; and
  - Helping clients to develop technological literacy skills.

- *Care-Site Provider(s):* Care-site HIV medical and case-management providers are instrumental in supporting the intervention and reinforcing the importance of using PositiveLinks. The care-site provider's responsibilities include:
  - Assisting in goal setting and tracking;
  - Supporting the PLC to identify and refer potential clients; and
  - Generally supporting clients to make the best use of the intervention to improve their outcomes.
- *Mobile Developer or Care-Site IT Security Stakeholders*: Each care-site team must include or consult with its IT security staff to ensure that the intervention complies with institutional regulations. Care-site IT teams may be required to integrate the EMR system with the PositiveLinks app. Early on, it will be helpful to identify an IT member or team who can provide ongoing technical support and assistance during the review and approval process.
- *Program Evaluator (optional)*: The program evaluator provides oversight of evaluation support, including data management and data analysis.

Staff Characteristics

Core competencies of all staff should include:

- Familiarity with the care site's referral processes;
- Familiarity with smartphone devices and smartphone apps;
- Flexibility and patience;
- Ability to creatively problem-solve;
- A genuine interest in the well-being of people with HIV;
- Cultural responsiveness and comfort with diverse populations and lifestyles;
- A growth mindset;
- Excellent time management and organizational skills; and
- Familiarity with the principles of SBCM, MI, and holistic engagement into care.

Adaptation

If designating or hiring an evaluator is not feasible, this task may be included in another staff member's role (e.g., the PLC).

Replication Tips for Intervention Procedures and Client Engagement

Successful replication of the PositiveLinks intervention involves the following:

- *Participation in PositiveLinks Staff Training Program.* This training program is provided by the PositiveLinks Team at UVA Health (Table 1). Training sessions may be conducted in person or online using a method that can deliver video-based, face-to-face, synchronous training. The initial training session is augmented by a certification program for all staff who will support PositiveLinks clients. The certification program offers online modules based on staff roles. The online learning modules should be available throughout the implementation process to ensure that all staff have demonstrated proficiency in using the PositiveLinks app and portal.
- *Promote the Intervention.* Marketing materials such as the brochure UVA Health developed can help disseminate information about PositiveLinks and encourage clients to enroll. (See Additional Resources Box). These materials should be available within the clinic and at partner organizations where appropriate. Marketing and dissemination of PositiveLinks materials should be informative, empowering, and reflective of the diverse communities you serve.

Table 1 — Recommended PositiveLinks Staff Training

In-Person Course Name	Content Description	Who Should Attend	Who Will Teach
Introduction to PositiveLinks	PositiveLinks development, features, intended use, and impact	PositiveLinks site care team	PositiveLinks team
PositiveLinks Member Enrollment and App Training	Member enrollment and app training best practices	Partner/site manager, PLC, site providers	PositiveLinks team
PositiveLinks Administrator Portal	Portal content curation, member and cohort monitoring, and reporting tools	Partner/site manager, PLC	PositiveLinks team
PositiveLinks Member Engagement and Retention Strategies	Best practices for promoting and retaining member engagement with PositiveLinks	Partner/site manager, PLC	PositiveLinks team
PositiveLinks Phone and Phone Credit Procurement and Management Practices	Portal tools and best practices for procuring prepaid devices and phone credits	Partner/site manager, PLC	PositiveLinks team

Source: University of Virginia School of Medicine. (n.d.) PositiveLinks Implementation Manual and Workbook (See Additional Resources Box).

Securing Buy-In

Securing the support of leadership, staff, and other relevant stakeholders is an important step when implementing a novel intervention. The following strategies may help to secure buy-in for the PositiveLinks intervention:

- **Prioritize stakeholder input at the client, operational, and leadership levels**: Gather feedback from clients and staff to assess buy-in, identify champions, discuss organizational priorities, gauge the potential client base, and address any questions or concerns that arise.
- **Highlight the importance of warm technology**: Stress how this technology helps to efficiently and sustainably build interpersonal relationships between site providers and clients.
- **Emphasize that PositiveLinks extends provider reach:** Underscore how the technology helps providers interact with clients in meaningful and efficient ways and helps to extend SBCM to a population that has not been retained in care for a variety of reasons, including geographic and resource-related factors.
- **Discuss the technical assistance available to PositiveLinks platform users**: Explain that a comprehensive orientation accompanies the PositiveLinks app and that the UVA Health team is hoping to develop a community of practice through the intervention. Emphasize that these activities either enhance and extend existing strategies or are aspirational within your organization.

Overcoming Implementation Challenges

The PositiveLinks intervention is multifaceted, and implementation can be complex. Anticipated challenges, as well as possible solutions, include:

- **Obtaining IT Approvals:** Prepare relevant documentation and collaborate with in-house staff to obtain IT security review and approval. Have open conversations to determine how nimble your organization can be in adopting new technology and integrating it into the workflow. Initial approvals may take longer than anticipated, making it crucial to maintain open lines of communication with organizational leadership to facilitate the process and create realistic timelines.
- **Obtaining Provider Buy-In:** Develop and strengthen relationships with providers**.** Clinicians, medical doctors, and nurses have significant workloads. A conversation about the value that the PositiveLinks app adds for them is necessary to address concerns (e.g., potential risks, protocols for clients who show psychological distress, completion of required documentation) that providers may have.
- **Public Health Crises:** Consider the broader healthcare landscape. Public health crises such as COVID-19 may impact your site's ability to deliver care to clients by reducing non-essential client contact. When in-person visits are not feasible, operationalize remote client enrollment and support.
- **Funding a mHealth Intervention**: Identify funding opportunities to support technological resources. Technology-based interventions can be costly, depending on the resources that need to be purchased and maintained, such as smartphones and data plans. However, these resources are key to enabling clients to overcome social and structural barriers to health. Work with internal teams to find funding, especially amid the growing recognition among federal funders of the potential need to support phones and related costs.
- **Sharing Challenges and Solutions with All PositiveLinks Platform Users:** Provide ongoing technical assistance. In addition to gathering feedback and responding to issues as they arise, the PLC can provide updated resources to teams and standardize solutions where appropriate to better support the care site. Potential challenges and solutions can be summarized in a document that includes knowledge and tips from staff. This collaborative exchange of knowledge enables the intervention to nurture a community of practice that empowers the broader PositiveLinks community. Teams can also designate staff members who will directly coordinate or manage the intervention. Other staff can focus on program implementation and troubleshoot problems. By facilitating regular communication with support teams and anticipating potential barriers, you will be able to resolve most issues that could threaten the intervention's success.

"It is important for care sites that are implementing PositiveLinks to know that there is ongoing technical assistance that's available. It's not a piece of software or code that we give to them, and we walk away, but there is a community of practice that we're developing."

– SENIOR IMPLEMENTATION SPECIALIST

Adaptation of the Original Intervention

While PositiveLinks continues to include core components of the original intervention, UVA Health has added features based on clients' and providers' feedback. It has also adapted the app for Spanish-speaking clients (Table 2). Organizations that work in different environments or with larger populations or have varying needs may choose to offer one message board or multiple tailored message boards (e.g., a dedicated message board for youth). The Spanish-language app, called ConexionesPositivas, also allows NovaSalud, a local CBO that serves predominantly Latinx populations in Northern Virginia, to provide clients with an additional resource to improve retention.

The Virginia Department of Health supports organizations that receive RWHAP Part B funding to implement PositiveLinks. The PositiveLinks team at UVA Health has collaborated with CBOs in Virginia to adapt PositiveLinks to fit the context of other care sites and has continued to follow them. A research consultant at UVA oversees implementation evaluation across different sites and reaches out to key stakeholders to discuss barriers and implementation facilitators. This allows the UVA Health PositiveLinks Team to update processes and the app as needed, stay relevant and responsive to client needs, and continue serving as a model for future organizations.

Table 2 — Adaptation of the PositiveLinks Intervention

Original Model	Adaptation	Rationale
Core components included medication adherence, self-monitoring, and social support	Addition of HIPAA-compliant telemedicine	HIPAA-compliance ensures the delivery of confidential, secure telehealth services.
	Adjustments to the user and community board interfaces, how clients receive self-monitoring queries, and how they view their lab results	Adjustments to the interfaces allow clients to tailor the intervention to their preferences.
English only	Development of a Spanish-language app, *ConexionesPositivas,* with an additional message board for Spanish speakers	*ConexionesPositivas* increases reach to Spanish-speaking populations.

Promoting Sustainability

To ensure the long-term sustainability of PositiveLinks, consider taking a multipronged approach:

- *Communicate with Stakeholders and Clients:* Proactively share updates and seek ongoing feedback from providers, clinic staff, and clients through focus groups, client advisory boards, surveys, newsletters, and the app itself. This offers the community multiple avenues to provide input and helps your organization determine changes that may be needed. Moreover, this input allows care sites to revisit their organizational priorities and assess the extent to which PositiveLinks is advancing them.
- *Update App Content*: To maximize impact on client engagement and health outcomes, ensure that the platform's resources and announcements are updated and continue to be relevant to clients. For example, the community message board is a space where PositiveLinks staff can add information about care-site activities and broader events in the community over time.
- *Secure Funding*: Collaborating with public health authorities, including health departments, is key to securing future grants to cover the administrative and technological costs of the intervention. Work with your state's department of public health and HIV care leadership to ensure that the intervention supports state goals. Highlighting the impact of PositiveLinks on retention, viral suppression, and overall health outcomes may help you negotiate additional financial support. Different funding sources can help sustain the intervention, including state funds, ADAP rebate dollars, and partnering with your state on its *Ending the HIV Epidemic* plans. Research funding may also allow your care site to support the intervention, particularly if your organization cannot access funding through a local or state health department.
- *Broaden Reach*: The flexibility of PositiveLinks lends itself to adaptation by care sites across the country. Another possible strategy for securing sustainability is to research ways of disseminating information about the intervention to other organizations and health systems. This would help put PositiveLinks on the state and national "radar" as an example of an innovative and effective intervention for people with HIV.

SWOT Analysis

SWOT is an acronym for Strengths, Weaknesses, Opportunities, and Threats. A SWOT analysis is a structured planning method that can assess the viability of a project or intervention. By conducting a SWOT analysis before an intervention, organizations can proactively identify challenges before they occur and think through how to best leverage their organizational strengths and opportunities to improve future performance. A SWOT analysis of the PositiveLinks intervention at UVA Health identified the following:

STRENGTHS

The intervention will increase relinkage and retention outcomes for clients who are out of care by:

- Establishing common goal(s) for the project,
- Enhancing existing relinkage efforts,
- Employing motivated staff, including a PLC who has a consistent clinic presence,
- Communicating through different channels with clients who have significant barriers to care,
- Identifying priority population(s) from the outset to facilitate recruitment and implementation,
- Presenting clients with tiered educational opportunities, and
- Nourishing creative thinking about ways to overcome barriers to health care access in rural populations.

WEAKNESSES

Agencies will find it challenging to implement the PositiveLinks intervention without:

- Leadership to promote the intervention,
- Discussing how activities to implement the app can be integrated into the organization's infrastructure,
- Determining the organization's willingness to embrace novel approaches to care,
- Procuring resources to provide clients with smartphones and data plans,
- Hiring a full-time PLC,
- Creating a client portal or EMR access points for client-provider communication,
- Addressing concerns about security at the client, clinic, and institutional level,
- Understanding broadband access (e.g., Wi-Fi, cellular data services),
- Identifying billable services (e.g., client correspondence with providers through the app),
- Establishing policies and procedures for phone repairs and replacement, and
- Providing sufficient training for both clients and staff on the app and other aspects of the intervention.

OPPORTUNITIES

The PositiveLinks intervention offers opportunities to:

- Offer a protected platform developed with and for people with HIV to overcome barriers to accessing HIV care,
- Expand the reach of support services,
- Allow clients to tailor features of the intervention based on their needs and interests,
- Disseminate important information to clients,
- Observe changes in client patterns daily,
- Securely transfer data between the app and the client's EMR,
- Integrate telemedicine efforts,
- Address stigma by facilitating client-provider relationship building and connecting clients to the broader community of people with HIV,
- Build trust and confidence in the system through client-centered care,
- Ensure timely and efficient messaging at the clinic,
- Assist clients with engaging in their own time,
- Provide safe and secure messaging between clients and their providers, and
- Enhance technology literacy among both clients and staff.

THREATS

Threats to the success of the PositiveLinks intervention include:

- Changes in funding availability,
- Changes in organizational priorities,
- Shifts in the public health landscape that may push organizations to pursue alternative ways of enrolling and supporting clients, and
- Lack of a point person(s) to address IT issues as they arise.

Conclusion

Evidence-based mobile health interventions such as PositiveLinks are integral to ensuring that people with HIV are engaged and retained in care. Organizations are uniquely positioned to consider adopting PositiveLinks, given the changing healthcare technology landscape and the need in the public health field for innovative, accessible interventions. The PositiveLinks platform, a clinic- or CBO–deployed smartphone app and the online portal, can enhance engagement at care sites by realizing broader organizational goals and providing health and social support to people with HIV in a holistic way beyond the clinical setting. In addition to closing health care gaps, the intervention further aims to connect clients to a virtual local community.

The components that make PositiveLinks effective include the capacity to self-monitor medication, mood, stress level, and care coordination. The community message board allows participants to connect with peers with HIV who provide psychosocial support, advice, and encouragement.[16] The app enhances clients' relationships with their care providers and virtual community, which has proved to be a sustainable strategy to retain clients in care. For providers, the PositiveLinks portal provides a complete and convenient visual snapshot of a client's status between care-site visits. In addition to delivering real-time, actionable data such as check-in response rates, self-reported medication adherence, CD4 counts and viral load, mood, stress levels, achievements, and upcoming appointments, PositiveLinks also provides resources for people with HIV who are new to care or at risk of falling out of care.

The implementation of PositiveLinks was evaluated in a pilot study that used a single-arm prospective design with 6-month and 12-month assessments. Results showed improved retention in care, visit constancy rates, CD4 counts, and viral suppression (Table 3).[1] Participant interviews and qualitative analysis of the app's community message board found that the app provided users with a sense of connection and social support.[1]

Table 3 — PositiveLinks Pilot Study: Summary of Findings[1]

	Baseline	6 Months Post-Implementation	12 Months Post-Implementation
Retention in care	51%	88% (P < 0.0001)	81% (P = 0.0003)
Visit constancy	22%	36% (P = 0.016)	51% (P = 0.0004)
Viral suppression	47%	87% (P < 0.0001)	79% (P = 0.0007)

Additional Resources

PositiveLinks Website
PLvirginia.org

Ryan White HIV/AIDS Program Fact Sheet
hab.hrsa.gov/sites/default/files/hab/Publications/factsheets/program-factsheet-program-overview.pdf

Ryan White HIV/AIDS Program Services: Eligible Individuals & Allowable Uses of Funds Policy Clarification Notice 16-02
hab.hrsa.gov/sites/default/files/hab/program-grants-management/ServiceCategoryPCN_16-02Final.pdf

CIE Cost Analysis Calculator
CIEhealth.org/innovations

PositiveLinks Budget Worksheet
CIEhealth.org/intervention/positive-links#resources (Click on Resources)

PositiveLinks Coordinator Job Description
CIEhealth.org/intervention/positive-links#resources (Click on Resources)

PositiveLinks Decision Task Checklist
CIEhealth.org/intervention/positive-links#resources (Click on Resources)

PositiveLinks Pre-Implementation Reflection
CIEhealth.org/intervention/positive-links#resources (Click on Resources)

PositiveLinks Site Readiness Checklists
CIEhealth.org/intervention/positive-links#resources (Click on Resources)

PositiveLinks Implementation Manual and Workbook
CIEhealth.org/intervention/positive-links#resources (Click on Resources)

ARTAS Resources
https://www.cdc.gov/hiv/effective-interventions/treat/artas?Sort=Title%3A%3Aasc

PositiveLinks Brochure
CIEhealth.org/intervention/positive-links#resources (Click on Resources)

PositiveLinks Challenges and Solutions
CIEhealth.org/intervention/positive-links#resources (Click on Resources)

PositiveLinks Frequently Used Terms
CIEhealth.org/intervention/positive-links#resources (Click on Resources)

The Cost and Threshold Analysis of Retention in Care (RiC): A Multi-Site National HIV Care Program
https://www.researchgate.net/publication/310666696_The_Cost_and_Threshold_Analysis_of_Retention_in_Care_RiC_A_Multi-Site_National_HIV_Care_Program

Endnotes

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PROJECT ACCEPT INTERVENTION

CIE
Center for Innovation and Engagement

Background

The Health Resources and Services Administration's (HRSA's) Ryan White HIV/AIDS Program (RWHAP) provides a comprehensive system of HIV primary medical care, essential support services, and medications for low-income people living with HIV who are uninsured and underserved. RWHAP funds states, cities, counties, 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.

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NASTAD Authors:

Alexander Perez, Manager, Health Equity
Rosy Galván, Director, Health Equity
Milanes Morejon, Manager, Health Equity

Intervention Development Team:

Sybil Hosek, Clinical Psychologist
Diana Lemos, Project Manager
Christopher Balthazer, Interventionist

Contributors

Natalie Cramer, Senior Director, NASTAD
Eve Mokotoff, Consultant, NASTAD
Tia Clark, Impact Marketing + Communications
Tara Kovach, Impact Marketing + Communications
Sarah Cook-Raymond, Impact Marketing + Communications

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Stock photos. Posed by models.

Intervention Snapshot

	Priority Population	Cisgender adolescents and young adults (ages 16 to 24) who have received a new HIV diagnosis*
	Setting	HIV Specialty Clinic
	Pilot and Trial Sites	Randomized Controlled Trials at Adolescent Medicine Trials Network for HIV/AIDS Interventions locations in Detroit, MI; Chicago, IL; Memphis, TN; and Miami, FL
	Model	Project ACCEPT uses an educational and skills-building approach to help youth with HIV develop coping strategies, understand their sexual health, assist them to better use the health care system, and create strategies for HIV care and medication adherence.
	RWHAP Ending the Epidemic (EHE) Opportunity	Approximately 50,900 people with HIV are ages 13 to 25. CDC estimates that youth continue to disproportionately face challenges in accessing care and achieving improved health outcomes, particularly due to low rates of HIV testing and difficulty overcoming socioeconomic and psychological barriers to care. PositiveLinks outcomes indicated a 2.33 greater likelihood of HIV medication usage, which was sustained 12 months post-intervention, as well as increased appointment adherence, visit consistency, and overall medical visits.
	Intervention Funding	Project ACCEPT was funded by a study through the Adolescent Trials Network for HIV/AIDS Interventions within the National Institute of Child Health and Human Development. Developers also used supplemental funding from the National Institutes on Drug Abuse and Mental Health, s RWHAP Parts A, C, and D funding, and the 340B Program.
	Staffing	Staff positions in the original intervention included a Counselor or Social Worker, Peer Facilitator, and Coordinator.
	Infrastructure Needed	Confidential spaces to host individual/ group discussions

**Although Project ACCEPT was originally developed for cisgender youth, it can be adapted to meet the needs of gender-diverse patients.*

Intervention Overview & Replication Tips

Why This Intervention?

Project Adolescents Coping, Connecting, Empowering, and Protecting Together (ACCEPT) was designed as a cisgender-specific, group-based intervention for youth aged 16 to 24 with HIV. Project ACCEPT results include improved engagement in care and other associated positive health outcomes, such as a decline in detectable viral load and greater self-reported adherence to antiretroviral therapy (ART) medication. Project ACCEPT increases engagement in care by addressing the unique challenges that cisgender youth with newly diagnosed HIV face. This intervention employs peer co-facilitated group discussions that use a stress-coping model and information and skills-building activities guided by social cognitive theory.[1] Although Project ACCEPT was originally developed for cisgender youth, it can be adapted to meet the needs of a gender-diverse clientele.

In a randomized controlled trial (RCT) conducted at four sites within the Adolescent Medicine Trials Network for HIV/AIDS Interventions (ATN), the group receiving the Project ACCEPT intervention (intervention group) was more likely than the control group to self-report use of HIV medications (odds ratio 2.33) over the 12 months post-intervention. The intervention group was also more likely than the control group to have a declining viral load over time ($p = 0.041$). An assessment of clinical review forms showed that the intervention group had non-statistically significant increases in appointment adherence rates; visit constancy; and an overall number of medical, mental health, or case management visits compared with the control group.[1]

Intervention at a Glance

This section describes the Project ACCEPT intervention to help readers assess the steps required for replication. Although most of the steps were standardized across the four RCT sites (Detroit, Michigan; Chicago, Illinois; Memphis, Tennessee; and Miami, Florida), these steps are specific to the implementation of Project ACCEPT at the Center of Relational Empowerment (CORE) Medical Center in Chicago. Project ACCEPT was primarily funded by a study funded by the Adolescent Trials Network for HIV/AIDS Interventions (ATN) within the National Institute of Child Health and Human Development.

 Step 1	**Define Intervention Population and Data Measures** Characterize youth attending your clinic as an initial step in conceptualizing a culturally appropriate replication of the intervention. In addition to HIV-specific health outcomes and medication adherence, collect information on psychosocial barriers to care (e.g., confidentiality issues, social stigma, status disclosure). Consider how you will clearly define data collection measures that align with the context in which the intervention will be replicated.
 Step 2	**Assess Staff Resources and Gaps** Develop an inventory of cultural competencies for your staff (HIV outreach workers, case managers, peer facilitators, and medical personnel). Gauge the type of cultural competency gaps that exist within your current team. Where possible, create leadership pipeline opportunities for youth who are engaged with your clinic.
 Step 3	**Secure Stakeholder Buy-In** Engage relevant stakeholders, including staff and leadership, to gauge their willingness and ability to bring on new staff who can fill gaps identified in step 2: *Assess Staff Resources and Gaps* and recruit youth for group-based activities. Define parameters for the type of experience and expertise new staff are expected to have, as well as limitations that may hinder you from hiring staff who reflect the culture of your clinic's clients.
 Step 4	**Engage Youth-Centered Community Service Partners** Assess synergies and create partnerships and linkage opportunities with trusted agencies in your area that work with youth with HIV or offer the necessary ancillary services to address community needs. These may include community-based organizations (CBOs), AIDS service organizations (ASOs), or other agencies that provide supportive services to youth with HIV (e.g., housing support, after-school and mentorship programs, substance use). This network is essential to identify providers with the cultural competency skills and experience needed to address service gaps and create a stronger sense of trust among youth.
 Step 5	**Assess Local Laws and Regulations** Create an inventory of policies, laws, and regulations specific to youth in your jurisdiction to help you streamline services and provide appropriate social support. This includes understanding consent laws and identifying programs that promote the legal independence of youth without guardianship.

 Step 6	**Recruit Peer Facilitators, Counselors, and Social Workers** Hire peer facilitators, counselors, and social workers who have experience working with youth with HIV. Recruit peer facilitators aged 18 to 24 years with HIV who have grappled with the same structural barriers that youth in your community frequently experience.
 Step 7	**Train Staff on Project ACCEPT Procedures and Facilitate Knowledge Exchange** Train new staff on the service delivery infrastructure, policies, and other relevant content related to HIV care in your setting. Integrate collaborative learning exercises so that existing staff learn from new staff's lived expertise and use that knowledge to refine their roles, ensure the provision of appropriate services, and reinforce interventionists' behavioral skills.
 Step 8	**Recruit Youth with HIV** Leverage youth currently receiving care at your organization as an initial cohort for Project ACCEPT ramp-up. Provide a thorough explanation of the intervention's components to potential participants along with an informed consent form to ensure youth understand that their participation is voluntary.
 Step 9	**Increase Youth Skills to Engage in HIV Medical Care and Social Support** Engage youth with HIV in care through participation in a series of guided individual and group sessions that use a multilevel framework for skills-building and tailored educational sessions.

Cost Analysis

Project ACCEPT was funded by a study through the Adolescent Trials Network for HIV/AIDS Interventions (ATN) within the National Institute of Child Health and Human Development. The intervention also used supplemental funding from the National Institutes on Drug Abuse and Mental Health. Additionally, intervention developers leveraged the Health Resources and Services Administration (HRSA) Ryan White HIV/AIDS Program (RWHAP). They supplemented their funding using Parts A, C, and D and the 340b drug pricing program. HRSA's RWHAP Fact Sheet provides more context on the different parts. Additionally, RWHAP's Policy Clarification Notice 16-02 outlines details on allowable costs. (See Additional Resources Box).

A more detailed cost analysis for the Project ACCEPT intervention was not available when this manual was developed. However, you can use the CIE Cost Calculator to create an estimate of the cost of implementing the intervention at your organization. (See Additional Resources Box).

Resources Assessment Checklist

Before implementing Project ACCEPT, your organization should walk through the following Resources Assessment (or Readiness) Checklist to assess your ability to do this work. If you do not have these components in place, you are encouraged to develop this capacity to conduct this intervention successfully. Questions to consider include:

- ❑ Does your staff know and understand HIV trends and intersecting health outcomes among youth with newly diagnosed HIV in your community?
- ❑ Does your staff understand the youth's demographic and cultural makeup in your community through either lived experience or work experience? For example, are they representative of the community? Do they understand colloquial terminology and cultural norms?
- ❑ Can your organizational structure accommodate youth with HIV by providing flexible appointment times, after-hours, off-site venues for group-based discussions, and other ancillary services (e.g., transportation, food banks)?
- ❑ Does your organization have funding streams available to recruit and sustain new staff and provide incentives for clients where appropriate?
- ❑ Does your organization (or a community partner) have counselors, social workers, and peer facilitators who are gender-matched with participants and have experience working with youth with HIV? If not, can you recruit such staff directly or via partnerships?
- ❑ Does your organization know where to recruit peer facilitators who have experiences similar to those of the youth you serve? Does your organization know where to identify counselors and social workers who have mental health and youth-serving backgrounds?
- ❑ Does your organization understand the structural barriers and internal policies that create obstacles for youth with newly diagnosed HIV and need care? Is your organization willing to address those barriers and policies?
- ❑ Do you have an existing relationship with a CBO, ASO, or other community partners that work closely with and are trusted by youth with HIV? Are representatives of these organizations willing to work with you to plan and implement this intervention, including recruiting peer facilitators where appropriate?
- ❑ Do you have educational materials on HIV care and ancillary resources accessible and relevant to youth in your community? If not, do you have the capacity to develop these resources in digital and printed formats as needed?

Setting the Stage

According to the U.S. Centers for Disease Control and Prevention (CDC), there are an estimated 1.2 million people with HIV in the United States.[2] During 2018, approximately 75.7 percent of people with HIV received HIV medical care, 57.9 percent were retained in care, and 64.7 percent were virally suppressed.[3] Youth ages 13 to 25 makeup around 50,900 of these cases and are considered the least likely to be aware of their status. The CDC estimates indicate that young people continue to disproportionately face challenges in accessing care and achieving improved health outcomes, particularly due to low rates of HIV testing and difficulty overcoming socioeconomic barriers to care.[4] At each stage of the HIV care continuum, from diagnosis to viral suppression, youth are not entering care or are falling out of care. Improving client engagement and reengagement in care is a national priority, with targeted retention measures established by the HIV National Strategic Plan (see Additional Resources Box), HRSA, and the Ending the HIV Epidemic (EHE) initiative, among others.[5]

Project ACCEPT employs an innovative care model designed to engage and retain youth aged 16 to 24 with HIV in care using a peer-facilitated, information- and skills-building framework. Youth hold the lowest rates of engagement in care after an HIV diagnosis of any age group, resulting in dismal retention rates and poor viral suppression outcomes. Youth face a range of barriers to successful engagement and retention in care, including typical adolescent developmental issues, psychological distress (e.g., symptoms of depression, hopelessness or anxiety, lack of social support, internalized stigma). All of these barriers can be heightened during the first year after receiving an HIV diagnosis. This first year is a vital time for youth to seek appropriate medical attention.[1,6]

Project ACCEPT was an RCT conducted at four sites within the ATN in the United States: Detroit, Michigan; Chicago, Illinois; Miami, Florida; and Memphis, Tennessee. The ATN is a multicenter research network that conducts research trials with youth aged 12 to 24 who have or are at risk for HIV. Research foci include primary prevention interventions and interventions across the HIV

care continuum, both of which include multilevel behavioral and social models. The Project ACCEPT study aimed to engage youth aged 16 to 24 who had received an HIV diagnosis within 12 months. Youth were randomly assigned to either the intervention arm (ACCEPT) or the control arm (HEALTH) at their baseline visit. The intervention combined individual and group sessions addressing a range of issues that influence engagement in care among youth with HIV, including stigma, disclosure, healthy relationships, substance use, future life planning, and referrals to other services where needed. The control arm was focused on general health habits, diet, nutrition, exercise, and information about HIV and other sexually transmitted diseases.

The Project ACCEPT intervention design was based on qualitative research with 30 young people with HIV. The intervention uses a social-ecological model that emphasizes the impact of reported stressors experienced by adolescents within a broader social-ecological system (e.g., families, sexual partners, providers, work, school). Findings indicated that the first year after receiving an HIV diagnosis was a challenging time for youth, especially regarding their HIV diagnosis and disclosing their status to others. Addressing these barriers by teaching skills to navigate sexual health issues, safer sexual negotiation tailored by gender, and delivering gender-specific individual and group-based learning effectively mitigated risk factors that contribute to worse

health outcomes.[1] The decision to separate groups by gender was based on findings of another ATN trial showing youth were more comfortable discussing gender-specific issues (e.g., pregnancy, sexual orientation) in single-gender groups, allowing for greater engagement and retention in the program.[6] The strength of this approach centers on leveraging the diversity and unique experiences of cisgender youth through peer co-facilitators who can tailor the intervention to the needs of youth in the community in which it is replicated.[6]

Over the 12 months post-intervention, the ACCEPT group was more likely than the control group to self-report use of HIV medications (odds ratio 2.33). An assessment of clinical review forms showed that the ACCEPT group had non-statistically significant increases in appointment adherence rates; visit constancy; and the overall number of medical, mental health, or case management visits. A qualitative analysis of a participant survey found that the intervention increased participants' comfort with and acceptance of their diagnosed HIV and increased social support after completing the intervention.[1] Overall, the intervention effectively improved HIV-related health outcomes and engagement in care among youth while providing them with an extra layer of support going forward.

"Facilitators are important to build [a] connection and introduce young folks to what it means to be patients—[this was a] first opportunity for folks to learn to navigate the medical system, which is an essential life skill, to make sure they are prepared."

– CLINICAL PSYCHOLOGIST AND DEVELOPER OF PROJECT ACCEPT

Description of the Intervention Model

Project ACCEPT helps address the challenges facing youth with newly diagnosed HIV by engaging them in the healthcare system. These efforts help clients address psychosocial barriers, a strategy for improving clients' engagement in routine clinic visits and promoting clients' medication adherence. Project ACCEPT's implementors in Chicago predominantly utilized ATN research funding and leveraged RWHAP Part A, C, and D funding to support staff activities around client engagement. RWHAP Part A funding can be useful to potential replicators for activities related to core medical services (e.g., AIDS Drug Assistance Program or ADAP, treatments, early intervention services, mental health services, substance abuse outpatient care, etc.) and supportive services (e.g., medical transportation, food banks, housing, psychosocial support, etc.). These can also be supplementally supported by RWHAP Part C funding should your organization be eligible to receive those funds. RWHAP Part D funding may be particularly useful to potential replicators given its specific focus on services for youth and women. These funds can be leveraged to provide primary care services specific to youth with HIV, clinical quality management, and supportive services like outreach, case management, and transportation to service delivery sites. The intervention is divided into three overarching phases:

1. Assess Gaps and Engage Stakeholders

Establishing the Project ACCEPT intervention begins with identifying the gaps in your service delivery infrastructure and assessing different stakeholders' readiness in recruitment and outreach to prioritize tailoring HIV and other medical care to youth.

a. *Define the Intervention Population:* Characterizing the cultural and demographic makeup of the youth you serve is an important initial step in implementing Project ACCEPT. Assess the population size and determine the recruitment parameters for gender-specific groups (e.g., solidify the age range, understand the distribution of gender and sexual identity). This will provide you with a clearer picture of the staff and resources you may need.

b. *Define Data Measures and Systems:* Establish standard data measures to be collected for ongoing evaluation of the intervention. Ensure that a system is in place for data entry, cleaning, and analysis. Establishing a system for collecting, storing, cleaning, and continually analyzing this information early on will prepare you to conduct an ongoing evaluation of the intervention's outcomes. It is critical to characterize the specific psychosocial barriers experienced by youth in your community, as these barriers will differ among communities and settings.

c. *Secure Stakeholder Buy-In:* Engage organizational leadership and existing staff to ensure support for additional staffing and training sessions. This includes securing support for additional resources and identifying any roadblocks that may prevent the team from recruiting the most suitable personnel to address identified gaps. Staff will need to be receptive to cross-cultural and intergenerational learning, willing to train new staff on processes and procedures, and ready to create a welcoming and supportive environment for youth at all HIV care continuum stages.

d. *Assess Staff Resources and Gaps:* Understanding the resource gaps that may exist across your care continuum begins with understanding the baseline set of skills and resources that are already available to your staff. Create an inventory of language skills, knowledge of youth development frameworks, cultural backgrounds, experiences, or training sessions that staff have participated in, and any expertise relevant to youth. Identify which, if any, of your existing counselors, social workers, peer facilitators, and other staff have the required cultural skills and where gaps exist.

e. *Engage Youth-Centered Community Service Partners:* Ideal partnerships engage organizations that already work closely and have established trust with youth with HIV in clinical and non-clinical settings or offer the services needed to provide a holistic response to social and structural barriers. Such organizations include CBOs, ASOs, youth-led groups, or other community partners that provide supportive services to youth with HIV. Depending on your community's needs, create partnerships with organizations that offer relevant services to queer or transgender youth and include a range of supporting resources (e.g., housing, trauma-informed care, gender-affirming care, safety planning).

   The ATN executive committee includes a community representative, which brings an added layer of community participation and engagement to their research goals. During the original implementation of Project ACCEPT, a youth community advisory board of 12 representatives from local programs was developed to provide input on potential collaborations, recruitment materials, policies, and procedures. If organizing a community advisory board is not feasible, think of ways to incorporate young community members in the development and implementation of Project ACCEPT. Emphasize centering the community perspective and ensuring a bidirectional relationship with community partners to provide clients services and support. Effective partnerships will increase the reach of your engagement and retention efforts while creating trust with the community you serve.

f. *Assess Local Laws and Regulations Related to Youth:* If you have not already done so, create an inventory of the legal requirements for consent, reporting, and privacy specific to youth in your jurisdiction. This may include the age of consent for services, mandated reporting, accessing services and medication without parental consent, or privacy laws related to insurance. Identify existing programs that promote the legal independence of youth who may not have guardianship.

2. Recruit and Train the Intervention Team

Once you have a thorough understanding of resources and gaps and have engaged stakeholders, staff, and community organizations, you are ready to build your intervention team.

a. *Recruit Peer Educators, Counselors, and Social Workers:* Building an effective facilitation team requires counselors, social workers, and peer facilitators who have the cultural experiences to engage appropriately with youth in your community. Hiring peer facilitators with lived experiences like those of the community members you serve is a crucial component of ensuring success in improving client outcomes. Lived experiences can vary based on the social dynamics of a setting. It is ideal for the recruited peer facilitators to be young people with HIV who have an experiential understanding of clients' structural and social barriers. Peers should also wield appropriate cultural knowledge and be familiar with community assets, strengths, and resilience factors. If it is difficult to recruit medical providers who have relevant experience working with youth with HIV, have your peer facilitators serve as provider/client liaisons. This can ensure that a strong foundation of trust is developed and maintained and that opportunities are established for peer facilitators to train providers. Counselors and social workers should have some background in mental health or behavioral science specific to supporting youth's mental health, focusing on how intersecting identities affect access to care and psychological outcomes. Although not required to be a standalone position, identifying an intervention coordinator can

help streamline processes and provide accountability for youth recruitment and retention activities.

b. *Train Staff and Facilitate Knowledge Exchange:* Train staff on organizational processes and procedures and ensure that newly recruited staff are appropriately integrated into the existing care infrastructure. This involves both traditional training sessions on service delivery infrastructure, policies, and other relevant content in your setting, and learning the didactic elements (e.g., techniques, goals) and participatory exercises that are crucial to the success of Project ACCEPT. Obtain feedback from youth on policies and procedures that may unintentionally foster elements of ageism or other forms of disempowerment. Facilitate an exchange between Project ACCEPT team members and peer facilitators to foster youth empowerment in relevant and meaningful ways.

   For the Project ACCEPT study, the ATN provided session-by-session group reviews of intervention manuals and individual feedback for interventionists throughout a two-day staff training session across all implementation sites. Alter the structure and delivery of the intervention content to align with your organizational culture. Allow intervention staff to review all relevant materials and become confident in using participatory exercises (e.g., role-playing) before initiating the intervention with youth. Ensure that counselors, social workers, and peer facilitators are trained together to build rapport and practice participants' co-facilitation dynamics for individual and group-based discussions.

c. *Recruit Youth with HIV:* Once you understand the characteristics of the youth you serve and have recruited and trained the appropriate staff to work effectively with them, you are ready to recruit clients for the Project ACCEPT intervention. If possible, first recruit youth from the patient population already receiving care at your organization or clinical site. If recruitment happens outside of your organization (e.g., in collaboration with community partners), establish a clear referral process that details how clients will be linked to care. Use trained clinical or intervention-specific staff to approach youth, ideally using peer facilitators as the first point of contact. Provide an informed consent form to youth to ensure that they understand that they are voluntary participants in the intervention. This form should explain:

   - The nature of the intervention;
   - The type of information collected;
   - Confidentiality procedures to keep their information from being shared outside of project staff; and
   - The evaluations and assessments involved.

3. Increase Youth Skills to Engage in HIV Medical Care and Social Support

With an established intervention team, a support network of community partners, and intervention participants, you are ready to help youth with HIV bolster the skills that will help them to access medical care and social support. Engagement in Project ACCEPT relies on the interaction between risk (e.g., functional independence, psychological stress) and resistance (e.g., competence, coping strategies) factors, as outlined in the Disability and Stress Coping Model.[7] This interaction can ultimately help youth develop plans that leverage their strengths and address their greatest areas of need. The skills-building approach is also modeled by social cognitive theory and focuses on HIV-related health behaviors, intrinsic motivation, and self-efficacy.[8]

Important Note: While clients should be informed that they may refuse to answer a question at any time, responses, or reactions to certain questions may indicate client distress. If at any time during the intervention a client shares they are at risk for harm (e.g., experiencing violence) or that they intend to cause harm to themselves or others, take measures to ensure their safety based on your organizational guidelines immediately.

Engaging youth should include individual and group sessions, although the exact flow will depend on your organization's service delivery process and the client's insurance status.

a. *Individual Sessions:* A counselor or social worker with a background in mental health, preferably with expertise in issues pertinent to youth, facilitates the individual sessions. The first two pre-group sessions aim to conduct individualized assessments of psychosocial barriers, introduce the intervention structure, and review the ground rules and expectations for participation. The third individual session occurs after completing the group sessions. It is an opportunity to review action plans, goals, and overall takeaways with each participant and provide referrals to ancillary services where necessary. Individual session materials can be found in the Project ACCEPT training manual. (See Additional Resources Box).

   - *Individual Session 1 (Pre-Group Session):* The first individual session is conducted after the client attends their first medical appointment after receiving their HIV diagnosis. The session aims to identify sources of support, conduct a psychosocial assessment, and prepare for a follow-up meeting with the medical provider. This follow-up meeting aims to ask the provider questions and continue the dialogue from the initial appointment. During the original implementation of Project ACCEPT, the first individual session was held within 14 to 18 days after the client's baseline visit.
   - *Individual Session 2 (Pre-Group Session):* This session provides an opportunity for clients to discuss their follow-up meeting with the medical provider, ensure the provider appropriately addressed all of their questions and concerns, and explore ways to make the client more comfortable interacting with the provider in the future. It also offers a comprehensive overview of the Project ACCEPT intervention model, including procedures, goals, and objectives. This session includes a meeting with a peer facilitator to prime the client for the initial group session.
   - *Individual Session 3 (Post-Group Session):* This session occurs after all group sessions have been completed. The session provides an opportunity to discuss the participant's experiences with the group sessions, review their "road map to the future," and facilitate any referrals. Encourage the participant to bring someone from their support network (e.g., partner, family member, friend) with them to this session. This reinforces the importance of social support building emphasized in the Project ACCEPT intervention and allows youth to practice communicating their needs to individuals who support them. Provide a certificate of completion to acknowledge the client's work and accomplishments and support continued engagement with new habits and skills. During the original implementation of Project ACCEPT, this session was held within 14 days after the final group session.

b. *Group Sessions:* A counselor or social worker and peer facilitator co-facilitate the six group sessions. These sessions are held weekly and offer enough time to ensure that clients have a thorough understanding of each session's relevant concepts and skills. The original Project ACCEPT allocated two hours per session, which clients received positively. Tailor session length to the needs of your community and resources available. Additionally, consider offering incentives to clients to bolster participation and retention.

   Group discussions explore a range of topics, including general HIV information, dealing with stigma and societal pressure, understanding sexuality and sexual health, strategies and tools for maneuvering in specific scenarios, and setting health goals. The first four group sessions can be conducted with mixed-gender groups. Conduct Session 5 with groups based on gender identity. The goal of the gender-specific skills sessions is to create a comfortable and affirming space for clients to better understand their sexual health, physiology, and overall relationship to society.

   Offer youth the option of selecting the gender-specific group that they feel most comfortable attending. Although Project ACCEPT was designed for cisgender individuals, organizations implementing the intervention can create similar spaces for gender-fluid individuals and can tailor content for transgender men, transgender women, and gender non-conforming or non-binary clients. Connect gender-fluid individuals with peer facilitators who share their gender-related lived experiences and can provide them with the same level of tailored, affirming support that their cisgender counterparts receive. A description of group session materials, content, and activities can be found in the Project ACCEPT training manual. (See Additional Resources Box).

   - *Group Session 1 – HIV Overview:* This session is used to introduce facilitators and participants and to set the ground rules for the sessions going forward (e.g., attendance expectations, respecting pronouns, frequency of meetings, appropriate behavior, how to share space). Include an icebreaker or bonding activity to make participants feel more comfortable holding space together. Use the first session to provide an overview of HIV education, particularly for those who may have received their HIV diagnoses within the last six months, and as a useful refresher for participants who received their HIV diagnoses outside of this time frame.

Educational content should include myths and facts about HIV, messaging about HIV, transmission prevention strategies (e.g., condom demonstration, an overview of the effectiveness of condoms, treatment as prevention, U=U, etc.), and the importance of retention in care and viral suppression.

- *Group Session 2 – Disclosure and Stigma:* This session focuses on the social elements of an HIV diagnosis, emphasizing how to navigate the dimensions of stigma associated with the disclosure of HIV status. This session includes a "disclosure scene analysis" that involves a discussion about disclosure steps, safety planning (e.g., assessing when it is safe to disclose), having participants understand the social support available to them and a disclosure decision tree exercise. Take time to consider the role of intersecting identities and how these relate to an individual's ability to disclose their HIV status. Explore ways to support youth in addressing their unique challenges and safely maneuvering disclosure within their support network. A role-playing exercise helps participants learn and practice skills to discuss living with HIV, handling disclosure outcomes, and creating a disclosure action plan and a medication regimen.
- *Group Session 3 – Preparing for Medical Intervention:* This session provides a technical overview of clinical procedures and discusses anticipated barriers to attending HIV medical appointments. This session highlights what active engagement with the clinic looks like and provides a problem-solving skills scenario to help clients better understand how to overcome individual challenges to routine clinic engagement. Include an overview of adherence to medical appointments and medications and help participants develop an active participant action plan.
- *Group Session 4 – Healthy Living and Substance Use:* This session provides an overview of "healthy living," which encompasses strategies for dealing with stress, assessing and mitigating risks, and incorporating nutrition and exercise into a daily routine. An effective format for these discussions is to use interactive games and other mediums to facilitate the conversation. The original Project ACCEPT used a media influence game to discuss social pressure and a grab bag game to discuss substance use and the risks and consequences of substance use disorders. Supplement these activities and conversations with tangible stress management and relaxation techniques and develop a "healthy living" action plan.
- *Group Session 5 – HIV-Positive Sexuality and Reproduction for Young Cisgender Women:* This session is conducted only with youth, peer co-facilitators, social workers, or counselors who identify as women. The session explores the dimensions of sexuality specific to cisgender women and includes discussions about pregnancy planning and prevention of mother-to-child transmission of HIV; discussion of women's sexual health, including an overview of physiology; role-playing exercises on negotiating safe sex; and the development of a sexuality action plan. Educational content specific to young cisgender women can be found in the Project ACCEPT participant handbook for cisgender women. (See Additional Resources Box). Although this session's content is specific to cisgender women, consider developing content on sexual health, safe-sex negotiation, and sexuality for transgender women. Involve a peer co-facilitator who shares a gender identity that is representative of the tailored content.

- *Group Session 5 – HIV-Positive Sexuality and Reproduction for Young Cisgender Men:* This session is conducted only with youth, peer co-facilitators, social workers, or counselors who identify as men. The session explores the dimensions of sexuality specific to cisgender men and includes discussions of family planning; maneuvering stigma about sexuality; cisgender men's sexual health, including an overview of physiology and condom use; role-playing exercises on negotiating safe sex; and the development of a sexuality action plan. Educational content specific to young cisgender men can be found in the Project ACCEPT participant handbook for cisgender men. (See Additional Resources Box). Although this session's content is specific to cisgender men, consider developing content on pregnancy planning, prevention of parent-to-child transmission of HIV, safe-sex negotiation, and sexuality for transgender men. Involve a peer co-facilitator who shares a gender identity that is representative of the tailored content.
- *Group Session 6 – Goal Setting and Self-Esteem:* This is the final group session of the Project ACCEPT intervention and is conducted with all youth, regardless of gender identity. The session covers maneuvering self-esteem and societal stigma while providing participants with the skills needed to set realistic goals for themselves. The session also includes interactive activities through group participation, allowing participants to better understand self-esteem, strategies for building healthier self-esteem, setting realistic goals (including a "road map to the future"), and other group strengthening activities. Conduct a group closing ceremony to provide an opportunity for the group to acknowledge their work and accomplishments.

Logic Model

Logic models are effective tools to assist in planning, implementing, and managing an intervention. Below is a logic model highlighting the resources, activities, outputs, outcomes, and impact of the Project ACCEPT intervention referenced throughout this guide.

Resources	Activities	Outputs	Outcomes	Impact
• Diversified funding: Ryan White HIV/AIDS Program (RWHAP), other government agencies, foundation grants, private and in-kind sources • Partnerships with trusted providers and team members with established community relationships and knowledge of community resources for youth • Staff (social workers/ counselors/peer facilitators) with knowledge of issues relevant to youth with HIV and experience in addressing psychosocial barriers and mental-health concerns • Confidential spaces to host individual and group discussions	• Recruit social workers and counselors who have experience working with youth with HIV and who understand youth mental health needs • Recruit peer facilitators with HIV who are representative of the community and have the skills to co-facilitate vulnerable discussions with youth about sexual and reproductive health and social barriers to care • Conduct individual and group sessions to foster skills for coping with social stressors and engaging effectively with the health care system • Create partnerships and linkage opportunities with local agencies that are trusted by and work with youth and can offer services to address gaps	Youth with HIV: • Are engaged and retained in HIV primary care and other needed services • Develop improved strategies to cope with social stressors and skills to engage in positive health behaviors and navigate the health system more effectively • Feel empowered to disclose their HIV status while prioritizing safety planning • Experience increased social support and community-building	Among participating youth with HIV: • Increased understanding of safe sexual health practices, HIV basics, and managing life with a chronic illness • Development of skills to engage with and navigate the health care system, practice safe-sex, cope with social stressors and learn about reproductive- health planning • Increased feelings of inclusion, acceptance, and support • Resilience against psychosocial stressors and barriers to care Within the implementing organization: • Development or maintenance of a positive reputation with youth • Increased knowledge of barriers to care specific to local youth • Increased number of appointments scheduled and kept appointments by youth	• Increased medication adherence • Increased visit constancy and appointment adherence • A decline in detectable viral load over time

Your Planned Work

Your Intended Results

Staffing Requirements and Considerations

Staff Capacity

Depending on the existing staff infrastructure in your setting, staff roles for Project ACCEPT may overlap. The following staff implemented the original intervention:

- *Counselor or Social Worker*: The counselor or social worker, otherwise known as the "interventionist," has experience in mental health or behavioral health interventions with specific expertise in adolescent and young people's mental health needs. The original implementers of Project ACCEPT prioritized counselors and social workers with master's level credentials, although this was not a strict requirement if individuals had the appropriate experience. Due to the gender-specific component of Project ACCEPT, counselors or social workers must reflect the gender identities of program participants.
- *Peer Facilitator*: Ideally, the peer facilitator should be similar in age to the youth enrolled (i.e., 18 to 24), although age should not be a limiting factor. The peer facilitator should live with HIV and understand the inherent cultural nuances among youth in the community you serve. Although an understanding of and expertise through education and training in mental health is preferred, it is more important to ensure that the peer facilitator reflects the young people in your community. They should have previous experience in facilitating or co-facilitating group discussions or have the necessary skills to engage appropriately with Project ACCEPT groups. Due to the gender-specific component of Project ACCEPT, peer facilitators must reflect the gender identities of program participants.
- *Coordinator:* It helps to identify an individual responsible for coordinating youth recruitment and retention activities. This need not be a standalone position. If a staff member at your organization already carries this responsibility, train them on Project ACCEPT procedures alongside the counselor or social worker. Depending on time constraints, coordination responsibilities may be divided among two staff members. The intent is to create an accountability pipeline for recruitment and retention activities and streamline the Project ACCEPT process into your existing clinic workflow. The coordinator should work closely with peer facilitators to ensure that the coordinator uses appropriate recruitment strategies and retention methods that address the barriers identified by youth in the community being served.

Staff Characteristics

Core competencies of all staff include:

- Experience working with youth with HIV;
- Background in the mental health needs, resilience factors, and communication preferences of youth as well as in positive youth development frameworks;
- Understanding of structural ageism and how it leads to disproportionate health outcomes for youth with HIV;
- Ability and willingness to prioritize youth as the experts in their own lives, with the autonomy to decide their own care goals and outcomes, and to provide feedback on how programs can be structured to meet their unique needs; and
- Pre-established relationships with community organizations and resources (both local and online) for youth.

Replication Tips for Intervention Procedures and Client Engagement

Successful replication of the Project ACCEPT intervention involves active feedback from youth through participation in advisory boards, leveraging peer facilitators' expertise and experiences, and building rapport through collaborative staff training sessions.

- *Create a Youth Community Advisory Board (CAB)*: The original implementation of Project ACCEPT involved developing a CAB comprised of youth served by the implementation sites. The CAB's role was to provide input on all aspects of the development and execution of Project ACCEPT, including feedback on policies and regulations specific to youth in each intervention jurisdiction. ATN also included a youth on their executive committee when conceptualizing the research study, which helped center youth perspectives across study activities and materials. If establishing a youth CAB is not feasible, prioritize youth perspectives and seek feedback during replication planning and execution.

  A youth CAB can:

  - Act as a resource to ensure you are appropriately addressing community needs by developing relevant and accessible materials and delivering inclusive and culturally appropriate content,
  - Increase your organizational knowledge of resources for youth, and
  - Strengthen your network of ancillary services based on the experiences of youth in your community.
- *Leverage the Expertise of Peer Facilitators*: Project ACCEPT's success is attributed to the inclusion of peer facilitators at each stage of the intervention. Successful implementation of Project ACCEPT's behavioral strategies relies heavily on peer facilitators' ability to use their lived experience to address youth needs. HRSA offers motivational interviewing resources for teaching and training, which may help leverage peer expertise. (See Additional Resources Box).

Allow peer facilitators to provide input and feedback on your organizational workflow, policies, and procedures to ensure they are appropriate. Create a pipeline to incorporate peer facilitators into your leadership structure wherever possible and prioritize their expertise as individuals with experience and knowledge who are maneuvering the same barriers as the population you are aiming to engage. Peers can:

- Act as a unique buffer between youth and the health care system and help youth to navigate and understand the system more effectively, and
- Offer youth an opportunity to discuss barriers and needs in an affirming and comfortable space, using accessible and familiar language. This can prompt youth to respond more positively to questions about their personal lives and better equip your organization to address their needs through a richer understanding of the barriers they face.[9]

- *Conduct Collaborative Training Sessions for Interventionists and Other Project Staff*: Train counselors, social workers, peer facilitators, and any other staff involved in the Project ACCEPT workflow (e.g., outreach workers, coordinators, case managers, providers) in a collaborative space where they can practice using the material for individual and group sessions to ensure consistency in the support they provide. Such collaborative training allows peer facilitators, counselors, and social workers to learn each other's facilitation styles, strengths, and areas for support, ultimately improving the rapport between intervention staff and youth.

"I've learned how to accept myself as an HIV-positive young adult. My counselors were caring, smart, informative men. I learned how to disclose [my status] with those I could trust and how to put on a condom. Most importantly, [I learned] ways to make myself feel better during this hard time of coping with HIV."

– PROJECT ACCEPT PARTICIPANT IN CHICAGO

Securing Buy-In

Securing the support of leadership, staff, and other relevant stakeholders is an important step when implementing a novel intervention. The following strategies may help to secure buy-in for the Project ACCEPT intervention:

- **Inform stakeholders that organizations with diverse client populations are viable for this intervention:** Use an in-reach instead of outreach approach to start implementing the intervention with clients already engaged in services but need additional support. This will minimize the time and resources needed to recruit clients.
- **Highlight existing resources:** An array of training curricula and facilitator protocols make learning intervention strategies flexible to staff needs.
- **Highlight the advantages your organization may receive by implementing the intervention:**
  - Offer positive experiences and affirming services to youth. This can increase word-of-mouth referrals, and the number of clients served.
  - Working with a youth advisory board or youth-centered organization offers an opportunity to learn more about barriers to care among youth (e.g., housing needs, parental consent). Peer facilitators can provide insight on questions to ask, how to harness community resilience factors, and how to "dig deeper" to identify barriers.

Overcoming Implementation Challenges

Barriers to implementing Project ACCEPT will vary based on your existing organizational infrastructure and workflow. Anticipated challenges, as well as possible solutions, include:

- **Client reluctance to engage with health care providers:** Past experiences with medical providers, especially related to discussing issues such as sexual health or other aspects of their personal lives, may discourage youth from adhering to care. To mitigate the discomfort or intimidation youth may feel when engaging with medical providers, ensure that providers have experience with youth and are competent in communication styles that reduce stigma and promote empathy and compassion (e.g., motivational interviewing strategies). Similarly, use peer facilitators as liaisons between providers and clients to increase trust and comfort and deliver content in a way that is palatable for youth. Training medical providers on Project ACCEPT procedures alongside peer facilitators can build the rapport needed for effective collaboration.
- **Funding:** Sustaining funding may present an obstacle to implementing Project ACCEPT in the long-term. A thorough conversation with your organizational leadership about funding, integration, and monitoring and evaluation of intervention components and outcomes will be essential to ensure that it can be feasibly implemented and sustained. Discuss ways to repurpose existing funding streams to support different intervention components or ways to collaborate with external organizations to secure the necessary resources. Developing a clear plan for using funds and other resources can help maintain leadership buy-in and ensure that the intervention receives ongoing support.
- **Non-inclusive training curricula and facilitator guides:** Project ACCEPT training curricula and facilitator guides were developed specifically for cisgender individuals, which can be isolating and irrelevant to transgender, gender non-conforming, and non-binary youth. Creating inclusive and affirming spaces for young people to explore and address issues related to gender and build life skills are at the heart of Project ACCEPT. It is important to adapt and extend these core components to all youth, regardless of gender identity. Tailor the content of your training curricula and counseling sessions for gender-diverse youth and ensure that the services you offer are inclusive (e.g., ensure medical providers can offer gender-affirming healthcare). Align your strategies for recruiting and training counselors, social workers, and peer facilitators with the needs of gender-fluid clients. Identify staff who align with your clients' gender identities and create safe group spaces for young people to convene and discuss common issues related to their sexual health, gender expression, and personal lives. Engage with community partners who offer services specific to LGBTQIA youth and can offer examples of how to create welcoming and relevant spaces.

Promoting Sustainability

Project ACCEPT was originally conceptualized and implemented as a finite academic study, limiting concrete strategies for its sustainability. However, a body of ongoing academic work assesses the intervention's scalability and sustained integration into routine medical care across various settings. Anecdotal evidence from intervention developers suggests that discussing ongoing funding initially with leadership at your organization is an important element of promoting sustainable implementation. Discuss your organization's capacity to hire and train new or existing staff, offer flexible scheduling to promote youth adherence, and provide safe venues for confidential conversations in individual and group sessions.

SWOT Analysis

SWOT is an acronym for Strengths, Weaknesses, Opportunities, and Threats. A SWOT analysis is a structured planning method that can assess the viability of a project or intervention. By conducting a SWOT analysis before implementing an intervention, organizations can proactively identify challenges before they occur and think through how to best leverage their organizational strengths and opportunities to improve future performance. A SWOT analysis of the Project ACCEPT intervention identified the following:

STRENGTHS

Project ACCEPT increases the skills of youth to engage in and maintain HIV medical care by:

- Creating an atmosphere of acceptance, affirmation, autonomy, and support;
- Leveraging the experiences of peers to facilitate tailored, youth-specific group sessions;
- Creating a network of medical and social support services for youth with HIV, including those belonging to marginalized communities;
- Providing educational materials to improve their understanding of their health needs and opportunities; and
- Facilitating skills building to increase healthy behaviors, improve mental health, enhance social support, develop coping strategies, and effectively navigate the health care system.

WEAKNESSES

Agencies will find it challenging to implement Project ACCEPT without:

- Current relationships with community stakeholders and potential service partners to bi-directionally collaborate on filling service gaps for youth;
- Counselors and social workers who have experience working with youth with HIV and mental health experience specific to youth;
- Young peer facilitators with HIV who are representative of the community and can offer mentorship on health and well-being;
- Stakeholder buy-in and funding to adequately support staff and counseling resources, and
- Receptiveness to feedback from youth on how to better structure programs to address their unique needs effectively.

OPPORTUNITIES

Project ACCEPT offers opportunities to:

- Better communicate health care strategies to youth by involving peer facilitators and using accessible language;
- Provide youth with life skills that promote autonomy and self-determination in managing their health;
- Establish relationships with youth-centered CBOs and other providers;
- Provide an ongoing knowledge exchange across staff regarding social and structural barriers and community resilience factors for youth; and
- Establish your organization as a trusted resource for youth education, skills building, and support relevant to HIV medical care.

THREATS

Threats to the success of Project ACCEPT include:

- Inability to secure ongoing funding to maintain staff;
- Failure to identify, recruit, or secure buy-in from key stakeholders, including community partners, service providers, or other key agencies working with youth;
- Lack of confidential space to host individual and group sessions;
- Lack of support to address emotional or psychological distress that may arise in youth during vulnerable conversations about their health and personal lives;
- Lack of willingness to support youth in autonomous decision-making or recognition of their expertise over their health; and
- Lack of receptiveness to feedback from youth on ways to improve programs to better address their needs and ability to thrive.

Conclusion

Project ACCEPT uses an educational and skills-building approach to promote positive behavior change, increase HIV knowledge, and develop coping strategies, ultimately leading to improved engagement and retention in HIV care. This gender-specific, group-based approach provides an affirming space for youth to increase their health care knowledge, understand their sexual health, and develop strategies to address barriers to adhering to medical appointments and ongoing medication requirements. Project ACCEPT leverages the experiences of peer facilitators and promotes collaboration with youth-specific CBOs, creating trust with youth, and expanding the network of supportive services available throughout their care journey. The study group receiving the Project ACCEPT intervention had a 2.33 greater likelihood of HIV medication usage than the control group, which was sustained 12 months post-intervention. The intervention group also had increased appointment adherence, visit constancy, and overall medical visits compared to the control group.[1] Overall, Project ACCEPT provides a model for clinics and settings to serve youth better and reduce the risk of HIV incidence, morbidity, and mortality.

Additional Resources

Ryan White HIV/AIDS Program Fact Sheet
hab.hrsa.gov/sites/default/files/hab/Publications/factsheets/program-factsheet-program-overview.pdf

Ryan White HIV/AIDS Program Services: Eligible Individuals & Allowable Uses of Funds Policy Clarification Notice 16-02
hab.hrsa.gov/sites/default/files/hab/program-grants-management/ServiceCategoryPCN_16-02Final.pdf

HIV National Strategic Plan
hiv.gov/federal-response/national-hiv-aids-strategy/national-hiv-aids-strategy-2021-2025

CIE Cost Analysis Calculator
CIEhealth.org/innovations

Project ACCEPT Intervention Manual
CIEhealth.org/intervention/project-accept#resources (Click on Resources)

Project ACCEPT Participant Handbook for Cisgender Women
CIEhealth.org/intervention/project-accept#resources (Click on Resources)

Project ACCEPT Participant Handbook for Cisgender Men
CIEhealth.org/intervention/project-accept#resources (Click on Resources)

Introduction to Motivational Interviewing
https://bphc.hrsa.gov/sites/default/files/bphc/qualityimprovement/clinicalquality/sud/intro-motivational-interviewing-slides.pdf

Innovative Models of Care: Motivational Interviewing
https://targethiv.org/ihip/module-5-innovative-models-care-motivational-interviewing

Effects of Pediatric Chronic Physical Disorders on Child and Family Adjustment
pubmed.ncbi.nlm.nih.gov/9534085/

An Ecological Model of Stressors Experienced by Youth Newly Diagnosed With HIV
researchgate.net/publication/41849905_An_Ecological_Model_of_Stressors_Experienced_by_Youth_Newly_Diagnosed_With_HIV

Evaluating the Acceptability and Feasibility of Project Accept: An Intervention for Youth Newly Diagnosed with HIV
ncbi.nlm.nih.gov/pmc/articles/PMC3280923/

Endnotes

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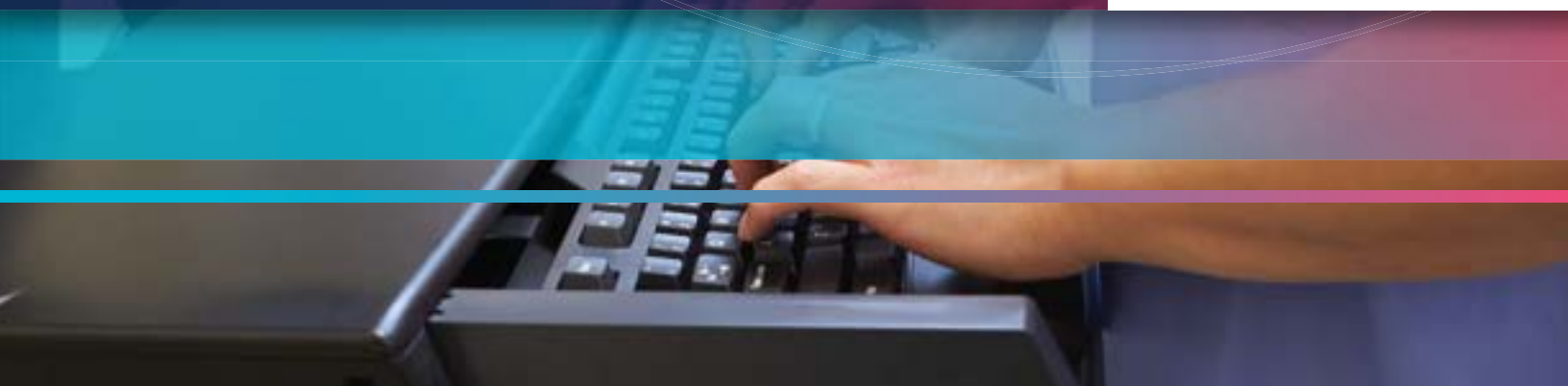
ROUTINE UNIVERSAL SCREENING FOR HIV INTERVENTION

Center for Innovation and Engagement



Background

The Health Resources and Services Administration's (HRSA's) Ryan White HIV/AIDS Program (RWHAP) provides a comprehensive system of HIV primary medical care, essential support services, and medications for low-income people with HIV who are uninsured and underserved. The RWHAP funds grants to states, cities, counties, 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.

NASTAD's Center for Innovation and Engagement (CIE) is funded by HRSA's HIV/AIDS Bureau (HAB), RWHAP Part F, Special Projects of National Significance (SPNS), under a three-year initiative entitled Evidence-Informed Approaches to Improving Health Outcomes for People with HIV. The purpose of this initiative is to identify, catalog, disseminate, and support the replication of evidence-informed approaches and interventions to engage people with HIV who are not receiving HIV health care or who are at risk of not continuing to receive HIV health care.

Acknowledgements

NASTAD Authors:

Alexander Perez, Manager, Health Equity

Bishar Jenkins, Fellow, Health Equity

Rosy Galván, Senior Director, Health Equity

Intervention Development Team:

Thomas Giordano, Infectious Disease Specialist

Nancy Miertschin, HIV Project Manager

Jennifer Haejin Kin, Program Coordinator

Michael Ruggerio, HIV Project Manager

Contributors

Natalie Cramer, Deputy Executive Director, NASTAD

Tia Clark, Impact Marketing + Communications

Tara Kovach, Impact Marketing + Communications

Sarah Cook-Raymond, Impact Marketing + Communications

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Stock photos. Posed by models.

Intervention Snapshot

	Priority Population	People 16 and older who are in an Emergency Department (ED) or other clinical setting and have an intravenous line inserted and/or have blood drawn
	Setting	Emergency Department and ambulatory clinic settings
	Pilot and Trial Sites	Ben Taub Hospital and Lyndon B. Johnson Hospital in Houston, TX
	Model	The intervention allows EDs and other clinical settings to embed routine opt-out HIV testing into their existing care services to address retention-in-care gaps. By leveraging an organization's existing staff infrastructure and dedicating staff to facilitating client linkage to care, organizations can identify and retain people with HIV who are unaware of their status or have fallen out of care.
	RWHAP Ending the Epidemic (EHE) Opportunity	RUSH offers a low-cost, low-burden approach to improve retention in care as well as viral suppression in people with HIV. Outcomes from the original RUSH intervention include an increase in client retention in care from 32.6 percent pre-intervention to 47.1 percent post-intervention and an increase in the viral suppression rate from 22.8 percent pre-intervention to 34 percent post-intervention.
	Intervention Funding	Ryan White HIV/AIDS Program (RWHAP) funding for support activities related to service linkage, core medical services, and supportive services. CDC funds may also be used for testing costs.
	Staffing	Staff positions in the original intervention included a Service Linkage Worker (SLW) and Administrative Coordinator.
	Infrastructure Needed	Connections with supportive services (e.g., housing) to facilitate client referrals In-house laboratory with the capacity to process additional samples Dedicated linkage workers A communication network accessible to care continuum staff

Intervention Overview & Replication Tips

Why This Intervention?

When implemented in the emergency department (ED) and ambulatory clinic settings, the Routine Universal Screening for HIV (RUSH) intervention resulted in significantly improved retention in care and viral suppression rates for persons who had received an HIV diagnosis. This intervention facilitates linkage to and retention in care through opt-out HIV testing for clients who receive an HIV diagnosis in the ED or other clinical settings. RUSH includes HIV screening of all clients over the age of 16 who have an intravenous line inserted and have blood drawn for any purpose while in the ED.

RUSH was initially implemented in the EDs at Ben Taub Hospital and Lyndon B. Johnson Hospital in Houston, Texas. Before the intervention, 32.6 percent of clients who visited the ED and received an HIV diagnosis were retained in care. Six months after implementation, 47.1 percent of clients were retained in care (adjusted OR = 2.75, CI: 2.31–3.28, $p < 0.001$) and the viral suppression rate increased from 22.8 percent pre-intervention to 34 percent post-intervention (adjusted OR = 2.61, CI: 2.15–3.16, $p < 0.001$).[1] Another notable benefit of the RUSH intervention is that it leverages existing staff and clinic workflow to embed HIV testing into routine care any time a blood draw occurs, thus reducing the need for extra personnel and limiting client flow disruption.[1]

Intervention at a Glance

This section describes the RUSH intervention to help readers assess the steps required for replication. The intervention was conducted in the ED at two publicly funded hospitals within the Harris Health System in Houston, Texas. RUSH is intended to be used in the ED and other care settings, including clinics.

 Step 1	**Address Staffing and Workflow Needs** Intervention success will depend heavily on a streamlined linkage-to-care process once clients receive an HIV diagnosis. It is crucial to have at least one staff member dedicated to working with clients to ensure that they receive follow-up care. This person should work closely with existing staff on developing an integrated workflow that encompasses lab processing, disclosure of testing rights to clients, post-test counseling for clients, and any other areas where service gaps may exist. Linkage workers should aim to set up follow-up appointments with clients before leaving the clinic setting where their HIV was diagnosed. If you do not currently employ a standalone linkage worker, consider repurposing existing staff to RUSH activities or recruiting a full-time linkage worker to add to your existing team.
 Step 2	**Secure Organizational Buy-In** Engage leadership and existing staff to gauge their willingness to integrate RUSH strategies into their work and support additional staffing if necessary. Use this opportunity to identify a champion within the organization to advocate for RUSH implementation and sustain buy-in. Because RUSH is designed to be integrated into the existing clinic workflow, discussion of integration and streamlining is crucial to ensure that services are not disrupted.
 Step 3	**Establish a Steering Committee** An interdisciplinary committee is essential to designing a program that will be broadly accepted and supported throughout the organization and to provide advice about changes as the project develops. Use the committee to assess the feasibility of embedding routine HIV testing into the existing clinic workflow. Conversations should include client consent, lab processing (rapid vs. nonrapid testing), and opt-out procedures.
 Step 4	**Determine Funding Streams** Determine funding streams for conducting HIV testing with clients regardless of their insurance status. This task should include working with Medicaid or Medicare coverage where possible and identifying additional funding streams if public insurance does not support HIV testing or linkage services. For example, RWHAP funding can be used to pay for linkage services and local health departments funded by the CDC may also have funds for HIV testing.
 Step 5	**Recruit Additional Staff** Linkage workers dedicated to RUSH are essential. Depending on your organization's size and the anticipated caseload, recruiting additional administrative staff dedicated to supporting logistics for RUSH training, communication, data management, and other processes may also be helpful. Train linkage workers in trauma-informed approaches so they are prepared to assist and support clients who have recently received an HIV diagnosis (see Additional Resources Box).

 Step 6	**Develop Promotional Materials** Create signage, flyers, legal consent forms, and other documentation that clearly communicates testing procedures to clients and describes their ability to opt-out. Place these materials in the client registration area(s) and at every blood draw station to ensure that clients have multiple opportunities to read about the process and understand that their participation is voluntary.
 Step 7	**Train ED Staff on RUSH Procedures** Train staff across the workflow to understand testing procedures, opt-out procedures, and consent materials. Providers at the original implementation sites received annual training for the first several years. If the intervention is conducted across several locations, both a linkage worker and a primary care provider are responsible for visiting the sites to ensure fidelity to intervention procedures among clinical providers and other staff. Ensure that staff are knowledgeable and willing to implement affirming strategies (e.g., trauma-informed care) for client linkage.
 Step 8	**Implement and Sustain RUSH** Embed procedures into your workflow and begin testing individuals for HIV as a part of routine care. Focus on reinforcing organizational culture and identifying a process for relaying institutional knowledge to new staff.

Cost Analysis

The RUSH evaluation was supported by a supplement to the National Institutes of Health (NIH)-funded Baylor College of Medicine-University of Texas Houston Center for AIDS Research, supplemental funds to the District of Columbia Developmental Center for AIDS Research, the Center for Disease Control and Prevention (CDC), the facilities and resources of the Department of Veterans Affairs, and the facilities and resources of the Harris Health System. Within the Health System, RWHAP Part A was predominantly used to support testing and service linkage activities. HRSA's RWHAP Fact Sheet provides more context on the different parts. Additionally, RWHAP's Policy Clarification Notice 16-02 outlines details on allowable costs (see Additional Resources Box).

A more detailed cost analysis was not available for the RUSH intervention when this manual was developed. However, you can use the CIE Cost Calculator to create an estimate of the cost of implementing the intervention at your organization (see Additional Resources Box).

Resources Assessment Checklist

Before implementing the RUSH intervention, your organization should walk through the following Resources Assessment (or Readiness) Checklist to assess your ability to do this work. If your organization does not have these components in place, you are encouraged to further develop your capacity to conduct this intervention successfully. Questions to consider include:

- ❑ Have you identified a strong champion for the intervention?
- ❑ Do you have support for RUSH implementation from key leadership staff at the care site?
- ❑ Does your clinic have:
  - ❑ An in-house laboratory?
  - ❑ A data management system for surveillance purposes?
  - ❑ A robust process for linking clients to HIV care services if those services are not offered in-clinic?
- ❑ Is your clinic committed to integrating into service delivery trauma-informed approaches that affirm and support people with intersectional identities (e.g., transgender patients, young people, Latinx gay men, etc.) who have received a new HIV diagnosis?
- ❑ Does your clinic have the capacity to hire a caseworker who is specifically trained to facilitate linking clients to care?
- ❑ Can you hire a staff member to coordinate testing consent and organize training for clinical staff?

Setting the Stage

According to the U.S. Centers for Disease Control and Prevention (CDC), there are an estimated 1.2 million people with HIV in the United States.[2] During 2018, approximately 75.7 percent of people with HIV received HIV medical care, 57.9 percent were retained in care, and 64.7 percent were virally suppressed.[3] While significant strides have been made in ensuring that people with HIV effectively progress through the HIV care continuum, these figures demonstrate that retention in care continues to be a critical issue. In 2018, approximately 35 percent of people with HIV were not in care and were, therefore, less likely to have achieved viral suppression.[4] Improving client engagement and re-engagement in care is a national priority with tailored retention measures established by the the HIV National Strategic Plan (see Additional Resources Box), HRSA, and the Ending the HIV Epidemic (EHE) initiative, among others.[5]

In 2006, the CDC released a series of guidelines recommending routine screening for HIV that is intended for all health care providers in both the public and private sectors, including those working in hospital EDs, urgent care clinics, inpatient services, substance abuse treatment clinics, public health clinics, community clinics, correctional health care facilities, and primary care settings.[6] Routine opt-out screening programs essentially embed HIV testing into a clinic's existing care infrastructure. Such testing programs have proven to be efficient at acceptably increasing the number of clients undergoing HIV testing, particularly in ED settings.[1] Large-volume testing in EDs has helped identify a portion of people with HIV in the United States who were unaware of their positive serostatus.[7] By providing an opportunity to access testing services earlier in the disease progression, such testing programs may be particularly useful for addressing disparities in HIV testing that people of color experience.[8]

The RUSH intervention was originally implemented at two publicly funded hospitals within the Harris Health System in Houston,

Texas. The largest publicly funded health system in Texas, the Harris Health System, provides healthcare for uninsured and underinsured clients.[1] The initial intervention sites were EDs at Ben Taub and Lyndon B. Johnson hospitals. The intervention was later expanded to include 13 community health centers, a community hospital, 12 homeless shelter clinics, and one mobile unit, which collectively performed 100,000 HIV tests annually.[7]

RUSH was evaluated in a retrospective cohort study that reviewed charts of people who received an HIV test in the ED between 2008 and 2012 and who had received a documented positive HIV test result a year or more before their ED visit.[1] Test records were extracted from electronic laboratory databases and were cross-checked with local surveillance data from the City of Houston Department of Health and Human Services to identify previously diagnosed cases. Data on visits provided by RWHAP-funded clinics in the surrounding Eligible Metropolitan Area were extracted from the Centralized Patient Care Data Management System. Outcomes of interest from the time just before a client's ED visit were compared with outcomes just after the client's "index visit" (e.g., the first ED visit between 2009 and 2012 with an HIV positive test result). These outcomes included retention in care (defined as two HIV primary care visits separated by at least 90 days within a 12-month period) and viral suppression (defined as an HIV viral load of less

than 200 copies/mL at any point in a 12-month period). During the RUSH implementation period, retention in care increased from 32.6 percent to 47.1 percent (adjusted OR = 2.75, CI: 2.31–3.28, $p < 0.001$) and viral suppression increased from 22.8 percent to 34 percent (adjusted OR = 2.61, CI: 2.15–3.16, $p < 0.001$).[1]

Description of the Intervention Model

The RUSH intervention facilitates linkage to and retention in care through routine opt-out HIV testing performed in the ED or other clinical setting, paired with linkage to services for clients with diagnosed HIV. Embedding HIV testing in the clinic workflow serves to identify clients who may be unaware of their HIV status and effectively retain them in HIV care. The implementors of RUSH utilized a mixture of research-specific funding for the evaluation of the intervention described here but leveraged RWHAP Part A funding to support activities related to testing and service linkage. Other RWHAP funding can be useful to potential replicators for activities related to core medical services (e.g., AIDS Drug Assistance Program or ADAP, treatments, early intervention services, mental health services, substance abuse outpatient care, etc.) and supportive services (e.g., medical transportation, food banks, housing, psychosocial support, etc.). The intervention is implemented in seven phases:

1. Address Staffing and Workflow Needs

RUSH is designed to embed HIV testing into the existing clinic care workflow by utilizing existing staff while reducing any additional time burden. However, the success of RUSH is heavily dependent on a robust linkage-to-care process and the availability of in-house lab services. Internal laboratory services allow for a rapid turnaround time and improved engagement in care. This is because clients typically receive their test results and meet with a linkage worker before leaving the ED. Similarly, a dedicated service linkage worker (SLW) creates a bridge between routine care and HIV-specific services, especially if those services are not already embedded into an organization's care continuum. SLWs work closely with physicians to deliver HIV test results to clients and provide HIV counseling and non-medical case management services to clients with newly or previously diagnosed HIV. Tailor linkage services to the client's needs and retain clients on an SLW's caseload until they are linked or re-linked to care. SLWs should be familiar with trauma-informed care, Motivational Interviewing (MI), or other strategies to assist in affirmingly linking clients to care.

2. Secure Organizational Buy-In and Establish a Steering Committee

It is critical to engage organizational leadership and existing staff to ensure support for additional staffing and training. Identify a champion in your leadership structure who can help sustain the buy-in and support needed from all stakeholders, including agency directors, supervisors, frontline providers, and clinic staff. To secure buy-in, consider highlighting the benefits of RUSH reaching national HIV goals, such as potentially bridging the late HIV diagnosis gap experienced by many people of color across the United States.[8]

Identify individuals to form a broad-based steering committee that includes an intervention champion who influences various leadership levels across the care continuum. The steering committee should consist of upper-level administrative staff, clinical staff, laboratory technicians, information technology (I.T.) staff, nursing management leaders, and, where feasible, members of the legal and communications teams. The original RUSH intervention's steering committee included nurses, lawyers, medical directors, and a corporate

Adaptation

Although not utilized by the RUSH implementers in Houston, rapid testing may be an option for preliminary and confirmatory testing as a way of eliminating the need for blood draws and laboratory processing when an in-house lab is not available.

communications professional, which was vital in "selling" the intervention to higher-level executives.

A broad-based steering committee can aid in quickly normalizing the integration of HIV testing, addressing reluctance from clinic staff, and remedying concerns about confidentiality and consent that may arise in a discussion of implementation feasibility. A robust steering committee will also help minimize disruptions in-clinic services and identify staff at key points in the care continuum who can ensure intervention fidelity.

The steering committee should prioritize discussions about the type of testing (e.g., rapid vs. nonrapid), coordination strategies for relaying lab results, client consent, client financing, anticipated caseload, and incorporation of data into existing electronic medical record (EMR) systems to assess possible obstacles when seeking buy-in.

Delineate I.T. needs to ensure a widespread understanding of data entry and migration needs. The establishment of a robust data management system before implementation is also critical.

3. Determine Funding Streams

HIV testing has a grade A recommendation from the U.S. Preventive Services Task Force (USPSTF), meaning it is covered by health insurance plans. However, intervention financing is an important consideration for clients who are uninsured as well as to cover personnel and other linkage and testing services costs. Assess state and local funding sources available to your organization and discuss opportunities for coordinating different funding streams to ensure sustainability. For example, RUSH intervention developers used RWHAP Part A and Part C and CDC funding to support linkage, testing, personnel, counseling, staff training, promotional materials, and other intervention costs.

4. Assess Staffing Needs

RUSH is designed to leverage your organization's existing staff, so explore ways to dedicate current staff to RUSH. However, if existing staff are not available to provide dedicated support to RUSH, recruit SLWs who can be readily embedded into your care workflow. Ideally, newly recruited SLWs will be familiar with supportive services in your jurisdiction, be representative of or have experience working with the communities you serve, and have both (MI) skills and knowledge of trauma-informed care strategies.

Recruiting additional staff may allow you to increase staff diversity and more readily reach marginalized groups who may experience compounded barriers to testing access and care engagement. Consider, for example, hiring individuals with diverse cultural backgrounds, language skills, and lived experiences similar to those of the populations you serve.

Depending on your organization's size and anticipated caseload, you may want to consider hiring more than one SLW. The ED in Houston dedicated two SLWs to work directly with RUSH. Because many clinic staff managing caseloads have significant time constraints, consider recruiting administrative staff dedicated to training, communication, and other logistical aspects of the RUSH program.

5. Develop Promotional Materials

Develop materials that clearly communicate the updated testing procedures and highlight that participation is voluntary. Materials may include signage, flyers, and legal consent forms. Materials

should be designed with accessibility and inclusivity in mind (e.g., written in multiple languages, using accessible vocabulary, adhering to accessibility standards for people with disabilities, etc.). When possible, get community members' feedback on the accessibility and appropriateness of the materials to ensure that the content is understood by a diverse audience and reaches those most in need of RUSH services. Place materials at client registration sites and blood draw locations, and anywhere else deemed relevant or useful. Consider placing permanent signage in waiting rooms to inform clients that they will receive an HIV test as a part of their routine care.

Consider distributing HIV testing information pamphlets during client registration. The original RUSH implementers adapted content from the Red Cross and basic information on HIV testing and care from CDC pamphlets. You may also consider developing promotional items such as pens and key chains to distribute to staff as a way of subtly reinforcing the RUSH program and building morale.

6. Train ED Staff on RUSH Procedures

Train all ED staff to understand HIV testing and linkage-to-care procedures to ensure streamlined support for clients who receive an HIV diagnosis. The structure of training and the participants who require training will vary depending on your organizational needs. However, all clinical staff should receive training on specific procedures such as consent, testing, linkage, and opting out. Registration workers should be trained to draw client attention to signage and other RUSH resources and connect clients with an SLW if they have additional questions.

To maintain intervention fidelity, conduct refresher training sessions for clinic staff at least annually during the first several years of implementation. SLWs should receive training in MI strategies if they are not already certified and should receive Anti-Retroviral Treatment and Access to Services (ARTAS) training if they have not already done so (see Additional Resources Box).

Staff who directly engage with clients (e.g., SLWs, providers, front-desk workers) should be knowledgeable about and comfortable implementing trauma-informed care strategies because these strategies are useful for affirming clients throughout the care continuum. Ensure that staff are versed in any specific training topics required by funders or jurisdictional regulations (e.g., RWHAP Part A cultural competence training, mandatory emergency response training).

If you conduct the intervention at several locations, hold an SLW or primary care provider responsible for visiting the sites to ensure intervention fidelity. Ensuring intervention fidelity can also help with establishing forward-facing consistency for clients across implementation sites. During the initial intervention ramp-up, ensure that SLWs liaise with clinic staff at every shift change to reinforce intervention procedures and establish rapport by providing small incentives (e.g., a box of donuts; promotional items such as RUSH pens or key chains).

RUSH implementers recommend that, if possible, you visit and observe sites in your jurisdiction that are conducting routine HIV testing. These visits can help you to gauge potential barriers and facilitators to implementation and identify useful training strategies for your staff.

Although not utilized by the RUSH implementers in Houston, rapid testing may be an option for preliminary and confirmatory testing as a way of eliminating the need for blood draws and laboratory processing when an in-house lab is not available.

7. Implement and Sustain RUSH

With staff and resources in place, begin universal HIV testing and linking clients who receive an HIV diagnosis to care. It is important to closely monitor workflow during the initial ramp-up to address barriers as they arise proactively. Check-in with staff to gauge where it may be possible to optimize procedures and reduce clinical staff burdens. Staff check-ins may also help to reinforce the integration of RUSH into your organizational culture.

The implementation phase of an intervention like RUSH offers an excellent opportunity to use trauma-informed and MI strategies with clients and to promote the positive elements of these strategies within your staff culture. MI can encourage your staff to use more compassionate and affirming communication styles across teams, improving the efficiency of team collaborations. Similarly, trauma-informed approaches can help build team resiliency by encouraging vulnerability and understanding in the workplace, which organically translates into better provider-client interactions.

It is important to note that protocols for opting out of routine HIV testing will vary depending on Electronic Medical Record (EMR) structure and care workflow. Identifying an appropriate point in your care continuum for client consent and questions is crucial. RUSH implementers in Houston worked closely with departments across the Harris Health System and throughout the RWHAP system of care to share client information and appropriately link clients to supportive services (e.g., housing, transportation, food pantries).

You will also want to develop a process for disseminating RUSH-specific content during periods of staff turnover. Having a staff champion (e.g., an SLW or administrative coordinator) and having support from a champion in leadership may be useful for this purpose.

[On the importance of reinforcing RUSH procedures and building morale]

"... Our service linkage coordinator would go over to Ben Taub at six or seven o'clock in the morning when their shifts changed, and he would take a box of donuts and just do a five-minute reminder or a quick refresher training with the nurses ... We had these pens, ballpoint pens that look like a hypodermic needle that said 'RUSH,' with a red top that referred to the tube of blood they used for the HIV tests ... everybody loved those pens."

– HIV PROJECT MANAGER AT THE THOMAS STREET HEALTH CENTER AND ORIGINAL IMPLEMENTOR OF RUSH IN THE HARRIS HEALTH SYSTEM

Logic Model

Logic models are effective tools to assist in planning, implementing, and managing an intervention. Below is a logic model highlighting the resources, activities, outputs, outcomes, and impact of the RUSH intervention referenced throughout this guide.

Resources	Activities	Outputs	Outcomes	Impact
• Diversified funding: RWHAP, other government funding, foundation grants, private and in-kind resources • Connections with supportive services (e.g., housing) to facilitate client referrals • In-house laboratory with the capacity to process additional samples • Dedicated linkage workers with training on MI strategies and ARTAS • Communication network accessible to care continuum staff	• Establish a steering committee that represents a variety of perspectives (e.g., providers, nurses, administrative staff, legal, communications, laboratory) • Establish anticipated caseload and data management system and strategy • Assess linkage worker capacity and need for a dedicated administrative coordinator • Repurpose or recruit staff dedicated to facilitating linkage to care and support services and an administrative coordinator, if appropriate • Train staff on RUSH intervention strategies, with ongoing booster training as necessary • Create staff and client feedback loops to ensure intervention integrity and sustainability	People with HIV are: • Identified, linked, and retained in care when they might not otherwise seek out or be offered HIV testing • Referred to support services as needed	Among people with HIV: • Simple, confidential HIV testing and access to information • Same-day linkage to care and support services where feasible • Normalization of HIV testing and care Within the implementation agency: • Increase in services offered via low-resource methods • Significant increase in the number of scheduled and kept HIV care appointments • A decrease in the capacity needed for retention outreach efforts • A more-streamlined set of coordinated care services	• Increased retention in care • Increased viral suppression • Decreased number of people who are unaware of their HIV status • Decreased societal stigma around HIV testing and care

Your Planned Work

Your Intended Results

Staffing Requirements and Considerations

Staff Capacity

The RUSH intervention leverages existing staff and clinic workflow to embed HIV testing into routine care every time a blood draw occurs while heavily relying on a dedicated SLW to effectively link and retain clients in care. Administrative staff dedicated to the RUSH intervention can also help to build accountability and streamlined communication across different healthcare roles in the care continuum.

The following are descriptions of the roles that RUSH intervention developers recommend to promote successful RUSH replication. However, it is important to think about specific organizational needs to identify additional roles that can improve intervention outcomes (e.g., data managers, staff who are representative of the communities you serve and have expertise in intersectional client needs, etc.).

- *Service Linkage Worker: A*n SLW who is dedicated to engaging with clients is essential to achieving improved client outcomes. The SLW should be trained in ARTAS and MI strategies and will ideally have experience working with the communities you serve and a thorough knowledge of the support services available in your community. The SLW should be familiar with trauma-informed approaches and comfortable applying these approaches when interacting with clients. Depending on your organization's caseload, you may consider hiring more than one SLW. Core responsibilities for this role include:
  - Delivering HIV test results using a trauma-informed approach (see Additional Resources Box);
  - Providing non-medical case management services (e.g., scheduling appointments, determining eligibility, assisting with transportation, connecting clients to social support services);
  - Providing HIV counseling and education;
  - Facilitating linkage to care for clients with a new or previous HIV diagnosis; and
  - Facilitating client outreach and retention efforts.
- *Administrative Coordinator: A*lthough this role is not required, hiring a dedicated administrative staff member to streamline RUSH-specific logistics across the care continuum is recommended. The person in this role should be well versed in your organizational workflow and RUSH procedures. Responsibilities for this role may include:
  - Planning and coordinating staff training sessions;
  - Hiring and supervising SLWs;
  - Communicating with providers and clinic staff about intervention procedures or changes;
  - Working with the legal department to develop consent forms;
  - Liaising with steering committee members to ensure broad-based input into program development, adherence to regulatory and clinical requirements, and system-wide acceptance of the intervention; and
  - Working with and training new staff on RUSH procedures.

Staff Characteristics

Core competencies for RUSH intervention staff should include:

- Excellent organizational and team-building skills;
- Experience working with people with HIV, particularly those belonging to marginalized communities;
- Knowledge and experience working with social support services in your organization and community;
- An attitude of acceptance, compassion, and support for autonomy;
- Commitment to learning and readiness for change; and
- Passion for improving the lives of people with HIV.

Core competencies for all staff should include:

- Commitment to learning and readiness for change;
- Adaptability;
- Willingness to embed HIV-specific work into their routine-care workflow;
- Understanding of the consent and confidentiality rights of people with HIV; and
- Excellent organizational and team-building skills.

Replication Tips for Intervention Procedures and Client Engagement

Ideally, instituting certain actions will enable organizations to replicate RUSH intervention procedures successfully:

- Ensure your organization has the necessary staff to facilitate linkage to care;
- Utilize an effective data tracking system for surveillance purposes; and
- Work with health department partners to ensure that staff undergoes the necessary training required by funders and local regulations to conduct testing in a culturally competent and affirming manner.

Because the ED is more likely to be a source of primary care for people with HIV than in other settings, EDs are uniquely suited to intercept people with undiagnosed HIV and people with diagnosed HIV who are not engaged in care.[7] Using the ED as a source of primary care is particularly true for people of color and other marginalized groups, who have historically engaged with HIV testing and care services much later than other groups.[8] Late-stage diagnosed HIV can result in increased morbidity and mortality, which compounds the risks faced by marginalized communities who may already experience barriers in accessing healthcare.

When someone receives a positive HIV test result, EDs should have the capacity to quickly link people to care in a way that promotes client retention. Therefore, a specific staff person (e.g., an SLW) should be designated to coordinate linkage-to-care services for the ED. If clients need to be referred to outside services, the SLW will facilitate that process to ensure the successful provision of services and a warm handoff outside the clinic.

Establishing and maintaining an effective data tracking system alongside a dedicated SLW will prove crucial to ensuring efficient client linkage. Obtain consensus among organizational leadership regarding the expected data parameters and surveillance outcomes to streamline data collection as much as possible once testing is underway. Also, establish a clear structure for how and when data is reported and who can access the information.

Intervention replication necessitates establishing protocols for training clinical staff to ensure fidelity to RWHAP guidelines and ongoing training for case managers and linkage workers. Due to the confidential nature of HIV testing and the opt-out component of this intervention, there should be a staff person who is not an SLW, who obtains client consent for HIV testing, communicates with providers regarding updates on training protocols, and coordinates MI training for staff. Please note that some training requirements are variable and specific to the clinic's jurisdiction. Consider collaborating with the Health Departments and other local health agencies that have experience meeting federal training requirements for clinical and non-clinical staff. Local health agencies may also offer strategies and recommendations for implementing testing programs and maintaining staff engagement.

Securing Buy-In

The RUSH intervention's success will rely on securing buy-in from stakeholders at both the leadership and staff levels to ensure the streamlined integration of intervention procedures. Consider employing the following strategies to secure buy-in:

- **Develop a working relationship between leadership and staff through the formation of a steering committee:** A committee will help establish clear lines of communication between different sectors of the care continuum and ensure that any concerns are heard and addressed. Similarly, establishing strong relationships among SLWs and administrative and other clinic or laboratory staff will foster smoother cross-collaboration and facilitate linkage activities for clients with newly diagnosed HIV. It is also important for the steering committee to welcome contributions from all major disciplines (e.g., legal, nursing, communications, and finance departments).
- **Conduct comprehensive staff training:** Include front-desk staff, registration workers, and everyone involved in client intake in RUSH training, so they are well equipped to discuss HIV testing with clients. At the very least, intake staff should highlight existing HIV testing resources and know how to connect a client to an SLW to answer any other questions. Trained intake staff can help promote client buy-in by ensuring that clients can make autonomous and informed decisions.
- **Decrease the time burden for clinical staff wherever possible by leveraging staff dedicated to the RUSH intervention:** This can be achieved by having an SLW provide reminders for clinical staff during shift changes, hiring a dedicated logistics coordinator, and working with providers and clinic staff to identify opportunities to avoid extra work. Staff will be more interested in adopting a new intervention if they consider the intervention to be something that organically embeds itself into their work.

- **Highlight the advantages that the RUSH intervention can offer the organization:**
  - Minimal resource requirements and potential for financial savings, particularly if implemented in a public hospital setting by leveraging existing staff resources and hospital networks.
  - Inherent potential for implementation without a significant impact on staff workload or client flow. For example,
    - The use of existing clinic staff to obtain samples reduces the need for extra personnel to administer HIV tests;
    - If you are using serum-based testing, automated sampling methods can reduce reporting errors; and
    - Sample collection strategies limit client flow disruption because clients are already having their blood drawn for other tests.
  - Incorporating routine testing into hospital settings enables medical staff to identify a large percentage of the population who have been out of care or unaware of their HIV status and link them to medical and other support.
  - Routine testing may help address racial and ethnic gaps in late HIV diagnoses, ultimately reducing health disparities.

Overcoming Implementation Challenges

It is important to consider potential barriers specific to your organization during the initial discussions with leadership about implementing RUSH. Some anticipated challenges, as well as possible solutions, are noted below.

- **Lack of Buy-In:** You cannot effectively implement RUSH across your organization without obtaining buy-in at the leadership and managerial levels. Replicators must identify a champion within the organization who believes in the intervention and can promote it to leadership. Highlighting the benefits of using RUSH, including the well-established cost-effective nature of routine HIV screening, is important to achieving buy-in.[1,7]
- **Lack of Off-Hours SLW Coverage:** Lack of an SLW who is available to see clients during off-hours can impede client contact and follow up the next day, particularly for sites that are open 24 hours, such as EDs. Consider expanding SLW coverage of after-hours visits or hiring an SLW who is dedicated to following up with clients who are not linked to care after receiving an HIV diagnosis.
- **Staff Turnover and Ongoing RUSH Training:** RUSH training can be an issue when integrating the intervention across different organizational levels. Replicators are encouraged to discuss potential issues or ongoing barriers to delivering the training with the steering committee and develop a strategy for disseminating RUSH training to new staff. Organizations should also coach RUSH-focused staff members to create institutional knowledge that can be easily disseminated to new staff.
- **Lack of Diverse Funding:** A lack of diverse funding may make it difficult to allocate funds to the intervention's testing and linkage components, particularly in ED settings. Ask about the availability of RWHAP, CDC and local health department upfront so that teams can strategize about ways to offset costs if such funding is not available. Where feasible, discuss repurposing existing funding and petitioning for more sustainable funding with organizational leadership. Consider partnering with other agencies that may have RWHAP funding or other diverse funding streams available.
- **HIV Testing Laws:** Legal issues around consent for HIV testing may be pervasive, especially if public activism about testing for HIV or other sexually transmitted infections (STIs) is stigmatized. Learn from organizations that have implemented similar interventions to identify approaches that may work well in your jurisdiction. Also, become aware of testing laws in other jurisdictions that promote access to routine opt-out HIV testing. For example, in 2010, New York State amended its laws to make routine HIV testing more readily available across a variety of health care settings while also making it easier for patients to give their consent. This policy allowed people aged 13 years and over to access routine opt-out HIV testing in outpatient and primary care settings. Please visit the CDC website to learn about HIV testing laws in your state (see Additional Resources Box).

[On the importance of having a champion]

"We were fortunate to have a really staunch champion in … the doctor who was the head of the ED at Ben Taub at that time, and he spearheaded the efforts to get standing delegated orders written, which included all that was needed to do the HIV test."

– HIV PROJECT MANAGER AT THE THOMAS STREET HEALTH CENTER AND ORIGINAL IMPLEMENTOR OF RUSH IN THE HARRIS HEALTH SYSTEM

Promoting Sustainability

Successful replication of the RUSH intervention may require organizations to explore various funding sources, particularly sources that support linkage services and testing for clients with varying insurance coverage.

During initial conversations with leadership and the steering committee, discuss anticipated testing volume, types of data to be collected, and strategies for effectively managing novel data. This will ensure that data collection is accurate and timely and will promote a healthy flow of information between providers and the RUSH team.

Clinics can also gather feedback directly from linkage specialists, providers, staff, and clients in various ways (e.g., group or individual check-ins or surveys). By creating a consistent and intentional feedback loop, clinics can ensure that outreach efforts are effective and that concerns are prioritized as they arise.

SWOT Analysis

SWOT is an acronym for Strengths, Weaknesses, Opportunities, and Threats. A SWOT analysis is a structured planning method that can assess the viability of a project or intervention. By conducting a SWOT analysis in advance of an intervention, organizations can proactively identify challenges before they occur and think through how to best leverage their organizational strengths and opportunities to improve future performance. A SWOT analysis of the RUSH intervention identified the following:

STRENGTHS

RUSH increases viral suppression in people with HIV and retains them in care by:

- Embedding HIV testing services into existing care services,
- Providing quick turnaround times for sample processing and test result dissemination, and
- Employing a dedicated linkage worker who retains the client on their caseload until the client has been linked to care and other supportive services.

WEAKNESSES

Agencies will find it challenging to implement the RUSH intervention without:

- Flexible and receptive clinical staff who are willing to integrate the intervention into their day-to-day work,
- Stakeholder buy-in and funding to adequately support ongoing testing and linkage efforts,
- An in-house laboratory (if nonrapid testing is used) and dedicated linkage workers, and
- Access to rapid testing equipment or training (if rapid testing is used).

OPPORTUNITIES

The RUSH intervention offers opportunities to:

- Streamline linkage and retention services using linkage workers who are connected to the broader clinical team,
- Provide a cost-effective, low-resource method of embedding HIV testing services,
- Decrease societal stigma around HIV and HIV testing,
- Decrease health inequities by providing accessible testing to address the late HIV diagnosis gap between marginalized and nonmarginalized communities, and
- Support the “Ending the HIV Epidemic” initiative by decreasing the number of people who are unaware of their HIV status.

THREATS

Threats to the success of the RUSH intervention at an organization may include:

- Inability to secure ongoing funds to support testing and linkage efforts,
- Lack of strategies to mitigate the impact of staff turnover,
- Failure to identify, recruit, and secure buy-in from key stakeholders,
- Unwillingness to integrate routine testing into daily workload, and
- Lack of familiarity with or unwillingness to use strategies that link people with newly diagnosed HIV to care in affirming ways (e.g., trauma-informed care).

Conclusion

The RUSH intervention allows EDs and other clinical settings to embed routine opt-out HIV testing into their existing care services to address retention-in-care gaps. By leveraging an organization's existing staff infrastructure and dedicating staff to facilitating client linkage to care, organizations can identify and retain people with HIV who are unaware of their status or have fallen out of care. CDC has recommended routine HIV screening for over a decade. Routine HIV screening is also considered an effective and acceptable method of screening people who may not otherwise seek out HIV testing or are not offered testing in other settings.

RUSH provides a low-cost, low-burden approach to improving retention in care and viral suppression in people with HIV. Outcomes from the original RUSH intervention include an increase in client retention in care from 32.6 percent pre-intervention to 47.1 percent post-intervention and an increase in the viral suppression rate from 23 percent pre-intervention to 34 percent post-intervention.[1]

Additional Resources

Ryan White HIV/AIDS Program Fact Sheet
https://ryanwhite.hrsa.gov/sites/default/files/ryanwhite/resources/program-factsheet-program-overview.pdf

Ryan White HIV/AIDS Program Services: Eligible Individuals & Allowable Uses of Funds Policy Clarification Notice 16-02
https://ryanwhite.hrsa.gov/sites/default/files/ryanwhite/resources/hrsa-justice-tep.pdf

CIE Cost Analysis Calculator
CIEhealth.org/innovations

NASTAD Trauma-Informed Approaches Toolkit
nastad.org/trauma-informed-approaches

Anti-Retroviral Treatment and Access to Services (ARTAS)
cdc.gov/hiv/effective-interventions/treat/artas?Sort=Title%3A%3Aasc&Intervention%20Name=ARTAS

Endnotes

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TAILORED MOTIVATIONAL INTERVIEWING INTERVENTION

Center for Innovation and Engagement

Background

The Health Resources and Services Administration's (HRSA's) Ryan White HIV/AIDS Program (RWHAP) provides a comprehensive system of HIV primary medical care, essential support services, and medications for low-income people living with HIV who are uninsured and underserved. The RWHAP funds states, cities, counties, 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.

NASTAD's Center for Innovation and Engagement (CIE) is funded by HRSA's HIV/AIDS Bureau (HAB), RWHAP Part F, Special Projects of National Significance (SPNS), under a three-year cooperative agreement entitled Evidence-Informed Approaches to Improving Health Outcomes for People with HIV. The purpose of this initiative is to identify, catalog, disseminate, and support the replication of evidence-informed approaches and interventions to engage people with HIV who are not receiving HIV health care or who are at risk of not continuing to receive HIV health care.

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NASTAD Authors:

Alexander Perez, Manager, Health Equity

Rosy Galván, Director, Health Equity

Intervention Development Team:

Sylvie Naar-King, Director, Center for Translational Behavioral Research

Sara Green, Center Manager

Contributors

Natalie Cramer, Senior Director, NASTAD

Tia Clark, Impact Marketing + Communications

Tara Kovach, Impact Marketing + Communications

Sarah Cook-Raymond, Impact Marketing + Communications

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Stock photos. Posed by models.

Intervention Snapshot

	Priority Population	Adolescents and young adults (ages 16 to 29) who have received a new HIV diagnosis.
	Setting	HIV Care Clinic
	Pilot and Trial Sites	University-affiliated medical department in Detroit, MI, Los Angeles, CA, Philadelphia, PA, Baltimore, MD, and Ft. Lauderdale, FL (2003–2007)
	Model	TMI helps to address the challenges faced by adolescents and young people who have received a new HIV diagnosis by assisting them to better use the health care system and address psychosocial barriers to HIV care and medication adherence. Intervention developers tailored the components of motivational interviewing to make them less time-intensive and more sustainable for providers and their staff.
	RWHAP Ending the Epidemic (EHE) Opportunity	In the TMI pilot, comparison of pre- and post-intervention scores showed that the youth cohort of 16- to 29-year-olds had large improvements in appointment adherence. In addition, youth showed a significant decline in viral load, with 33 percent of participants in the intervention group having an undetectable viral load at a six-month follow-up compared with 22 percent in the control group.
	Intervention Funding	The TMI intervention was funded by a HRSA HIV/AIDS Bureau (HAB), RWHAP Part F, Special Projects of National Significance (SPNS) grant with supplemental funding from the Adolescent Trials Network for HIV/AIDS Interventions (ATN) through the National Institute of Child Health and Human Development.
	Staffing	TMI intervention developers recommend using existing staff for implementation. The evidence indicates that, with appropriate training and MI competency, diverse staff can be used effectively to improve retention outcomes in youth.
	Infrastructure Needed	Connections with ancillary services (e.g., housing) to facilitate client referrals Certified trainers to facilitate skills-building sessions and ongoing fidelity, maintenance, and monitoring

Intervention Overview & Replication Tips

Why This Intervention?

Motivational Interviewing (MI) is a well-recognized, evidence-based intervention that has been adapted for adolescents and young adults (hereafter referred to collectively as *youth*) to promote behavior change and treatment engagement across different behaviors in multiple formats and disciplines.[1] Research in social psychology shows that in children and adults positive behaviors are strongly associated with motivation based on intrinsic factors (e.g., values, satisfaction) compared with extrinsic factors (e.g., rewards, guilt).[2] This type of behavior change intervention has also shown effectiveness in promoting positive health outcomes for youth who identify as part of racial and ethnic minority groups, particularly African Americans.[1,2]

The Tailored Motivational Interviewing (TMI) intervention uses evidence-based MI strategies to promote intrinsic behavior change in youth with HIV, ultimately leading to improved retention in care through the provision of an environment of acceptance, compassion, and autonomy.[1] TMI helps to address the challenges faced by adolescents and young people who have received a new HIV diagnosis by assisting them to better use the health care system and to address psychosocial barriers to HIV care and medication adherence. TMI intervention developers tailored the components of MI to make them less time-intensive and more sustainable for providers and their staff.

Behavior change promotions similar to TMI have been shown to effectively improve self-management and substance use for youth (ages 16 to 29) with HIV, increasing both appointment adherence and viral suppression.[2,3] In the TMI intervention pilot, a comparison of pre- and post-intervention scores showed that the youth cohort missed fewer appointments post-intervention, regardless of their assigned interventionists.

> **"They really feel a difference when someone interacts with them in a MI style. We hear them tell us 'this is the first time I felt listened to' or 'this is the first time I didn't feel judged.'"**
>
> – TMI INTERVENTION DEVELOPER

Interventionists were peer outreach workers or master's-level staff. Members of the cohort who were assigned a peer outreach worker showed an even larger improvement in retention outcomes (median effect size, d = 0.43) and attended significantly more intervention sessions (d = 0.44).[2] Youth ages 16 to 24 who participated in Healthy Choices, a large-scale, multisite, randomized controlled trial (RCT) that followed the TMI intervention pilot project, also showed significant improvements in rates of undetectable viral load compared with youth assigned to a control group ($\beta 1 = -1.072$, $P < .001$).[3]

Intervention at a Glance

This section provides an overview of the current iteration of the TMI intervention that is undergoing academic review by the Adolescent Trials Network. These steps represent the culmination of efforts by intervention developers to address identified barriers to the implementation of TMI since the original pilot project was conducted in Detroit, Michigan, in 2003. The intervention aims to improve youth retention in primary care and related clinical outcomes. The TMI intervention was primarily funded and evaluated by the Health Resources and Services Administration (HRSA) Ryan White HIV/AIDS Program (RWHAP) Part F Special Projects of National Significance (SPNS) Program grant with supplemental funding from the Adolescent Trials Network for HIV/AIDS Interventions (ATN) through the National Institute of Child Health and Human Development.

 Step 1	**Define Priority Youth Characteristics and Data Measures:** Understand the demographic and cultural characteristics of the youth you serve. In addition to gathering information about HIV-specific health outcomes and medication adherence, spend time collecting information about facilitators of and anticipated barriers to adopting and using MI, establishing baseline competency in MI strategies, and developing measures for evaluating intervention fidelity.
 Step 2	**Secure Leadership Buy-In:** Gauge the willingness of organizational leadership and existing staff to meet training requirements, integrate MI strategies into their work, and support additional staffing if necessary. Identify an agency champion to aid in advocating for program implementation and sustaining buy-in. TMI is designed to be integrated at all levels of an organization's client interactions. Discuss time commitments and workflows with staff to ensure that clinic services are not disrupted.
 Step 3	**Assess Staff Competencies and Readiness:** Conduct a multi-level assessment of baseline competencies in MI strategies and familiarity with barriers to care among the youth you serve. Create a thorough inventory of all staff who engage with youth to identify those with existing MI knowledge and those who require training. Determine whether a better understanding of community needs is required to effectively address barriers to care. Conduct a readiness assessment to identify the ability of staff to commit to training procedures and integrate MI strategies into their work.

Step 4

Develop a Youth Advisory Board:

Development of a youth advisory board is crucial to ensuring that strategies are aligned with the specific needs and communication styles of youth in your community. Take time to assess synergies and create partnerships with local agencies that already work with youth with HIV or offer the necessary ancillary services to address the needs of this population and help to meet their goals. These agencies may include drop-in youth centers, Gay Straight Alliance (GSA) advisors in schools, or others that provide supportive services to youth.

Step 5

Build a Community of Practice (CoP):

CoPs can be useful to organizations as they replicate TMI and other evidence-based interventions because they facilitate learning from the experiences of other organizations that have implemented similar strategies. Developing a CoP can be particularly useful if external training and facilitation become too costly and your organization wishes to develop internal expertise.

Step 6

Recruit TMI Trainers and Staff as Necessary:

Rather than changing the structure of a clinic's HIV care delivery, the TMI intervention relies on training staff to communicate with clients in an accepting, empathetic, and humanizing way. This requires effective training from facilitators who are well versed in both theoretical and practical approaches to MI. Replicators are encouraged to use the Motivational Interviewing Network of Trainers (MINT), which was created by the original intervention developers as a means of ensuring fidelity to core MI strategies. (See Additional Resources Box). Although the intervention is designed to work with existing staff, consider recruiting staff who are representative of the community you serve to address gaps in knowledge that you identified in the assessment of staff competencies.

Step 7

Train Staff:

The TMI intervention can be effectively implemented only if all staff who have contact with clients are trained. An initial 12-hour skills workshop delivered by members of MINT is crucial to ensure that both existing and newly recruited staff (if applicable) thoroughly understand how to apply MI strategies in their specific roles. Training sessions can be spread over several days, with an optional virtual component to minimize disruption to clinic services. MINT also provides ongoing virtual training sessions to assess and maintain intervention fidelity.

Step 8

Retain Youth with HIV in Care and Monitor Intervention Fidelity:

Integrate MI strategies on an ongoing basis across all client engagement points. After staff complete the initial 12-hour skills workshop and incorporate MI techniques into their work, the MINT team will provide a four-month "maintenance" period of ongoing support and feedback as a means of upholding the fidelity of the implemented strategies.

Cost Analysis

The TMI intervention was funded by a HRSA HAB RWHAP Part F SPNS grant with supplemental funding from the Adolescent Trials Network for HIV/AIDS Interventions (ATN) through the National Institute of Child Health and Human Development. RWHAP Part F supports the development of innovative models of HIV care and treatment to respond quickly to emerging needs of clients served by the program. HRSA's RWHAP Fact Sheet provides more context on the different parts. Additionally, RWHAP's Policy Clarification Notice 16-02 outlines details on allowable costs. (See Additional Resources Box).

The TMI intervention cost analysis was not available when this manual was developed. However, you can use the CIE Cost Analysis Calculator to create an estimate of the cost of implementing the intervention at your organization.

Resources Assessment Checklist

Before implementing the TMI intervention, your organization should walk through the following Resources Assessment (or Readiness) Checklist to assess your ability to do this work. If your organization does not have these components in place, you are encouraged to further develop your capacity so that you can successfully conduct this intervention. Questions to consider include:

- ❑ Does your staff understand HIV trends and intersecting health outcomes for youth in your community with newly diagnosed HIV?
- ❑ Does your staff understand the demographic, psychological development, and cultural makeup of youth in your community?
- ❑ Is your organization willing to address structural barriers and internal policies that create barriers for youth with newly diagnosed HIV who need care, or who are in care but not virally suppressed?
- ❑ Have you identified a champion in your organization who will advocate for the intervention at different leadership levels and promote buy-in?
- ❑ Are staff intrinsically willing to learn new skills and incorporate them into their day-to-day practice? Are they open to learning these skills through experiential learning and team-building exercises?
- ❑ Does your organization have funding streams available to recruit and sustain trainers through MINT?
- ❑ Is space available to host skills-building workshops and fidelity-maintenance sessions?
- ❑ Do you have an existing relationship with a community-based organization (CBO), AIDS service organization (ASO), or other community partners who work closely with and are trusted by youth with HIV? Are representatives of these organizations willing to work with you to plan and implement this intervention, including recruiting peer outreach workers as appropriate?
- ❑ Do you have HIV care educational materials and supplementary resources that are accessible and relevant to youth in your community? If not, do you have the capacity to develop these resources?

Setting the Stage

According to the U.S. Centers for Disease Control and Prevention (CDC), there is an estimated 1.2 million people with HIV in the United States.[4] During 2018, approximately 75.7 percent of people with HIV received HIV medical care, 57.9 percent were retained in care and 64.7 percent were virally suppressed.[5] Approximately 50,900 of the people with HIV are ages 13 to 25. Among all age groups of people with HIV, those in this age group are considered the least likely to be aware of their status.[6] CDC's estimates indicate that youth continue to disproportionately face challenges in accessing care and achieving improved health outcomes, particularly due to low rates of HIV testing and difficulty overcoming socioeconomic barriers to care.[6] At each stage of the HIV care continuum, from diagnosis to viral suppression, individuals are not entering care or are falling out of care. Improving client engagement and reengagement in care is a national priority, with targeted retention measures established by the National HIV National Strategic Plan (See Additional Resources Box), HRSA, and the Ending the HIV Epidemic (EHE) initiative among others.[7]

MI is based on communication strategies that are designed to strengthen intrinsic motivation by fostering compassionate and accepting environments in which clients receive care.[1] This type of behavior change intervention has shown success in improving health behaviors across a variety of adult populations when delivered by a diverse range of providers, including physicians, health educators, and mental health professionals.[3] The higher risk of poor retention in HIV care for youth relative to adults and the extensive research highlighting the associations between positive behavior change and intrinsic factors in both adults and youth (i.e., values, satisfaction) prompted the adaptation of MI strategies to promote behavior change and treatment engagement across multiple formats for youth.[2,3]

From 2003 to 2005, a university-affiliated medical department in Detroit, Michigan, implemented a pilot project aimed at assessing MI treatment fidelity and its impact on retention outcomes among youth (ages 16 to 29). Before implementing

the intervention, a clinical psychologist from MINT trained four interventionists (two peer outreach workers, two master's-level staff). Following the two-day training session, trainers used role plays, protocol-specific practice, and weekly coaching sessions to ensure that interventionists met or exceeded beginner competency in MI before seeing clients.

Clients were randomly assigned to peer outreach workers or master's-level interventionists. Each client received two 30- to 45-minute sessions (at baseline and six months later) that focused on retention in HIV care and on the creation of a plan addressing their health goals and barriers to achieving them. The pilot project highlighted the utility of MI strategies in improving retention outcomes, specifically appointment adherence and viral suppression, among youth involved in the intervention. Youth assigned to peer outreach workers showed even greater improvements in retention outcomes and had better attendance at intervention sessions than those assigned to master's-level staff, although both groups had significant improvements in outcomes. Findings also suggested that MI strategies can be effectively taught to and administered by staff with a variety of professional and educational experiences.[6]

Following the success of the pilot project, from 2005 to 2007 several HIV/AIDS care centers conducted a large-scale, multisite, randomized controlled trial (RCT). The trial, Healthy Choices, was implemented at five sites throughout the United States (Los Angeles, California; Philadelphia, Pennsylvania; Baltimore, Maryland; Ft. Lauderdale, Florida; Detroit, Michigan) to strengthen the evidence that MI improves retention outcomes in youth (ages 16 to 24). Youth were eligible to participate in the trial if they were able to complete questionnaires in English and if they exhibited at least one of three behaviors: substance use, condomless intercourse, or less than 90 percent adherence to antiretrovirals (ARVs). The interventionists were doctoral students in psychology or trained clinicians who participated in a two-day MINT training session before engaging with clients. After training, the interventionists participated in ongoing, weekly telephone supervision and regularly submitted videotaped client sessions to the MINT team for intervention-fidelity coding.[3]

Youth assigned to the intervention group each received four individual sessions to work on two of three behavior goals that were identified through screening at enrollment. In session one, interventionists used MI techniques to discuss the client's first goal, providing structured, personalized feedback aimed at building motivation and creating a plan to initiate change. Session two followed the same format but focused on the second goal. The remaining two sessions were geared toward reviewing and personalizing the client's behavior change plan, monitoring and encouraging progress, finding solutions to overcome barriers, and eliciting strategies to prevent the repetition of negative health-seeking behaviors. At six-month follow-up, youth assigned to the Healthy Choices intervention showed a significant decline in viral load, with 33 percent having an undetectable viral load compared with 22 percent of youth in the control group.[3]

Building on the evidence generated from these studies, in 2018 the intervention developers, with support from the Adolescent Trials Network, launched a hybrid implementation-effectiveness RCT known as the Scale It Up project. (This trial was still in progress when this manual was developed in 2020.) This type of hybrid trial adapts the intervention training components to make them less time-intensive and more sustainable for providers and their staff.

The Scale It Up RCT, which is being conducted at 10 sites in the United States (Memphis, Tennessee; Philadelphia, Pennsylvania; Brooklyn, New York; Miami, Florida; Baltimore, Maryland; San Diego, California; Birmingham, Alabama; Tampa, Florida; Los Angeles, California; and Washington, DC), focuses on ensuring intervention fidelity through improved training strategies and measurement of client outcomes.[1] The intent is to scale up MI in a series of multidisciplinary adolescent settings while balancing flexibility and fidelity. The teams that conducted the Detroit pilot project and the Healthy Choices RCT recommended the modified training strategies as a flexible adaptation of the intervention for HIV providers.

Description of the Intervention Model

The TMI intervention helps to address the challenges faced by youth (ages 16 to 29) who have received a new HIV diagnosis by assisting them to better use the health care system and to address psychosocial barriers to improve engagement in routine clinic visits and promote medication adherence.

When implementing TMI, consider utilizing the Exploration, Preparation, Implementation, and Sustainability (EPIS) framework for replicating evidence-based practices. EPIS provides overarching guidance on identifying critical factors to consider when adapting evidence-based practices to fit into existing workflows. The framework has been extensively peer reviewed and has proven effective in successfully implementing a variety of evidence-based practices.[8] Although many EPIS components have been integrated into the implementation steps that follow, users may benefit from exploring the framework while implementing the TMI intervention. The intervention is implemented in three phases:

1. Assess Gaps and Engage Stakeholders

a. *Define Priority Youth Characteristics*: The TMI intervention is designed to identify and leverage clients' strengths to promote intrinsic behavior change. Having a thorough understanding of the cultural and demographic makeup of the youth receiving care at your organization is an important initial step in implementing a TMI strategy.

b. *Define Data Measures and Systems*: Establish standard data measures and procedures to ensure client confidentiality and support ongoing evaluation of client outcomes. In addition to collecting information on HIV-specific health outcomes and medication adherence, to complete this step, consider:

- Collecting information on facilitators of and anticipated barriers to adopting the TMI intervention;
- The type of client information that will be collected to identify clients' social, structural, and psychological barriers to care;
- Procedures for storing and sharing information where appropriate; and
- Monitoring and evaluation measures to ensure ongoing intervention fidelity among staff.

Create a feedback loop that allows the care team to use information gathered during the assessments to adjust its strategies while maintaining fidelity to the mandatory intervention components.

c. *Secure Leadership Buy-In*: Engage organizational leadership and existing staff to ensure support for additional staffing and MI training sessions. Identify a champion in your leadership structure to ensure the necessary sustained buy-in and support from all relevant stakeholders, including agency directors, supervisors, frontline providers, and clinic staff. Ensure that leadership is well informed of the training requirements, staff time commitment, and fidelity reporting requirements that are crucial to the intervention's effectiveness. Identify staff who can and should be involved, as well as any additional staff who may be needed. Define parameters for the type of work experience that new staff should have. Address limitations that may hinder you from hiring staff who are representative

of your community. Keep in mind that the TMI intervention is designed to use existing staff as a way of promoting accessibility in different service-delivery settings. Spend time discussing sustainability promotion, integration of intervention training modules into clinic programs and policies, and budgeting for training sessions and ongoing technical assistance from external trainers.

d. *Assess Staff Competencies and Readiness*: Develop an inventory of staff competencies through a multi-level assessment of systemic, organizational, and provider characteristics. This means developing a thorough understanding of baseline competencies in MI as well as alignment with the cultural makeup of the youth your organization serves. Include an assessment of staff readiness to commit to the training requirements and integrate the behavioral skills they learn into their daily work. This step is crucial in gauging the type of competency gaps that exist within your team and addressing them intentionally during the implementation phase.

   If certain staff have credible MI experience, explore ways to help them facilitate the integration of MI strategies during implementation and aid novice staff in acquiring MI skills. If staff have time constraints or other readiness issues, discuss these with the MINT team and identify strategies for addressing them. Depending on resource availability, consider integrating peers into your service-delivery cascade as a way of providing services that are better suited to addressing the structural and social barriers faced by youth. If this is not possible, ensure that staff are well versed on the barriers to care experienced by the youth they serve, even if it involves additional training sessions or pursuing cross-cultural learning opportunities. Where possible, create leadership pipeline opportunities for youth engaged at your clinic.

e. *Develop Advisory Boards:* Engage with community organizations to help develop and provide ongoing feedback on intervention fidelity. Consider establishing a youth advisory board to ensure that strategies are aligned with the specific needs and communication styles of youth in your community. For example, to ensure effectiveness, TMI intervention developers partnered with the Children's Diagnostic Treatment Center in Broward County, Florida, to create an advisory board comprised of youth who had previously been involved in MI interventions.

f. *Develop Partnerships and a Community of Practice*: Assess synergies and create partnerships and linkage opportunities with organizations that (1) already work closely and have established trust with adolescents and young people with HIV in clinical or non-clinical settings, or (2) offer the ancillary services needed to provide a holistic response to social and structural barriers. Types of organizations to consider partnering with include youth-led groups, ASOs, and other CBOs that provide supportive services to youth with HIV. These partnerships will help you establish a CoP for learning implementation strategies from organizations that have adopted TMI or similar strategies. These organizations can aid in both ramping up and sustaining the TMI intervention and can offer an ongoing network of support to address barriers.[1] A CoP is also a cost-effective option for skills sharing if external facilitation becomes a financial burden.

2. Recruit and Train Staff in MI

a. *Recruit Trainers and Staff Where Necessary*: Successful implementation of the TMI intervention relies predominantly on embedding tactful, empathetic, and humanizing communication styles across an organization's care continuum to ensure that the needs of youth are being identified and met while creating a space that is welcoming to youth from diverse backgrounds. This type of intrinsic behavior change strategy requires thorough training and practice with trainers who are experienced in imparting these strategies to staff who may have a wide range of skills, competencies, and cultural backgrounds.

   Developers of the TMI intervention partnered closely with Behavior Change Consulting to develop the training curricula that have been adopted and disseminated by MINT at the local, national, and international levels. (See Additional Resources Box). Use MINT as a training resource to ensure fidelity to core MI strategies. Although the intervention is designed to work with existing staff, address gaps you may have identified in your existing staff infrastructure, including hiring peers or other workers with the appropriate cultural competency to readily engage with youth.

b. *Train Staff:* Appropriate staff training and competency building is the cornerstone of implementing the TMI intervention. Ensure that all staff engaged with youth have some degree of experience in specific TMI methods. This promotes consistency across your organization and reinforces the motivational goals set by youth throughout their engagement with the HIV care continuum. Make the training sessions as far-reaching as possible without disrupting the clinic workflow. Develop a clear structure for administrative supervision to coordinate the different components of staff training.

   The initial adaptation of the TMI intervention for youth involved a two-day intensive training session for interventionists of varying skill levels (peer outreach workers, master's-level staff, doctoral-level psychologists, trained clinicians). Train all staff who have an intrinsic readiness for change and a willingness to engage with youth in more compassionate ways as a means of improving their care delivery. The current adaptation of the TMI intervention involves the following steps:

   i. *Initial 12-hour Skills Workshop:* This step is delivered by members of MINT and is required but can be spread over four days. The training sessions are experiential and serve as a team-building activity for staff, making in-person sessions an important component. If necessary, in-person training can be supplemented by virtual sessions (up to six hours). Encourage staff to coach each other in small groups and engage in role-playing activities, using a series of standard client interactions to promote

experiential learning and group cohesion. Other group TMI methods are included to increase staff's intrinsic motivation to implement the strategies that they are learning.

The workshop emphasizes stigma-reduction communication by having participants practice expressing empathy and support for client autonomy; encouraging critical reflection and the examination of power dynamics; and introducing lifelong learning strategies. The workshop also includes tailored videos featuring scenarios that involve behaviors often attributed to youth with HIV.

ii. *Intensive Training Period:* During the first six months after the initial training sessions, participants engage in bi-monthly 15-minute virtual role-play exercises based on standard client interactions. These exercises are recorded to allow the MINT trainers to code and score interventionists' MI competency. The four competency scores and categories are (1) beginner, (2) novice, (3) intermediate, and (4) advanced. These exercises also enable MINT to provide feedback on both strengths and areas needing improvement.

In addition to the bi-monthly virtual role-play exercises, staff with a beginner or novice competency rating are required to engage in three virtual coaching sessions of one hour each. Each coaching session involves a standardized activity that allows the staff member to reflect on and reinforce behavior change methods. These sessions also include (1) a brief interaction to elicit discussions about provider behavior change and self-efficacy in regard to TMI implementation; (2) feedback on a staff member's two highest and two lowest ratings; (3) coaching activities specific to each of the lowest ratings; and (4) individual goal setting. The goal of these sessions is to ensure that staff have advanced to at least an intermediate competency level in implementing MI strategies. (Once a staff member reaches intermediate competency, these sessions become optional.)

iii. *Fidelity Maintenance*. Four months after the end of the intensive training period and quarterly thereafter, staff who are implementing MI strategies complete "standard client interactions" and receive prompt automated feedback on their strengths and areas for improvement. These interactions are based on standard client profiles developed from actual clinical encounters and are delivered by trained actors. The actor is provided with a client history and a specified target behavior that the staff member is to address.[1] Each session includes three "must say" statements to prompt the staff member to actively use TMI strategies.[1] Feedback can be tailored to be "global," so that the organization's leadership can disseminate it to staff as they see fit, or, where appropriate, provided individually to each participating staff member.

"[TMI] is an individual intervention to promote behavior change, but it is also a structural intervention because its health force is training for the End[ing] of the [HIV] Epidemic initiative."

– TMI INTERVENTION DEVELOPER AND FOUNDER OF MINT

3. Retain Youth with HIV in Care

With a trained intervention team and a support network of community partners, you are ready to engage youth with HIV using intrinsic behavior change strategies and stigma-reducing communication styles.

a. *Monitor Intervention Fidelity:* Begin monitoring after the initial 12-hour skills workshop and consistently monitor fidelity throughout the implementation of the TMI intervention. The aim is to identify barriers to implementation and find solutions to overcome them. In the original intervention pilot project, MI fidelity was assessed using the Motivational Interviewing Treatment Integrity (MITI) scale, which focuses specifically on interventionist behavior. The MITI scale gauges an individual's empathy and overall competency as a counselor by having trained coders listen to audiotaped recordings of client interactions and code them into four competency scores.[2] In its current iteration, MI fidelity is measured through "competency ratings" that are derived from the MI Coach Rating Scale using results from the recorded client-interaction exercises mentioned above. Trained independent raters at MINT code the recordings of standard client interactions and produce a score of 1 (beginner) to 4 (advanced) that indicates the staff member's competency in implementing MI strategies with fidelity.[1]

   Once the intensive training and fidelity-maintenance periods are complete, you can choose to select an internal staff member who will act as an ongoing coach for new or existing staff, preferably with lived experience, to ensure that MI strategies continue to be implemented consistently and effectively. Or, if you prefer, you may continue to engage with MINT as an external facilitator. Replicators are encouraged to contact MINT if they are interested in exploring this option.

   Meet without external facilitators to review client and systems data, address barriers and facilitators, and strengthen intervention fidelity where appropriate. As the intervention becomes more streamlined, identify TMI champions across your staff structure to maintain a culture of compassion and acceptance for the youth being served. Incorporate specific retention strategies used in previous iterations of the intervention, such as reminder phone calls or working closely with outreach staff to contact individuals who are hard to reach.[3]

Logic Model

Logic models are effective tools to assist in planning, implementing, and managing an intervention. Below is a logic model highlighting the resources, activities, outputs, outcomes, and impact of the Tailored Motivational Interviewing intervention referenced throughout this guide.

Resources	Activities	Outputs	Outcomes	Impact
• Diversified funding: Ryan White HIV/AIDS Program, other government agencies, foundation grants, private and in-kind sources • Partnerships with trusted providers and team members with long-standing community relationships and knowledge of community resources • Connections with ancillary services (e.g., housing) to facilitate client referrals • Certified trainers to facilitate skills-building sessions and ongoing fidelity maintenance and monitoring	• Establish staff and community resources • Develop an inventory of team cultural competencies and gaps and staff readiness for skills acquisition • Create partnerships and linkage opportunities with agencies that work with youth or can offer services to address youth needs • Train staff in MI skills and support ongoing fidelity maintenance and monitoring	• Youth with HIV retained in HIV primary care and ancillary services • Youth with improved goal-setting skills and increased motivation to engage in positive health behaviors	Among participating youth with HIV: • Use of stigma-reducing communication styles • Positive behavior changes and motivation to maintain adherence to care Within the implementing agency: • Significant increase in the number of appointments scheduled and kept • Decreased need for retention outreach efforts • Shift in organizational culture to build strong interpersonal skills within the organization and encourage better staff relationships • Creation or maintenance of a positive reputation with youth communities • Increased knowledge of youth's barriers to care • Stronger set of coordinated care services across the organization	• Increased viral suppression among youth with HIV • Increased appointment adherence among youth with HIV

Your Planned Work

Your Intended Results

Staffing Requirements and Considerations

Staff Capacity

TMI intervention developers recommend using your existing staff to implement TMI across your organization's HIV care continuum. Both the TMI pilot project and the Healthy Choices RCT used interventionists with specific experience (e.g., peer outreach workers, master's-level staff, doctoral-level psychologists) to gauge the ability of staff with different educational and professional backgrounds to implement MI strategies. The evidence indicates that, with appropriate training and MI competency, diverse staff can be used effectively to improve retention outcomes in youth. Evidence has also shown an even greater improvement in retention outcomes for youth who were engaged by peer outreach workers compared with interventionists who have master's-level credentials.[2] If you hire peers, to the extent possible, choose those who are representative of the youth communities you serve.

Strong administrative supervision is necessary during the ramp-up of TMI due to the ongoing training and fidelity-monitoring components that are required to ensure the intervention's effectiveness in achieving positive health outcomes for youth. Establish a supervision framework that is appropriate for your organizational structure and that facilitates staff training, time management, and efficient, streamlined implementation of MI strategies and support for young peers who benefit from intentional supervision.

Staff Characteristics

Core competencies of all staff should include:

- Experience working with youth with HIV;
- Understanding of youth resilience factors, communication preferences, and development frameworks;
- An attitude of acceptance, compassion, and support for autonomy;
- Understanding of structural ageism and how it leads to disproportionate health outcomes for young people with HIV;
- Ability and willingness to prioritize youth as experts in their own lives who have the autonomy to decide their own care outcomes and goals, and to provide feedback on how to structure programs to meet these clients' unique needs;
- Pre-established relationships with community organizations and resources (local and online) for youth;
- Commitment to learning something new and readiness for change; and
- Passion for applying creative solutions to improve the lives of youth.

Replication Tips for Intervention Procedures and Client Engagement

Successful replication of TMI involves working with community partners and other organizations to create a CoP, using an EPIS framework, conducting readiness assessments for staff, and providing clear administrative supervision.

- *Create CoPs:* CoPs are a strategy to promote the uptake and sustainability of evidence-based practices. In a CoP, a "community" is defined as a group of people who learn together and develop common practices based on shared goals, values, and trust.[1] A CoP has no formalized structure; the membership structure or method of communication is entirely dependent on the needs and availability of your organization and those with whom you wish to connect. CoPs should remain non-hierarchical and flexible to suit the needs of their members.

  CoPs can be useful to organizations as they attempt to replicate and sustain a TMI intervention because they facilitate learning from the experiences of other organizations that have replicated the same or similar strategies. Developing a CoP can be particularly useful if external training and facilitation become too costly or if your organization wishes to develop internal expertise in TMI for future dissemination. A CoP may be founded on:

  - A shared domain of knowledge, tools, language, and stories that create a sense of identity and trust to promote learning and member participation;
  - A community of people who create a social fabric for learning, sharing, inquiry, and trust; or
  - A shared practice made up of frameworks, tools, references, and documents that community members share.

- *Use an EPIS Framework:* The EPIS framework provides implementation guidance while identifying unique and common factors at the systems and organizational levels that need to be considered when replicating evidence-based practices. Existing literature has identified EPIS as a consistent, effective framework through which to replicate evidence-based practices, and it can serve as a useful resource when considering the best approach to establishing a skills-acquisition model for staff.[8]

The steps outlined in the **Description of the Intervention Model** section incorporate

many of the EPIS principles. However, it may be useful to become more familiar with the framework while replicating TMI. The stages of EPIS are:

- **Exploration:** Use to assess the existing health needs of clients or communities while identifying the best evidence-based practices to address them; then decide whether to adopt that practice. Consider necessary adaptations or modifications to the evidence-based practice to ensure effective implementation.
- **Preparation:** Use to identify facilitators of and potential barriers to implementation and to prime organizational personnel for the implementation phase. This phase includes developing a detailed implementation plan that capitalizes on facilitators, actively addresses potential barriers, and planning for implementation support (training, coaching, auditing, etc.).
- **Implementation:** Use to build on the first two phases and actively integrate evidence-based practices across the organization. Embed ongoing monitoring of implementation in the process and adjust implementation strategies where necessary.
- **Sustainment:** Focus on ongoing evaluation, adaptation, and support of the intervention within all structures of your organization to ensure the continued achievement of your desired public health outcomes.

- *Conduct Staff Readiness Assessments:* A readiness assessment is an analysis of an organization's capacity to undergo a transformational process or change. Conducting a readiness assessment is beneficial for identifying potential challenges that could arise when implementing new procedures, structures, or processes. Due to the intrinsic behavioral component involved in TMI strategies, staff need to be prepared and open to learning new communication styles and engagement strategies before committing to an MI training curriculum. Quantify the amount of time providers and other clinical staff must dedicate to the required training components and to incorporating MI strategies into their day-to-day work. Although a formal readiness assessment specific to TMI replication is not available, you can conduct qualitative interviews or surveys to assess staff willingness and ability to implement TMI. General parameters for gauging staff readiness include:[9]
  - The provider's belief that caring for clients at the facility is relatively manageable and that the new strategy will improve the provider's experience;
  - The relationship between the provider and the organization's administration and other clinicians is open and collaborative;
  - The provider actively participates in initiatives that promote evidence-based and leading clinical practices; and
  - The provider is willing to assume a leadership role while implementing an integrated care system by taking responsibility for key objectives and helping to promote the system to other providers within the organization.
- *Provide Clear Administrative Supervision:* Administrative supervision refers to a person or group that leads the coordination and follow-up of TMI-related training activities. Given the modular nature of the required training and the number of staff who could be involved, identify a point person who is responsible for coordinating logistics with MINT trainers or CoPs where applicable. The point person is also responsible for ensuring that staff implementing MI strategies with clients are attending their fidelity-monitoring follow-up sessions, meeting fidelity criteria, and receiving technical assistance they may need.

  Administrative supervision may also assist with gauging provider time constraints for TMI-specific activities, promoting the sustainability of the intervention once it has been integrated into the system, and providing ongoing support to providers and other clinical staff during the initial "intensive" skills-building sessions.

Securing Buy-In

Securing the support of leadership, staff, and other relevant stakeholders is an important step when implementing a novel intervention. The following strategies may help to secure buy-in for the TMI intervention:

- **Highlight existing TMI resources**: The existing array of training protocols, curricula, and other resources makes learning TMI intervention strategies flexible to the needs of staff. Using seasoned trainers such as those in MINT will ensure an adaptable training structure that fits your organization's needs while ensuring the fidelity of the intervention throughout its lifespan. Similarly, establishing a sustainability pathway suitable for your organization's needs can promote streamlined integration of the intervention into existing services.
- **Use an in-reach instead of an outreach approach**: This allows your organization to begin implementing the intervention with clients who are already engaged in services but need additional support, minimizing the time and resources needed to recruit clients.
- **Highlight the advantages your organization may receive by implementing the intervention:**
  - You can create or maintain a positive reputation in the community by offering positive experiences and affirming services to youth. This can lead to increased word-of-mouth referrals and to an increase in the number of clients you serve.
  - Working with a youth advisory board or youth-centered CBO offers an opportunity to learn more about barriers to care among youth (e.g., substance use disorder, parental consent). Peers can provide great insight on what questions to ask, how to harness community resiliency factors, and how to "dig deeper" to identify barriers to care.
  - The acquisition of behavioral skills inherent to the TMI intervention can help to promote a stronger culture of communication among your staff. This can help to shift the organizational culture to promote autonomy, support, and compassion as a means of creating better interpersonal relationships among staff.
  - The communication aspect of the intervention makes it flexible and easily integrated into all aspects of the HIV care continuum, resulting in a stronger, interwoven set of coordinated services.

"It really starts to shift the organizational culture in a way that people start to use it with each other. Even the way supervisors interact with their supervisees shows modeling of Motivational Interviewing. It becomes a way of communication with the world."

– TMI INTERVENTION DEVELOPER

Overcoming Implementation Challenges

As an initial step when considering the suitability of TMI for your organization, assess the potential barriers to implementing the intervention that you may experience. Anticipated challenges and possible solutions include:

- **Provider availability:** Using a provider with limited availability can create barriers to TMI skills acquisition during the intensive training period. Providers' schedules can be dynamic and can fill up quickly, making it a challenge to carve out time for training sessions. Organizational leadership and administrative supervision support staff can discuss scheduling options to reduce the time burden experienced by providers and other staff as a way of ensuring compliance with the required training. Where necessary, training sessions can be virtual or spread across multiple days to avoid clinic disruptions.
- **Staff have prior experience with MI:** Staff may believe they are already competent in MI. However, it is important that they receive training that adheres to the fidelity model and is consistent with the evaluated outcomes of the evidence-based practice highlighted in this manual. Gauge the type of training and experience staff have in MI strategies and ensure that they are certified in the MI style pertinent to TMI.
- **Staff turnover and participation in the required components of TMI:** Internal coaching of team members and engagement with CoPs can ensure that MI becomes established institutional knowledge that can easily be disseminated to new staff. To mitigate barriers to staff participation, discuss potential issues or ongoing barriers with MINT trainers and tailor required components of the intervention to staff needs.
- **Lack of buy-in at the leadership and managerial levels:** Without buy-in, effective organizational uptake of TMI will not occur. Identify an agency champion who can promote the intervention within the leadership hierarchy. Highlight the myriad benefits offered by TMI at both the individual and organizational levels while creating a clear plan of action to integrate TMI strategies into the existing care structure. Take the opportunity to engage CoPs in discussions about strategies they have used to create buy-in among leadership and staff.

Promoting Sustainability

Successful replication of the TMI intervention may require exploring a variety of funding sources, particularly those aimed at addressing the upfront expenses of staff training and fidelity maintenance or ongoing external facilitation and assistance with fidelity monitoring. HRSA's Ryan White HIV/AIDS Program Fact Sheet provides more context on the different parts that may support intervention costs, and RWHAP's Policy Clarification Notice 16-02 outlines details on allowable costs (see Additional Resources Box). Additionally, state and local health department resources may be available to support implementation.

Fidelity-maintenance strategies such as ongoing audit, feedback, and booster training sessions are particularly useful for sustainability, whether these are delivered by external facilitators or by well-trained internal coaches. Developing fidelity measures that can be used by external or internal facilitators is an important step toward ensuring that the intervention is maintained and remains effective. For example, use a standard client-interaction fidelity model to rate interventionists on their engagement with clients. The development and active utilization of CoPs have also been deemed useful in promoting the sustainability of TMI due to the culture of collaboration and shared learning that they foster. These communities can help to actively address ongoing barriers and can provide lower-cost resources for training and fidelity monitoring.[1]

SWOT Analysis

SWOT is an acronym for Strengths, Weaknesses, Opportunities, and Threats. A SWOT analysis is a structured planning method that can be used to assess the viability of a project or intervention. By conducting a SWOT analysis before implementing an intervention, organizations can proactively identify challenges before they occur and think through how to best leverage their organizational strengths and opportunities to improve future performance. A SWOT analysis of the TMI intervention identified the following:

STRENGTHS

The TMI intervention will readily retain youth with HIV in care and increase their viral suppression by:

- Creating an atmosphere of acceptance, compassion, and autonomy by using empathetic and intentional communication styles;
- Providing agencies and organizations as a place to refer youth with HIV;
- Creating an organizational culture with improved interpersonal communication between staff, ultimately improving the quality of service delivery for youth; and
- Providing an adaptable and flexible model of behavior change that can be used by all staff and can be integrated into existing infrastructure to leverage organizational strengths.

WEAKNESSES

Agencies will find it challenging to implement the TMI intervention without:

- Flexible and receptive clinical staff with a willingness to acquire a new behavioral skill;
- Current relationships with, or leads on, community stakeholders and current or potential service partners who participate in collaboratively defining the needs of youth and provide ancillary services;
- Stakeholder buy-in and funding to support staff training, ongoing intervention fidelity monitoring, and booster training sessions;
- Organizational willingness to prioritize youth experience and expertise in autonomously deciding their care outcomes and goals; and
- Receptiveness to youth feedback on how to improve programs to address their unique needs.

OPPORTUNITIES

The TMI intervention offers opportunities to:

- Establish relationships with youth-centered CBOs and other providers through the development of CoPs;
- Develop an organizational culture centered on empathy and encouragement that ultimately improves interpersonal relationships among staff;
- Foster flexible and adaptable behavior change across the HIV care continuum; and
- Provide ongoing knowledge exchange among staff regarding social and structural barriers to HIV care that are unique to youth communities.

THREATS

Threats to the success of the TMI intervention may include:

- Time constraints that prevent providers and other clinical staff from attending required training.

Conclusion

The TMI intervention uses evidence-based MI strategies to promote intrinsic behavior change in youth with HIV, ultimately leading to improved retention in care. This communication-centered approach to service delivery provides a compassionate and supportive environment in which youth can address the barriers they may face to remaining in care and promotes adherence to appointments and maintenance of viral suppression. The TMI intervention also leverages existing staff and care infrastructure while promoting collaboration with youth-centered CBOs and other youth-serving agencies to create a provider network that can more readily improve the lives of youth with HIV. Overall, the TMI intervention provides an adaptable model for clinics and other service-delivery settings to better serve youth, ultimately reducing the HIV incidence rate and the risks of HIV-related morbidity and mortality.

In the TMI intervention pilot, comparison of pre- and post-intervention scores showed that the youth cohort of 16- to 29-year-olds had large improvements in appointment adherence.[2] In addition, youth ages 16 to 24 who were randomly assigned to the Healthy Choices intervention showed a significant decline in viral load, with 33 percent of youth in the intervention group having an undetectable viral load at a six-month follow-up compared with 22 percent in the control group.[3]

Additional Resources

Motivational Interviewing Network of Trainers (MINT)
motivationalinterviewing.org/

HIV National Strategic Plan
hiv.gov/federal-response/national-hiv-aids-strategy/national-hiv-aids-strategy-2021-2025

Ryan White HIV/AIDS Program Fact Sheet
hab.hrsa.gov/sites/default/files/hab/Publications/factsheets/program-factsheet-program-overview.pdf

Ryan White HIV/AIDS Program Services: Eligible Individuals & Allowable Uses of Funds Policy Clarification Notice 16-02
hab.hrsa.gov/sites/default/files/hab/program-grants-management/ServiceCategoryPCN_16-02Final.pdf

CIE Cost Analysis Calculator
CIEhealth.org/innovations

Behavior Change Consulting
behaviorchangeconsulting.org/

Improving Health Outcomes for Youth Living with the Human Immunodeficiency Virus: A Multisite Randomized Trial of a Motivational Intervention Targeting Multiple Risk Behaviors
jamanetwork.com/journals/jamapediatrics/fullarticle/382533

Motivational Interviewing by Peer Outreach Workers: A Pilot Randomized Clinical Trial to Retain Adolescents and Young Adults in HIV Care
doi.org/10.1080/09540120802612824

Testing a Motivational Interviewing Implementation Intervention in Adolescent HIV Clinics: Protocol for a Type 3, Hybrid Implementation-Effectiveness Trial
researchprotocols.org/2019/6/e11200/

Endnotes

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Additional Web Resources

Practitioners may also find the following RWHAP resources useful in providing care and treatment services to people with HIV to improve health outcomes and reduce HIV transmission.

Center for Innovation and Engagement
Resources available include the intervention implementation guides found in this compendium as well as additional materials to support implementation of intervention models that provide statistically significant improvements in HIV care and treatment outcomes for people with HIV. Additional tools available include a cost calculator to determine program costs and support planning of replication activities, tip sheets, and COVID-19 considerations.

www.TargetHIV.org/CIE or www.CIEhealth.org

HIV Care Innovations: Replication Resources
These resources include implementation toolkits developed under the RWHAP's SPNS evaluation and demonstration program as well as various HRSA technical assistance and training projects.

https://targethiv.org/library/hiv-care-innovations-replication-resources

Best Practices Compilation
The Best Practices Compilation gathers and disseminates intervention strategies that have been implemented in RWHAP-funded settings and that improve outcomes along the HIV care continuum.

https://targethiv.org/bestpractices/search

Dissemination of Evidence-Informed Interventions
The initiative created four evidenced-informed Care and Treatment Interventions (CATIs) that are replicable, cost-effective, capable of producing optimal HIV care continuum outcomes, and easily adaptable to the changing health care environment.

https://targethiv.org/deii

Integrating HIV Innovative Practices
Integrating HIV Innovative Practices products are informed by SPNS research and evaluation, and include easy-to-use training manuals, curricula, case studies, pocket guides, monographs, handbooks and more to help take tested innovation and turn it into practice. Associated technical assistance training webinars provide an interactive experience with experts and a help desk allows practitioners to submit questions and share lessons learned.

https://targethiv.org/ihip

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