Improving Health Outcomes

Moving Patients Along the HIV Care Continuum and Beyond

IMPLEMENTATION MANUAL
JUNE 2017

HRSA
Health Resources & Services Administration

U.S. Department of Health and Human Services
Health Resources and Services Administration
HIV/AIDS Bureau

Improving Health Outcomes

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The publication was produced for the U.S. Department of Health and Human Services, Health Resources and Services Administration, HIV/AIDS Bureau under contract number HHSH250201400048I.

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Suggested Citation: U.S. Department of Health and Human Services, Health Resources and Services Administration, HIV/AIDS Bureau, *Improving Health Outcomes: Moving Patients Along the HIV Care Continuum and Beyond.* Rockville, Maryland: U.S. Department of Health and Human Services, 2017.

Table of Contents

The Health Resources and Services Administration (HRSA), HIV/AIDS Bureau (HAB) has developed the Integrating HIV Innovative Practices (IHIP) manuals, curricula, and trainings to assist health care providers and others delivering HIV care in communities heavily impacted by HIV/AIDS with the adoption of Special Projects of National Significance (SPNS) models of care. This IHIP training manual is part of that effort.

Introduction: About this Manual

What is this Guide and How is it Organized?

This manual synthesizes the lessons learned and steps to replicate interventions from federally funded, innovative Special Projects of National Significance (SPNS) demonstration sites. These SPNS interventions have proven to advance people living with HIV (PLWH) along the Care Continuum. This manual is organized by Care Continuum stage as follows:

- Diagnosing HIV
- Linkage to care
- Retention in care
- Prescription of antiretroviral therapy (ART) and medication access
- Beyond the Care Continuum: addressing hepatitis C virus (HCV) comorbidity and coinfection.

Who is the Target Audience?

The target audience includes health care provider sites (particularly those with a focus on HIV, HCV, and correctional health), health departments, technical assistance trainers and other health educators, and community partners, including correctional facilities and social support organizations. Featured interventions were implemented and evaluated in Ryan White HIV/AIDS Program-funded settings and, thus, have particular relevance to other Ryan White grantees who may be seeing similar patient populations, facing similar challenges, and also trying to meet federal priorities around the Care Continuum.

What are the Learning Objectives?

In furtherance of national goals, this manual will:

- Illustrate the effectiveness of featured interventions;
- Provide information on key components and the capacity required to conduct this work; and
- Highlight best practices so that readers have necessary information to replicate and implement care interventions.

About SPNS & IHIP

The Special Projects of National Significance (SPNS), under the HIV/AIDS Bureau (HAB) of the Health and Human Service's (HHS), Health Resources and Services Administration (HRSA), is focused on funding, evaluating, and disseminating innovative models of care that help address emerging needs of persons living with HIV and AIDS, and equipping providers with best practices informed by this work.

The Integrating HIV Innovative Practices (IHIP) project is an outgrowth of SPNS. HAB created IHIP to share knowledge gained from SPNS interventions, and promote their replication. In short, IHIP takes tested innovations and turns them into practice. IHIP is where training meets implementation, with the intended results being more informed providers, better care delivery and, ultimately, healthier clients and communities. This manual helps achieve SPNS' federal mandate to disseminate findings while also aligning with national goals, including the Care Continuum.

The IHIP project is currently managed under the "Translation of SPNS Findings and Technical Assistance Support to Implement New Models of Care" contract, and this Manual is part of larger IHIP efforts.

How Can Readers use this Manual?

The SPNS program, through its grantees, has contributed in developing and evaluating innovative models of care and treatment along the HIV Care Continuum. This manual features interventions that were tested and implemented in Ryan White HIV/AIDS Program-funded facilities and can be successfully replicated in other Ryan White-funded care settings. This implementation manual includes an overview of 10 SPNS interventions, inclusive of what they did during the SPNS funding cycle as well as how they have evolved today given the changing healthcare landscape. The manual also includes replication tips for readers so that they can begin similar interventions within their respective sites. The featured interventions have successfully advanced PLWH through a critical HIV Care Continuum stage (see "**SPNS Interventions Along the Care Continuum: Summary Table**"). These models have the potential to serve as valuable tools to HIV organizations interested in adopting the latest evidence-informed models that are adaptable to meet the challenges of the evolving healthcare environment. The manual is intended to inform readers and guide them on replicating similar care models within their evolving clinical and community practices. Although these SPNS interventions all included an evaluation component, which is acknowledged in the respective chapters, such evaluation is not required for replication.

Each chapter of this Manual includes a rationale for the intervention it describes and case studies that demonstrate its effectiveness. The chapters also feature a description of "Steps at a Glance," a Resource Assessment (or Readiness) Checklist to help readers decide which intervention(s) fit their needs, and information about the level of organizational and community capacity needed to implement each intervention. Chapters are organized in a similar way, making it easy to compare the level of resources needed for implementing interventions. The Manual may be read as an entire document, in stand-alone sections that describe interventions related to a particular HIV Care Continuum stage, or as stand-alone case studies that describe a specific intervention.

What Other Resources Accompany this Manual?

This Manual is accompanied by supporting webinars about the interventions, a dedicated listserv, and a help desk. Additional resources and information about other SPNS initiatives are also available at **www.hab.hrsa.gov**.

Why the HIV Care Continuum?

HIV Care Continuum in the U.S.: An Overview

The "continuum of engagement in care" (later changed to the HIV Care Continuum) was a phrase used by Dr. Laura Cheever, HRSA Associate Administrator for the HIV/AIDS Bureau (HAB), in her seminal 2007 editorial to describe the fluid nature of HIV healthcare delivery and client experience.[1]

Today, the concept of engaging clients and moving them along the HIV Care Continuum has received unprecedented attention because research has proven the benefits of antiretroviral therapy for all HIV-positive people, regardless of CD4 cell count or viral load.[2] Unfortunately, many PLWH are not fully linked, engaged, retained, or virally suppressed. Fortunately, approximately 87% of PLWH in the U.S. have been diagnosed and are aware of their HIV status. However, along subsequent stages of the continuum, dramatic drop-offs occur.[3] According to the U.S. Centers for Disease Control and Prevention (CDC), 74.5% of diagnosed people living with HIV (PLWH) age 13 and older are linked to care within one month following an HIV diagnosis, 56.5% are retained in care, and 54.7% are virally suppressed.*[4]

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[1] Cheever LW. Engaging HIV-infected patients in care: their lives depend on it. [Editorial.] *CID*. 2007; 44 (June1):1501–2.

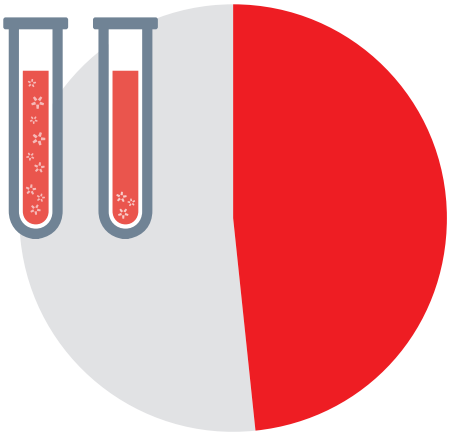
[2] Lundgren JD, Babiker AG, Gordin F, et al. INSIGHT START Study Group. Initiation of Antiretroviral Therapy in Early Asymptomatic HIV Infection. *N Engl J Med.* 2015. 27;373(9):795–807.

[3] Centers for Disease Control and Prevention (CDC). *Today's HIV/AIDS Epidemic*. Fact Sheet. July 2015. Available at: **www.cdc.gov/nchhstp/newsroom/docs/factsheets/todaysepidemic-508.pdf.**

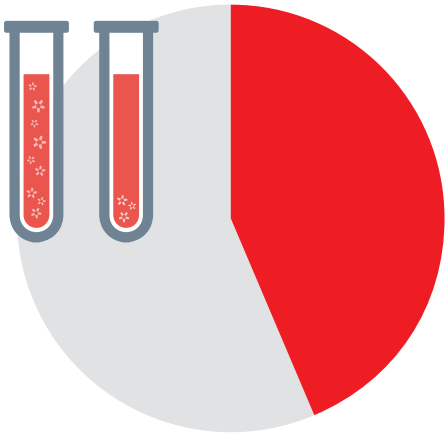
[4] CDC. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2014. *HIV Surveillance Supplemental Report* 2016;21(No.4). **www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-supplemental-report-vol-21-4.pdf** Accessed September 16, 2016.

*According to the CDC, "different steps, or 'bars,' within a single continuum come from different sources of data. Also, not all steps in the care continuum are necessarily dependent on the previous step." Moreover, linkage "cannot be directly compared to other steps" as linkage is a percentage of people diagnosed within a given year. These data, however, represent the most recent data sources from CDC and for stratifying care continuum stages or steps.

A deeper analysis of data on the HIV Care Continuum has found disparities among particular groups.[5] For example, in the U.S., just 48.5% of diagnosed Black/African American PLWH age 13 and older are virally suppressed[6] and 43.7% of diagnosed youth age 13–24 are virally suppressed.[7]



Just **48.5%**
of diagnosed Black/African American PLWH are virally suppressed.[6]



Only **43.7%**
of diagnosed youth age 13–24 are virally suppressed.[7]

From Diagnosis to Viral Suppression

Since 2006, the Centers for Disease Control and Prevention (CDC) has recommended routine screening of HIV for everyone ages 13–64 and recommends at least annual screening for persons at increased risk for HIV infection. The U.S. Department of Health and Human Services (HHS) Panel on Antiretroviral Guidelines for Adults and Adolescents recommends immediate initiation and lifelong adherence to antiretroviral therapy (ART) for all HIV-positive adults and adolescents, regardless of CD4 count. Doing so facilitates viral suppression, which leads to better health, longer life expectancy, and decreased risk of HIV transmission.

Sources: CDC. HIV Testing in Clinical Settings. September 18, 2015. Available at: **www.cdc.gov/hiv/testing/clinical/**

U.S. Preventive Services Task Force. Final Recommendation Statement: Human Immunodeficiency Virus (HIV) Infection: Screening. December 2016. Available at: **www.uspreventiveservicetaskforce.org/Page/Document/RecommendationStatementFinal/human-immunodeficiency-virus-hiv-infection-screening**

[5] CDC. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2014. *HIV Surveillance Supplemental Report* 2016;21(No.4). **www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-supplemental-report-vol-21-4.pdf** Accessed September 16, 2016.

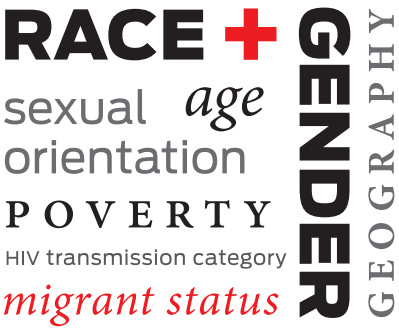
[6] CDC. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2014. *HIV Surveillance Supplemental Report* 2016;21(No.4), Table 5a. **www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-supplemental-report-vol-21-4.pdf** Accessed September 16, 2016.

[7] CDC. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2014. *HIV Surveillance Supplemental Report* 2016;21(No.4), Table 5a. **www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-supplemental-report-vol-21-4.pdf** Accessed September 16, 2016.

Many factors, including poverty, homophobia, racism, high HIV community viral load, psychosocial issues (e.g., substance use, mental health issues, incarceration, and homelessness), lack of familiarity of and trust in the healthcare system, and other barriers, further compound disparities.[8]

The HIV Care Continuum provides a framework to better understand HIV care and treatment in the U.S. Knowing where gaps in the HIV Care Continuum are most pronounced, and for what populations, facilitates targeted interventions—and investments—that are likely to have the greatest impact and public health benefit.

CAUSES OF DISPARITIES



HRSA's Special Projects of National Significance (SPNS) program has supported these efforts with a longstanding track record of funding and evaluating innovative, replicable interventions. These move PLWH along the Care Continuum, leading them to optimized health outcomes and, ultimately, improved quality of life.[9]

[8] Centers for Disease Control and Prevention (CDC). Today's HIV/AIDS Epidemic. Fact Sheet. July 2015. Available at: **http://www.cdc.gov/nchhstp/newsroom/docs/factsheets/todaysepidemic-508.pdf**.
[9] HRSA. *Ryan White HIV/AIDS Program Annual Client-Level Data Report 2014*. **http://hab.hrsa.gov/data/servicesdelivered/2014RWHAPDataReport.pdf.** Published December 2015. Accessed January 29, 2016.

SPNS At-a-Glance Intervention Summary Table

The following table provides a snapshot of the featured interventions.

Diagnosing HIV

Wisconsin Department of Health Services –
Social Networks Testing

Wisconsin

TARGET POPULATION
High-risk and hard-to-reach populations

GOALS AND OBJECTIVES
To leverage existing social networks to find high-risk men who have sex with men (MSM) and reach persons unaware of their HIV status, provide them HIV counseling and testing, and link newly diagnosed clients into care.*

CHALLENGES
- Retaining staff at participating agency sites.
- Using incentives.
- Monitoring the number of intervention-referred Network Associates.
- Stigma associated with being a Recruiter.

SUCCESSES
- Social Network Testing yielded higher rates of identifying infected persons than more traditional outreach methods.

Linkage to Care

Care Alliance Health Center –
Assess, Test, Link: Achieve Success (ATLAS) Program

Cleveland, OH

TARGET POPULATION
Urban jail inmates

GOALS AND OBJECTIVES:
To implement a jail-based HIV testing and linkage case management program; identify HIV-positive jail-based clients and provide linkage case management; connect HIV-positive jail-based clients to medical care and social services while incarcerated—and upon release to the community; and encourage retention in care upon release to the community.

CHALLENGES
- Correctional staff turnover or transfers, necessitating need to create new relationships with new staff.
- Working with clients with extensive mental health and substance use needs.
- Ensuring patient confidentiality in an "open" jail setting.
- Ensuring free choice in an opt-in HIV testing program within the County Corrections System.

SUCCESSES
- Education of correctional staff about HIV and universal precautions, facilitated service delivery, and a productive working environment.
- Health education helped reduce stigma and increase HIV knowledge.
- HIV-positive inmates were actively engaged and linked to a Ryan White community-based case manager upon release from jail. Linkage to a Ryan White case manager was the most significant predictor of linkage to and retention in HIV primary care.

University of Illinois at Chicago –
Enhancing Linkages to Care for Women Leaving Jails

Chicago, IL

TARGET POPULATION
Urban inmates in a women's jail

GOALS AND OBJECTIVES
To expand HIV counseling and testing in the jail and improve transition post-release into housing, HIV primary care, and necessary support services to HIV-positive women.

CHALLENGES
- Barriers included difficulty in client acceptance of HIV diagnosis, shame, mental illness, and substance use.
- A change in the jail administration leadership delayed initial rollout of the intervention as relationship building and buy-in needed to begin again.

SUCCESSES
- Substantially increased the proportion of women who kept their initial medical appointment after leaving jail.
- Provided transportation services to appointments; helped women secure IDs post release to maximize their benefits entitlements; and connected them to community-based Ryan White case managers.

* When this work began, the standard of care from HIV diagnosis to linkage to care was 90 days; however, organizations looking to replicate this work should use the revised standard of care and link PLWH to care within one month of diagnosis.

Louisiana Department of Health and Hospitals – Video Conferencing Louisiana **TARGET POPULATION** Louisiana state prison inmates nearing release	**GOALS AND OBJECTIVES** To leverage existing telemedicine technology within the Department of Corrections (DOC) for facilitating direct communication between incarcerated people living with HIV (PLWH) and case managers to whom they will be referred after release. **CHALLENGES** • Earlier-than-expected inmate releases. • Ensuring appropriate technology capacity of case management agencies (including equipment) and logistics for confidential video conferencing. • Correctional staff awareness and understanding of Health Insurance Portability and Accountability Act (HIPAA) policies. • Ensuring program alignment with DOC requirements. **SUCCESSES** • Increased inmate comfort with discharge plan and community-based case manager and improved linkage to care. • Improved relationships between the DOC staff and case management agencies.
Virginia Department of Health – Active Referral Virginia **TARGET POPULATION** PLWH across Virginia in need of linkage to or re-engagement in HIV care	**GOALS AND OBJECTIVES:** To establish linkage to care after HIV diagnosis as well as linkage to HIV-positive clients who have not accessed care or have fallen out of care.* **CHALLENGES** • Staff turnover, including at community-based organizations with which the Active Referral disease intervention specialist (DIS) staff links clients. • Obtaining complete and accurate data on newly diagnosed cases because of incomplete reporting or provider reluctance to share data. • Managing overlap in perceived and actual responsibilities of participating staff. **SUCCESSES** • Establishment of effective two-way communication between patient navigators and DIS. • Improved client linkage to care. • Sustainability achieved as a result of successful pilot and the integration of protocols into DIS responsibilities.
Louisiana State University, Health Science Center and Louisiana Department of Health and Hospitals, Office of Public Health - Louisiana Public Health Information Exchange (LaPHIE) Southern and Central Louisiana **TARGET POPULATION** Out-of-care PLWH in Louisiana	**GOALS AND OBJECTIVES:** To establish and test a bi-directional public health information data system (pulling from surveillance data and electronic health records) to create a provider alert when out-of-care HIV-positive clients interface with the state hospital systems in any way. Alert creates opportunity to link client to HIV care and services. **CHALLENGES** • Collaboration with diverse partners across the healthcare system. • Identifying and operating within legal and ethical parameters relative to sharing health data—proved doable, legal, and ethical but provided comprehensive vetting. • Numerous tests needed to ensure proper function of the communications. **SUCCESSES** • Between 2009 and 2013, over 1,000 messages delivered, alerting clinicians of an opportunity to reengage a PLWH in HIV care; more than 1,000 PLWHA were brought back into care.

* When this work began, the standard of care from HIV diagnosis to linkage to care was 90 days; however, organizations looking to replicate this work should use the revised standard of care and link PLWH to care within one month of diagnosis.

Retention in Care

New York-Presbyterian Hospital (NYP) – My Health Profile Continuity of Care Record

New York, NY

TARGET POPULATION

Members in a special needs plan for PLWH

GOALS AND OBJECTIVES

To implement a continuity of care record (CCR) as a personal health record to ensure timely, high-quality, and better-coordinated care, and to improve clinical outcomes and quality of life.

CHALLENGES

- Ensuring sustainability of the initiative in light of technology and infrastructure changes.
- Rapidly changing field of health information technology (HIT).

SUCCESSES

- Illustrated that HIV-positive clients with low health literacy would adopt a CCR at similar rates to more affluent and higher educated populations.
- Multi-stakeholder (case managers, clinicians, patients) appreciation and utilization of the CCR; improved cross-provider communication; improved client autonomy and retention in care.
- CCR design went on to inform statewide patient portal system.

Prescription of ART & Medication Access

Virginia Department of Health – Care Coordination

Virginia

TARGET POPULATION

PLWH across Virginia recently released from corrections

GOALS AND OBJECTIVES

To make referrals of incarcerated clients upon release from the Virginia Department of Corrections (DOC) more proactive so as to improve uptake of ADAP medications.

CHALLENGES

- Clarifying distinct roles between care coordinators (whose primary function is to work with DOC, pharmacies, ADAP/benefits counselors, and community partners) and other partners.
- Unpredictable nature of discharge dates (e.g., released on good behavior).
- Homelessness and housing instability upon release from DOC.

SUCCESSES

- Effective communication with DOC allows partners to obtain timely care and benefits (e.g., ART supply at discharge).
- Initiative expansion from state prisons to local jails.
- Securing and provision of ART at the time of release.

Beyond the Care Continuum: Addressing HCV Comorbidity & Coinfection

University of California, San Francisco's San Francisco General Hospital HIV Clinic – Hepatitis Treatment Expansion Initiative

San Francisco, CA

TARGET POPULATION

Urban PLWH coinfected with HCV

GOALS AND OBJECTIVES

To expand San Francisco General Hospital (SFGH)'s hepatitis c virus (HCV) work and increase capacity to evaluate and treat HCV among their coinfected clients by transitioning from a clinic-wide hepatitis initiative to a dedicated hepatitis clinic care model with a multidisciplinary team that meets twice monthly.

CHALLENGES

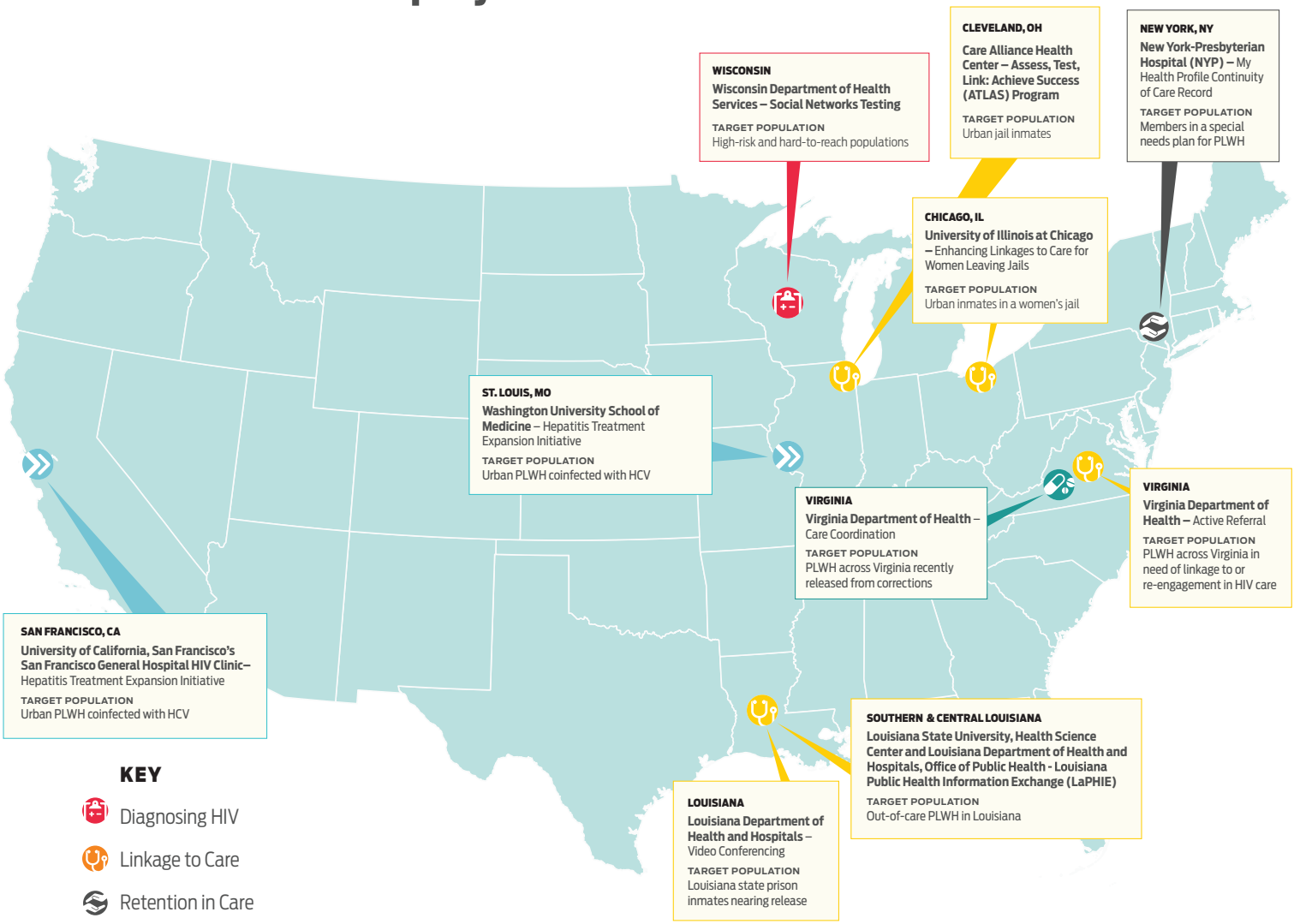
- Long period of time to initially establish the care model.
- Maintaining staff awareness of rapidly evolving HCV information and treatment options.
- Navigation of complex Medicaid and other coverage options for HCV treatments.

SUCCESSES

- 45% increase in treatment capacity during SPNS award; to date, progress made toward eradicating HCV at large in the clinic.

	• 100% cure rate in patients treated for HCV. • Treatment of HCV in clients who may otherwise have been excluded from treatment in clinical trials or other care settings (i.e., able to treat even the most difficult of cases). • Increased awareness among patients of new HCV treatment options. • Increased community awareness and replication of SFGH HCV model.
Washington University School of Medicine – Hepatitis Treatment Expansion Initiative St. Louis, MO **TARGET POPULATION** Urban PLWH coinfected with HCV	**GOALS AND OBJECTIVES** To create a multidisciplinary HCV team and a "co-located care with a specialist" model; to improve HCV screening; and to cure coinfected clients of HCV. **CHALLENGES** • Client readiness for HCV treatment given misperceptions about side effects of current therapies (i.e., many clients aren't aware of the improved tolerance of current HCV medications). • Time and experience needed to navigate complex health insurance issues, pharmaceutical assistance programs, and secure coverage. **SUCCESSES** • Universal HCV screening and development of comprehensive coinfection client database. • Establishment of an HCV-trained team (lead physician, HCV nurse, specialty pharmacist). • Securing institutional and community buy-in on the expanded clinic services. • Improved clinic treatment capacity and engagement with specialized pharmacy to support coverage issues.

SPNS Grantee Map By Location



KEY

- Diagnosing HIV
- Linkage to Care
- Retention in Care
- Prescription of ART & Medication Access
- Beyond the Care Continuum: Addressing HCV Comorbidity and Coinfection

Diagnosing HIV

Diagnosing HIV

In the U.S., approximately 1 in 8 HIV-positive individuals are unaware of their status.[10] Awareness of HIV status is a necessary first step to link people living with HIV into medical care and move them along the HIV Care Continuum toward retention in HIV primary care, and ultimately, viral suppression.

A critical first step is educating and offering HIV testing to increase the number of persons who know their HIV status and linking them to HIV primary care. Once individuals know their status and are linked to care, they are far less likely to engage in risky behaviors and, thus, are less likely to transmit the virus. Current research has found that individuals who are unaware of their HIV status, and those diagnosed but not in medical care, account for 91.5% of new HIV transmissions.[11] Conversely, adherence to HIV medications can lead to decreased transmissibility by 96%, underscoring the importance of identifying HIV cases and securing treatment for these individuals.[12]

The Centers for Disease Control (CDC) and the U.S. Preventive Services Task Force (a government group of doctors and scientists) call for routine HIV screening for adolescents and adults and at least annual testing for persons at increased risk for HIV infection; HIV testing is considered a preventive service offering.[13, 14, 15]

Increasing access to testing for HIV offers both public and individual health benefits. But a host of barriers prevent people from being tested, such as lack of access to health care; lack of perceived risk; competing priorities, particularly those related to basic survival needs; substance use and mental health issues; stigma; and more.

In the U.S., the burden of HIV is not distributed equally. At the time of this manual's publication, gay and bisexual men, including youth, black, gay and bisexual men; Black females; persons living in the

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[10] CDC. HIV in the United States: At a Glance. Fact Sheet. Available at: **www.cdc.gov/hiv/pdf/statistics_basics_ataglance_factsheet.pdf.**

[11] Skarbinski, J et al, Human Immunodeficiency Virus Transmission at Each Step of the Care Continuum in the United States, *JAMA Intern Med.* 2015; 175(4):588–596, published online February 23, 2015.

[12] Cohen MS, Chen YQ, McCauley M, et al; HPTN 052 Study Team.Prevention of HIV-1 infection with early antiretroviral therapy. *N Engl J Med.* 2011.11;365(6):493-505.

[13] The CDC recommends routine HIV screening for adults and adolescents ages 13-64 and the U.S. Preventive Services Task Force recommends HIV screening for individuals ages 15-65.

[14] CDC. HIV Testing. November 5, 2015. Available at: **www.cdc.gov/hiv/testing/**

[15] U.S. Preventive Services Task Force. Final Recommendation Statement: Human Immunodeficiency Virus (HIV) Infection: Screening. December 2016. Available at: **www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/human-immunodeficiency-virus-hiv-infection-screening**

Southern U.S.; youth; persons who inject drugs; and transgender persons are particularly affected. These groups are also most likely to be hard to reach and out of care.

Innovative intervention models such as the Wisconsin Department of Health Services' Social Networks HIV Testing Program (Social Networks Testing) can readily identify high-risk target populations, test them, and link high-risk target populations into care. In fact, Social Networks Testing (also known as Social Networks Strategy)[16] has tested and diagnosed more HIV-positive people than more traditional outreach methods. Thus, Social Networks Testing may be more effective and a better use of staff time for contacting undiagnosed HIV-positive people than more common approaches.[17]

[16] Social Networks Testing is the intervention name used by the Wisconsin Department of Health Services during their SPNS Intervention. This intervention may also be known by the CDC name of "Social Networks Strategy."

[17] Kimbrough LW, Fisher HE, Jones KT, et al. Accessing Social Networks With High Rates of Undiagnosed HIV Infection: The Social Networks Demonstration Project. *AJPH.* 2009;99(6): 1093–99.

Improving Health Outcomes

Moving Patients Along the HIV Care Continuum and Beyond

INTERVENTIONS AT-A-GLANCE | INTERVENTION SUMMARY TABLE

Diagnosing HIV

INTERVENTION OVERVIEW & REPLICATION TIPS

Social Networks Testing
Wisconsin Department of Health Services

Linkage to Care

INTERVENTION OVERVIEW & REPLICATION TIPS

Assess, Test, Link: Achieve Success (ATLAS) Program
Care Alliance Health Center (OH)

Enhancing Linkages to Care for Women Leaving Jail
University of Illinois at Chicago

Video Conferencing Intervention
Louisiana Department of Health and Hospitals

Active Referral Intervention
Virginia Department of Health

Louisiana Public Health Information Exchange (LaPHIE)
Louisiana State University, Health Science Center and Louisiana Department of Health Hospitals, Office of Public Health

Retention in Care

INTERVENTION OVERVIEW & REPLICATION TIPS

My Health Profile
New York-Presbyterian Hospital

Prescription of ART & Medication Access

INTERVENTION OVERVIEW & REPLICATION TIPS

Care Coordination Intervention
Virginia Department of Health

Beyond the Care Continuum: Addressing HCV Comorbidity and Coinfection

INTERVENTION OVERVIEW & REPLICATION TIPS

Hepatitis Treatment Expansion Initiative
University of California, San Francisco, San Francisco General Hospital HIV Clinic

Hepatitis Treatment Expansion Initiative
Washington University School of Medicine (MO)

INTERVENTION OVERVIEW & REPLICATION TIPS

Social Networks Testing

Wisconsin Department of Health Services, Wisconsin

The table below provides a general overview of the Social Networks Testing intervention so readers can assess the necessary steps required for replication. Social Networks Testing demonstrates that members of high-risk groups are often more effective at identifying and recruiting HIV-positive and at-risk individuals than traditional testing and outreach models.

Intervention at-a-Glance

Step 1	**Identify and Enlist Recruiters** Recruit HIV-positive or high-risk HIV-negative individuals whose social networks align with the target population for your proposed intervention. These individuals have likely previously tested at your agency.
Step 2	**Engage Recruiters** Recruiters receive orientation, interviewing, and coaching. This requires one key staff person to serve as the primary point of contact for Recruiters throughout the project.
Step 3	**Solicit Network Associates** Recruiters reach out to a set number of individuals within their social networks (known as Network Associates) and connect them to HIV counseling, testing, and referral. The number of recruited Network Associates is typically capped around 20.
Step 4	**Provide Counseling, Testing, and Referral** Provide HIV counseling and testing to Network Associates and, as appropriate, active linkage to care. If Network Associates appear to be good fits as Recruiters, approach them about the position and, if interested, the process begins again.
Step 5	**Connect to a Linkage-to-Care Specialist** After someone tests HIV positive, connect them to a dedicated Linkage-to-Care Specialist who serves as a patient navigator and provides short-term, more intensive care management and coordination services for patients to help them identify and overcome barriers to care.

Source: Wisconsin Department of Health Services. *Social networks HIV testing program manual: a recruitment program for HIV counseling, testing, and referral services.* August 2015.

Resource Assessment Checklist

Organizations should walk through a Resource Assessment (or Readiness) Checklist to assess their ability to conduct this work. If organizations do not have these components in place, they are encouraged to develop their capacity so that they can successfully conduct the Social Networks Testing intervention. Questions to consider include:

- ☐ Does your organization have a Counseling, Testing, and Referral program and, if not, does it have the capacity to establish one?
- ☐ Does staff have expertise in interviewing, counseling, testing, outreach, data collection, and project management and, if not, is there a plan in place to hire (if needed) and train staff to obtain this expertise?
- ☐ Has your organization identified a target population(s) and does the organization have experience working with this population? If not, is there a plan in place to access (and work with) this population?
- ☐ Does your organization have access to HIV-positive or high-risk HIV-negative individuals linked by social networks to your target audience? If not, is there a plan to access these individuals?
- ☐ Does your organization offer a range of HIV prevention services or have a strong formal referral relationship in place with an organization that does?
- ☐ Does your organization offer HIV primary care services or have a strong formal relationship in place with an organization that does?
- ☐ Is there a referral tracking system in place and, if not, does your organization have the capacity to develop one?
- ☐ Does your organization have—or can it free up—adequate time for staff to implement this intervention? The CDC recommends having at least two staff members who are trained in the intervention and a budget of 20 hours total per week for Social Network Testing activities. That said, it may be possible to weave some Social Network Testing intervention activities into existing HIV counseling and testing activities, such as screening potential new Recruiters as part of broader risk assessment screenings. This will depend on what scale your organization wants the intervention.

Source: Wisconsin Department of Health Services. *Social Networks HIV Testing Program Manual: A Recruitment Program for HIV Counseling, Testing, and Referral Services.* August 2015.

Centers for Disease Control and Prevention (CDC). Social Network Strategy: Frequently Asked Questions. n.d. Available at: **https://effectiveinterventions.cdc.gov/docs/default-source/sns/15-sns-frequently-asked-questions-handout-final.pdf?sfvrsn=0.**

Setting the Stage: Grantee Intervention Background

Wisconsin is a low-to-moderate HIV incidence state; however, diagnoses and prevalence rates in certain populations or parts of the state are comparable to other heavily impacted populations nationwide.[18]

Like many other parts of the country, Wisconsin—primarily Milwaukee—has seen an alarming spike in the number of new HIV diagnoses among young MSM. In the few years leading up to the SPNS intervention, new infections among males age 13–29 had nearly doubled. Over an eight-year period, Milwaukee saw a 140% increase in HIV incidence in young (under the age of 30) black MSM.[19] Among all people with HIV in the U.S., young, black MSM are among the least likely to be aware of their infection[20] and experience lower levels of engagement in HIV care and viral suppression than other HIV-infected populations.

Over an eight-year period, Milwaukee saw a **+140% increase** in HIV incidence in young black MSM.[19]

In response to rising HIV rates, the Wisconsin Department of Health Services launched its first Social Networks HIV Testing Strategy (Social Networks Testing) at select sites.[21] Social Networks Testing is a recruitment intervention for HIV counseling, testing, and referral services. (The core concept, goals, and intervention steps of "Social Networks Testing" may also be known as "Social Networks Strategy," as referred to by the CDC.)

The goal of Social Networks Testing is to leverage existing social networks to find members of high-risk groups and reach persons unaware of their HIV status, provide HIV testing, and link newly diagnosed clients into HIV primary care within 1 month of their diagnosis with the support from a Linkage-to-Care Specialist. Clients are also linked to HIV Partner Services.[22] The Wisconsin Department of Health Services' addition of a dedicated Linkage-to-Care Specialist, including more robust patient navigation services following diagnosis, are unique

The goal of Social Networks Testing is to leverage existing social networks to find members of high-risk groups and reach persons unaware of their HIV status.

[18] Wisconsin Department of Health Services. *Social Networks HIV Testing Program Manual: A Recruitment Program for HIV Counseling, Testing, and Referral Services.* August 2015.
[19] Wisconsin Department of Health Services. *Social Networks HIV Testing Program Manual: A Recruitment Program for HIV Counseling, Testing, and Referral Services.* August 2015.
[20] CDC. HIV Prevalence, Unrecognized Infection, and HIV Testing Among Men Who Have Sex With Men—Five U.S. Cities, June 2004–April 2005. MMWR.2005;54(24):597–601.
[21] Wisconsin Department of Health Services. *Social Networks HIV Testing Program Manual: A Recruitment Program for HIV Counseling, Testing, and Referral Services.* August 2015.
[22] Wisconsin Department of Health Services. *Social Networks HIV Testing Program Manual: A Recruitment Program for HIV Counseling, Testing, and Referral Services.* August 2015.

The **Institute of Healthcare Improvement (IHI) Collaborative Learning Model** informs the Wisconsin Department of Health Services' Social Networks Testing intervention. IHI's Collaborative Learning Model is a systematic approach to healthcare quality improvement in which systems, organizations, and providers implement and measure small-scale interventions, then share their experiences to accelerate learning and implementation.

additions to this intervention. Because the Ryan White HIV/AIDS Program is focused primarily on care and treatment of PLWH and Social Networks Testing targets an earlier stage of the Care Continuum, the Wisconsin Department of Health Services created more intensive linkage services to ensure that newly diagnosed patients connect with Ryan White-funded care and treatment services and actively progress along the Care Continuum.

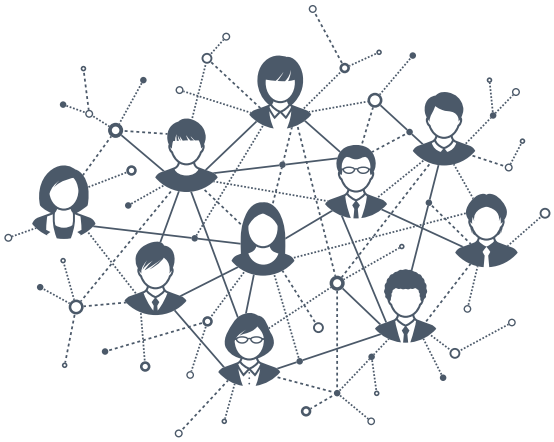
Wisconsin received SPNS funding as part of the **Systems Linkages and Access to Care for Populations at High Risk of HIV Infection (System Linkages) Initiative.**

Description of Intervention Model

CHALLENGE ACCEPTED

THE CHALLENGE: finding hard-to-reach, high-risk, HIV-positive, previously undiagnosed individuals and actively linking them to HIV primary care and services.

Intervention Model: Social Networks Testing



The HIV positivity rate among all people tested in a given area is variable, but often less than 1%. According to Wisconsin's Department of Health Services, "This suggests a need for more efficient targeting that will reach persons at increased risk who are not being reached with current methods."[23]

Using Social Networks Testing, HIV-positive and high-risk HIV-negative persons are enlisted to recruit people from their social, sexual, and/or drug-using networks who may be at risk for HIV infection. They are linked to HIV counseling, testing, and referral services.[24, 25] This strategy is based on the concept that social networks often overlap with sexual or drug-use networks, where HIV risk activities occur. The principle behind Social Networks Testing is that people in the same social network share similar risk behaviors and have a similar chance of being HIV infected. This creates a refined, targeted, and focused approach. Social Networks Testing builds on the relationships and trust among people in shared social networks and the influence they can exert on one another.

[23] Wisconsin Department of Health Services. *Social networks HIV testing program manual: a recruitment program for HIV counseling, testing, and referral services.* August 2015.
[24] Jordan WC, Tolbert L, Smith R. Partner notification and focused intervention as a means of identifying HIV-positive patients. *J Natl Med Assoc* 1998;90:542–6.
[25] CDC. Use of social networks to identify persons with undiagnosed HIV infection—Seven U.S. Cities—October 2003-September 2004. *MMWR* 2005;54:601–6

This approach is a viable strategy for identifying undiagnosed HIV infection.[26] For example: a CDC study on Social Networks Strategy (aka Social Networks Testing) found that 6% of study participants were newly identified as HIV-positive—six times the national positivity rate.[27] Additionally, 82% of participants in the CDC study, while HIV-negative, were deemed high-risk; this offered a critical opportunity to provide risk-reduction counseling where it was most needed.[28] Social Networks Testing demonstrates that members of high-risk groups are often more effective in identifying persons with HIV or at risk for HIV than traditional testing and outreach methods. Social Networks Testing may be particularly effective for reaching individuals who cannot be reached through other outreach activities.

Social Networks Testing staff screen and enlist HIV-positive and high-risk HIV-negative individuals as "Recruiters" to identify individuals from their social, sexual, and drug-using networks who may be at risk for HIV infection. Recruiters refer these members from their social networks (known as Network Associates) to HIV counseling, testing, and referral services. If Network Associates appear to be good candidates, then they are approached about becoming a Recruiter and the cyclical nature of the intervention continues.

Social Networks Testing: Terminology 101

Recruiter: An HIV-positive or high-risk HIV-negative individual with social networks that intersect with the organization's target population(s). Recruiters serve a short-term position and require coaching (rather than more formal training). Recruiters identify Network Associates in their social networks (e.g., friends and sex or drug partners) that they believe are at risk for HIV, and refer or accompany them to HIV testing.

Network Associate: An individual who is believed to be HIV-positive or at risk for HIV, who comes in for testing based on the encouragement of a Recruiter (who is a person they know). Network Associates are representative of the target audience(s) that the CBO is trying to reach.

Positivity Rate Findings from Social Networks Testing Project[29]

Wisconsin's Social Networks Testing Project 2.94%

Publically Funded Sites 0.91%

[26] CDC. Use of social networks to identify persons with undiagnosed HIV infection—Seven U.S. Cities—October 2003-September 2004. *MMWR* 2005;54:601–605.
[27] Wisconsin Department of Health Services. *Social networks HIV testing program manual: a recruitment program for HIV counseling, testing, and referral services.* August 2015.
[28] CDC. Use of social networks to identify persons with undiagnosed HIV infection—Seven U.S. Cities—October 2003-September 2004. *MMWR* 2005;54:601–605.

Wisconsin Department of Health Services has rolled out two iterations of the Social Networks Testing intervention. The Department recommends that state or local health departments looking to replicate this intervention consider selecting just a few sites when starting, where larger concentrations of the target audience can be reached, and where protocol adherence can be closely monitored, instead of a full statewide rollout. The Social Networks Testing intervention can be integrated and replicated directly by CBOs and other provider sites so long as they offer—or have a collaborative partner that offers—HIV testing and counseling. The items in the **Resource Assessment (Readiness) Checklist**, however, must still be met.

When rolled out on a smaller scale with full protocol compliance, Wisconsin's Social Networks Testing project yielded a much higher positivity rate (2.94%) than the overall positivity rate at publicly funded test sites (0.91%).[29]

[29] Wisconsin Department of Health Services. *Social networks HIV testing program manual: a recruitment program for HIV counseling, testing, and referral services.* August 2015.

Staffing Requirements & Considerations for Replication

Staffing Capacity	**Based on the Wisconsin Department of Health Services work, here are the types of staff capacity and characteristics necessary to replicate this intervention.** • Staffing depends, in part, on the scale of the intervention and whether it is being used to bolster other agency outreach and recruitment strategies, or if it is being done as a stand-alone intervention. The CDC recommends having at least two staff trained in the intervention, and 20 hours total per week budgeted for Social Networks Testing activities, although some intervention activities can be woven into existing clinic HIV counseling and testing activities (such as screening potential new Recruiters as part of broader risk assessment screenings). A Linkage-to-Care Specialist or other similar personnel to provide patient navigation and short-term intensive care management should be available to patients who test HIV positive.
Staff Characteristics	• Recruiters are either HIV-positive or high-risk HIV-negative individuals. (Note: Recruiters do not have to disclose their HIV status, or engagement in or degree of high-risk behaviors to the Network Associates they recruit.) • They are in good standing with your organization, have accessed your site, and are considered trusted community leaders. • Recruiters are comfortable and knowledgeable with the topic of HIV. • They are representative of the target population(s) or have access to target population(s) through their existing social networks. • They desire to help their community and see value in Social Networks Testing. • Recruiters should interact well with peers. • Recruiters should be able and willing to ➢ access persons in social networks representative of the target population(s) (Note: These do not need to be people the Recruiter has engaged in high-risk behaviors with—only that the Recruiter believes the person has engaged in high-risk behavior(s) and is currently unaware of their HIV status). ➢ recruit members of social networks to refer to testing. ➢ participate in two or more total meetings with testing staff. ➢ agree and adhere to confidentiality and other project policies and procedures.
Disqualifying Characteristics	Persons should not be considered as Recruiters if • they have a history of coercion or violence against partners or peers • have mental illness in an acute stage • have their health or social needs jeopardized or delayed because of participation in the project • their primary interest in the program is receiving an incentive (if one is given).

Sources: CDC. Social Networks Strategy: Frequently Asked Questions. n.d. Available at: **https://effectiveinterventions.cdc.gov/docs/default-source/sns/15-sns-frequently-asked-questions-handout-final.pdf?sfvrsn=0.**

Wisconsin Department of Health Services. *Social Networks HIV Testing Program Manual: A Recruitment Program for HIV Counseling, Testing, and Referral Services.* Final Report. August 2015.

Replication Tips for Intervention Procedures and Client Engagement

This section provides tips for readers interested in replicating the intervention and, where applicable, includes grantee examples for further context.

Recommendations for getting started:

- **Appoint a project leader and champion** who will serve as a point of contact to drive implementation of the intervention and be a key point of contact when challenges arise.
- **Select a specific number of agencies** to implement the strategy (if partnering with other organizations). These should ideally be organizations with which you have an established, trusting relationship.
  - **Walk through the intervention** components with these organizations.
  - **Determine a key target audience(s).** This should be as specific as possible (e.g., gender, sexual orientation, race/ethnicity, age group), although not so narrow as to create obstacles for recruitment. Surveillance data should be consulted to inform the target audience(s).
  - **Establish communication channels** with dedicated staff at partner agencies and conduct monitoring.
  - **Create a protocol** and ensure key decision makers—and representatives of the target audience—have reviewed and provided feedback before it is implemented, and modify as necessary. Protocol standardization facilitates intervention consistency across sites and quicker ramp-up of new staff.
  - **Establish a Memorandum of Understanding (MOU)** outlining the roles and responsibilities of respective parties.
- Agencies should **determine the timing of their intervention** (i.e., goal dates for anticipated steps to occur) as well as any measurable outcomes they'd like to track.
- Determine if agencies can **conduct HIV testing outside of traditional business hours**, to better reach members of the target population.
- Encourage test sites to have **testing staff trained and familiar in Social Networks Testing**. Even clients trained under traditional HIV testing and counseling may be qualified candidates as Recruiters.
- **Conduct a Plan-Do-Study-Act (PDSA) cycle** in advance of formal rollout and make modifications as necessary. (If modifications are made in this step, or others, be sure to update the protocol accordingly.)
- **Conduct data collection** to assess the intervention.

Integrating Social Networks Testing into Current Testing Services

Review existing testing programs to assess how to integrate Social Networks Testing into existing systems and processes. This includes the following:

- **Secure agency and staff buy-in** of the intervention.
- **Assess current testing strategies and service delivery** to determine how best to access target population(s) and enlist Recruiters.

- **Assess current outreach test site locations** and discontinue services with little or no prevalence of newly identified HIV-positive people, as necessary.
- **Identify key staff to implement the program;** reassign or redefine their roles and responsibilities to include Social Networks Testing activities. (Staff members with volunteer management experience will work directly with Recruiters.)
- **Promote the strategy** to and involve participation of the target population. Agencies may want to establish an advisory group, comprised of target population representatives, to provide input and feedback at the onset of the intervention and during periodic check-ins.

Providing Incentives

Agencies will need to decide whether or not to use incentives in their Social Networks Testing intervention. Wisconsin has experienced successes and challenges with incentives. In an effort to avoid incentive "shopping," Wisconsin has limited incentives to $20, to be split evenly (as two $10 gift cards) between the Recruiter and Network Associate.[30] However, despite this precaution, Wisconsin has still encountered "incentive shopping." For example, although Recruiters may bring in an HIV-positive Network Associate who has not disclosed their status to the Recruiter, or Recruiters are unaware that the Network Associate is a routine tester, the Wisconsin Department of Health Services began seeing far too many of these instances for them to be chance.

Identifying Recruiters and Engaging Clients

Wisconsin Department of Health Services' Social Networks Testing contains five primary phases.[31]

1. **Recruiter Enlistment Phase:** Create procedures to identify potential Recruiters from the target population(s). The testing agency then uses these procedures to identify clients or volunteers who are HIV-positive, at high-risk for HIV, or have many high-risk people within their existing social network, and enlist them to become Recruiters.

   Wisconsin Department of Health Services strategically placed marketing materials around the agency. These explained the project, potential benefits, roles and responsibilities, and how to learn more, if interested.

2. **Recruiter Engagement Phase:** This phase includes orientation, interviewing, and coaching. The testing agency works with the Recruiter to provide initial orientation about the program and training (coaching) on the process. Orientation can be done 1:1 or as a group. Recruiters receive basic tools and tips on how to talk about and refer peers to HIV testing. Coaching is conduced 1:1 and is repeated regularly as the Recruiter works with peers. (Note: All intervention participants, including Recruiters, need to be aware of and compliant with the Health Insurance Portability and Accountability Act [HIPAA]).

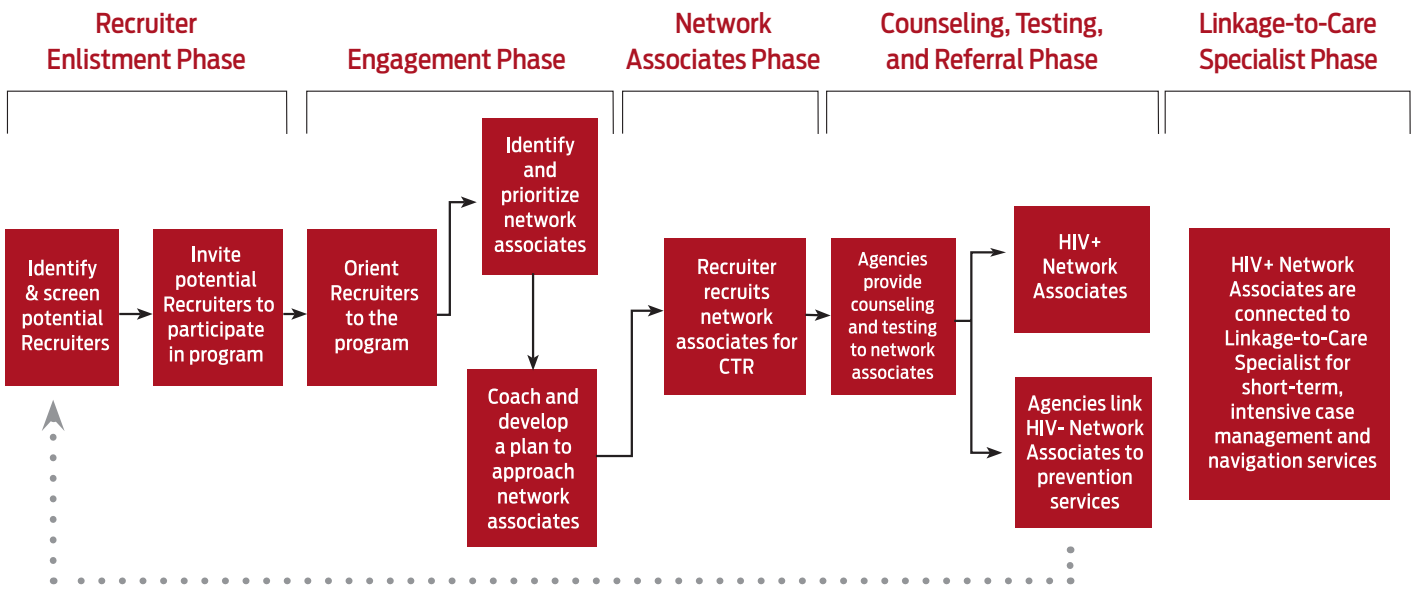
[30] Wisconsin Department of Health Services. *Social networks HIV testing program manual: a recruitment program for HIV counseling, testing, and referral services.* August 2015.
[31] Wisconsin Department of Health Services. *Social networks HIV testing program manual: a recruitment program for HIV counseling, testing, and referral services.* August 2015.

3. **Recruitment of Network Associates Phase:** Recruiters reach out to friends, acquaintances, co-workers, drug use partners, sex partners, or other peers participating in high-risk behaviors for HIV. The Recruiter offers to connect them to HIV testing. These peers are referred to as "Network Associates."

4. **Counseling, Testing, and Referral (CTR) Phase:** Based on referral from the Recruiter, Network Associates come into the agency for HIV testing. They are identified as Social Networks Testing participants when this occurs, since Recruiters either accompany them into the clinic or give them a card which lists the clinic information (e.g., address and phone number), the intervention (in this case, Social Networks Testing), and the Recruiter (via ID number, not name) who referred them.

5. **Linkage-to-Care Specialist Phase:** After someone tests HIV positive, they are connected to a dedicated Linkage-to-Care Specialist who serves as a patient navigator and provides short-term, more intensive care management and coordination services for patients to help them identify and overcome barriers to care. Because each client has a unique set of barriers, individual tasks performed by the Linkage-to-Care Specialist are tailored to patient needs. These barriers are addressed through a standardized process including intake, assessment, service plan development and implementation, transition planning, and discharge. The Linkage-to-Care Specialist actively links newly diagnosed individuals to HIV primary care and provides assistance to navigate the healthcare system. Upon engagement into services, the Linkage-to-Care Specialist focuses on actively building out the patient's participation in their health care, building engagement-in-care skills, and increasing knowledge around treatment adherence and maintenance. The Linkage-to-Care Specialist works with the patient for up to nine months. During this period the patient must attend at least three HIV medical visits with a prescribing provider prior to discharge. At intake, the

The Five Phases of Wisconsin's Social Networks Testing Intervention for Counseling, Testing, Referral, and Linkage to Care



Source: Modified from CDC. Four Phases of SNS for CTR. n.d. Available at: **https://effectiveinterventions.cdc.gov/docs/default-source/sns/28-phases-diagram.png?sfvrsn=0.**

patient is informed of the time-limited nature of the Linkage-to-Care Specialist services and that the goal for the patient after this phase is continued engagement in HIV medical care, treatment adherence, and increased autonomy in order to transition to self-management or traditional case management services. The Linkage-to-Care Specialist stays in frequent communication with the patient during this phase and then, in anticipation for discharge, case conferences with the broader HIV team to facilitate a warm transition. This role is much more intensive and robust than traditional CDC Social Networks Testing which typically ends after referral to care.

These phases typically follow the process indicated in the flow chart on page 24.

In order to expand the Social Networks Testing intervention, the testing agency identifies good candidates from the group of Network Associates to be the next generation of Recruiters. This is referred to "Expanded Social Networks Testing."

This is done as follows: After individuals receive HIV counseling, testing, and referral services, they are screened as potential new Recruiters. When a person comes in for an HIV test, the tester can assess what the person's sexual network might look like and whether he/she may be a good candidate for the Social Networks Testing intervention. If so, the tester will tell them about the program, explain what it is and how Recruiters work, and if they are interested, set up a time for an orientation.

Preparing Recruiters

Recruiter orientation is an important part of the strategy. Initially, a description of the project and processes can be done one-on-one, or as a group if several Recruiters are identified around the same time. Orientation covers the following topics:

- Description of the strategy, its purpose, and target population(s)
- Benefits of the strategy
- Description of roles and responsibilities
- Statement that participation is voluntary and may be discontinued at any time
- Confidentiality standards, including signing a confidentiality agreement
- Name and contact information for point person at the agency who will serve as Recruiter's primary point of contact
- Addressing any Recruiter concerns
- Going over the participation agreement form.

Interview Recruiters to elicit Network Associate information and "coach" Recruiters on approaching Network Associates. This process (unlike orientation) should be one-on-one with an agency member and the Recruiter. During this time, the agency staff member assists the Recruiter in identifying social network members who meet the target population.

Together, the agency staff member and Recruiter develop a plan to link Network Associates to HIV testing. The staff member and Recruiter discuss how to broach the subject and may even practice some role-playing to increase the Recruiter's comfort level and confidence. Additionally, the staff member and

Recruiter will discuss where to identify Network Associates (e.g., any locations, events, and times they're likely to see them).

As part of this step, the agency staff member and Recruiter typically identify how many Network Associates they are going to approach as well as talk through any anticipated challenges in recruiting Network Associates. Recruiters are allowed to bring in whatever number of Network Associates they feel comfortable with; this typically ranges from 1–20 Network Associates.[32] If Recruiters are more comfortable bringing in a smaller number of Network Associates, that's okay. The ceiling for Network Associates is around 20, since it is rare for Recruiters to have many more individuals with an unknown HIV status that they feel comfortable approaching.

Throughout this process, the staff maintains regular contact with the Recruiter. This is done through regularly scheduled check-ins as well as a dedicated staff point person who answers questions and helps address problems or challenges that may arise during the process.

Transitioning Recruiters Off the Intervention

Recruiters are transitioned when

- the original recruiting plan is complete, or Recruiter agrees there are no additional Network Associates to target in their network;
- they begin linking persons who are not part of the target population;
- Recruiter begins approaching people outside their existing network;
- they begin purposefully linking individuals they know have been diagnosed with HIV, or show other signs that they are motivated by and working for incentives rather than the intent of the intervention; or
- the Recruiter discontinues voluntary participation.

When Recruiters are transitioned, they are reminded of the infinite nature of the confidentiality agreement and thanked for their participation. Agencies should also underscore that Recruiters are always welcome to ask questions or raise concerns even after their role has been completed. In addition, if their network grows or changes, they can link additional Associates to testing in the future.

Securing Buy-in

When replicating this intervention, some important parts of buy-in are 1) transparency, 2) managing expectations, and 3) agreement on, and adherence to intervention and agency protocols.

Offer a series of community meetings to explain the strategy and how it benefits individual and community health. This can help bolster buy-in and address questions up front.

When collaborating with external partners and/or rolling out the intervention internally, it is critical that roles and responsibilities be clarified, including addressing any questions or concerns up front. This

[32] CDC. Social Networks Strategy: Frequently Asked Questions. n.d. Available at: **https://effectiveinterventions.cdc.gov/docs/default-source/sns/15-sns-frequently-asked-questions-handout-final.pdf?sfvrsn=0.**

proactive approach creates a more streamlined system, and reduces challenges down the line. Additionally, when all parties believe they're supporting the same effort—and feel supported in doing so—it fosters a sense of teamwork and helps nurture further buy-in.

Protocol development should not be done in a vacuum. Bring stakeholders and representatives from the intervention target audience to provide input into the design of the protocols. Modify the protocol as necessary. All participating agencies and staff should have a copy of this protocol. Conduct onsite visits with each participating agency to ensure that both management and frontline staff understand the strategy and the protocol and that all are in agreement. Provide intervention trainings.

Having this protocol in place, with MOUs that clearly outline objectives, expectations, and expected goals and outcomes, will help ensure fidelity in monitoring and promote intervention success.

Overcoming Implementation Challenges

Agency staff turnover is one of the biggest challenges to implementing interventions. Address this by assigning staff that seem genuinely excited about the new intervention and have a protocol in place that clearly outlines processes so the learning curve for new staff members is minimized.

Incentives can prove challenging. They may require additional funds and can possibly create "bad motivation" for Recruiters. This can be addressed by launching the intervention without incentives, since they are not a required component of the work, or by setting a quota for each recruiter. For example,

> *"You can tell a Recruiter that he/she can bring in up to three Network Associates. If, after interviewing the three Network Associates, you discover that they do not disclose risk or already know that they are HIV positive, you can offer the agreed upon incentives to the Recruiter, thank them for participating in the program, and 'release' them. If, on the other hand, you find that the Network Associates disclose risk and do not know their HIV status, you can go back to the recruiter and 'renew the contract.'"*[33]

It can also be challenging to monitoring the number of intervention-referred Network Associates. For example, Wisconsin found that some individuals came in via referral from a Recruiter; however, these were routine testers who regularly came into the clinic and had received harm-reduction counseling countless times. It was quite possible that the Recruiter was unaware of the Network Associates' HIV testing regularity; however, agency testers were unclear how to log the Network Associates' visits in the agency's database (i.e., Do they go under "Social Networks Testing" or not?). Determine how to treat these situations and proactively discuss them with staff to reduce possible data and intervention-tracking challenges. The decision should be included in the protocol around policies and procedures.

Stigma is also a challenge. Some individuals fit the profile for a Recruiter but believe their involvement in the intervention would suggest a positive HIV status—something they were not comfortable sharing or

[33] CDC. Social Network Strategy: Frequently Asked Questions. n.d. Available at: **https://effectiveinterventions.cdc.gov/docs/default-source/sns/15-sns-frequently-asked-questions-handout-final.pdf?sfvrsn=0.**

insinuating to their Network Associates. These individuals are not enlisted as Recruiters; however, such reactions create a window to discuss disclosure issues and stressors with these clients.

Promoting Sustainability

The Social Networks Testing intervention can readily be woven into existing HIV testing, counseling, and referral services. Another way to integrate Social Networks Testing into existing services is to further align it with Partner Services; once a positive individual is identified and engaged in Partner Services, staff could also broach the topic/interest of becoming a Recruiter. Wisconsin has not tried this latter approach but agrees that it could be possible and worth investigation; however, this will require some discretion on the part of Partner Services staff. This is something that should be broached after the person has successfully linked to HIV primary care and has had time to deal with their diagnosis.

Conclusion

By leveraging existing social networks to find members of high-risk groups and reach persons unaware of their HIV status, target populations can readily be identified, tested, and linked to HIV primary care. Social Networks Testing is a promising intervention, since it often yields higher rates of testing positivity than more traditional outreach methods using current staff and agency testing infrastructure.

For organizations already devoting staff time to testing and outreach, Social Networks Testing appears to be a good use of staff time to effectively reach undiagnosed HIV-positive people—a critical first step to moving them along the HIV Care Continuum, meeting national goals, reducing transmission risk, and improving overall health outcomes.

Other Related Resources

- **System Linkages and Access to Care for Populations at High Risk of HIV Infection (System Linkages) Initiative**
- **CDC. Social Networks Strategy for Counseling, Testing, and Referral. Effective Interventions**
- **CDC. Social Networks Strategy for Counseling, Testing, and Referral. High Impact Prevention**

Linkage to Care

Linkage to Care

Linkage to care, as it relates to the Care Continuum, refers to linking individuals who are HIV-positive to HIV primary care. This may include newly diagnosed individuals, persons previously diagnosed who have never been linked to care, or persons who have fallen out of care and are being re-linked. The standard of care for linkage is that persons who are diagnosed with HIV be linked to HIV medical care as soon as possible and no later than 30 days following diagnosis.[34]

Underserved populations, including many racial, ethnic, and sexual minorities, face numerous structural, financial, and cultural barriers that impede their linkage to and engagement in care.[35] Of those newly diagnosed, 74.5% of persons age 13 and older are linked to care within one month of diagnosis though just 56.5% are retained in HIV care.[36] Delaying HIV care and treatment can lead to poorer health outcomes and earlier death, instead of better health.[37] Delaying initiation of HIV care and treatment also creates the opportunity for HIV transmission to occur.[38]

Addressing several key areas has been found to improve linkage and re-engagement in care, including

- removal of structural barriers;
- increased social support services;
- use of peers, client navigation, and care coordination;
- a culturally responsive approach;
- appointment scheduling and follow up;
- timely and active referrals post-diagnosis;
- integrated one-stop-shop care delivery (e.g., co-located substance use, mental health, and other service offerings);

[34] CDC. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2014. *HIV Surveillance Supplemental Report* 2016;21(No.4). **www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-supplemental-report-vol-21-4.pdf** Accessed September 16, 2016.

[35] CDC. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2014. *HIV Surveillance Supplemental Report* 2016;21(No.4), Table 5a. **www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-supplemental-report-vol-21-4.pdf** Accessed September 16, 2016.

[36] CDC. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2014. *HIV Surveillance Supplemental Report* 2016;21(No.4). **www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-supplemental-report-vol-21-4.pdf** Accessed September 16, 2016.

[37] Horstmann E, Brown J, Islam F, et al. Retaining HIV-infected Clients in Care: Where are We? Where Do We Go From Here? *Clin Infect Dis.* 2010;50:752–61.

[38] AIDSInfo. *Guidelines for the Use of Antiretroviral Agents in HIV-1-Infected Adults and Adolescents.* Clinical Guidelines Portal. Available at: **https://aidsinfo.nih.gov/guidelines**

- active approaches to reach and re-engage individuals who are out of care—for instance, using the Internet and mobile devices (e.g., for social networking, texting); and
- assistance with entitlements/benefits paperwork to secure additional financial, insurance, identification, and social support services.

A warm transition is also critical. This is the act of "applying social work tenets to public health activities for those with chronic health conditions, including HIV-infection."[39] Often the HIV tester is linking a client to another provider and possibly even to another facility. What this linkage looks like, how active it is, how comfortable the client is made to feel in establishing yet another new relationship shortly after receipt of their diagnosis can either help increase the likelihood of linkage to care or add to challenges that complicate it. Without a caring, supportive, and warm transition approach, pre-existing barriers to care and other stressors will continue to take priority.[40]

SPNS has tested and identified interventions that have proven effective in linking, re-engaging, and retaining clients in care, even for some of the hardest-to-reach and most vulnerable populations.

[39] Jordan AO, Cohen LR, Harriman G, et al. Transitional Care Coordination in New York City Jails: Facilitating Linkages to Care for People with HIV Returning Home from Rikers Island. JAIDS (Suppl). 2013;(2); S212–219.

[40] Jordan AO, Cohen LR, Harriman G, et al. Transitional Care Coordination in New York City Jails: Facilitating Linkages to Care for People with HIV Returning Home from Rikers Island. JAIDS (Suppl). 2013;(2); S212–219.

Improving Health Outcomes

Moving Patients Along the HIV Care Continuum and Beyond

Diagnosing HIV

INTERVENTION OVERVIEW & REPLICATION TIPS

Social Networks Testing
Wisconsin Department of Health Services

Linkage to Care

INTERVENTION OVERVIEW & REPLICATION TIPS

▶ Assess, Test, Link: Achieve Success (ATLAS) Program
Care Alliance Health Center (OH)

Enhancing Linkages to Care for Women Leaving Jail
University of Illinois at Chicago

Video Conferencing Intervention
Louisiana Department of Health and Hospitals

Active Referral Intervention
Virginia Department of Health

Louisiana Public Health Information Exchange (LaPHIE)
Louisiana State University, Health Science Center and Louisiana Department of Health Hospitals, Office of Public Health

Retention in Care

INTERVENTION OVERVIEW & REPLICATION TIPS

My Health Profile
New York-Presbyterian Hospital

Prescription of ART & Medication Access

INTERVENTION OVERVIEW & REPLICATION TIPS

Care Coordination Intervention
Virginia Department of Health

Beyond the Care Continuum: Addressing HCV Comorbidity and Coinfection

INTERVENTION OVERVIEW & REPLICATION TIPS

Hepatitis Treatment Expansion Initiative
University of California, San Francisco, San Francisco General Hospital HIV Clinic

Hepatitis Treatment Expansion Initiative
Washington University School of Medicine (MO)

Assess, Test, Link: Achieve Success (ATLAS) Program

Care Alliance Health Center (OH)

The table below provides a general overview of the Assess, Test, Link: Achieve Success (ATLAS) intervention so readers can assess the necessary steps required for replication. This intervention integrates jail-based case managers into the community HIV case management system to engage and subsequently link incarcerated individuals as they transition from jail to community.

Intervention at-a-Glance	
Step 1	**Provide HIV Testing or Promote Existing Testing in Jail** Offer and advertise HIV testing.
Step 2	**Conduct Client Needs Assessment** Meet with client after intake and conduct screenings and needs assessment.
Step 3	**Create a Discharge Plan** Draft a discharge plan complete with referrals for HIV primary care and social support services.
Step 4	**Case Conference with Community-based Case Manager** Collaborate with community-based case manager to ensure communication and "warm linkage" upon release to promote continuity of care.
Step 5	**Offer Health Education (if possible)** Provide health education classes (open invitation) covering HIV/sexually transmitted infections (STIs), hepatitis, tuberculosis, and general health and heath management.
Step 6	**Prepare Clients for Discharge** Finalize discharge plans, document all referrals, and furnish a copy of discharge plan and client's jail chart medical review.
Step 7	**Follow up Post-Release** Follow up with clients and community-based case managers to ensure connection to care.
Step 8	**Support Community Outreach** Support community-based case managers in locating clients who fall out of care.

Sources: Care Alliance Health Center. *Special Projects of National Significance (SPNS) Program: Enhancing Linkages to HIV Primary Care in Jail Settings Initiative, EnhanceLink Program Description Form*. 2012.

Care Alliance Health Center. Enhancing Linkages to HIV Primary Care & Services in Jail Settings. Final Report. 2012.

Resource Assessment Checklist

Organizations should walk through a Resource Assessment (or Readiness) Checklist to assess their ability to conduct this work. If organizations do not have these components in place, they are encouraged to develop their capacity so that they can successfully conduct this jail intervention. Questions to consider include:

- ☐ Does your organization offer case management services? If so, is there a case manager who passes jail clearance requirements?
- ☐ Does your organization have access to a jail within your service area with which you can partner?
- ☐ Is HIV testing already taking place within the jail, or is your organization able to provide it?
- ☐ Does your organization offer HIV primary care and social support services or have relationships in place with agencies that do? If not, is your organization able to establish and maintain such relationships?
- ☐ Is your organization filling an unmet need for the jail, or is another organization already offering the services and intervention being proposed?
- ☐ Is staff interested in working with and providing compassionate services to incarcerated individuals?

Sources: Care Alliance Health Center. *Special Projects of National Significance (SPNS) Program: Enhancing Linkages to HIV Primary Care in Jail Settings Initiative, EnhanceLink Program Description Form*. 2012.
Care Alliance Health Center. *Enhancing Linkages to HIV Primary Care & Services in Jail Settings*. Final Report. 2012.

Setting the Stage: Grantee Intervention Background

The Care Alliance Health Center created and implemented the ATLAS program in downtown Cleveland's Cuyahoga County Corrections Center. Ohio's Cuyahoga County has approximately 1.2 million residents, including Cleveland's 438,000 residents. The demographics of the incarcerated population at this urban jail are approximately 80% male, with a capacity of 1,800 and 26,000 bookings annually (depending on the size of the specific jail facility).[41] *Booking* is the process of entering an official charge against an arrested person on a police register.

"We, as a community, are responsible for getting people on their meds and into care, so if we can partner with the jails to optimize care then that benefits us all."

– Dr. Ann Avery,
Care Alliance Principal Investigator

of incarcerated individuals pass solely through jails.[48]

Prior to coming to jails, many individuals have not received health care. If they have, services are often fragmented due to co-occurring health conditions or barriers that interfere with access (e.g., substance use, mental illness), and structural inequalities, including poverty, unstable housing, limited educational attainment, and un- or underemployment.[42, 43] Vulnerable populations are less equipped to address health issues when faced with competing needs related to survival, such as food and shelter.[44] In these communities, health disparities may lead to risky behaviors, which in turn contribute to acquisition of HIV infection, and crime leading to arrest.[45, 46]

These activities are particularly critical given the nature of the jail environment, where marginalized individuals with a range of social and health problems congregate in one place. More people pass through jails than prisons, offering a unique and promising opportunity to intervene and engage them.[47, 48] However, such individuals are often discharged quickly, creating an important—but small—window of time for conducting an intervention.[49, 50] Discharge planning and associated linkage to care upon release are critical, since the majority of detainees never move on to prisons and, instead, return to the same communities they recently left.

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[41] Care Alliance Health Center. Enhancing Linkages to HIV Primary Care & Services in Jail Settings. Final Report. 2012.
[42] Kushel MB, Hahn JA, Evans JL, et al. Revolving Doors: Imprisonment Among the Homeless and Marginally Housed Population. *Am J Public Health*. 2005;95:1747–52.
[43] Centers for Disease Control and Prevention (CDC). *HIV Testing Implementing Guidance for Correctional Settings.* 2009.
[44] Zellman H. Philadelphia FIGHT Institute for Community Justice. *Establishing the Need for an Intervention Program.* 2012.
[45] HRSA, SPNS. Enhancing Linkages and Access to Care in Jails. *What's Going on @ SPNS.* July 2012.
[46] Flanigan TP, Zaller N, Beckwith CG, et al. Testing for HIV, Sexually Transmitted Infections, and Viral Hepatitis in Jails: Still a Missed Opportunity for Public Health and HIV Prevention. *JAIDS (Suppl).* 2010;55(2):S78–S83.
[47] Zack B, Hane L. At the Nexus of Correctional Health and Public Health: Policies and Practice, American Public Health Association Annual Meeting. 2015 [Presentation]
[48] Spaulding AC, Seals RM, Page MJ, et al. HIV/AIDS among inmates of, and releases from, US correctional facilities, 2006: declining share of epidemic but persistent public health opportunity. *PLos One.* 2009;4(11):1–8.
[49] Spaulding AC, Perez SD, Seals RM, et al. Diversity of Release Patterns for Jail Detainees: Implications for Public Health Interventions. *Amer J of Public Health.* 2010;1010(S1):S347–52.
[50] Tinsley M, Health Resources and Services Administration (HRSA), HIV/AIDS Bureau (HAB), Special Projects of National Significance (SPNS) Program. Enhancing Linkages to Primary Care & Services in Jail Settings: A Critical HIV/AIDS Bureau Initiative. [Presentation.]
[51] Spaulding AC, Seals RM, Page MJ, et al. HIV/AIDS Among Inmates of, and Releases From, US Correctional Facilities, 2006: Declining Share of Epidemic but Persistent Public Health Opportunity. *PLos One.* 2009;4(11):1–8.

Care Alliance received SPNS funding as part of the Enhancing Linkages to HIV Primary Care & Services in Jail Settings (EnhanceLink) to address these barriers and link transitioning clients from jail into HIV primary care upon release.

Description of Intervention Model

CHALLENGE ACCEPTED

THE CHALLENGE: finding hard-to-reach, high-risk, HIV-positive, previously undiagnosed individuals and actively linking them to HIV primary care and services.

Intervention Model:
Transitional Jail Care Coordination with Strength-Based Case Management

The ATLAS intervention involves:

1. creation and implementation of a jail-based HIV testing and linkage case management program (if jail-based HIV testing program does not currently exist);
2. providing client education and risk reduction counseling;
3. identifying HIV-positive clients and providing linkage case management during their jail stay;
4. coordinating resources and communication with community and jail providers so clients connect to medical care and social services while incarcerated and upon community release;
5. encouraging retention in care upon release to the community; and
6. conducting client follow up, as necessary.[52,53]

The Continuum of Care was in full effect and the client has a collaborative release plan in place.[54]

The intervention involves transitional jail care coordination grounded in strength-based case management. Strength-based case management focuses on identification of personal and environmental resources that assist clients in reaching their goals (specifically medical and social goals).

This intervention includes a particular innovation: the integration of jail-based case managers into the community's HIV case management network, which enhances linkages and subsequent retention in care. As the ATLAS program describes:

> *"Jail-based case managers become integrated into the HIV case management network in the community, meeting with supportive services providers monthly, forming strong working relationships which provide ease and open communication when case conferencing and providing referrals for care upon release. The Continuum of Care was in full effect and the client has a collaborative release plan in place."*[54]

[52] Care Alliance Health Center. Special Projects of National Significance (SPNS) Program: Enhancing Linkages to HIV Primary Care in Jail Settings Initiative EnhanceLink Program Description form. 2012.
[53] Care Alliance Health Center. Enhancing Linkages to HIV Primary Care & Services in Jail Settings. Final Report. 2012.
[54] Care Alliance Health Center. Special Projects of National Significance (SPNS) Program: Enhancing Linkages to HIV Primary Care in Jail Settings Initiative, EnhanceLink Program Description Form. 2012.

Staffing Requirements & Considerations for Replication

Staffing Capacity

Based on the ATLAS work, here are the types of staff necessary to replicate this intervention.

Jail-based case manager: An important part of the intervention is a case manager based within the jail who also actively engages with community-based case managers. This facilitates more thorough discharge planning and more active linkage. This position requires:

- typically a Bachelor's degree in social work, psychology, public health, or related field; and
- training in case management techniques and (if conducting research) training in evaluation methods and human subjects research protocols.

Although this is a full-time position, organizations serving a smaller caseload and, thus, implementing a smaller-scale intervention can have a case manager in the jail part-time. A part-time position would split their time between the community and the jail or have the jail help facilitate in-reach. (See also Text Box "**Replicating on a Budget.**") Splitting time between the jail and the community is not necessarily a bad thing. If agencies already invest in case management personnel, no new monies are needed; instead, this requires re-imagining or re-defining the jail as an extension of the community—which it is.

Community-based case manager: It is imperative that the jail-based case manager has a community-based case manager where he/she can refer recently released clients . This community-based manager may work within the same agency as the jail-based case manager, or at a partner organization. Regardless, the two persons should have open lines of communication and a means for confirming linkage to, and subsequent follow-up of, appointments. This work is part of the case manager's regular caseload; it may include clients who have experienced recidivism. While clients are still detained, community-based case managers can keep apprised of their status and anticipated discharge dates by contacting the jail-based case manager for updates. This position has similar schooling requirements as the jail-based case manager.

HIV tester: A full-time HIV tester works in the jail to bolster testing and identification of HIV-positive clients. This is done because prior to the intervention, there was minimal access to or routinization of HIV testing within the jail. This position requires:

- a high school degree; and
- training in HIV testing and education.

Organizations replicating this work should investigate the degree of existing HIV testing within their jails. For ATLAS, the introduction of more extensive HIV rapid testing is supported by the Ohio Department of Health.

Staffing Capacity

Optional positions:

Part-time community-based research assistant: This position filled evaluation requirements for the SPNS initiative; however, agencies without a more formal evaluation component do not necessarily require it. Responsibilities mainly included conducting community follow-up evaluation. If used, this position requires:

- a Bachelor's degree in social work, psychology, public health, or a related field; and
- training in case management techniques and protocols for evaluation and human subjects research.

Part-time data management assistant: Without a more formal evaluation component, this position is not required. Primary role involves input and assistance with study data. This position requires similar schooling requirements as the part-time community-based research assistant.

Health educator: This individual provides health education classes within the jail, covering topics such as HIV, STIs, hepatitis, tuberculosis, and risk reduction. This position requires:

- a Bachelor's in education, social work, psychology, public health, or a related field; and
- training in HIV education, risk reduction, and HIV testing/counseling.

It is highly recommended, if possible, to incorporate a health educator into the intervention. After SPNS funding, ATLAS was not able to sustain this position so it has woven educational topics into clients' broader risk and needs assessment discussions, reinforced by the community-based case manager during discharge planning.

Staff Characteristics

Jail-based case managers need to be

- flexible to the unique challenges of working with people who are in jail and those soon-to-be released;
- able to meet jail security clearance criteria;
- genuinely interested in working with incarcerated individuals; and
- willing to follow jail policies and guidelines while in the jail.

All staff should:

- have an extensive awareness of community resources;
- be able to foster cooperation and communication with jail staff and community-based case managers;
- be able to deliver culturally appropriate services;
- offer non-judgmental services;
- ideally be reflective of racial and ethnic backgrounds of clients; and
- ideally have language ability (e.g., Spanish) as appropriate for your jail population.

Sources: Care Alliance Health Center. *Special Projects of National Significance (SPNS) Program: Enhancing Linkages to HIV Primary Care in Jail Settings Initiative, EnhanceLink Program Description Form.* 2012.

Replication Tips for Intervention Procedures and Client Engagement

This section provides tips for readers interested in replicating the intervention and, where applicable, includes grantee examples for further context.

It is useful to know what the process looks like for clients when they arrive at the jail in order to better understand the transitional jail care coordination intervention work. Upon arrest, clients come into the jail and are booked—a process that typically involves recording of the individual's name, fingerprinting, "mug shot," assessment of any personal property, and review of any outstanding warrants. For these first few hours, they're kept in a general holding area.

After approximately 4–6 hours, incarcerated individuals are taken to an intake "pod area." Pods are large dormitories housing many people in one room. This is where clients receive their initial health screening with a jail nurse.

After screening with the jail nurse, the intervention steps officially begin. These include:[55, 56]

1. **Providing HIV Testing.** The HIV tester offers opt-in rapid HIV testing to incarcerated individuals during their routine health assessments, and to those housed during their first 24 hours in the jail intake pods. (Note: Opt-out testing is preferable; however, space constraints or jail policies may prohibit intervention staff from meeting with every individual and providing routine opt-out testing.)

   Testing also takes place via medical staff referral. Other ways the HIV tester seeks to increase awareness of and access to HIV testing, includes:

- Securing buy-in from correctional officers who can encourage people to sign up for testing.

HIV Testing in Jails

The CDC strongly recommends jail-based HIV testing, which is also consistent with national goals.

HIV testing in jails provides public health officials the opportunity to identify new cases and reestablish contact with previously diagnosed individuals, many of whom never entered care or have dropped out of care. The presence of incarcerated clients throughout the HIV Care Continuum, and all present in one place, underscores the strategic role jails have to play in curtailing the epidemic.

To be successful in structuring HIV programs in jails, healthcare and correctional officials will be well served to:

1) Understand the HIV Care Continuum from the standpoint of engagement interventions that promote participation;

2) Be aware of jail, community, and prison interventions that promote engagement in care and may already be in operation;

3) Anticipate and plan for the unique barriers that come with working in the unpredictable and evolving environment of jails; and

4) Be creative in designing engagement interventions suitable for both newly and previously diagnosed individuals.

Sources: de Voux, Spaulding AC, Beckwith, C et al. Early Identification of HIV: Empirical Support for Jail-based Screening PLos One. 2012;7(5):1–7. Rapp RC, Ciomcia R, Zaller N, et al. The Role of Jails in Engaging PLWHA in Care: From Jail to Community. *AIDS and Behavior*. 2013 (Suppl);17:S89-99.

[55] Care Alliance Health Center. Special Projects of National Significance (SPNS) Program: Enhancing Linkages to HIV Primary Care in Jail Settings Initiative, EnhanceLink Program Description Form. 2012.
[56] Care Alliance Health Center. Enhancing Linkages to HIV Primary Care & Services in Jail Settings. Final Report. 2012.

- Providing a brief 5-minute "elevator pitch" to the dorm area (if permissible) about the importance of testing. Local facts as well as access-to-care issues are highlighted to garner attention. This outreach is also provided to the general population "pods" as a way to extend the reach of the program.

2. **Meeting Client and Assessing Needs.** After intake, clients go to a long-term cell. Within a couple of days, the jail-based case manager visits HIV-positive clients (either newly diagnosed in the jail, or self disclosed during the health screening). The reason for meeting with the jail-based case manager is not advertised. The jail-based case manager and the client go to a private table outside of the general cell area, where the case manager describes the intervention.

   If the client agrees to participate, the case manager does a full needs assessment (typically taking 35–40 minutes); this includes assessing substance use, mental health symptoms, medical needs, housing needs, food access needs, support system, and any current medications.

   Discharge plans are then created, based on each client's specific needs. The jail-based case manager reviews the client's needs and discusses what type of community-based agency and medical care would be most appropriate. If a client is already connected to a community medical and/or social service provider, the case manager, discusses whether the client would like to re-connect with those agencies and secures the client's permission to make contact and share information. All communications and recommendations are documented through standard case management notes and documented release of information forms.

   Simultaneously, the jail-based case manager works with correctional staff to ensure the client has access to mental health, substance use, and any other services needed during their incarceration. The jail-based case manager also follows up with the jail infectious disease (ID) nurse to ensure HIV medications and HIV care services are coordinated during the client's jail stay.

3. **Creating a Discharge Plan.** Once the client and jail-based case manager determine which agencies to make referrals, the jail-based case manager contacts the agencies and sets up appointments for release. A discharge plan is drafted for the client. Discharge plans include referrals to mental health and/or substance use services, HIV primary care, housing, and other necessary services. The jail-based case manager works with the Ryan White community-based case manager at the agencies on the receiving end of the referrals, to ensure the client is connected directly to them or to a specific social worker once released. This close collaboration and communication between the jail-based case manager and the community-based case manager helps ensure continuity of care, from the jail to the community. It also facilitates a "warm transition" for the client.

   The jail-based case manager follows up with the client during regularly scheduled, even weekly, appointments while the client is incarcerated—though the client can request more frequent meetings if they wish to discuss HIV care, support, or have questions about their discharge plan.

Replicating on a Budget

Although the jail-based case management position is central to this intervention, there are three ways this work—or central components of this work—can be replicated on a smaller scale:

1. The same case manager manages clients in the jail and the community:

As intervention principal investigator Ann Avery explains, "During the initial three months following release, inmates often need additional assistance in connecting to services, and a consistent contact could better assist the individual…[and] without the additional task of collecting data for evaluation, the Interventionist role could effectively manage clients both in the jail and in the community."

2. Part-time jail-based case management:

The density of medical case management services should follow the density of HIV prevalence, so an area or jail with lower prevalence may not require a full-time, jail-based case manager. At its smallest scale, the intervention would need weekly visits from a case manager to establish relationships with jail staff and be better informed as to upcoming anticipated discharges.

3. Relationship building and inreach:

Avery adds, "An alternative is to create a relationship with the jail so that if someone comes in who is HIV positive, the jail can do inreach and knows to call your organization so you can send in your medical case manager."

4. **Case Conferencing with Community Provider.** The jail-based case manager conducts case conferencing with community-based medical providers and the Ryan White community case manager. These discussions take place throughout the client's stay and include coordination of appointments prior to client release.

Community-based Ryan White case managers can also contact jail-based case managers at any time to receive updates about their clients.

5. **Offering Health Education (If Possible).** Based on sexual and substance use-related risk factors identified during the baseline assessment, clients are referred to the intervention health educator.

All incarcerated individuals, not only those who test for HIV or those who disclose their HIV diagnosis, should be offered health education classes. This helps avoid stigma or disclosure issues. Topics range from HIV/STIs, hepatitis, and tuberculosis, as well as general health and health management. The jail, especially the jail medical staff, often sees value in the classes because they fill a need. Classes utilize large group discussions, hands-on activities, videos, and other instructional techniques. Given the unpredictability and often short stays within jail, classes should be concentrated to three classes over the course of a week; this helps ensure clients obtain all of the health and risk reduction information the classes have to offer prior to their release.

After SPNS funding, the ATLAS program was not able to sustain the health educator position. As such, harm reduction and health education tips have been woven into broader needs assessment discussions during discharge planning and are reinforced by the community-based case manager.

6. **Preparing Clients for Release**. Discharge plans (sometimes also called "release plans") are finalized and a copy is provided to clients. These plans should document all activities in the jail and include all plans and referrals made for the client for the time of release, along with the jail chart medical review.

The jail-based case manager helps apply for Medicaid and other services, if clients are not enrolled or these programs need to be re-activated upon release. Bus tickets are also available for release, as needed.

7. **Following up Post-Release.** Jail-based case managers conduct monthly follow-up after the client's release (providing additional referrals, as needed). This is done to ensure continued connection to care. Follow-up work also includes monthly meetings or phone calls with clients and contact with community-based medical providers and case managers.

8. **Supporting Community Outreach.** If clients drop out of care after release, the intervention staff collaborates with community outreach workers to locate them. This is accomplished by reaching out to other community corrections centers and monitoring jail and prison records and databases to see if the person has been reincarcerated, as well as checking emergency contact numbers and listed address(es).

   Nicknames/known aliases, identifying marks (such as tattoos), and places where the client likes to hang out should all be documented on the contact information form collected during the jail stay with other more traditional information (e.g., address, phone number) to help facilitate quicker outreach and re-linkage.

Intervention Preparation

An important part of preparing for a successful intervention in a jail setting includes familiarizing yourself with the jail—including jail policies.

For instance, the ATLAS health educator had to change program supplies, since pens with caps and blue ink pens are not allowed in the jail but click-style, black pens are. Paper handouts can be brought in, but they cannot be stapled or paper-clipped together. Cellphones are not allowed into the jail. While these may sound like very specific requests, it is imperative that outside organizations coming into the jail respect that they are guests—and that means abiding by the jail's rules and regulations. This may also mean that staff you want in the jail cannot pass required clearance standards. It is important to discuss both personal and programmatic requirements with jail administrators up front.

Jails require flexibility and creativity. For instance, some activities or areas of the jail that staff are allowed into one day may be different the next. Changes can occur because of lockdowns. These changes may affect a single day, or in instances where new/different corrections officers are placed in the jail (due to reassignment or turnover), it requires development of new relationships.

It is important, therefore, to prepare for the intervention by outlining how it will work and what the benefits are for the jail. This requires that agencies do their homework in advance, if they aren't already collaborating with the jail. The goal is to fill a real need that is not being addressed by other community agencies within the jail. As such, the preparatory research should include knowing which partner agencies

and contractors are working in the jail, and what they are doing there. Some of these agencies may even assist in helping you with correctional leadership buy-in and in partnering on aspects of your intervention.

Face-to-face meetings facilitate stronger working relationships and partnerships. In the age of electronic communication, it is easy to rely on technology; however, picking up the phone and having in-person meetings can help to move things forward and build stronger partnerships for your intervention.

> "I think it's important to ask good questions, particularly to the jail because it's easy to say, *'This is what we have and what we want to bring you, and you should do this.'* It's harder to go in with an open mind of what really is needed and what would be beneficial for both of us to do together."
>
> –Dr. Ann Avery,
> Care Alliance Principal Investigator

Education is also a key to a successful intervention. Educate corrections officers about HIV—and universal precautions and confidentiality—and continue to do periodic education.

Finally, offer a spectrum of services for all individuals, not just those who are HIV-positive, so as to provide a layer of privacy and protection for the clients.

Securing Buy-in

Identifying supporters in the jail administration is key to a successful intervention. The jail's medical department director and ID nurse are essential supporters of the project and may help advocate for the intervention with higher-ups in the jail administration. The medical director and ID nurse can help identify locations where the intervention team can provide services, as well as provide feedback to proposed protocols.

Meet with jail administration staff to refine the intervention and draft protocols. Provide trainings to medical and corrections staff to facilitate open dialogue and create an opportunity to address fears, misconceptions, and other concerns.

Be sure to collaborate with the community. Attend community events, including Ryan White Planning Council meetings, Regional Advisory Group prevention meetings, Ryan White Case Management Network meetings, and other places where key stakeholders congregate in order to foster working relationships, increase awareness about the intervention, and aid referrals to community organizations. Talk to community providers about how best to work together and share information to facilitate referrals and how often to have ongoing check-ins, since successful referrals and linkages rely on these relationships. Nurture these relationships to ensure everyone is on board, communicating regularly, and facilitating successful releases.

Overcoming Implementation Challenges

The nature of the jail setting is inherently challenging for several reasons:

- **High Staff Turnover:** To address staff turnover at the jail, provide regular education sessions, and prepare to re-introduce yourselves and the program throughout the intervention. Staff turnover at community-based organizations (CBOs) is also not uncommon. The jail-based case manager should keep in frequent contact with the CBOs.
- **Complicated Clients with Extensive Mental Health and Substance Use Issues:** Working with clients who have complex comorbidities involves patience. Intervention staff need to meet clients "where they're at" and ensure clients are connected to appropriate services both within the jail and via referral to CBOs upon discharge.
- **Mostly Open Jail Spaces to Meet Clients:** Open jail spaces are often the only places where intervention staff can meet with clients. Yet, confidentiality is critical. To help address this, work to de-identify the program as being HIV-specific (e.g., offering testing, health education, etc. to all individuals), work with the jail's medical director and ID nurse to find suitable locations for meeting with clients, and ensure that conversations are out of earshot from corrections officers.
- **An opt-in HIV testing program:** If the jail has an opt-in testing program, as was the case in the Cuyahoga County Corrections Center, advertisement of the availability and benefit of testing in numerous locations throughout the jail will be increasingly important.
- **Clients are Not Discharged:** It can be challenging to spend considerable time working on a discharge plan only to have the client ultimately sent to prison. Because the jail-based case manager receives lists from the jail and regularly communicates with jail staff, the "curve" at which they can accurately predict whether or not a client will be released—and when—improves. Continued communication with jail staff about predicted discharge dates is also important. Better assessment of discharge allows staff to focus on clients most likely to return to the community.

Promoting Sustainability

Ryan White HIV/AIDS Program funds may be able to support the transitional jail care coordination work. Care Alliance uses Part A transitional care coordination to sustain the jail-based case manager position and Part C funds to support the HIV tester role. Partnering with other agencies within the jail may also help promote sustainability of the intervention.

Conclusion

The transitional jail care coordination intervention helps address continuity of care issues as clients are released from the jail into the community. Although the time period from intake to release can be brief, it offers a critical window to engage an otherwise hard-to-reach population, intervene, and move them along the HIV Care Continuum. Many incarcerated individuals have undiagnosed mental illness, are unaware of their HIV status or are out of care at the time of incarceration, and suffer from many health disparities, making intervention all the more important.

"The single largest predictor of client success...is whether a client is actively linked to a Ryan White case manager in the community upon release."

–Dr. Ann Avery,
Care Alliance Principal Investigator

Community-based providers working with vulnerable populations would do well to investigate the feasibility of replicating a similar intervention. Jail interventions, however, cannot be successfully developed independently—partnerships with jail administrators are essential. The role of the Ryan White community-based case manager is also essential. The single largest predictor of client success, which is statistically associated with retention in care one-year post-release, is whether a client is actively linked to a Ryan White case manager in the community upon release.

Other Available Resources

- **Enhancing Linkages to HIV Primary Care & Services in Jail Settings Initative**
- **Enhancing Linkages to HIV Primary Care and Services in Jail Settings Evaluation Site**
- **Creating a Jail Linkage Program: Tools from the Integrating HIV Innovative Practices Project**
- **SPNS Initiative Web page and associated peer-reviewed journal articles**
- Certification as a health educator (available through the **National Commission on Health Education Credentialing**)

Improving Health Outcomes

Moving Patients Along the HIV Care Continuum and Beyond

INTERVENTIONS AT-A-GLANCE | INTERVENTION SUMMARY TABLE

Diagnosing HIV

INTERVENTION OVERVIEW & REPLICATION TIPS

Social Networks Testing
Wisconsin Department of Health Services

Linkage to Care

INTERVENTION OVERVIEW & REPLICATION TIPS

Assess, Test, Link: Achieve Success (ATLAS) Program
Care Alliance Health Center (OH)

▶ Enhancing Linkages to Care for Women Leaving Jail
University of Illinois at Chicago

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INTERVENTION OVERVIEW & REPLICATION TIPS

Hepatitis Treatment Expansion Initiative
University of California, San Francisco, San Francisco General Hospital HIV Clinic

Hepatitis Treatment Expansion Initiative
Washington University School of Medicine (MO)

Enhancing Linkages to Care for Women Leaving Jail

University of Illinois at Chicago

The table below provides a general overview of the Enhancing Linkages to Care for Women Leaving Jail intervention so readers can assess the necessary steps required for replication. This intervention integrates jail-based case managers to work with jail-based discharge planners and peers to support HIV-positive women as they transition from jail to the community.

Intervention at-a-Glance	
Step 1	**Provide HIV Testing in the Jail** Offer expanded HIV testing services marketed to women incarcerated in the jail facility.
Step 2	**Conduct Needs Assessment** Meet with clients to identify needs and identify community services to reduce barriers to linking to HIV primary care and supportive services.
Step 3	**Enroll Interested Women into Intervention** Conduct pre-intervention survey and enroll interested and eligible women into the intervention.
Step 4	**Create Discharge Plans** Develop discharge plans based on client needs, and review plans with client.
Step 5	**Jail-based Discharge Planner Provides "Warm Transition" to Transitional Case Manager** Jail-based discharge planner introduces clients to the intervention's transitional case manager who will assist clients in exercising their discharge plan on the "outside." Transitional case manager outlines what the "jail-to-community linkage" component looks like and what clients can expect.
Step 6	**Provide Clients HIV Medical Care During Jail Stay** HIV-positive women visit the jail medical facility and receive necessary services.
Step 7	**Provide Health Education Sessions** When possible, provide additional educational support to women around HIV and risk reduction.
Step 8	**Release Clients from Jail** Clients are offered transportation services to housing and actively connected to community-based Ryan White case managers.

Step 9	**Case Management Services Begin** Community-based case managers help facilitate medical care and social service appointments and coverage.
Step 10	**Provide Transportation and Peer Accompaniment to Appointments** Peers provide additional support around transportation and patient navigation-related services to help ensure clients attend appointments.
Step 11	**Follow-up with Clients** Follow-up is conducted to ensure clients are accessing services and, if they've fallen out of care, community outreach is conducted.

Source: University of Illinois at Chicago, School of Public Health. *Enhancing Linkages to Care for Women Leaving Jail.* Final Report. August 31, 2012.

Resource Assessment Checklist

Organizations should walk through a Resource Assessment (or Readiness) Checklist to assess their ability to conduct this work. If organizations do not have these components in place, they are encouraged to develop their capacity so that they can successfully conduct the Enhancing Linkages to Care for Women Leaving Jail intervention. Questions to consider include:

- ☐ Does your organization offer case management services? If so, is there a case manager who passes jail clearance requirements?
- ☐ Does your organization have access to a jail within your service area with whom you can partner?
- ☐ Is HIV testing already taking place within the jail? If not, is your organization able to provide it?
- ☐ Does your organization offer HIV primary care and social support services, or are there relationships in place with agencies that do? If not, are you able to establish and maintain such relationships?
- ☐ Is your organization filling an unmet need for the jail, or is another organization already offering the services and intervention you're hoping to replicate?
- ☐ Do you have staff interested in providing compassionate, transitional "jail-to-community linkage" services to incarcerated women?

Source: University of Illinois at Chicago, School of Public Health. *Enhancing Linkages to Care for Women Leaving Jail.* Final Report. August 31, 2012.

Setting the Stage: Grantee Intervention Background

The University of Illinois at Chicago (UIC), Community Outreach Intervention Projects, School of Public Health was funded as part of the SPNS Enhancing Linkages to HIV Primary Care & Services in Jail Setting (EnhanceLink) initiative. Prior to the SPNS grant, UIC had not worked in the jail; however, it had extensive experience conducting community work, treating populations that were frequently incarcerated, and employing a large service staff, including those reflective of the community.

In this project, the UIC intervention team worked with the Cook County Jail—one of the largest jail facilities in the country. Cook County Jail represents the sole jail for the city of Chicago (which has approximately 2.8 million residents). At the jail, there are approximately 100,000 intakes annually and an average daily population of 10,158. Of these, the women's division has a capacity of 704 beds.[57]

UIC chose to focus its intervention specifically on women and sought to better understand the associations between HIV infection, incarceration, primary care, and vulnerabilities related to gender inequality, and how best to remove barriers, actively link these women to myriad health and social support services, and assist them in obtaining the maximum benefit from entitlements and social services.[58]

Description of Intervention Model

CHALLENGE ACCEPTED

THE CHALLENGE: linking HIV-positive, highly disadvantaged women during the brief jail stay window to extensive community services upon release.

Intervention Model

Transitional Jail Care Coordination with a Prevention Case Management

The UIC intervention sought to improve the following:[59]

- HIV counseling and testing within the jail
- Access to and use of primary care for HIV-positive women (beginning with needs assessment and discharge planning in the jail and continuing into the community)
- Post-release follow-up for 6 months
- Understanding among intervention participants about HIV, risk reduction, and the importance of accessing services.

Critical components of the intervention include the integration of jail-based transitional case managers, active linkage to Ryan White case managers, assistance in securing identification (IDs), and use of peers as outreach workers/patient navigators to accompany clients to medical and social service appointments and who have shared life experiences.

[57] Draine J, Ahuja D, Altice FL, et al. Strategies to Enhance Linkages Between Care for HIV/AIDS in Jail and Community Settings. *AIDS Care*. 2011;23(3):366-77
[58] University of Illinois at Chicago, School of Public Health. *Enhancing Linkages to Care for Women Leaving Jail.* Final Report. August 31, 2012.
[59] University of Illinois at Chicago, School of Public Health. *Enhancing Linkages to Care for Women Leaving Jail.* Final Report. August 31, 2012.

The UIC intervention is based on the Centers for Disease Control and Prevention's (CDC's) Prevention Case Management Model. This model was designed to address complex needs for persons likely to have difficulty practicing HIV risk reduction behaviors.*[60] The model has been evaluated in prisons but, prior to the SPNS initiative, had rarely been evaluated in jails.[61]

At large, Prevention Case Management includes the following seven essential components,[62, 63] pictured at right.

More specifically, within the UIC intervention, these seven steps played out as follows:

Table: University of Illinois Prevention Case Management Model in Action

COMPONENTS	DETAILS
Client Recruitment and Engagement	Protocols to recruit and engage clients, staff training
Screening and Assessment	Demographic information, STI/HIV risks, substance use, sexual history, mental health, social support, skills to reduce risks, barriers to safer behavior, protective factors and strengths
Client-Centered Discharge Plan	Primary care and treatments, adherence to treatment, secondary prevention, social services, education and information, mental health services
HIV Risk-Reduction Counseling	Perceived risk and susceptibility, intentions to change, knowledge, self-efficacy, barriers, social support
Active Coordination and Follow-up of Services	Collaboration, written referral process protocols, referral tracking system, annual assessment, mechanism for emergency psychological or medical services
Monitoring and Reassessment of Needs	Ongoing assessment of needs, risks, and progress, revision of plans
Discharge and Maintenance	Timeline, attainment of goals, evaluation

[60] U.S. Centers for Disease Control and Prevention. HIV prevention case management—guidance. September 1997. Available at: **http://stacks.cdc.gov/view/cdc/13299**
[61] University of Illinois at Chicago, School of Public Health. *Enhancing Linkages to Care for Women Leaving Jail.* Final Report. August 31, 2012.
[62] Centers for Disease Control and Prevention. HIV prevention case management—guidance. September 1997. Available at: **http://stacks.cdc.gov/view/cdc/13299**.
[63] Myers J, Zack B, Kramer K, et al. Get Connected: An HIV Prevention Case Management Program for Men and Women Leaving California Prisons. *Am J Public Health.* 2005;95(10):1682–84.
* Prevention case management model is no longer readily used by CDC.

These activities are particularly critical because women represent a significant and growing segment of jail detainees and persons living with HIV.[64] Compared to men, more women report homelessness, reduced adherence to prescribed antiretroviral therapy (ART), worse health, more severe substance use disorders, more chronic health conditions, and more chronic mental and psychiatric disorders.[65] Additionally, as the number of expressed needs increase, women are more likely to drop out of care than men.[66]

Women often report different needs upon release than men. As such, gender-responsive intervention strategies are recommended in order to link and, ultimately, retain women in HIV programs post-release and move them along the HIV Care Continuum.[67]

Women in the Cook County Jail are highly disadvantaged (for example, evidence of poverty, substance use, mental health problems, lack of adequate housing, hunger, limited social support, and high HIV risk behavior) and require extensive services on the outside in order to successfully link into HIV care. Most of the women enrolled in the SPNS project had been on ART, but less than one-half reported taking medication the week before incarceration, and one-half of the women had CD4 counts below 350, a level associated with greater likelihood of opportunistic infections and cancers.[68]

The time period immediately following correctional release is a critical juncture for engagement as it represents a time of increased vulnerability. Moreover, during this time, engagement into medical care is often a lower priority, particularly if basic needs have not been addressed. The UIC intervention model includes transportation to a safe destination at discharge; assistance in securing safe housing, mental health support, and harm reduction services; a 1-800 emergency contact number; and expedited linkage—and peer accompaniment to—medical care.[69]

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[64] Williams CT, Kim S, Meyer J, et al. Gender Differences in Baseline Health, Needs at Release, and Predictors of Care Engagement Among HIV-positive Clients Leaving Jail. *AIDS Behav.* 2013;17(Suppl 2):S195-202.

[65] Binswanger IA, Merrill JO, Krueger PM, et al. Gender Differences in Chronic Medical, Psychiatric, and Substance-Dependence Disorders Among Jail Inmates. *Am J Public Health.* 2010;100(3):476-82.

[66] Williams CT, Kim S, Meyer J, et al. Gender Differences in Baseline Health, Needs at Release, and Predictors of Care Engagement Among HIV-positive Clients Leaving Jail. *AIDS Behav.* 2013;17(Suppl 2):S195-202.

[67] Williams CT, Kim S, Meyer J, et al. Gender Differences in Baseline Health, Needs at Release, and Predictors of Care Engagement Among HIV-positive Clients Leaving Jail. *AIDS Behav*. 2013;17(Suppl 2):S195-202.

[68] University of Illinois at Chicago, School of Public Health. *Enhancing Linkages to Care for Women Leaving Jail.* Final Report. August 31, 2012

[69] University of Illinois at Chicago, School of Public Health. *Special Projects of National Significance (SPNS) Program, Enhancing Linkages to HIV Primary Care in Jail Settings Initiative, EnhanceLink Program Description Form*. 2012.

Staffing Requirements & Considerations for Replication

Staffing Capacity

Based on the UIC work, here are the types of staff necessary to replicate this intervention.

HIV tester: Because the UIC intervention includes expanded HIV rapid testing over the weekend, an HIV tester is necessary to provide HIV testing and counseling.

Jail-based discharge planner: The discharge planner meets with HIV-positive women and works with them to create a plan that addresses their specific medical care and barriers. In most instances, this plan includes linkage to HIV primary care and other medical services. (UIC links clients to the Ruth. M. Rothstein CORE Center in Cook County—a comprehensive, "one-stop-shop" medical center.) Following the meeting the discharge planner introduces the women to one of the intervention's "transitional" case managers.

Transitional case manager: These case managers work with women inside the jail and after they reenter the community. During the course of the SPNS study, there were two female transitional case managers; however, depending on the size of the jail and an organization's proposed intervention, one individual or even a part-time individual may suffice. Transitional case managers review the discharge plan with the women; they explain what the transition into the community will look like and how they'll provide support to the women during this time. For those interested, transitional case managers will provide transportation to housing services upon the client's release from jail. The transitional case manager also provides a "warm transition" to a community-based Ryan White case manager and follows up to ensure the client has successfully connected to the services and appointments identified in the discharge plan.

Peers: Peers provide outreach, transportation, and patient navigation support services. They are reflective of the clients being served and are able to help women overcome barriers and remain engaged in care.

Community-based Ryan White case manager: The transitional case manager connects clients to a community-based Ryan White case manager. This Ryan White case manager serves as the key point of contact for the client post-release. Communication and coordination between the transitional case manager and the Ryan White case manager is critical.

Optional positions:

Research and data assistant: This position filled evaluation requirements for UIC during the SPNS funding period; however, agencies without a more formal evaluation component will not necessarily require this.

	Health educators: The health educator provides health education sessions on HIV, risk reduction, general health, and emotional stressors. It is highly recommended, if possible, to incorporate a health educator into the intervention. After SPNS funding, UIC was not able to sustain this position. If this position cannot be filled, organizations replicating this work should consider weaving educational topics into clients' broader risk and needs assessment discussions, during discharge planning, and with reinforcement from the community-based Ryan White case manager.
Staff Characteristics 	Jail-based staff need to be • flexible to the unique challenges of working with people who are in jail and those soon-to-be released; • able to meet jail security clearance criteria; • genuinely interested in working with incarcerated individuals; and • willing to follow jail policies and guidelines while in the jail. All staff should • have an extensive awareness of community resources; • be able to foster cooperation and communication with jail staff and community-based Ryan White case managers; • be able to deliver culturally appropriate services; • offer non-judgmental services; and • ideally be reflective of racial and ethnic backgrounds of clients.

Sources: University of Illinois at Chicago, School of Public Health. *Enhancing Linkages to Care for Women Leaving Jail.* Final Report. August 31, 2012.
University of Illinois at Chicago, School of Public Health. *Special Projects of National Significance (SPNS) Program, Enhancing Linkages to HIV Primary Care in Jail Settings Initiative, EnhanceLink Program Description Form*. 2012.

Replication Tips for Intervention Procedures and Client Engagement

This section provides tips for readers interested in replicating the intervention and, where applicable, includes grantee examples for further context.

The intervention includes the following key steps:[70, 71]

1. **Expand HIV testing.** The UIC team created a weekend testing program for women. In this intervention model, counselors visit the women's housing areas and market this service. Women who wish to be tested ask to go to the medical clinic, where testing is conducted in private with rapid HIV tests.

   Those identified as HIV-positive are given appointments for in-jail medical care.

2. **Assess baseline needs and assets.** A discharge planner meets with all HIV-positive women to discuss medical care and social support needs, as well as barriers that may prohibit clients from accessing services post-release.

3. **Enroll clients.** Interested and eligible women are enrolled in the intervention. If replicating agencies are including a data collection component, then a pre-intervention survey will also be completed in this step.

4. **Develop service discharge plan.** Unless the client has existing care elsewhere, is moving beyond Chicago post-release, or has other preferences, the discharge plan includes a post-release medical appointment at a comprehensive, one-stop-shop medical facility. (For UIC, this is the Ruth M. Rothstein CORE Center, which is part of the Cook County hospital system.)

5. **Connect to transitional case management.** The jail discharge planner introduces women to one of the two transitional case managers, both of whom are women. The discharge planner explains that the transitional case manager's role is to help them carry out the discharge plan in the community, as well as to add or amend it as needs evolve. The transitional case manager provides the women with her contact information for post-release follow-up and offers to transport clients back to the community upon release. Additionally, the transitional case manager obtains client contact information to support follow-up efforts.

6. **Initiate HIV clinic visit in jail.** While incarcerated, HIV-positive women visit the medical facility to review any existing ART prescriptions (of known positives) and to review or update baseline labs. This visit also includes medical chart review and data abstraction.

7. **Connect women to health education sessions.** At the time of the intervention, the University of Illinois was able to conduct a client education program. Educational topics included HIV treatment; HIV transmission; the HIV service system safety net; dealing with emotions; and family, faith, and social concerns.

8. **Release from jail.** Clients are actively connected with community-based Ryan White case managers upon release from jail.

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[70] University of Illinois at Chicago, School of Public Health. *Enhancing Linkages to Care for Women Leaving Jail.* Final Report. August 31, 2012.

[71] University of Illinois at Chicago, School of Public Health. *Special Projects of National Significance (SPNS) Program, Enhancing Linkages to HIV Primary Care in Jail Settings Initiative, EnhanceLink Program Description Form*. 2012.

9. **Begin case management activities.** Immediately upon release, case management activities began. These include HIV primary care visits, additional housing assistance, childcare (if applicable), employment support, psychosocial health referrals, and referral to any other previously identified but unmet needs.

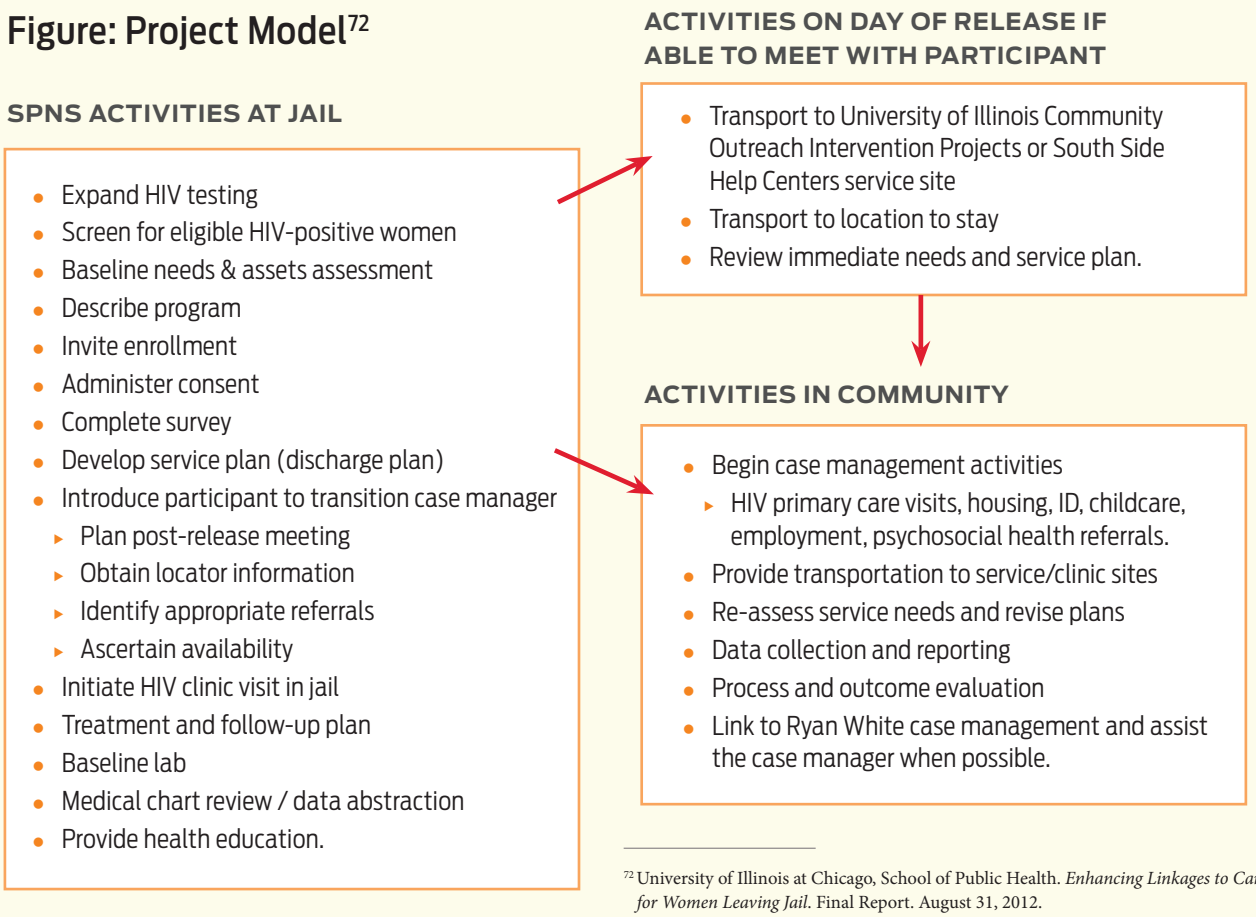
   An important component of these case management activities is assisting women in accessing identification. Of the women who participated in the UIC SPNS project, 80% did not have IDs. Lack of identification impedes access to social support services and impedes women's ability to maximize the entitlements for which they qualify. UIC has been able to secure payment of IDs from community groups funded for this purpose. Intervention staff assist clients in the process and manage expectations about what the process looks like (e.g., lots of forms and waiting in lines).

10. **Transportation and accompaniment at clinic site visits.** As needed, intervention staff provides additional transportation assistance to HIV primary care and social support visits. Peer outreach workers/patient navigators who share similar life experiences and are reflective of the intervention's target population typically conduct this activity.

11. **Conduct follow-up.** Intervention staff stays in continuous contact with clients through telephone calls, letters, and home visits. Transitional case managers maintain a record of client appointments with physicians, call participants prior to the visit, ask if transportation assistance is required, and provide transportation if it is needed.

    If clients appear lost to follow-up, then the intervention team will review publicly available corrections databases (which include "inmate locators" at the state and county levels) and court dockets. The team also searches in shelters, hospitals, and inpatient mental health and drug and alcohol facilities. With prior client consent, the intervention team reaches out to family and loved ones, as needed.

Figure: Project Model[72]



[72] University of Illinois at Chicago, School of Public Health. *Enhancing Linkages to Care for Women Leaving Jail*. Final Report. August 31, 2012.

Intervention Preparation

Some important considerations when conducting a transitional jail linkage-to-community intervention include the following:

Find out who is in the jail. In order to initiate this work, it is important to first assess who is already in the jail and what they are doing. At the time of the SPNS project launch, a separate unit of the County was providing medical care in the jail and a University of Illinois staffer was conducting research in that unit. This researcher was able to provide introductions to key administrators in the health care unit, which became critical to securing buy-in, as the intervention requires both clearance from the jail and the sharing of medical records from the healthcare provider.

Meet with key community players. Community-based Ryan White case managers need to know about the intervention so confusion and "turf wars" can be avoided and clients can better connect to these case managers on the outside.

Consider organizing a meeting with community partners to discuss the project, seek input on how best to coordinate activities, and placate any fears that you are stealing clients. Explain that the intervention helps clients find their way to the community-based organizations. Community partners often see more clients, not fewer, because clients are being proactively linked to HIV care and services.

Understand how the jail is organized and how it works. "Jail is such an unusual place to come into that you really need to spend some time going into the setting and getting acclimated with the environment and doing background work," says Dr. Lawrence J. Ouellet, UIC SPNS intervention principal investigator. This includes assessing the physical space where meetings with clients take place and deciding how the needs of the jail staff can be accounted for in project planning.

Remember you are a visitor in the jail. It is critical to abide by jail rules when doing a jail-based intervention. This includes the processes required to work within the jail, such as background checks, fingerprints, a jail ID, and accounting for the time it takes to get through this process before intervention work can begin. Some intervention staff may have histories of incarceration, which can impede their ability to enter the jail; this possibility should be researched ahead of time. Talk to jail representatives and see if the infrastructure and materials needed for your work can be accessed or brought into the jail.

Flexibility is key. Jails have much higher turnover rates than prisons, which makes jails comparatively chaotic. Discharge windows are short and often unpredictable. Follow client court dates, review data systems, and talk to the jail-based discharge planner to assess when a person is likely to be released. This should likely happen every week to week-and-a-half. For clients released from jail with little advance notice, staff should begin contact attempts upon learning of this change.

Securing Buy-in

Establish partnerships through meetings with key community and jail members, invite these stakeholders to the table during preliminary intervention planning discussions, and take their recommendations in

earnest. Be careful not to duplicate efforts, alleviate any concerns around "turf wars" or "patient poaching," and create memoranda of understanding with formal partners.

Overcoming Implementation Challenges

In working with this population, the major challenges revolve around difficulty accepting HIV status; shame of being HIV-positive; mental illness; substance use, withdrawal, or entering a drug treatment program; extreme deprivation that makes HIV a secondary issue; waiting until HIV medications run out to schedule appointments; and habits of using the ER to obtain medical care. To address these issues, provide education early on, proactively seek to engage women into services to meet their unmet needs, encourage and aid women in advocating for themselves as they seek services, help them enroll them in benefits programs, and provide continuous support, follow-up, and patient navigation.

Promoting Sustainability

Ryan White Part A funds may be able to be used to support transitional case management, such as transitional jail-to-community care coordination services. Components of the intervention are also sustained through additional grant funding, typically for both men and women living with HIV.

Conclusion

Each year, about 14% of people with HIV experience incarceration.[73] More incarcerated people pass through jails than prisons.[74, 75] Given the number of people living with HIV passing through these facilities and the need to reach them, jail interventions afford a unique window with which to do so. Participation in the intervention has shown an increase in linkage to post-release medical care. As Dr. Ouellet explains, "We see the jail linkage work as an extension of our community work so it makes sense to be there."

Other Available Resources

- SPNS. **Creating a Jail Linkage Program: Tools from the Integrating HIV Innovative Practices Program.**
- **Enhancing Linkages to HIV Primary Care & Services in Jail Settings Initiative.**
- Williams CT, Kim S, Meyer J, et al. **Gender Differences in Baseline Health, Needs at Release, and Predictors of Care Engagement Among HIV-positive Clients Leaving Jail.** *AIDS Behav.* 2013;17(Suppl 2): S195-202.

[73] Spaulding AC, Seals RM, Page MJ, et al. HIV/AIDS among inmates of and releasees from US correctional facilities, 2006: declining share of epidemic but persistent public health opportunity. *PLoS One.* 2009;4(11): e7558.
[74] Zack B, Hane L. *At the Nexus of Correctional Health and Public Health: Policies and Practice.* American Public Health Association Annual Meeting. 2015 [Presentation]
[75] Draine J, Ahuja D, Altice FL, et al. Strategies to Enhance Linkages Between Care for HIV/AIDS in Jail and Community Settings. *AIDS Care.* 2011;23(3):366–77.

Improving Health Outcomes

Moving Patients Along the HIV Care Continuum and Beyond

Diagnosing HIV

INTERVENTION OVERVIEW & REPLICATION TIPS

Social Networks Testing
Wisconsin Department of Health Services

Linkage to Care

INTERVENTION OVERVIEW & REPLICATION TIPS

Assess, Test, Link: Achieve Success (ATLAS) Program
Care Alliance Health Center (OH)

Enhancing Linkages to Care for Women Leaving Jail
University of Illinois at Chicago

▶ Video Conferencing Intervention
Louisiana Department of Health and Hospitals

Active Referral Intervention
Virginia Department of Health

Louisiana Public Health Information Exchange (LaPHIE)
Louisiana State University, Health Science Center and Louisiana Department of Health Hospitals, Office of Public Health

Retention in Care

INTERVENTION OVERVIEW & REPLICATION TIPS

My Health Profile
New York-Presbyterian Hospital

Prescription of ART & Medication Access

INTERVENTION OVERVIEW & REPLICATION TIPS

Care Coordination Intervention
Virginia Department of Health

Beyond the Care Continuum: Addressing HCV Comorbidity and Coinfection

INTERVENTION OVERVIEW & REPLICATION TIPS

Hepatitis Treatment Expansion Initiative
University of California, San Francisco, San Francisco General Hospital HIV Clinic

Hepatitis Treatment Expansion Initiative
Washington University School of Medicine (MO)

Video Conferencing Intervention

Louisiana Department of Health and Hospitals

The table below provides a general overview of the Video Conference intervention so readers can assess the necessary steps required for replication. This intervention allows community-based case managers to connect via video chat with incarcerated clients prior to release.

Intervention at-a-Glance	
Step 1	**Secure List from the Louisiana Department of Public Safety and Corrections (DOC)** Secure list from DOC of all HIV-positive clients and identify who is 180 days from release and create discharge plan. Review list and offer clients pre-release services and prepare referrals.
Step 2	**Schedule Video Conference** Approximately 4–6 weeks before a client is released, a video conference is scheduled between the client and the community-based Ryan White case manager. The prison's telemedicine coordinator (or master scheduler) and the Louisiana Department of Health and Hospitals' Office of Public Health (OPH), STD/HIV Program corrections specialist collaborate and are responsible for scheduling.
Step 3	**Day of Video Conference: Corrections Specialist Checks on Client Status** The corrections specialist checks with a DOC corrections officer to confirm a client is present and in the infirmary or is in transport to the infirmary.
Step 4	**Retrieve Medical Chart** The corrections specialist retrieves the client's medical chart from the DOC medical staff.
Step 5	**Prepare Checklist in Client's File** The corrections specialist secures a client checklist to be filled out during the video conference. The checklist includes the name of the community-based Ryan White agency where the client is being referred, the date and time of the video conference, the corrections specialist's name, the name of the client, correctional facility where the client is incarcerated, the client's release date, whether they are currently being detained or released on parole, and any additional notes.
Step 6	**Begin Video Conference** The corrections specialist and the Ryan White case manager dial into the encrypted online video conference. When the Ryan White case manager appears onscreen, the corrections specialist addresses any last-minute questions that may need to be covered. If no questions exist, the corrections specialist cues the DOC corrections officer to bring the client into the exam room where the telemedicine equipment is located.

Step 7	**Provide Introductions** Remind the client about the video conference, as previously discussed, and introduce them to the case manager. Note that if a guard is in the room, the corrections specialist has the right to ask the guard to leave the room.
Step 8	**Complete Forms During Video Conference** The Ryan White case manager follows intervention instructions and completes forms with the client. These include a case manger checklist, client assessment form, and a personal needs and care planning tool. The corrections specialist makes notes on their own checklist regarding any scheduled appointments between the client and the case manager as well as any key points made during the video conference.
Step 9	**Recap and Review** At the end of the video conference, the corrections specialist provides a brief summary of the discussion, outlines next steps, and concludes the video conference. The corrections specialist recaps the session with the client and provides any written details on a client letter as well as detailed notes in the client's DOC medical chart about the encounter and video conference session.
Step 10	**Conduct Monitoring** The corrections specialist conducts weekly monitoring to track any video conference clients who may be released early. Two weeks before release, all referral applications are faxed to community agencies. The client's AIDS Drug Assistance Program (ADAP) application and medical appointment date are faxed to the community-based organization where the client is being referred.
Step 11	**Client Discharge** The client receives a copy of their discharge plan, including appointments and contact information. Louisiana Department of Health and Hospitals staff follows up on referrals for up to 90 days post-release or less time if the client is linked to both case management and medical care.

Sources: Louisiana Office of Health and Hospitals, Office of Public Health, STD/HIV Program. *Video Conference Manual: Louisiana's Special Projects of National Significance Systems Linkages and Access to Care for Populations at High Risk of HIV Infection Initiative*. Final Report. August 31, 2015.

O'Brien K. Louisiana Office of Health and Hospitals, Office of Public Health, STD/HIV Program. *Video Conference Service: Protocols for the Louisiana Office of Public Health – STD/HIV Program & Ryan White Part A and B Case Management Agencies.* September 30, 2013.

Resource Assessment Checklist

Organizations should walk through a Resource Assessment (or Readiness) Checklist to assess their ability to conduct this work. This intervention may be of particular interest to state or local health departments, medical directors/providers at correctional facilities, Ryan White grantees, and rural community providers. If organizations do not have these Checklist components in place, they are encouraged to develop their capacity so that they can successfully conduct the Video Conference intervention. Questions to consider include:

- ☐ Does your organization have access to video-conferencing/telehealth equipment and, if not, are you able to procure it?
- ☐ Does your organization have an existing relationship with its local or state correctional facility or are you able to foster one?
- ☐ Does your organization currently offer case management services or have a community partner in place that does? If not, are you able to identify such agencies and establish a relationship?
- ☐ Has your organization assessed how many HIV-positive clients are within the DOC partner site and does it have the capacity to work with and provide referrals to this caseload? If not, does your organization have the ability to bring on additional personnel support?
- ☐ Is your organization filling a need for DOC or is another agency offering similar services?
- ☐ Does your organization have a referral tracking system in place and, if not, does it have the capacity to develop one or otherwise follow up on referrals?

Source: Louisiana Department of Health and Hospitals, Office of Public Health, STD/HIV Program. *Video Conference Manual: Louisiana's Special Projects of National Significance Systems Linkages and Access to Care for Populations at High Risk of HIV Infection Initiative*. Final Report. August 31, 2015.

Setting the Stage: Grantee Intervention Background

Prior to the video-conferencing intervention, a previous intervention model existed and offered:

- Pre-release services starting 180 days before a client's release date.
- Client meetings with the Louisiana Department of Health and Hospitals' Office of Public Health (OPH), STD/HIV Program corrections specialist every 4-6 weeks to complete paperwork and applications for post-release HIV medical care, case management, and ADAP.

Across the nine DOC-managed state prison facilities that participated in the SPNS intervention, the average HIV positivity rate is 2.33% (ranging from 1.46% to 3.63%, based on the facility's capacity to handle HIV care needs).[76]

However, this model did not offer much opportunity for dialogue with clients, and while referrals to outside agencies were made, many clients were only familiar with the Louisiana Department of Public Safety and Corrections (DOC) system of HIV care delivery. Thus, navigating to an unknown system for care and medication seemed overwhelming and was a contributing factor to clients' significantly 10 percentage points lower linkage-to-care rates than the general HIV-positive population.[76]

Video conferencing has the potential to positively impact the continuum of care.

Meanwhile, DOC invested in telemedicine technology to reduce transports to outside medical care facilities. DOC medical staff use the telemedicine equipment to facilitate medical consults with outside specialists. Based on the availability of this existing telemedicine technology, OPH proposed that it be used at each DOC site to facilitate video conferencing between HIV-positive clients and a community-based case manager at the site where the client is being referred.

The vision was to "help eliminate some of the unknowns faced by HIV-positive clients upon release (e.g., how to secure clothing, food, housing, employment, transportation, and health care coverage)." In fact,

> *"empirical evidence, and logic, suggests that video conferencing has the potential to positively impact the continuum of care. By establishing relationships to care providers that foster sustainability and continuity of care, the propensity to link to care sooner is established."*[77]

To lay the groundwork for the intervention and test its theory, OPH received a SPNS grant as part of the **Systems Linkages and Access to Care for Populations at High Risk of HIV Infection (System Linkages) Initiative**. It partnered with nine state prisons and 11 case management agencies (four Part A-funded and seven Part B-funded agencies) across the state to facilitate this work.

[76] Louisiana's Department of Health and Hospitals, Office of Public Health, STD/HIV Program. Louisiana's Special Projects of National Significance Systems Linkages and Access to Care for Populations at High Risk of HIV Infection Initiative. Final Report. August 31, 2015.
[77] Louisiana's Department of Health and Hospitals, Office of Public Health, STD/HIV Program. Louisiana's Special Projects of National Significance Systems Linkages and Access to Care for Populations at High Risk of HIV Infection Initiative. Final Report, p.4. August 31, 2015.

Description of Intervention Model

CHALLENGE ACCEPTED

THE CHALLENGE: addressing low linkage-to-care rates among people who are returning to the community from prison.

Intervention Model: Video Conferencing with Strengths-based Case Management

In the new Video Conference intervention, incarcerated clients can video chat with the same case manager that they will be connected to on the "outside." Video conferencing offers clients the opportunity to discuss their release plans and any concerns they may have about HIV treatment or care. It also provides the community-based Ryan White case manager an opportunity to learn about the client's anticipated needs upon release, and better prepare to address those needs in advance.

The Video Conference intervention applies strengths-based case management. This includes a focus on client goals, general life plans, and identifying personal and environmental resources that meet client preferences—specifically their medical and social support goals. It is a client-driven approach that helps encourage HIV-positive individuals to work with their case manager to develop a step-by-step plan for meeting their needs and identifying the strengths and skills they have that will promote and further support their plan. For incarcerated individuals who may have limited support in the community, it can be an encouraging and emboldening experience.

The intervention leverages the following key partnerships:

- **Louisiana Department of Health and Hospitals, Office of Public Health, STD/HIV Program:** Responsible for procuring video equipment, installation of equipment at case management partner sites, client pre-release services, scheduling video conferences, conducting trainings, quality assurance, fidelity monitoring, CAREWare[78] documentation, and tracking of client linkage for 90 days post-release.
- **Louisiana Department of Corrections:** Responsible for providing current list of HIV-positive clients at each prison, providing client medical records, permission to schedule video-conference sessions among other telemedicine appointments, providing access to telemedicine equipment, escorting clients to and from pre-release services meetings and video case conferencing. Additionally, granting security clearance to the OPH corrections specialist.
- **Ryan White Part A and B Agencies:** Responsible for appointing case managers to participate in the video-conference intervention, participating in video-conference and corrections-specific trainings, entering data into CAREWare, following up on referrals, and linking clients to additional needed resources in the community.

[78] CAREWare is the Ryan White Program's free, scalable software system for managing and monitoring HIV clinical and supportive care. To learn more, visit: **http://hab.hrsa.gov/manageyourgrant/careware.html.**

- **Ryan White Part A Administration:** Helps provide reimbursement payment to Part A agencies participating in the intervention.
- **Louisiana State University Health Care Services Division Medical Informatics and Telemedicine:** These IT specialists help ensure video-conference equipment for the intervention are secure, assist with equipment setup at community partner agencies, and provide IT support as necessary.

Staffing Requirements & Considerations for Replication

Staffing Capacity

Based on the OPH work, here are the types of staff necessary to replicate this intervention.

Corrections specialist: The Corrections specialist's primary activities include

- obtaining the list of HIV-positive clients from the DOC and identifying those who are within 180 days of release (and thus eligible for pre-release planning);
- tracking client release dates;
- coordinating and communicating with the community-based case manager where client is being referred upon release;
- collaborating with the telemedicine/IT support coordinator to ensure video-conferencing equipment is encrypted and secure;
- overseeing the entire video-conference process, including coordination, scheduling, implementation, and documentation; and
- tracking client linkage to referrals.

DOC telemedicine coordinator (or master scheduler): Responsible for coordination, scheduling, and facilitation of telemedicine equipment. This individual works with the corrections specialist to respond to video-conferencing requests.

Community-based case manager: This individual is housed at a Ryan White Part A or B partner agency where clients are linked. Their primary responsibilities include

- completing all video-conferencing forms and documents;
- ensuring conferencing data is entered into the CAREWare database;
- communicating and coordinating with the corrections specialist;
- providing linkage to referrals for clients post release; and
- following up with clients post release.

Note: Since the Video Conference intervention is considered transitional case management by the Health Resources and Services Administration (HRSA), it is possible for more than one Ryan White-funded source to bill for services provided to the client. As such, it should be determined at what point the responsibility for the client's linkage completely falls onto the community case manager.

	Telemedicine/IT support coordinator: This individual helps set up the video-conferencing technology at community partner agencies and assists in technological troubleshooting. In particular, their responsibilities include • determining bandwidth and video-conferencing operating capacities at participating community agencies; • recommending video-conferencing equipment to be purchased and installed at community agencies; • making any necessary changes to network and firewalls to ensure an encrypted and secure video-conferencing connection; and • providing TA as needed.
Staff Characteristics 	Corrections specialists should be • flexible to the unique challenge of working with clients in custody and those soon-to-be released; • able to meet corrections security clearance criteria; • genuinely interested in working with incarcerated individuals; and • willing and able to follow prison policies and guidelines while in the prison facilities. All staff should • have extensive awareness of and familiarity with community resources; • have the ability to foster cooperation and communication with corrections staff and community-based case managers; • have the ability to deliver culturally appropriate services; • offer non-judgmental services; and • ideally be reflective of racial and ethnic backgrounds of the client population.

Sources: Louisiana Department of Health and Hospitals, Office of Public Health, STD/HIV Program. Louisiana's Special Projects of National Significance Systems Linkages and Access to Care for Populations at High Risk of HIV Infection Initiative. Final Report. August 31, 2015.

Louisiana Department of Health and Hospitals, Office of Public Health, STD/HIV Program. Video Conference Service: Protocols for Louisiana Office of Public Health—STD/HIV & Ryan White Part A and B Case Management Agencies.

Replication Tips for Intervention Procedures and Client Engagement

This section provides tips for readers interested in replicating the intervention and, where applicable, includes grantee examples for further context.

Steps for getting started include the following:

- **Select case management agencies** to work with (if separate from your own).
- **Survey IT capacity of case management agencies,** namely Internet broadband (i.e., do they have the bandwidth to facilitate video conferencing and, if not, can they upgrade).
- **Assess space to conduct private video conferencing** (i.e., do case management agencies have a space where video conferencing can be held confidentially).
- **Develop training materials** and protocols.
- **Conduct mock sessions** with each case manager so they become accustomed to the video-conferencing technology and seeing themselves on screen.
- **Train case managers in interviewing skills** and assess during mock sessions.
- Offer all case managers a **"corrections 101" training** to become better informed about the corrections system.
- **Purchase video-conference equipment** for community case-management agencies, if existing equipment is not available.
    - Equipment should facilitate a secure line. For example, Skype, Google Hangout, FaceTime etc. are not recommended; instead, equipment that maintains encryption and ensures confidentiality to adhere to Health Insurance Portability and Accountability Act (HIPAA) compliance is recommended. If purchasing equipment, be certain of what authorization is required to complete the purchase and which entity is purchasing the equipment (e.g., if state dollars are used to purchase the equipment then the equipment may ultimately be owned by the state and require annual inventory and tagging). OPH purchased PolyCom equipment because it met data security and confidentiality needs, though there are other equipment suppliers.
- **Determine how to document the video-conference session;** at minimum a client consent form should be developed, signed, and obtained.
- **Determine the best method for scheduling** video-conference sessions, based on existing schedules. Also, develop a protocol for clients who need to reschedule their session (e.g., they're in lockdown and can't get to the medical office that houses the telemedicine equipment at the DOC).
- Discuss **how information will be entered into a client-level database such as CAREWare** in order to log video conferencing-specific data for reporting and evaluation purposes.
- **Identify which clients are eligible** for video conferencing.

Getting Started Checklist: Considerations for Intervention Partners

Health Department	Case Management Agencies	Department of Corrections	Telemedicine/IT Partner Service Provider
☐ Select Case Management Agencies	☐ Locate Private Space to Conduct Video Conferencing	☐ Acquire/ Confirm Access to Telemedicine Equipment	☐ Recommend Appropriate Video-conferencing Equipment for Case Management Agencies
☐ Survey IT Capacity of Case Management Agencies	☐ Identify Case Managers	☐ Identify HIV-positive Clients	☐ Configure and Assign Secure Conference Lines or "Meeting Rooms" at Case Management Agencies
☐ Develop Training Materials and Training Plan	☐ Participate in Pre-implementation Training	☐ Provide Clearance for Health Department to Enter DOC Facility	☐ Determine Capability to Provide On-demand Technical Support
☐ Develop Documentation	☐ Determine the Point of Client Transfer	☐ Determine Impact (if any) on DOC Staff	
☐ Determine Methodology for Scheduling Video-conferencing Sessions			
☐ Program Additional Sub-forms in CAREWare			
☐ Purchase Video-conference Equipment			
☐ Clarify/Confirm Ownership of Video-conference Equipment			
☐ Determine Which Clients are Eligible for Video Conferencing			
☐ Determine Whether to Provide Client Incentives			

Source: Louisiana Department of Health and Hospitals, Office of Public Health, STD/HIV Program. Video Conference Manual: Louisiana's Special Projects of National Significance Systems Linkages and Access to Care for Populations at High Risk of HIV Infection Initiative. Final Report. August 31, 2105.

INTERVENTION SCHEDULING 101

Each DOC maintains a list of known HIV-positive individuals in their custody. This list is populated from pharmacy and laboratory records. A crucial component for success is ensuring that corrections specialists have access to a database or are given regularly updated lists so that they have reliable information about release dates, the possibility of early release due to good behavior, or transferring of client to different facilities.

The Video Conference

The Video Conference intervention ideally happens as close as possible to the client's release date. This makes it easier for the client to remember both the case manager and the plans outlined during the meeting. That said, telemedicine equipment must accommodate the DOC's other clients, so case conference scheduling has to be built around the existing telemedicine schedule. Most clients receive their video conference 4–6 weeks before release, although it is certainly possible for the meeting to take place at a later date.

Just before the video conference (typically 48–72 hours in advance), the corrections specialist faxes a "video-conference referral package" to the community-based case manager. This package includes the following client information:[79]

- Consent for video-conference form
- Referral to case management form
- Most recent lab work
- Scheduling letter with brief client summary.

The case manager reviews this information before the video conference.

On the day of the video conference, the corrections specialist confirms that the client is in the infirmary or is being transported there. The corrections specialist retrieves the client's medical chart to have on hand and dials in to the secure video conference generally 15 minutes early. Meanwhile, the case manager dials in 10 minutes early. This enables both the corrections specialist and case manager to confirm there are no technological issues in advance so that they are ready to go and able to maximize time with the client.

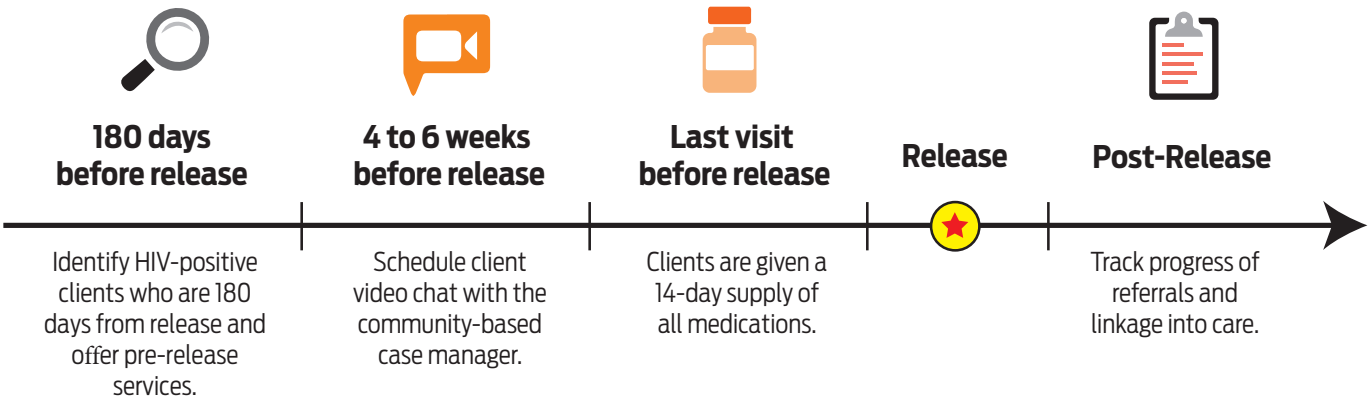
The corrections specialist introduces the client to the case manager. During the video conference, the client learns more about the agency where they are being referred. Clients are encouraged to discuss their needs and wishes for their lives post-release. During the intervention, clients are generally very willing to open up and share with case managers. It is a time where the focus is expressly on them, and they see the value of the services being offered, find comfort in putting a face to a name, and meet the person they will then see in the community.

As one client explains,

> *"Well, to be perfectly honest, just seeing a person that I haven't met over the camera and saying that she would be the same person that I can come speak to when I'm released, just basically saying now you see me over this camera. We're building a relationship, but when you come in, I'll be that same person. So, I felt comfortable knowing that I already had an opportunity to meet the person who I would be speaking to rather than being kind of nervous going and meeting a new person."*

[79] Louisiana Department of Health and Hospitals, Office of Public Health, STD/HIV Program. Video Conference Service: Protocols for Louisiana Office of Public Health—STD/HIV & Ryan White Part A and B Case Management Agencies.

Intervention Timeline



The case manager completes an assessment form, a personal needs and care planning tool, and updates any information from the pre-release services meeting. During this process, the case manager is tailoring the client's discharge plan to the client's needs, while simultaneously building rapport that will facilitate post-release linkage and engagement.

The case manager documents all referrals and, after the video conference, completes a referral follow-up form. This form will be used to track the progress and completion of referrals by the agency.

At the end of the conference, the meeting is summarized, as are next steps for all parties.

Fidelity monitoring is completed to ensure each step of the process is being followed. This is done by

- ensuring documentation collected and reported from the video-conference session is in alignment with protocols;
- checking client charts for completeness and accuracy by OPH; and
- cross-checking the client's paper file against their electronic file in CAREWare (or other database if not using CAREWare).[80]

Securing Buy-in

OPH has a strong, existing relationship with the DOC medical director, who has been very welcoming of the Video Conference intervention work and helped to approve access for it to be done. The involvement and backing of the correctional medical director underscores the importance of securing champions early on.

Communication and coordination across participating partners during planning stages is important to secure feedback on protocols and proposed roles and responsibilities and ensure buy-in. It is similarly important that organizations doing this work provide education to correctional staff about the project and underscore the need for—and subsequent access to—discharge lists as well as the importance of HIPAA and confidentiality requirements.

[80] CAREWare is the free, scalable software for managing and monitoring HIV clinical and supportive care and that facilitates Ryan White HIV/AIDS Program Services Report (RSR).

Fidelity monitoring should be completed to confirm each step of the Video Conference intervention is being followed. This also helps promote transparency, and secure and maintain buy-in.

Overcoming Implementation Challenges

Engage an IT department or other specialist to advise on and support (and subsequently test) equipment and provide TA, as needed. This will help overcome challenges related to equipment security and video-conference logistics.

Additional intervention challenges are typical to corrections-related work, such as clients being released earlier than expected and ensuring the intervention aligns with DOC requirements. If partners can share database systems and files, participate in regular check-ins, and work with the same protocols, some of these headaches can be averted.

Promoting Sustainability

OPH continues to sustain and support this intervention through Ryan White Part A and B funds, thanks to its alignment with transitional care coordination requirements.

Given the costs of recidivism and HIV transmissions at the individual, societal, and community levels, a proven intervention that facilitates increased access to critical care and services, timely linkage and engagement in care, and ultimately, improved health outcomes makes for a compelling case for investment.

Conclusion

Incarcerated individuals are disproportionately affected by a host of health disparities and structural inequalities. Upon release, many individuals are unfamiliar with the healthcare system and are, understandably, more concerned with meeting basic survival needs, which places HIV medical care as a lesser priority. Without assistance in removing these barriers and actively linking them to care, clients remain at risk for returning to and engaging in the same behaviors that led to HIV infection and incarceration.

Linking incarcerated, HIV-positive clients to care through a Video Conference intervention addresses national goals to increase access to care and improve health outcomes for people living with HIV.[81] In addition, clients show increased interest and engagement in their care plan when video conferencing is integrated into their discharge planning.

The Video Conference intervention improves and streamlines pre-release services documentation and cross-institutional communication between OPH, DOC, and case management agencies. Moreover, client linkage-to-care in the first 90 days post-release has increased because of the intervention, with more clients linking to critical HIV services and moving along the Care Continuum.

Other Available Resources

- **Systems Linkages and Access to Care Initiative**

[81] Louisiana's Department of Health and Hospitals, Office of Public Health, STD/HIV Program. Louisiana's Special Projects of National Significance Systems Linkages and Access to Care for Populations at High Risk of HIV Infection Initiative. Final Report. August 31, 2015.

Improving Health Outcomes

Moving Patients Along the HIV Care Continuum and Beyond

Diagnosing HIV

INTERVENTION OVERVIEW & REPLICATION TIPS

Social Networks Testing
Wisconsin Department of Health Services

Linkage to Care

INTERVENTION OVERVIEW & REPLICATION TIPS

Assess, Test, Link: Achieve Success (ATLAS) Program
Care Alliance Health Center (OH)

Enhancing Linkages to Care for Women Leaving Jail
University of Illinois at Chicago

Video Conferencing Intervention
Louisiana Department of Health and Hospitals

▶ Active Referral Intervention
Virginia Department of Health

Louisiana Public Health Information Exchange (LaPHIE)
Louisiana State University, Health Science Center and Louisiana Department of Health Hospitals, Office of Public Health

Retention in Care

INTERVENTION OVERVIEW & REPLICATION TIPS

My Health Profile
New York-Presbyterian Hospital

Prescription of ART & Medication Access

INTERVENTION OVERVIEW & REPLICATION TIPS

Care Coordination Intervention
Virginia Department of Health

Beyond the Care Continuum: Addressing HCV Comorbidity and Coinfection

INTERVENTION OVERVIEW & REPLICATION TIPS

Hepatitis Treatment Expansion Initiative
University of California, San Francisco, San Francisco General Hospital HIV Clinic

Hepatitis Treatment Expansion Initiative
Washington University School of Medicine (MO)

INTERVENTION OVERVIEW & REPLICATION TIPS

Active Referral Intervention

Virginia Department of Health

The table below provides a general overview of the Active Referral intervention so readers can assess the necessary steps required for replication. This intervention uses Disease Intervention Specialists (DIS) to more actively and immediately link clients to HIV care services.

Intervention at-a-Glance	
Step 1	**Clients Receive HIV Test** Clients test positive for HIV at a local health department or are referred from another HIV-testing agency, such as a clinic or community-based organization (CBO).
Step 2	**Receives Morbidity Reports** Reports are sent from physicians, hospitals, and laboratories for persons diagnosed with HIV or other reportable STD cases.
Step 3	**Identify HIV-positive Clients** The DIS immediately engages new HIV-positive clients. These are individuals who a) test HIV positive at the health department, b) are referred to the health department after they test positive elsewhere, c) are referred to the Active Referral intervention, or d) are identified by the DIS as priority cases from the morbidity report. (Priority cases include new HIV cases as well as primary and secondary syphilis cases, and associated sexual partners.)
Step 4	**Conduct Counseling and Outreach to Priority Clients** The DIS follows interview procedures with newly identified HIV-positive clients, discusses their diagnosis, and provides education and risk reduction counseling using motivational interviewing. The DIS also discusses linkage to HIV medical care and available support services that meet client needs.
Step 5	**Secures Consent** DIS prepares referrals and uses a Coordination of Care and Services Agreement (CCSA) form to discuss linkage to medical care or patient navigator and gain informed consent to coordinate services. Upon consent, DIS assists clients in filling out and indicating type of health information to be shared with referral party.

Step 6

Conduct Follow-up

DIS confirms client linkage to medical care or patient navigation by receiving a faxed completed CCSA form back from the referral point, or through a follow-up phone call to complete the CCSA form. As client attends medical visit(s), this is documented on the CCSA form.

Source: Virginia Department of Health. *Active Referral: Implementation Manual. Virginia Department of Health, Special Projects of National Significance, System Linkages and Access to Care Initiative.* Final Report. October 2015.

Resource Assessment Checklist

Organizations should walk through a Resource Assessment (or Readiness) Checklist to assess their ability to conduct this work. If organizations do not have these components in place, they are encouraged to develop this capacity so that they can successfully conduct the Active Referral intervention. Questions to consider include:

- ☐ Does your organization have access to reportable new HIV cases in your jurisdiction?
- ☐ Does your organization offer or do you have a partner agency/agencies that offer patient navigation, HIV primary care, and social support services? If not, is your organization able to create relationships with entities that do?
- ☐ Are there Coordination of Care and Services Agreement (CCSA) forms in place at your agency and, if not, are you able to create and formalize such forms?

Note: Most states have DIS staff but each state is different, so understanding your state structure is important to getting this work off the ground.

Source: Virginia Department of Health. *Active Referral: Implementation Manual. Virginia Department of Health, Special Projects of National Significance, System Linkages and Access to Care Initiative.* Final Report. October 2015.

Setting the Stage: Grantee Intervention Background

The Virginia Department of Health (VDH) sought to establish an Active Referral intervention so clients are linked to HIV primary care immediately upon diagnosis. Active Referral was incorporated into routine Disease Intervention Specialist (DIS) activity, which has been primarily supported through existing CDC funding. With support from the SPNS Systems Linkages and Access to Care for Populations at High Risk of HIV Infection (System Linkages) Initiative, VDH was able to provide necessary training and additional staff time needed for administrative and evaluative operations, particularly Active Referral protocol development.

By creating a formalized written protocol, the SPNS project helped refine the methodology for ensuring clients reach the services they are referred to. Standardization of the DIS Active Referral process has helped minimize organizational and systematic challenges from the previous infrastructure.

A project planning-group was created to guide overall project design and implementation, including representatives from other interventions taking place across the state. VDH did this to ensure optimization of linkage and retention strategies and to avoid duplication. Additionally, consumers were recruited to weigh in on the process and provide feedback during the Plan, Do, Study, Act (PDSA) cycles.[82]

According to the VDH,

> *"Prior to SPNS, there was no standardized procedure for DIS staff to link a newly diagnosed PLWH into medical care or get confirmation of their attendance at an appointment. While many DIS staff were actively engaged in the process of linking patients to care, methods used by individual DIS staff varied, as did the extent of follow-up. With the introduction of the Active Referral protocol, DIS staff now have a uniform method for getting patients linked to care and documenting that link."*[83]

VDH's Active Referral intervention uses DIS staff and testing referral agencies across the state of Virginia to rapidly link clients to care upon diagnosis, as well as HIV-positive clients who are not fully linked to care. More specifically, the intervention target populations include

1. newly diagnosed;
2. sporadically in care or at risk for falling out of care;
3. lost to care; and
4. previously diagnosed/never engaged in care.[84]

DIS staff work directly with referral sources and coordinate with patient navigators and medical providers. This includes a feedback loop so DIS knows if clients have entered into care.

The intervention was piloted in the Central and Southwest regions and then expanded across the state.

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[82] Virginia Department of Health. *Active Referral: Implementation Manual. Virginia Department of Health, Special Projects of National Significance, System Linkages and Access to Care Initiative.* Final Report. October 2015.
[83] Virginia Department of Health. *Active Referral: Implementation Manual. Virginia Department of Health, Special Projects of National Significance, System Linkages and Access to Care Initiative.* Final Report. October 2015.
[84] Virginia Department of Health. *Active Referral: Implementation Manual. Virginia Department of Health, Special Projects of National Significance, System Linkages and Access to Care Initiative.* Final Report. October 2015.

Description of Intervention Model

CHALLENGE ACCEPTED

THE CHALLENGE: linking newly diagnosed individuals during that critical "capture" moment immediately following diagnosis, as well as ensuring linkage is truly active and engaged so clients follow through.

Intervention Model: **Active Referral Model**

The Institute of Healthcare Improvement (IHI) Collaborative Learning Model is a process where systems, organizations, and providers implement and measure small-scale interventions and then share their experiences in an effort to accelerate learning and widespread implementation.[85] IHI informed the development and piloting of the Active Referral intervention.

The Active Referral intervention involves DIS staff and testing and referral agencies across the state working together to ensure clients are rapidly linked to care upon HIV diagnosis, using a standardized active referral protocol. DIS accomplish this by working directly with referral sources and with assistance from medical providers and patient navigators (where available). This allows DIS staff to more efficiently and consistently receive confirmation of linkage to HIV medical care.

The Active Referral intervention sought to increase the percentage of newly diagnosed individuals who are linked to care and to link them within 30 days of their diagnosis or initial referral to a patient navigator.[86] DIS staff are located in 35 health districts across Virginia and supervised by local health department STD nurses, nurse managers, or DIS frontline supervisors. DIS across the state take some direction from Virginia's STD Surveillance, Operations & Data Administration (SODA) field operations and approximately five DIS staff members are directly supervised by regional SODA field operations.

Each region has at least one "champion" who serves as the go-to person for Active Referral and linkage-to-care issues. These individuals help provide technical assistance where needed. They also help to identify any overlap of processes and procedures between DIS' Active Referral intervention and the work being done by patient navigators.

[85] Institute for Healthcare Improvement. *The Breakthrough Series: IHI's Collaborative Model for Achieving Breakthrough Improvement.* White Paper. 2003.
[86] Rhodes A. Virginia Department of Health. Personal Correspondence. February 2, 2017.

Staffing Requirements & Considerations for Replication

Staffing Capacity

Based on the VDH work, here are the types of staff necessary to replicate this intervention.

Disease intervention specialists (DIS): DIS are responsible for the Active Referral intervention. Primary tasks include

- following up on priority clients (Note: by law, DIS have authority to locate persons diagnosed with an infectious disease that impacts public health and provide test results on behalf of the testing facility);
- providing STD prevention education;
- reducing ongoing disease transmission;
- conducting appropriate testing and counseling;
- providing referrals to connect clients to care;
- offering partner services;
- reporting required health conditions; and
- following up on active linkage to care.

DIS supervisor: This individual supervises the DIS and ensures their compliance with the Active Referral protocol. Depending on where DIS are working out of in the state, this supervisor could be a health department STD nurse, nurse manager, DIS frontline supervisor, or STD Surveillance, Operations & Data Administration (SODA) field operations manager.

Regional "champion:" Each region also has at least one "champion" who serves as the go-to person for Active Referral and linkage-to-care issues. These individuals help identify any processes and procedures overlap between DIS' Active Referral intervention and the work being done by other synergistic interventions in the state. Where necessary, these individuals may offer TA.

Staff Characteristics

Core competencies include

- familiarity with, and course completion of client-focused HIV risk-reduction counseling models;
- skill in the counseling process;
- active listening skills;
- ability to use and be comfortable with interactive negotiating styles rather than persuasive; approaches to communicate and engage clients;
- using open-ended question to solicit further information from clients;
- interest in learning new counseling and skills-building techniques;
- ability to build client trust and create a supportive environment;
- "people" skills;
- non-judgmental attitude; and
- skilled at eliciting behavioral information and providing referral resources.

Source: Virginia Department of Health. Active Referral: Implementation Manual. Virginia Department of Health, Special Projects of National Significance, System Linkages and Access to Care Initiative. Final Report. October 2015.

The Care Continuum Team Roster

While several programs and interventions across the state of Virginia—and operating through the state health department—have clear synergies, it is important to know the key "players" and how their work all fits together to support client advancement along the HIV Care Continuum.

Disease intervention specialists (DIS): DIS workers are part of an "Active Referral" intervention focused on rapidly linking newly diagnosed HIV-positive individuals into care. The DIS receive a list of new diagnoses, identify priority cases, reach out to them, discuss the diagnosis and provide some HIV education and active linkage to a patient navigator. The patient navigator will help this client manage their way through the health care system. DIS also assist those who have fallen out of care and bring them back.

Patient Navigation: Patient navigators work across all five health regions of Virginia to carry out linkage and retention activities by providing healthcare systems navigation and support.

CHARLI: This is a pre- and post-release correctional program for inmates operating through state funds, focused on HIV testing and the establishment of a release plan to community-based organizations, with a particular emphasis on linkage to support services.

Care Coordination: An intervention first funded through a grant from the Health Resources and Services Administration's HIV/AIDS Bureau, Special Projects of National Significance and sustained through Ryan White funds. Care coordination's primary focus is on ensuring access to medication and HIV medical care for recently released inmates, including facilitation of coverage and support for and tracking of medication pickup and medical appointments. This includes referral for expedited ADAP coverage and a 30-day supply of ART immediately after release.

Sources: Virginia Department of Health. *Care Coordination Implementation Manual: Virginia Department of Health, Special Projects of National Significance, System Linkages and Access to Care Initiative.* Final Report. October 2015.

Virginia Department of Health. *Active Referral Implementation Manual: Virginia Department of Health, Special Projects of National Significance, System Linkages and Access to Care Initiative.* Final Report. October 2015.

Replication Tips for Intervention Procedures and Client Engagement

This section provides tips for readers interested in replicating the intervention and, where applicable, includes grantee examples for further context.

DIS Processes

The Active Referral intervention establishes a new, formalized role for DIS staff to readily engage and offer newly identified HIV clients a direct referral to a medical provider or patient navigator.

Documented client follow-up is an essential part of this intervention and in ensuring they link to care.

When a client is newly diagnosed or newly identified with HIV at a local health department, they are immediately engaged in the Active Referral Process, where DIS assist with coordination of linkage to HIV medical care and other services. Additionally, DIS receive morbidity reports from physicians, hospitals, and laboratories for persons in their district who are diagnosed with HIV and other reportable STDs. DIS are then responsible for following up with priority STD diagnoses (i.e., HIV, primary and secondary syphilis, and associated partners) and engaging them in care and services through the Active Referral process.

By using motivational interviewing and creating rapport, DIS provide education and prevention messaging to clients, and also discuss referrals to available services. Referrals to support services are often critical for keeping clients engaged, because when basic survival needs are unmet, HIV becomes less and less of a priority.[87]

DIS should be sure to clarify for clients what the Active Referral DIS Intervention is. Interested clients sign a Coordination of Care and Services Agreement (CCSA) form (valid for 24 months) and provide DIS staff and patient navigators with authorization to contact and reengage clients if they become lost to care. If clients are interested in the patient navigation program, then a "warm transition" from DIS to the patient navigator should occur.

The Active Referral intervention calls for DIS staff to directly contact the provider or patient navigator (either via phone or fax) to make and/or confirm an HIV medical care appointment on behalf of or with the client. The CCSA form is provided (usually faxed) to the referral point. Two-way communication between DIS and patient navigators, as well as clearly defined roles and responsibilities between the two, is key.

An important part of the CCSA form is the section where navigators and providers fill out and fax back confirmation that the referral was received and that the client was seen. Documented client follow-up is an essential part of this intervention and in ensuring they link to care.

[87] Virginia Department of Health. *Active Referral Implementation Manual: Virginia Department of Health, Special Projects of National Significance, Systems Linkages and Access to Care Initiative.* October 2015.

Securing Buy-in

It is important to educate medical providers, social support staff, DIS, and patient navigators about how Active Referral is both similar to and different from existing DIS job responsibilities and how Active Referral is aligned with patient navigation and community health workers. As VDH explains,

> *"This helped all parties understand that no one role stood alone in serving as advocates for their patients, which in turn helped patients trust each role as well."* [88]

Trainings should be provided to help DIS staff better explain to clients what services are being offered, and how these services are beneficial to clients' health. These trainings are continuously refined over time. Additionally, patient navigators were invited to portions of the trainings to encourage networking between them and the DIS. This creates an improved Care Continuum model and improved DIS offerings. It also keeps stakeholders engaged in the system and invested in the work.

Based on staff recommendations, trainings on data collection and data quality were added. Trainings typically last approximately 3 hours and cover topics such as public health goals, health department versus field perspectives, how to move from passive to active referrals, motivational interviewing, use of the Active Referral protocol, communication best practices, and others.

VDH explains that, "Training experienced DIS staff on conducting Active Referral requires addressing a common misconception: that DIS staff were already doing Active Referral work."[89] Although DIS staff facilitated referrals, they were not doing Active Referral as defined in the SPNS project. Some were not following up to ensure clients arrived at their first appointments; some were doing these activities but not documenting the work. This is where a formal, standardized protocol and required documentation are useful in routinizing the process and clarifying tasks and expectations for staff.

Some tips for collaborating with partners and clarifying roles include the following:

- **Knowing the key entities with whom to outreach.** For Virginia, this included reaching out to multiple state programs (HIV care, HIV prevention, STD operations, HIV Surveillance), local health department staff, Ryan White grantees, community-based organizations, and related intervention programs (e.g., CDC's Care and Prevention in the United States [CAPUS] demonstration project operating in the state).
- **Holding inclusive meetings with stakeholders to involve them early on in planning.** For the Active Referral intervention, VDH held statewide meetings with stakeholders, including conference calls, and technical working sessions to strategize about key areas of the project during the initial developmental phases of the intervention.
- **Ensuring clarity about why changes in job procedure were being made.** This involved explaining the importance of changes in the current DIS process and how they help better link clients to care to reduce the risk of onward transmission.
- **Show you're listening and that feedback is valued.** VDH asked DIS to review draft protocols and forms and wove DIS recommendations directly into updated documents and trainings.

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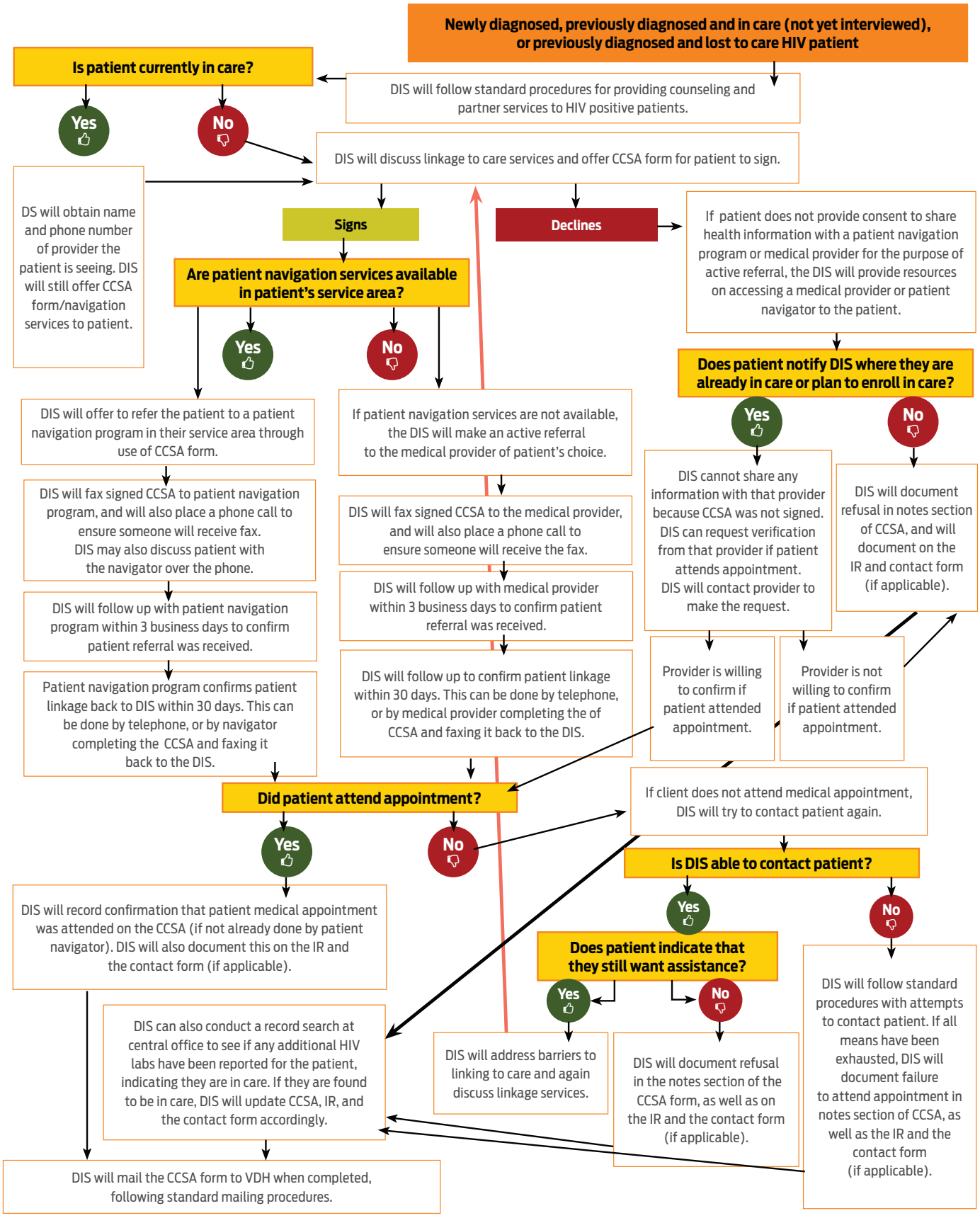
[88] Virginia Department of Health. *Active Referral Implementation Manual: Virginia Department of Health, Special Projects of National Significance, Systems Linkages and Access to Care Initiative.* October 2015.

[89] Virginia Department of Health. *Active Referral Implementation Manual: Virginia Department of Health, Special Projects of National Significance, Systems Linkages and Access to Care Initiative.* October 2015.

Active Referral Process Map



- **Increase communication.** This includes increasing communication between DIS and patient navigators to help them feel more connected and less confused about their respective roles. DIS also provides updates in monthly statewide STD prevention meetings and stays in touch with contacts at referral sites.

Overcoming Implementation Challenges

Because of the evolving nature of this work as well as staff turnover, trainings are ongoing. This creates the opportunity to address questions that arise during implementation of Active Referral.

Because both DIS and patient navigators work toward the common goal of handling referrals and creating a relationship with clients to better link and retain them in care, staffing challenges or perceptions of overlap have to be clarified and addressed.

Collecting accurate data on newly diagnosed cases can be a challenge, because of either incomplete laboratory reporting or reluctance by some providers to allow surveillance staff to review data. Continued enforcement of protocols and communication outreach may help address these challenges.

Promoting Sustainability

The development of the Active Referral intervention protocol and associated forms took VDH longer than expected. This time could possibly have been reduced by spending more structured time with DIS up front to understand how the intervention could be incorporated into their process, and by dedicating a higher proportion of staff time toward the protocol and form development.

That said, now that a protocol has been established, it is formally woven into DIS regular job assignments, incorporated into goal-setting under ongoing CDC grant funding that supports DIS activity, and is now considered a standard statewide process. As such, there is no real additional cost required to sustain the activities.

Although Active Referral was completed by DIS staff for the SPNS grant, VDH is now working to expand the intervention to anyone who engages with clients in linkage and re-engagement work.

Conclusion

The key components of an Active Referral intervention are a protocol to ensure consistency among DIS workers, engagement of community partners, linkage to patient navigators, and ultimately, client linkage and retention in HIV medical care.

Given the critical time period immediately following HIV diagnosis and the importance of receiving medical care, the value of linkage interventions, such as Active Referral, cannot be underscored enough.

Other Available Resources

- **Systems Linkages and Access to Care for Populations at High Risk of HIV Infection (System Linkages) Initiative**

Improving Health Outcomes

Moving Patients Along the HIV Care Continuum and Beyond

Diagnosing HIV

INTERVENTION OVERVIEW & REPLICATION TIPS

Social Networks Testing
Wisconsin Department of Health Services

Linkage to Care

INTERVENTION OVERVIEW & REPLICATION TIPS

Assess, Test, Link: Achieve Success (ATLAS) Program
Care Alliance Health Center (OH)

Enhancing Linkages to Care for Women Leaving Jail
University of Illinois at Chicago

Video Conferencing Intervention
Louisiana Department of Health and Hospitals

Active Referral Intervention
Virginia Department of Health

▶ Louisiana Public Health Information Exchange (LaPHIE)
Louisiana State University, Health Science Center and Louisiana Department of Health Hospitals, Office of Public Health

Retention in Care

INTERVENTION OVERVIEW & REPLICATION TIPS

My Health Profile
New York-Presbyterian Hospital

Prescription of ART & Medication Access

INTERVENTION OVERVIEW & REPLICATION TIPS

Care Coordination Intervention
Virginia Department of Health

Beyond the Care Continuum: Addressing HCV Comorbidity and Coinfection

INTERVENTION OVERVIEW & REPLICATION TIPS

Hepatitis Treatment Expansion Initiative
University of California, San Francisco, San Francisco General Hospital HIV Clinic

Hepatitis Treatment Expansion Initiative
Washington University School of Medicine (MO)

Louisiana Public Health Information Exchange (LaPHIE)

Louisiana State University, Health Science Center and Louisiana Department of Health Hospitals, Office of Public Health

The table below provides a general overview of the Louisiana Public Health Information Exchange (LaPHIE) intervention so readers can assess the necessary steps required for replication. This intervention facilitates bidirectional information exchange between hospital system records and surveillance data to identify and link out-of-care HIV-positive clients back to care and treatment.

Intervention at-a-Glance	
Step 1	**Electronic Medical Record (EMR) Registers Client Arrival to Medical Facility** When any client registers at a participating medical center, their identifying information is added to the medical center's electronic registration system.
Step 2	**Compare Client Against Out-of-Care Dataset** An electronic notification is sent and compares registered client against out-of-care dataset to see if there's an exact match.
Step 3	**Out-of-Care Message is Sent** If there's a match, a standard, disease-specific electronic message is sent to the facility's electronic EMR system.
Step 4	**Alert Displays on Clinician Screen** The EMR system receives the message and it displays a standard, disease-specific alert to an authorized clinician when they open the client's EMR.
Step 5	**Linkage-to-Care Action is Prompted** When the clinician clicks on the alert, they see a list of suggested actions that can be checked off on the screen.
Step 6	**Linkage-to-Care Action Recorded** After a client meets with a clinician, the clinician checks off the linkage-to-care actions taken, and a message is sent to update the out-of-care dataset.

Step 7	**Out-of-Care Dataset Updated**
	The out-of-care dataset is updated nightly to determine which individuals should be included in the dataset.

Source: Louisiana State University Health Care Service Division. *Louisiana Public Health Information Exchange (LaPHIE): An Electronic Network to Improve Access for Hard to Reach Populations of Persons Living with HIV.* Final Report. February 28, 2013.

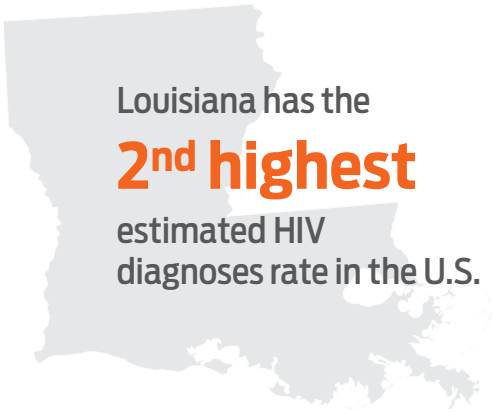
Resource Assessment Checklist

Organizations should walk through a Resource Assessment (or Readiness) Checklist to assess their ability to conduct this work. If organizations do not have these components in place, they are encouraged to develop their capacity so that they can successfully conduct the Louisiana Public Health Information Exchange (LaPHIE) intervention. Questions to consider include:

- ☐ Does your organization have access to timely, accurate surveillance data or to a collaborating partner who does?
- ☐ Is there interest in establishing a system where surveillance data and real-time EMR data are communicating?
- ☐ Does your organization have access to—or can you tap into—diverse and affected stakeholder groups to explain project plans and incorporate their input?
- ☐ Does your organization have an EMR system in place? Is this across one or more facilities?
- ☐ Are there IT staff members who can establish a secure, bi-directional electronic information system to share data across two sources? If not, are you able to partner with or hire an organization that has this expertise?
- ☐ Does your organization have IT user support to field and manage questions as technical features are rolled out? If not, can your organization acquire this expertise?

Setting the Stage: Grantee Intervention Background

Under a combined program with a single administrative director, the Louisiana Department of Health and Hospitals, Office of Public Health (OPH), STD/HIV Program oversees surveillance, prevention, and care programs for both HIV and STDs and conducts data entry and analysis related to these programs. Meanwhile, the Louisiana State University (LSU) Health Care Services Division had an extensive EMR system across its eight hospitals.



Source: Centers for Disease Control and Prevention. HIV Surveillance Report, 2014; vol. 26. **http://www.cdc.gov/hiv/library/reports/surveillance/**. 2015.

After a joint OPH-LSU analysis revealed that approximately 1,100 individuals received at least one non-HIV medical service within the LSU hospital system yet their HIV diagnosis was not readily available to the clinician in the medical record at the time, OPH-LSU developed a hypothesis. They proposed that a bi-directional exchange of information between healthcare providers and public health surveillance data would effectively identify and offer the opportunity to link these otherwise hard-to-reach persons into HIV care and treatment.[90]

LSU, in partnership with OPH, was awarded SPNS funding as part of the **Electronic Networks of Care initiative** to establish and test this bi-directional data system known as the Louisiana Public Health Information Exchange program, or LaPHIE.

LaPHIE was phased into LSU hospital ERs and then associated venues throughout the hospital system and proved itself as an innovative electronic health information intervention to address unmet need among HIV-positive individuals in the state.

Description of Intervention Model

CHALLENGE ACCEPTED

THE CHALLENGE: how to turn clinical encounters with clients who are not in HIV care, and change this missed opportunity into a time for active engagement and subsequent linkage to care.

Intervention Model: Electronic Network Notification System

Given the sometimes transient and sporadic nature of healthcare receipt among hard-to-reach people living with HIV (PLWH), LaPHIE is able to maximize meaningful use of existing electronic health records to screen for, identify, and conduct outreach for out-of-care HIV-positive individuals.

[90] Louisiana State University Health Care Service Division. *Louisiana Public Health Information Exchange (LaPHIE): An Electronic Network to Improve Access for Hard to Reach Populations of Persons Living with HIV.* Final Report. February 28, 2013.

Privacy and confidentiality are paramount when it comes to health information and medical records. This is particularly true for diagnoses such as HIV, which is still a very stigmatized disease. Sharing protected healthcare and public health information while complex and challenging, is doable.

Before embarking on this work, LSU and OPH convened a legal compliance and ethics working-group consisting of public health officials, doctors and nurses, attorneys familiar with both federal and state health laws, HIV-positive persons, HIV advocates, and a medical ethicist. During the course of a year, the workgroup compiled legal questions, reviewed relevant legislation, and engaged in discussions with national confidentiality and biomedical ethic experts to help answer questions. An independent market research firm also conducted focus group interviews with potential clients as well as clinicians and public health personnel about the project. After all of this, the following conclusions were made:[91]

- LaPHIE is both legal and ethical. In Louisiana, no laws prohibit information sharing for the purposes of improving individual care. In fact, Louisiana legislation facilitates communication between public health authorities and healthcare providers in order to improve treatment.
- Focus group participants, from clients to providers to public health personnel, expressed overall acceptance to—and after rollout, appreciation for—the LaPHIE system.[92]

LaPHIE partners took steps to ensure only the minimally necessary information is transmitted; that transmissions are secure; and that this information only be shared with authorized providers. Protections include secure servers behind firewalls and information traveling through secure, private channels employing state-of-the-art encryption.

Because LaPHIE alerts are provided in real-time through an automated system, it is imperative that the data be up-to-date. OPH monitors laboratory data on an ongoing basis with the majority of laboratory data being reported electronically daily. Each week, surveillance supervisors review lab quality assurance reports and immediately follow up on any issues.[93]

HITECH & MEANINGFUL USE

The Health Information Technology for Economic and Clinical Health (HITECH) Act promotes the adoption and meaningful use of health information technology. ***Meaningful use*** is using certified electronic health record technology to

- improve quality, safety, efficiency, and reduce health disparities;
- engage and empower patients;
- improve care delivery, transparency, and efficiency;
- maintain privacy and security of patient health information; and ultimately,
- lead to improved public and patient health outcomes.

Source: HealthIT.gov. Meaningful Use Definition & Objectives. n.d. Available at: **www.healthit.gov/providers-professionals/meaningful-use-definition-objectives.**

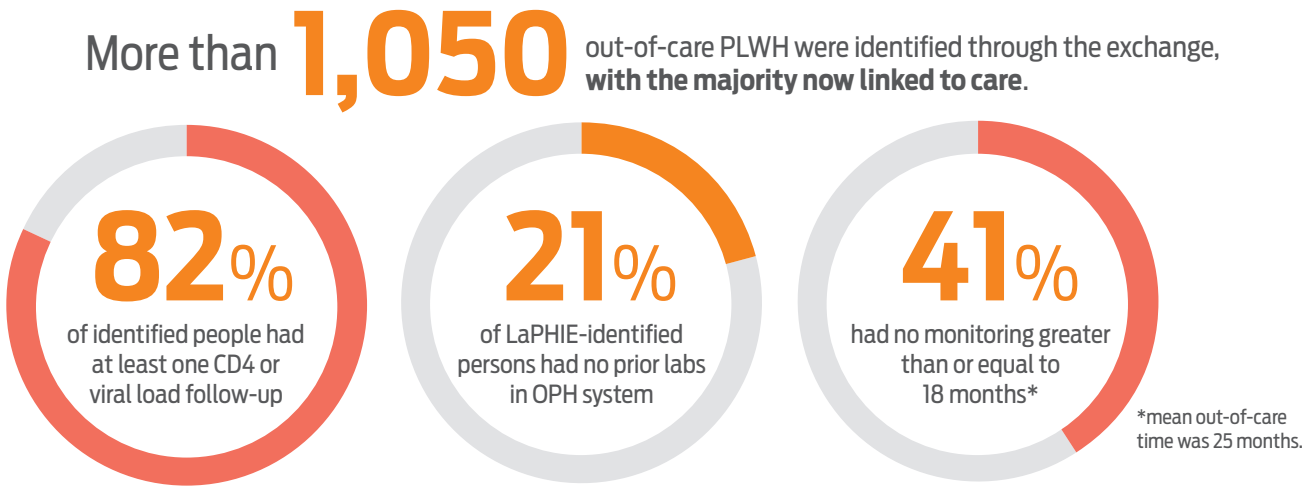
[91] Louisiana State University Health Care Service Division. *Louisiana Public Health Information Exchange (LaPHIE): An Electronic Network to Improve Access for Hard to Reach Populations of Persons Living with HIV*. Non-technical Guide. February 28, 2013.

[92] LSU and OPH. Louisiana Public Health Information Exchange (LaPHIE). n.d. Available at: https://effectiveinterventions.cdc.gov/docs/default-source/data-to-care-d2c/LaPHIE_Program_Description_12_10_13.pdf?sfvrsn=0.

[93] LSU and OPH. Louisiana Public Health Information Exchange (LaPHIE). n.d. Available at: **https://effectiveinterventions.cdc.gov/docs/default-source/data-to-care-d2c/LaPHIE_Program_Description_12_10_13.pdf?sfvrsn=0.**

LaPHIE BY THE NUMBERS

Just in the *first two years*, LaPHIE saw incredible HIV Care Continuum improvement. This included:



Source: Louisiana State University Health Care Service Division. *Louisiana Public Health Information Exchange (LaPHIE): An Electronic Network to Improve Access for Hard to Reach Populations of Persons Living with HIV.* Non-technical Guide. February 28, 2013.

The LaPHIE dataset contains thousands of records of persons diagnosed with HIV who appear to be out-of-care. *Out-of-care* is defined as no record of CD4 or viral load in the last 9 months. The OPH database interfaces with the LSU hospital client registration and EMR systems. When individuals enter the LSU hospital system (ER, clinic, or otherwise), the system compares those clients against the out-of-care list.

When an exact match is made (with last name, first name, birth date, and social security number), a LaPHIE message (issued as a standard HL7 Client Problem message) is sent in real-time to the EMR, and a provider sees an alert on the opening screen of the client's record. Alerts are only visible to nurses and physicians who are in a position to take action.

When providers see the alert, they have the option to "take action now" or "take action later." When "take action now" is selected, they are directed to a screen that includes clinical support recommendations and a structured documentation tool to record the clinical actions taken.

After an alert, clinicians or designated staff talk to the client and answer any questions they have. There are several options available for the provider to select in terms of which actions are taken. These include [94]

1. discuss OPH alert and underscore the importance of HIV treatment;
2. re-order a confirmatory test;
3. assess stage of illness;
4. schedule or refer client for a follow-up appointment;

[94] LSU and OPH. Louisiana Public Health Information Exchange (LaPHIE). n.d. Available at: **https://effectiveinterventions.cdc.gov/docs/default-source/data-to-care-d2c/LaPHIE_Program_Description_12_10_13.pdf?sfvrsn=0.**

5. counsel pregnant client (if pregnant);
6. document any client report of any HIV treatment receipt at another facility (and the name of that facility); and
7. confirm client is not interested in treatment at this time.

A "clinical actions taken" message is sent back to OPH upon client's discharge. If a provider selects "take action later," the LaPHIE alert will continue to post with each return to the Client Summary Screen, reminding the provider that action is still needed. These alert messages can be thought of as a type of electronic outreach targeting HIV-positive persons.[95]

[95] Louisiana State University Health Care Service Division. *Louisiana Public Health Information Exchange (LaPHIE): An Electronic Network to Improve Access for Hard to Reach Populations of Persons Living with HIV*. Final Report. February 28, 2013.

Staffing Requirements & Considerations for Replication

Staffing Capacity

Based on the OPH work, here are the types of staff necessary to replicate this intervention.

Project coordinator: This individual oversees the project design and continued maintenance of the LaPHIE intervention. This person also helps coordinate and oversee any focus or working group activities.

Surveillance manager: The surveillance manager oversees surveillance, prevention, and care programs for both HIV and STDs and conducts data entry and analysis related to these programs. This individual provides input on the intervention's dataset and alert notification copy.

IT manager: During project design, this person helps conceptualize the flow of information across data sources, identifies possible issues, and provides recommendations. Additionally, they oversee the build and development of the bidirectional data system, identify any failure points in the flow of information, help develop a dataset, and provide TA and troubleshooting.

For OPH, additional staff, such as clinicians, program directors, experts in compliance, the chief medical officer, and the HIV administrative director offered in-kind support during the planning, launch, and rollout of LaPHIE.

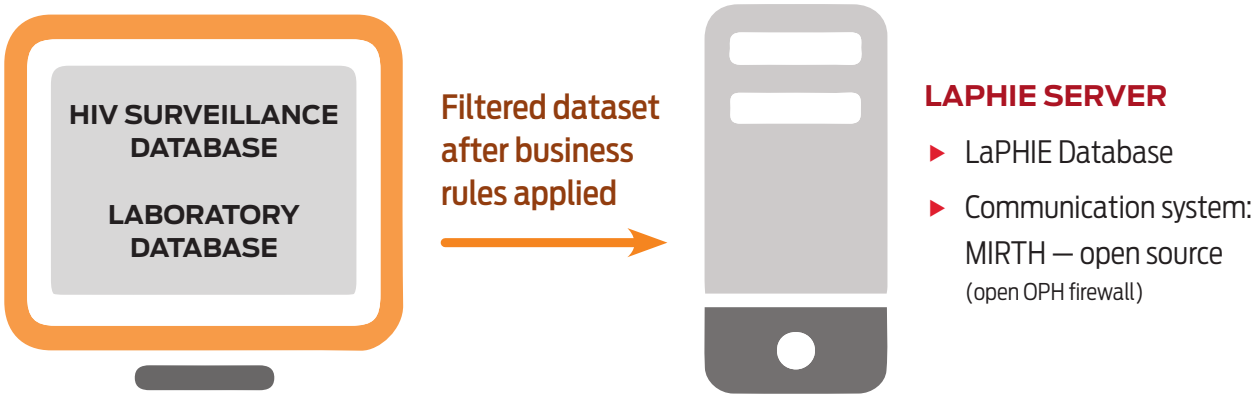
Staff Characteristics

Important staff characteristics include

- experience with and understanding of surveillance data and quality assurance strategies;
- knowledge of the existing electronic medical record system and integration of health information technology systems to facilitate bi-directional communication; and
- interest in working with and improving health outcomes for people living with HIV.

Sources: Louisiana State University Health Care Service Division. *Louisiana Public Health Information Exchange (LaPHIE): An Electronic Network to Improve Access for Hard to Reach Populations of Persons Living with HIV*. Non-technical Guide. February 28, 2013.

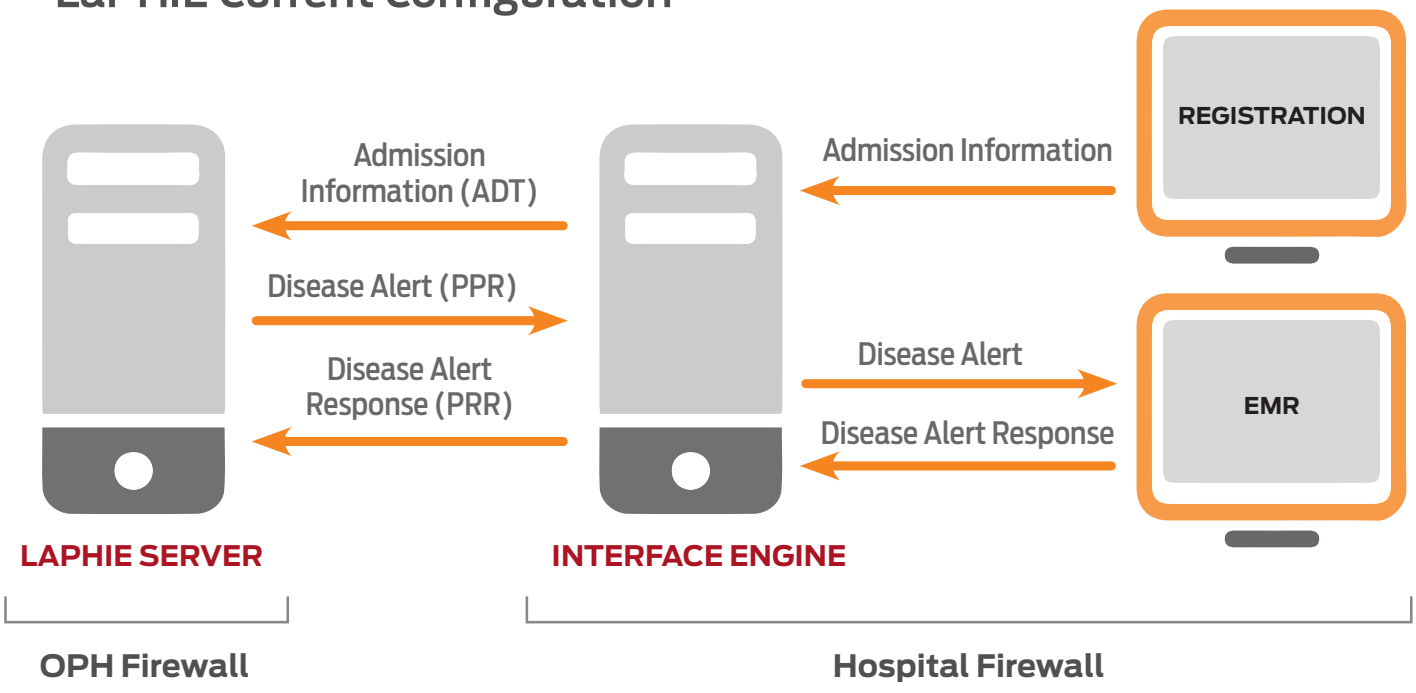
LaPHIE Surveillance Data Inputs



TARGET POPULATIONS:

- Persons considered "not in care" (no record of CD4/VL in 9 months)
- Persons who have not received test results and may be unaware of HIV status
- HIV-exposed infants in need of follow-up

LaPHIE Current Configuration



Source: Reprinted with permission. Louisiana Office of Public Health, STD/HIV Program and Louisiana State University.

Replication Tips for Intervention Procedures and Client Engagement

This section provides tips for readers interested in replicating the intervention and, where applicable, includes grantee examples for further context.

Organizations interested in replicating LaPHIE need to determine whether the intervention is in alignment with their institutional goals, mission, vision, and priorities as well as what type of service encounters and institution's intervention alerts are appropriate. Because LaPHIE intervention would be a new system, how it is rolled out, to which facilities, and in what order, as well as how trainings will take place for users, all need to be considered.[96]

Since LaPHIE involves multiple stakeholders, it is also important to consider whether any competing, large-scale or technological projects are taking place, in transition, or planned for in the near future. This includes any plans for an upgrade or switch to a new EMR software system or any major changes in leadership that could affect implementation and rollout.[97]

Since non-infectious disease clinicians will be receiving alerts, the project should consider how comfortable these individuals are with discussing HIV and HIV care.[98] Organizations may want to consider offering HIV education in addition to LaPHIE technical use trainings.

Depending on the scale of the project, organizations will also need to consider how much time and effort a LaPHIE-style intervention will require from IT staff. Assessment of current IT activities as well as data quality assurance activities is advisable during project planning.

The following steps should also be considered when creating a similar intervention:

- **Identify any failure points in the flow of information** (e.g., from diagnosis of HIV infection to reporting, to follow-up across public health and medical providers).
- **Have your EMR system adopt a "no wrong door" approach** so untreated PLWH with encounters anywhere at the participating hospital can be referred to an initial point of clinical care.
- **Develop a dataset.** This includes knowing your organization's strengths and weaknesses when it comes to your dataset. Do you have comprehensive lab surveillance that provides enough information to determine if a person is out of care?
- **Determine message flow and alert notifications.** This includes message content. Clinicians and public health professionals should provide input on intervention message alerts. Ideally, messages are simple and intuitive, including recommended actions for providers to take, and tracking those

[96] Louisiana Department of Health and Hospitals, Office of Public Health, STD/HIV Program. *Louisiana's Special Projects of National Significance: Systems Linkages and Access to Care for Populations at High Risk of HIV Infection Initiative.* Final Report. August 31, 2015.
[97] Louisiana Department of Health and Hospitals, Office of Public Health, STD/HIV Program. *Louisiana's Special Projects of National Significance: Systems Linkages and Access to Care for Populations at High Risk of HIV Infection Initiative.* Final Report. August 31, 2015.
[98] Louisiana Department of Health and Hospitals, Office of Public Health, STD/HIV Program. *Louisiana's Special Projects of National Significance: Systems Linkages and Access to Care for Populations at High Risk of HIV Infection Initiative.* Final Report. August 31, 2015.

respective actions. Clinicians should also be familiar with how to respond to alerts in EMRs and, ideally, there should not be too many other competing alerts for clinician attention.

- **Determine process for follow-up** should providers decline action.

Securing Buy-in

LSU and OPH went to great lengths to secure buy-in from stakeholders during the brainstorming, building, rollout, and testing phases of LaPHIE. This included:[99]

- **Legal compliance and ethics working group.** LSU and OPH created the working group to vet LaPHIE's feasibility and adherence to federal and state laws.
- **Community engagement via focus groups.** The LaPHIE project team conducted 16 focus groups with 149 clients and 23 "key informant" interviews with clients with HIV who were infrequent users of health care. As described by the project team, "The purpose of the qualitative research was to measure affected individuals' opinions on the purpose and structure of this exchange of protected health information."
- **In-person meetings.** Community and planning bodies were held prior to and during the implementation of LaPHIE.
- **Provider and healthcare system conversations.** LSU and OPH worked to engage with and communicate to providers about the LaPHIE project, how it would interface with current operations, answer questions, and address any possible concerns.
- **Trainings.** In advance of the LaPHIE launch, the LSU project coordinator conducted in-depth training with LaPHIE "Super-users" at each participating medical center. A Super-user is responsible for overseeing LaPHIE in their unit, and they are emailed every time there is an alert to ensure appropriate follow-up has occurred. The Super-users provide LaPHIE training to all clinicians in their unit. Additionally, all new LSU clinicians receive mandatory online training on how to use the LaPHIE system.

In addition to securing input from diverse personnel and partners for initial buy-in to create and maintain the system, these parties were also readily engaged to evaluate LaPHIE on an ongoing basis to ensure it continued to fulfill its mission.[100]

Organizations hoping to replicate LaPHIE would be well served to engage similar stakeholder groups and ensure adequate training so that the intervention operates, and users engage with the system, as intended.

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[99] Louisiana State University Health Care Service Division. *Louisiana Public Health Information Exchange (LaPHIE): An Electronic Network to Improve Access for Hard to Reach Populations of Persons Living with HIV.* Non-technical Guide. February 28, 2013.

[100] LSU and OPH. Louisiana Public Health Information Exchange (LaPHIE). n.d. Available at: **https://effectiveinterventions.cdc.gov/docs/default-source/data-to-care-d2c/LaPHIE_Program_Description_12_10_13.pdf?sfvrsn=0.**

Overcoming Implementation Challenges

Many of the challenges that the LaPHIE system encountered were also viewed as strengths. These included pulling together individuals across the healthcare system that had diverse philosophies, perspectives, and policies. These differing views ensured that the LaPHIE team considered all angles of the project, how it would work, interface with current systems, and how users and clients would feel about it.

The intervention has to balance individual rights and protection of the public's health. To address this, LSU and OPH examined the ethical nature of the system as well as the possible individual and community health outcomes such a system could bring.[101]

Because of the nature of the LaPHIE project and the bi-directional communication taking place across data systems, the process required numerous tests to ensure that EMR notifications were working correctly. To facilitate success, LaPHIE had a phased rollout, first at a hospital ER and then the broader hospital-affiliated clinics, and then on to another hospital ER and so on.[102]

Promoting Sustainability

The LSU hospital system has undergone significant change in recent years. In 2013, two hospitals were closed altogether, and the remaining hospitals—with the exception of one—were privatized and changed administrations.[103] The LaPHIE team has reached out to the hospitals about the intervention and to illustrate the value it brings to public health efforts. Three of the six hospitals decided to continue operating the LaPHIE system while the other three determined not to pursue it, citing a change in electronic health record software as their reason why.[104] With resources received from HRSA Special Projects of National Significance, OPH and LSU partnered with a private hospital not affiliated with the previous LSU system and successfully implemented LaPHIE in 2015.[105] Also, the Georgia Department of Public Health is implementing an intervention similar to LaPHIE.[106]

Conclusion

LaPHIE has proven an effective intervention in identifying and linking out-of-care HIV-positive individuals back to HIV care and treatment. Thousands of clients with HIV who were out of care have been effectively linked back into care and treatment thanks to LaPHIE.

As others consider replicating a similar model, it is important to understand the people who are falling through the "cracks" of their system, assessing how their dataset can be leveraged to best identify and intervene with these persons, assessing whether the validity of their surveillance data can be used for this style approach, and engaging stakeholders to secure necessary buy-in.

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[101] Louisiana State University Health Care Service Division. *Louisiana Public Health Information Exchange (LaPHIE): An Electronic Network to Improve Access for Hard to Reach Populations of Persons Living with HIV.* Final Report. February 28, 2013.

[102] Louisiana State University Health Care Service Division. *Louisiana Public Health Information Exchange (LaPHIE): An Electronic Network to Improve Access for Hard to Reach Populations of Persons Living with HIV*. Final Report. February 28, 2013.

[103] Gruber D and Wendell D. Louisiana Department of Health and Hospitals. Personal Interview. January 21, 2016.

[104] Gruber D and Wendell D. Louisiana Department of Health and Hospitals. Personal Interview. January 21, 2016.

[105] Gruber D and Wendell D. Louisiana Department of Health and Hospitals. Personal Interview. January 21, 2016.

[106] HRSA, HAB. Sustainability Results in Better Care for More People. *What's Going on @ SPNS*. October 2014. Available at: **http://hab.hrsa.gov/abouthab/files/cyberspnssustainability.pdf.**

LaPHIE taps into the promise of electronic health systems and illustrates just how effective the coupling of surveillance and EMR systems can be. For grantees who have a multi-campus hospital system, operate within regional health information organizations or exchanges, or otherwise communicate and share information across different facilities where clients may access care, then the LaPHIE "no wrong door" approach is a promising intervention worth further consideration.

Other Available Resources

- **Electronic Networks of Care Initiative**
- **LaPHIE Overview**
- **LaPHIE Presentation**
- **LaPHIE Collaborative Project Presentation**
- Legal and Ethical Aspects of Louisiana Public Health Information Exchange (LaPHIE) **"Using Technology to Improve Health Outcomes."** *What's Going on @ SPNS.*
- **"Sustainability Results in Better Care for More People."** *What's Going on @ SPNS.*
- **CDC Effective Interventions: Louisiana Public Health Information Exchange (LaPHIE)**
- Magnus M, Herwehe J, Murtaza-Rossini M, et al. **Linking and Retaining HIV Clients in Care: The Importance of Provider Attitudes and Behaviors.** *AIDS Client Care and STDS*. 2013; 27(5): 297-303.
- Herwehe J, Wilbright W, Abrams A, et al. **Implementation of an Innovative, Integrated Electronic Medical Record (EMR) and Public Health Information Exchange for HIV/AIDS.** *J Am Med Inform Assoc*. 2012;19(3): 448-452.

Retention in Care

Retention in Care

Retention refers to the ability of a provider or care system to maintain a continuous relationship with a client.

Retention in HIV care is an independent predictor of survival.[107,108] Mortality rates are 12 times higher for clients with missed visits versus mortality rates among clients who attended all scheduled appointments during the first year of care.[109]

In fact,

> *"Patients with missed visits in the year after establishing initial outpatient HIV care had more than twice the rate of subsequent mortality, compared with patients who did not miss visits, even when controlling for baseline CD4 count and antiretroviral receipt within the first year."*[110]

Successful HIV treatment requires sustained engagement in HIV care.[111,112] For many people living with HIV, the reality is quite different. Approximately one-third of HIV-infected individuals fail to sustain access to care for three consecutive years.[113] As a result, these individuals do not have consistent access to antiretroviral therapy (ART) or other medical services.

Studies show that clients retained in care are more likely to have better overall health outcomes, including improved CD4 count, suppressed viral load, and fewer hospital admissions/emergency room visits.[114]

Many of the same strategies that are essential for linkage and re-engagement to care are also relevant for improved retention in care. These can include medical case management, patient navigation, clinic use of peers and peer support groups, flexible clinic hours, culturally responsive and culturally reflective staff,

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[107] Mugavero MJ, Lin HY, Willig JH, et al. Missed Visits and Mortality Among Patients Establishing Initial Outpatient HIV Treatment. *Clin Infect Dis.* 2009;48:248–56.
[108] Giordano TP, Gifford AL, White AC Jr., et al. Retention in Care: A Challenge to Survival with HIV Infection. *Clin Infect Dis.* 2007;44:143–9.
[109] Mugavero MJ, Lin HY, Willig JH, et al. Missed Visits and Mortality Among Patients Establishing Initial Outpatient HIV Treatment. *Clin Infect Dis.* 2009;48:248–56.
[110] Mugavero MJ, Lin HY, Willig JH, et al. Missed Visits and Mortality Among Patients Establishing Initial Outpatient HIV Treatment. *Clin Infect Dis.* 2009;48:248–56.
[111] Giordano TP, Gifford AL, White AC Jr., et al. Retention in Care: A Challenge to Survival with HIV Infection. *Clin Infect Dis.* 2007;44:143–9.
[112] Mugavero MJ, Lin HY, Willig JH, et al. Missed Visits and Mortality Among Patients Establishing Initial Outpatient HIV Treatment. *Clin Infect Dis* 2009; 48:248–56.
[113] Olatosi BA, Probst JC, Stoskopf CH, Martin AB, Du us WA. Patterns of Engagement in Care by HIV-infected Adults: South Carolina, 2004–2006. *AIDS* 2009; 23:725–30.
[114] Horstmann, E., J. Brown, F. Islam, J. Buck, & B. Agins. Retaining HIV- Infected Patients in Care: Where Are We? Where Do We Go from Here? *Clin Infect Dis*. 2010; 50: 752–761.

appointment reminders, integrated co-located care, transportation assistance, access to mental health and substance use services, and access to social support services, including stable housing.

Health information technology has also proven valuable in supporting retention efforts, by tracking client care receipt, improving communication across multidisciplinary providers caring for the same client, and for prompting follow up. In their SPNS Electronic Networks of Care initiative grant, New York-Presbyterian (NYP) Hospital was able to illustrate that providing clients access to their medical continuity of care records could increase client autonomy, improve client involvement and interest in their care services, and increase overall retention, even among those clients with very low health literacy.

Improving Health Outcomes

Moving Patients Along the HIV Care Continuum and Beyond

Diagnosing HIV

INTERVENTION OVERVIEW & REPLICATION TIPS

Social Networks Testing
Wisconsin Department of Health Services

Linkage to Care

INTERVENTION OVERVIEW & REPLICATION TIPS

Assess, Test, Link: Achieve Success (ATLAS) Program
Care Alliance Health Center (OH)

Enhancing Linkages to Care for Women Leaving Jail
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Video Conferencing Intervention
Louisiana Department of Health and Hospitals

Active Referral Intervention
Virginia Department of Health

Louisiana Public Health Information Exchange (LaPHIE)
Louisiana State University, Health Science Center and Louisiana Department of Health Hospitals, Office of Public Health

Retention in Care

INTERVENTION OVERVIEW & REPLICATION TIPS

▶ My Health Profile
New York-Presbyterian Hospital

Prescription of ART & Medication Access

INTERVENTION OVERVIEW & REPLICATION TIPS

Care Coordination Intervention
Virginia Department of Health

Beyond the Care Continuum: Addressing HCV Comorbidity and Coinfection

INTERVENTION OVERVIEW & REPLICATION TIPS

Hepatitis Treatment Expansion Initiative
University of California, San Francisco, San Francisco General Hospital HIV Clinic

Hepatitis Treatment Expansion Initiative
Washington University School of Medicine (MO)

"My Health Profile" Continuity of Care Record Intervention

New York-Presbyterian Hospital

The table below provides a general overview of the My Health Profile intervention so readers can assess the necessary steps required for replication. My Health Profile is a patient portal leveraged across a regional health network containing critical health information to improve continuity of care.

Intervention at-a-Glance	
Step 1	**Identify What Information the Continuity of Care Record (CCR) will Highlight** Work with staff to identify what information is critical to be displayed in the CCR's "snapshot."
Step 2	**Engage an Information Technology (IT) Partner** Contract with an IT vendor to host the CCR and work with the intervention team to ensure CCR components meet IT standards, and offer interoperability, and multidirectional information-sharing.
Step 3	**Identify How Information Will be "Tethered"** Evaluate how existing health network and electronic medical record data will be pulled and pre-populated into the CCR.
Step 4	**Conduct Focus Groups with Key Stakeholders** Engage physicians, case managers, and clients to assess interest in the CCR, address concerns, and solicit input.
Step 5	**Provide Coaching and Training** Offer CCR and computer (as well as Internet browsing) training to users, particularly clients.
Step 6	**Conduct Evaluation** Although more robust evaluation like that of a SPNS grant isn't necessary for all organizations, those implementing a CCR will want to establish periodic reviews to ensure the system is working correctly and to assess whether engagement is meeting organizational standards. If not, adjustments may be necessary.

Source: New York-Presbyterian Hospital. New York-Presbyterian/SelectHealth CCR Demonstration Project. Final Report. August 2012.

Resource Assessment Checklist

Organizations should walk through a Resource Assessment (or Readiness) Checklist to assess their ability to conduct this work. If organizations do not have these components in place, they are encouraged to develop their capacity so that they can successfully conduct the "My Health Profile" Continuity of Care Record intervention. Questions to consider include:

- ☐ Has your organization surveyed or does it plan to survey the municipality your organization resides in to assess any larger regional or statewide health networks or initiatives in place or planned for the near future?
- ☐ Are the proposed participating medical sites able to share electronic health records?
- ☐ Is your organization able to ensure bi-directional flow between participating medical provider sites and the continuity of care record (CCR)?
- ☐ Has your organization identified or is it able to identify an open-source, non-proprietary software system that can be integrated into the existing health information network and electronic medical system software? If not, is your organization willing to find one or engage a knowledgeable IT consultant to help find one?
- ☐ Does your organization provide direct HIV primary care services or have a very strong and active partnership with an organization that does?
- ☐ Is your organization able and willing to engage people living with HIV in the development process of your CCR?
- ☐ Has your organization assessed or do you have plans to assess what critical information should be displayed in the CCR "snapshot" of information?
- ☐ Is your organization able to ensure security of patient health information and, ideally, create an "audit trail" within the CCR to show who has accessed the record? If not, is your organization able to create the necessary security components and audit features to do this work?
- ☐ Is your organization cognizant of patient health literacy issues and will it be taking that into consideration in the design of the CCR?

Source: New York-Presbyterian Hospital. New York-Presbyterian/SelectHealth CCR Demonstration Project. Final Report. August 2012.

Setting the Stage: Grantee Intervention Background

As Dr. Peter Gordon at New York-Presbyterian (NYP) Hospital explains, "Our healthcare system is in many ways hopelessly fragmented with silos of information existing at multiple sites and, in the end, the cost of not having this information flow freely is too great to society and too great at an individual level."[115]

NYP proposed developing a "continuity of care record" (CCR) to bridge this information divide with the goal of facilitating timely, high-quality, and user-centered care that could be easily accessible, comprehensive, and improve clinical outcomes and quality of life.

With funding through the Special Projects of National Significance (SPNS) **Electronic Networks of Care initiative**, NYP was able to develop and test this CCR intervention. At the time this intervention was first proposed and funded, bundling aspects of individual care was a novel idea, but today this concept has moved fairly center-stage as health information technologies have grown more sophisticated and users have become increasingly more comfortable with technology as part of the clinical equation.

Description of Intervention Model

CHALLENGE ACCEPTED

THE CHALLENGE: Silos of information exist across providers and healthcare facilities that can complicate care delivery and create duplications and inefficiencies.

Intervention Model: Continuity of Care Record Across a Regional Health Information Network

The My Health Profile CCR intervention "tethers to [an] electronic network system, thereby pre-populating important demographic, care coordination, laboratory, medication, and other critical information."[116] Unlike a comprehensive electronic medical record, a CCR isn't exhaustive. Instead, via secure Internet connection, it provides a "snapshot in time" of a client's critical information and allows clients—in addition to providers and case managers—to access this information.

A CCR provides a "snapshot in time" of a client's critical information and allows clients to access this information.

The idea of sharing a snapshot of health information with clients, particularly low-health-literacy, high-need, and sometimes-transient people living with HIV (PLWH), represents an innovative and forward-thinking approach. Because a CCR pulls from existing electronic health records, it ensures information is accurate, timely, and does not require inputting of data into the system; as such, it avoids some of the pitfalls that other forward-facing "patient portals" have encountered in the past.

[115] Gordon, P and RDE Systems. My Health Profile. 2013. Available at: http://ecompas.me.
[116] New York-Presbyterian Hospital. New York-Presbyterian/SelectHealth CCR Demonstration Project. Final Report. August 2012. p.1

To establish this intervention there are four primary phases:

1. *IT development*. The first phase consists of activities such as contracting with an IT vendor to host the CCR, making enhancements to the existing IT network, conducting staff recruitment and training, and developing promotional material about the intervention.
2. *Evaluation and data assessment*. The second phase includes assembling local evaluation methodology and ensuring that technology can readily pull necessary data.
3. *User testing*. This third phase includes gathering pre-disposing and enabling factors related to the adoption and use of the CCR. This includes conducting focus groups with core users, both providers and clients.
4. *Evaluation*. The fourth phase includes post-implementation surveys every 6 months to both CCR adopters and non-adopters to facilitate intervention review. For cross-site evaluation, audio computer-assisted self-interviewing (ACASI) software is immensely useful. In addition, an annual comprehensive data abstraction of important demographic, clinical, and care coordination data took place.

HITECH & Meaningful Use

The Health Information Technology for Economic and Clinical Health (HITECH) Act promotes the adoption and meaningful use of health information technology. *Meaningful use* is using certified electronic health record technology to

- improve quality, safety, efficiency, and reduce health disparities;
- engage and empower patients;
- improve care delivery, transparency, and efficiency;
- maintain privacy and security of patient health information; and, ultimately,
- lead to improved public and patient health outcomes.

Source: HealthIT.gov. Meaningful Use Definition & Objectives. n.d. Available at: **www.healthit.gov/providers-professionals/meaningful-use-definition-objectives**

Major components of the My Health Profile CCR include the following:

- *Easily accessible*. My Health Profile is mobile-, tablet-, laptop-, and desktop-friendly. Because this password-protected information lives online, clients can access it wherever they are.

- *Easy-to-use dashboard*. The client dashboard is dynamic. It includes
  - ⇨ a multifunctional tool with the ability to graph clinical information;
  - ⇨ FAQs and an information button with definitions of key words and medications;
  - ⇨ list of current medications; and
  - ⇨ to-do lists, including upcoming appointments.

- *Improved communication*. Clients can email their provider within the CCR. Similarly, providers can view where else clients are accessing care, including any additionally prescribed medications and lab work—thereby reducing risk of errors, duplications, and drug-drug interactions.

- *Audit trail*. The CCR keeps track of everyone who has seen the record, which helps address client worries about confidentiality.

- *Selected sharing*. Clients can offer access to their CCR to an individual of their choosing on a limited basis, which helps offer coherence and engagement in care (e.g., when traveling or getting a new provider up to speed or to show a benefits counselor proof of HIV status to quality for services or if in the ER and wanting to make providers aware of HIV status and existing medications).

- *Supports the "blue button initiative."* The CCR information can be downloaded and printed at the user's choosing.

- *Supports low-health literacy clients*. The platform was developed with health literacy in mind and tested among target users.

Clients feel empowered with the information they are given. They became more engaged in their care, less timid to ask questions about their HIV or other healthcare issues, and find that proof of HIV status vis-à-vis My Health Profile limited the amount of time necessary to enroll in social support services. One client recalls previously having to call their case manager, request information be mailed to them, deliver it to the housing coordinator, and then wait for the information to be processed. With My Health Profile, the same client was able to ask the housing coordinator if they had Internet access and almost instantaneously bring up their CCR and provide the necessary documentation right on the spot.

Staffing Requirements & Considerations

Staffing Capacity

Based on the NYP work, here are the types of staff necessary to replicate this intervention.

Project coordinator: This individual oversees the project design and continued maintenance. They identify key data points for presentation in the CCR, assess existing regional or other available electronic health networks, and provide support to coaches and intervention evaluator.

Project evaluator: The project evaluator works with the intervention team to create an evaluation methodology. This individual manages any cross-site evaluation efforts as well as assessment of pre-disposing enabling factors related to adoption and use of the CCR as well as post-implementation surveys and data abstraction.

IT vendor/contractor: Oversees build of multi-directional data system. Ensures information is pulling from care site electronic health systems and pre-populating into the CCR in real-time. Builds and tests CCR to meet industry standards.

Coach: The coach provides training to CCR users, particularly clients. These trainings cover basic computer skills, safe Internet browsing practices, discussions of where the CCR can be accessed, the role of the CCR, and how to log in and use the CCR.

Additional staff, such as clinicians, nurses, and case managers participate in focus group activities and use the CCR as part of clinic operations.

Staff Characteristics

- Experience with, and understanding of, surveillance data and quality-assurance strategies.
- Knowledge of the existing electronic medical record system and integration of health information technology systems, to facilitate bi-directional communication.
- Interest in working with and improving health outcomes for people living with HIV.

Sources: New York-Presbyterian Hospital. New York-Presbyterian/SelectHealth CCR Demonstration Project. Final Report. August 2012.

Replication Tips for Intervention Procedures and Client Engagement

This section provides tips for readers interested in replicating the intervention and, where applicable, includes grantee examples for further context.

Identifying Technology Needs and Developing IT Support

In doing this work, it is critical to adopt interoperable national health information network standards. Organizations will likely need to enlist an IT contractor to help implement the CCR into current standards and the current electronic health record while keeping in mind that health information technology (HIT) is a fast-evolving field and nimbleness of design is of equal importance.

To limit expenditures and possible challenges down the line, NYP purposefully chose to avoid proprietary/commercial software or any design that could interfere with how their electronic health record system was constructed.

In establishing the CCR, developers need to be clear on how the electronic network system is integrated and what information is being pulled in to populate the CCR profile. For example, is there currently a regional health information network (RHIO) where your organization is located? If so, what organizations are connected to the RHIO (e.g., hospitals and medical clinics, pharmacy database, claims database) where information could be pulled from and displayed? Equally important to *what's* being displayed is *how* it is being displayed.

Implementers should also review "standard Internet access." Don't assume a challenge for clients is Internet access. Survey users and potential users. They may be quite savvy in knowing where community resources exist, including where they can access computers for free (e.g., libraries, CBOs). Consider creating a list of computer access points, such as libraries and coffee shops, open to the general public. Provide this list during all CCR trainings.

Providing Trainings

Recruit and train staff and "coaches." Provide targeted "coaching" so that prospective users receive training not only in the CCR application but also in safe Web browsing techniques and basic computer literacy. As NYP describes,

> *"An important 'first principle' when contemplating population level health information technology interventions [is] to ensure that adequate resources are targeted for human capital that can be deployed to educate, coach, and support potential adopters and users of a specific HIT application."*[117]

[117] New York-Presbyterian Hospital. New York-Presbyterian/SelectHealth CCR Demonstration Project. Final Report. August 2012. p.7–8.

Enlisting the Target Audience

It is important to identify providers within the regional health network, including primary care providers, subspecialists, case management agencies, skilled nursing facilities, and participating hospitals. Then, conduct focus groups with these key personnel. For example, NYP held five focus groups to solicit input, concerns, and desired uses and displays. They found that the addition of an "audit trail" (more specifically, a screen that allowed clients to see who has accessed their record) allayed client concerns over potentially compromised privacy and confidentiality.

When the CCR prototype is developed, have clients, care coordinators, and clinicians review and evaluate it. Keep in mind that not every "bell and whistle" needs to be included—sometimes a more stripped-down version is easier to use and actually increases functionality among users.

The My Health Profile intervention demonstrates that clients with HIV—including those with low health literacy—will adopt and use a CCR as a personal health record at comparable rates to those of more affluent and more educated populations.[118,119] The intervention is also able to show that, through access to a CCR, clients

- develop increased understanding of their HIV disease and medications;
- develop greater autonomy;
- have improved retention in care;
- demonstrate a relatively high level of trust in providers; and
- are largely supportive of efforts to share protected and sensitive health information via electronic information networks when security and privacy concerns are adequately addressed.[120]

The My Health Profile intervention demonstrates that clients with HIV will adopt and use a CCR as a personal health record at comparable rates to those of more affluent and more educated populations.

By providing a more comprehensive view of client engagement in the healthcare system, the intervention improves provider-to-provider and provider-to-client communication and reduces duplicative services. The My Health Profile intervention model also informs clinical and care coordination information needs of case managers too.[121,122] Given that case managers represent a critical group in client care yet are often overlooked when clinical information-sharing policies are discussed or implemented, this is an important quality of the intervention. Altogether, these lead to improved quality and coordination of care as well as decreased costs, enabling providers to focus on more pressing client issues. Clients are more engaged in care and subsequently better retained in care.

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[118] New York-Presbyterian Hospital. New York-Presbyterian/SelectHealth CCR Demonstration Project. Final Report. August 2012.
[119] Gordon P. *My Health Profile*. New York State Patient Portal Challenge. NY eHealth Collaborative (NYeC) Public Forum. 2013.
[120] New York-Presbyterian Hospital. New York-Presbyterian/SelectHealth CCR Demonstration Project. Final Report. August 2012.
[121] New York-Presbyterian Hospital. New York-Presbyterian/SelectHealth CCR Demonstration Project. Final Report. August 2012.
[122] Camhi E. New York State Department of Health AIDS Institute. "Health Information Technology: Consumer Engagement and Education." Quality of Care Consumer Advisory Committee Meeting. June 8, 2011.

Securing Buy-in

To secure buy-in, clearly outline project plans and processes. Invest time and research into IT standards and ensure the proposed intervention fits within existing health information system and electronic medical records. Provide information about the CCR intervention through meetings with stakeholders across the regional health network, as well as focus groups with target users, assess their perceptions on ease of use and usefulness, and make modifications along the way.

Overcoming Implementation Challenges

To address low client computer skills, enlist "coaches" who are responsible for training clients to use the CCR and on basic computer skills. This can lead to increased autonomy in client care. For example, at NYP, clients have gone from not knowing how to open up a browser to feeling confident to research their HIV, side effects, and medications, and feel empowered to bring up questions to their providers. For many clients, the myriad medical appointments they attend are, in fact, "siloed." Seeing a snapshot of all of their critical health information in one place gives them a better understanding of how it all fits together.

NYP initially hypothesized that clinicians, followed by case managers, would be the most likely to adopt the CCR, while clients would be least likely/hardest to adopt the CCR. What NYP found was, in fact, the opposite. Clients proved most likely to adopt, followed by case managers. Clinicians adopted the system but required some education to curtail the assumption that the system created more work for them on a daily basis.[123] As such, organizations should be proactive in educating all stakeholders who would come into contact with the CCR and address any misperceptions early on.

NYP experienced some system restructuring. In an effort to avoid the possibility of an interruption of the NYP electronic information network upon which the CCR relied to obtain its data, the NYP intervention team met with a regional health information exchange organization to assess the possibility of tethering the CCR to this evolving exchange. This was possible *only* because the CCR application is built to IT standards that are intended to facilitate interoperability in the fast-changing world of HIT. This underscores a critical lesson that HIT applications need to fit within both current HIT standards and keep in mind the evolving nature of the field so that they, too, can evolve as technology or circumstance demand.[124]

Promoting Sustainability

With e-scripts and the influence of meaningful use criteria requiring that organizations begin to extend personal health profiles, coupled with the increasing number of medical facilities and institutions that have electronic health record systems, the environment is ripe for My Health Profile-style functionality and replication of similar models.

[123] New York-Presbyterian Hospital. New York-Presbyterian/SelectHealth CCR Demonstration Project. *Final Report*. August 2012.
[124] New York-Presbyterian Hospital. New York-Presbyterian/SelectHealth CCR Demonstration Project. Final Report. August 2012.

The My Health Profile CCR demonstrates that personal health records integrated with health information exchanges are an ideal mechanism to ensure that essential and actionable information is available at the *right time* and the *right place* for clinical care and decision-making and for data quality management.[125] As of the publication of this manual, the My Health Profile intervention is influencing the design and efforts across the state of New York to connect individuals to their medical records.

Conclusion

As the My Health Profile intervention team explains:

> *"People living with HIV, and other safety-net populations, uniquely benefit from direct access to their personal health information as associated barriers regarding access to care, housing instability, and an often revolving door of health care providers, fragment their health care delivery system."*[126]

If organizations are willing to take into consideration client health literacy and ease-of-use in the CCR design, provide coaching to users (particularly older clients), and have an existing electronic health network with which to tap into and tether the CCR, this work is certainly feasible to improve care coordination and client retention in HIV primary care.

Other Available Resources

- **Electronic Networks of Care Initiative**
- **My Health Profile**
- Gordon P, Camhi E, Hesse R, et al. **Processes and Outcomes of Developing a Continuity of Care Document for Use as a Personal Health Record by People Living with HIV/AIDS in New York City**. *Int J of Med Inform*. 2012; 81(10): e63–e73.
- Schnall R, Smith AB, Sikka M, et al. **Employing the FITT Framework to Explore HIV Case Managers' Perceptions of Two Electronic Clinical Data (ECD) Summary Systems.** *International Journal of Med Inform.* 2012; 81(10): e56–e62.
- Schackman BR, Dastur Z, Rubin DS, Berger J, et al. **Feasibility of Using Audio Computer-Assisted Self-interview (ACASI) Screening in Routine HIV Care**. *AIDS Care.* 2009; 21(8): 992–99.
- Teixeira PA, Gordon P, Camhi E, et al. **HIV Patients' Willingness to Share Personal Health information Electronically**. *Patient Educ Couns*. 2011;84(2):e9–e12.
- Schnall R, Gordon P, Camhi E, et al. **Perceptions of Factors Influencing Use of an Electronic Record for Case Management of Persons Living with HIV**. *AIDS Care*. 2011.23(3):357–65.
- Odlum M, Gordon P, Camhi E, et al. **Perceptions of Predisposing, Enabling, and Reinforcing Factors Influencing the Use of a Continuity of Care Document in Special Needs PLWH**. *J Health Care Poor Underserved*. 2012. 23(4):1457–76.

[125] Camhi E, Thomas J, Gordon P. Promoting Consumer Access to the EMR to Improve Quality of Care and Data Reporting. Health Resources and Services Administration, HIV/AIDS Bureau All-Grantee Meeting. Conference Presentation. November 28, 2012.
[126] Camhi E, Thomas J, Gordon P. Promoting Consumer Access to the EMR to Improve Quality of Care and Data Reporting. Health Resources and Services Administration, HIV/AIDS Bureau All-Grantee Meeting. Conference Presentation. November 28, 2012.

Prescription of ART & Medication Access

Prescription of ART & Medication Access

The U.S. Department of Health and Human Services (HHS) Panel on Antiretroviral Guidelines for Adults and Adolescents recommends immediate initiation of, and lifelong adherence to, antiretroviral therapy (ART) for all HIV-positive adults and adolescents, regardless of CD4 count. This recommendation is based, in part, on mounting evidence over the last decade on the benefit of ART as a means of prevention.

Using treatment as prevention gained greater attention—and traction—when data from the landmark HIV Prevention Trial Network (HPTN) 052 found that use of ART reduces HIV transmissibility by 96%.[127]

However, a growing body of anecdotal evidence points to gaps in understanding and practice among providers when it concerns starting HIV-positive clients on ART. A recent study found that only 1 in 7 clinicians immediately began treatment of clients who tested positive.[128] This contributes to the HIV Care Continuum gap between retention in care, prescription of ART, and subsequent medication access. It also further delays viral suppression, which is known to decrease transmissibility and result in improved health outcomes and longer life expectancy.

Providers can position their clients for success by leveraging the Ryan White AIDS Drug Assistance Program (ADAP) and pharmaceutical/patient assistance programs, by assisting clients with health insurance and benefits enrollment, and by offering education about the importance of ART adherence.

The Virginia Department of Health's Care Coordination intervention illustrates that even for highly vulnerable populations, such as clients who are about to be released from incarceration, medication access programs are possible, and they work. By ensuring active rather than passive follow-up, leveraging available medical and social support systems, coordinating with other care providers and staff (e.g., patient navigators, ADAP coordinators), and being flexible to client needs, lifesaving medications can get into the hands of people who need and will use them. Adherence and improved health outcomes can then follow.

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[127] Cohen MS, Chen YQ, McCauley M, et al; HPTN 052 Study Team.Prevention of HIV-1 infection with early antiretroviral therapy. *N Engl J Med*. 2011.11;365(6):493–505.
[128] Kurth A, Mayer K, Beauchamp G, et al; HPTN (065) TLC-Plus Study Team. Clinician Practices and Attitudes Regarding Early Antiretroviral Therapy in the United States. *J Acquir Immune Defic Syndr*. 2012;61(5):e65–9.

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Video Conferencing Intervention
Louisiana Department of Health and Hospitals

Active Referral Intervention
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Beyond the Care Continuum: Addressing HCV Comorbidity and Coinfection

INTERVENTION OVERVIEW & REPLICATION TIPS

Hepatitis Treatment Expansion Initiative
University of California, San Francisco, San Francisco General Hospital HIV Clinic

Hepatitis Treatment Expansion Initiative
Washington University School of Medicine (MO)

Care Coordination Intervention

Virginia Department of Health

The table below provides a general overview of the Care Coordination intervention so readers can assess the necessary steps required for replication. This intervention promotes HIV medication access, coverage, and pickup for individuals transitioning from correctional facilities.

Intervention at-a-Glance	
Step 1	**Coordinate with Department of Corrections (DOC) or Jail Medical Staff** Receive referral from correctional facility and collaborate with existing medical staff to coordinate the discharge process. Obtain consent to share client information prior to release along with other critical information needed to begin enrollment of the client into an expedited AIDS Drug Assistance Program (ADAP).
Step 2	**Facilitate Referrals** Facilitate referrals to community support services, such as case management, linkage to support services, mental health services, patient navigation, and any other existing pre- and post-release programs that can assist in meeting client needs and supporting their transition.
Step 3	**Link Clients to Certified Application Counselor and Support Staff** Connect clients to certified application counselors within 60 days post-release. Link referred clients (if not already enrolled) with additional case management, patient navigation, and other services.
Step 4	**Facilitate Medication Access** Per agreement with DOC, facilitate client access to HIV medications upon release and confirm clients are active and enrolled in ADAP or other prescription coverage program. Note: It is not uncommon for the supply of antiretroviral therapy (ART) to vary from prisons and jails.
Step 5	**Monitor Medication Pickup and Medical Appointments** Monitor to ensure that HIV medications are dispensed, picked up, and consistently accessed over a 12-month period. Monitor client attendance at HIV medical visits for 12 months. If clients miss medication pick up or medical appointments, care coordinators follow up with clients by phone.
Step 6	**Conduct Follow-up/Re-engage Clients** Follow up with clients and those lost to care for more than 6 months, and refer them to a patient navigator or disease intervention specialist to assist in bringing them back into care.

Source: Virginia Department of Health. Care Coordination Implementation Manual. Virginia Department of Health, Special Projects of National Significance, System Linkages and Access to Care Initiative. Final Report. October 2015.

Resource Assessment Checklist

Organizations should walk through a Resource Assessment (or Readiness) Checklist to assess their ability to conduct this work. If organizations do not have these components in place, they are encouraged to develop their capacity so that they can successfully conduct the Care Coordination Intervention. Questions to consider include:

- ☐ Does your organization have access to a correctional facility to partner with in your service area?
- ☐ Is your organization filling a need for the DOC and recently released individuals, or is another agency already conducting similar work?
- ☐ Does the proposed care coordinator have a driver's license or other transportation to commute to correctional facilities and meet with DOC and community organization staff?
- ☐ Can the proposed care coordinator pass security clearance requirements to enter the DOC and local/regional jails?
- ☐ Does your organization have—or have access to—a certified application counselor who can enroll recently released individuals into health insurance?
- ☐ Does your organization have a pharmacist on staff or a partnership with a specialty pharmacy? Is the pharmacist/pharmacy familiar with ADAP and pharmaceutical assistance programs?
- ☐ Does your organization receive Part B base and/or ADAP funding or have other means to provide medication access to recently released clients?
- ☐ Does your organization offer case management services or have access to a community partner who does?
- ☐ Does your organization offer or have contact with other agencies that offer HIV primary care and social support services where clients can be referred? If not, can these relationships be fostered?
- ☐ Is staff interested in, educated about, and compassionate toward individuals who have been incarcerated?

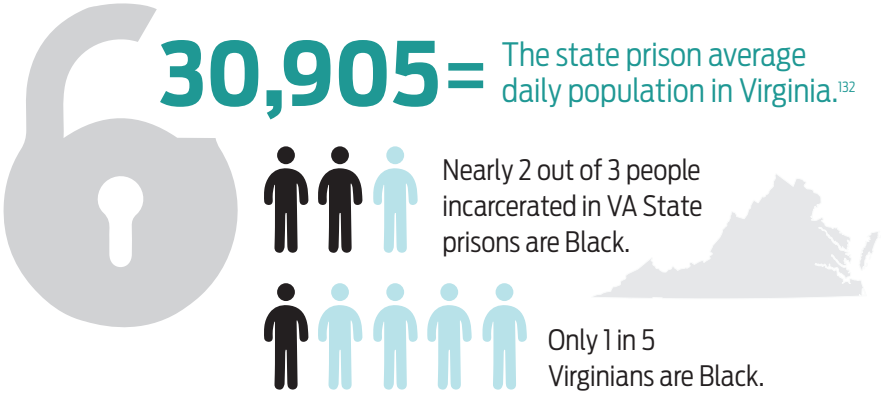
Source: Virginia Department of Health. *Care Coordination Implementation Manual. Virginia Department of Health, Special Projects of National Significance, System Linkages and Access to Care Initiative.* Final Report. October 2015.

Setting the Stage: Grantee Intervention Background

Without effective linkage and medication access interventions, the same barriers to care that exist prior to incarceration remain upon release. Even when health insurance, medications, and referrals are available, post-release is a time of vulnerability and competing priorities. Many individuals released from prisons and jails are uninsured before incarceration. Even if they are eligible for Medicaid or Medicare beforehand, their benefits are often discontinued while incarcerated. Most clients do not know how to reactivate them when released. This barrier is difficult to navigate and additionally impedes access to medication and HIV primary care.[129] Without access to HIV treatment, viral suppression cannot occur, placing individuals and communities at greater risk for infection.[130]

The Virginia Department of Health (VDH) originally sought to address this challenge through a Seamless Transition Program—a collaborative but unfunded, passive referral system between the state ADAP program and the DOC. In this program, HIV medications were made available for pickup; however, less than 50% of HIV clients picked up ART within 6 months post-release.

Recognizing the need for more active interventions, VDH applied for and received SPNS funding under the ***Systems Linkages and Access to Care for Populations at High Risk of HIV Infection (System Linkages) Initiative.*** This funding coincided with new state HIV testing provisions in Virginia DOC facilities (prisons not jails) from opt-in to opt-out testing.



The SPNS intervention, called Care Coordination, replaced the Seamless Transition Program. VDH coordinated with partners to gather baseline HIV data (including unmet need and epidemiology) to create an accurate picture of the State's HIV care needs. What they saw was approximately 13,000 HIV-positive clients being released from state and federal correctional facilities in Virginia each year. Leveraging the statewide focus of the SPNS initiative, VDH set out to implement the Care Coordination intervention across 23 state prison facilities and later expanded to add 11 local jails.[131,132]

[129] HRSA, Special Projects of National Significance. Training Manual: Creating a Jail Linkage Program. September 2013. Available at: **https://careacttarget.org/sites/default/files/file-upload/resources/Jail%20Linkage%20Program%20IHIP%20Training%20Manual.pdf**.

[130] Cohen MS, Chen YQ, McCauley M, et al; HPTN 052 Study Team.Prevention of HIV-1 infection with early antiretroviral therapy. *N Engl J Med*. 2011.11;365(6):493–505.

[131] Bureau of Justice Statistics. *National Prisoner Statistics Program, 2012-2013*. Available at: **www.bjs.gov/content/pub/pdf/p13.pdf**

[132] Virginia Department of Health. *Care Coordination Implementation Manual. Virginia Department of Health, Special Projects of National Significance, System Linkages and Access to Care Initiative*. Final Report. October 2015.

Description of Intervention Model

CHALLENGE ACCEPTED

THE CHALLENGE: The passive nature of referrals provided to HIV-positive clients leaving Virginia correctional facilities with regard to ADAP medications contributed to poor uptake of ADAP and linkage to medical, mental health, and other services (e.g., fewer than 50% of releasees picked up ADAP-supported medications within 6 months of release).

Intervention Model: Care Coordination

The Care Coordination intervention is designed to enhance services to ensure uninterrupted access to HIV medications and medical care for HIV-positive clients re-entering the community.[133]

The **Institute of Healthcare Improvement (IHI)** Collaborative Learning Model approach informs the Care Coordination intervention. As VDH explains,

> *"The Collaborative Learning Model is a systematic approach to health care quality improvement in which systems, organizations, and providers implement and measure small-scale interventions, then share their experiences in an effort to accelerate learning and widespread implementation of successful ideas for change."*[134]

The Care Coordination intervention involves collaboration across multiple entities and individuals, including:

- *The Virginia Department of Health*
  - ⇨ VDH, including health department programs, such as patient navigators, disease intervention specialists (DIS), and the Comprehensive HIV/AIDS Resources and Linkages (CHARLI) program
  - ⇨ Virginia ADAP program, including local ADAP coordinators.
- *Correctional Facilities and Correctional Contractors*
  - ⇨ The Virginia DOC
  - ⇨ Local/regional jail administration and medical contractors
  - ⇨ Virginia Commonwealth University Health System, which provides telemedicine services to clients while incarcerated in DOC facilities.
- *Community-based Partners*
  - ⇨ Case managers at Ryan White and HIV prevention-funded community-based organizations (CBOs)
  - ⇨ Community health workers at medical and social support organizations.

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[133] Virginia Department of Health. *Virginia Department of Health Care Coordination Implementation Manual: Special Projects of National Significance, System Linkages and Access to Care Initiative*. October 2015.

[134] Virginia Department of Health. *Virginia Department of Health Care Coordination Implementation Manual: Special Projects of National Significance, System Linkages and Access to Care Initiative*. October 2015.

The cornerstone of the care coordination intervention is providing medication access to incarcerated clients being released. ADAP provides the backbone of the program by facilitating and confirming linkage, as well as providing a consistent 30-day HIV medication supply to supplement medications given to clients by the correctional facility. (Virginia prisons provide 30 days of HIV medications to clients upon release, while jails provide 3–7 days of medication, depending on resources.)

In the intervention, DOC staff contact care coordinators and provide them with client discharge packets. Care coordinators collaborate with certified application counselors to enroll clients in health insurance and also work with ADAP counselors to secure expedited client enrollment into ADAP.

Because of the central involvement of ADAP in the intervention, the VDH HIV Care Services Assistant Director for Medication Access who oversees ADAP serves as the point person for hiring and supervision of care coordinators. This additionally facilitates care coordinator access to the ADAP database and ADAP eligibility determination team.

A cornerstone of the program is getting a 30-day HIV medication supply to clients.

Unlike case managers and patient navigators, care coordinators do *not* routinely meet directly with clients. Care coordinators primarily work with DOC, pharmacies, ADAP/benefits counselors, and community partners to ensure medications and associated coverage are available, and that clients are accessing them. However, they do frequently interface with clients via telephone primarily to coordinate referrals, facilitate access to medication and medical care, and conduct follow-up to confirm retention.

If clients are already enrolled in the pre- and post-release CHARLI program, CHARLI staff will link clients to community services. If the client is not in CHARLI, then the care coordinator provides post-release referrals to CHARLI or directly to social support services.

By proactively engaging, enrolling, tracking, and following up with clients to ensure health insurance coverage, prescription access, medication pickup receipt, and access to medical care, clients are able to reach viral suppression on the HIV Care Continuum.

The Care Continuum Team Roster

Several programs and interventions across Virginia, including those operating through the State health department, have clear synergies. As such, it is important to know the key "players" and how their work fits together to advance the HIV Care Continuum.

Disease Intervention Specialists (DIS): DIS are part of an "active referral" intervention, focusing on rapidly linking newly diagnosed HIV-positive individuals into care. DIS are given lists of names (generated from local and state health departments) of newly diagnosed clients. DIS identify priority cases on the lists, reach out to these clients, discuss their diagnosis, provide HIV education, and actively link them to patient navigators who will then help them manage their way through the healthcare system. DIS also assist clients who have fallen out of care and work to bring them back.

Patient Navigation: Patient navigators and community health workers work across all five-health regions of the state to carry out linkage and retention activities by providing healthcare systems navigation and support.

CHARLI (Comprehensive HIV/AIDS Resources and Linkages): This is a pre- and post-release correctional program operating with state funds and focusing on HIV testing, establishment of a release plan to CBOs, and emphasizing linkage to support services.

Care Coordination: Care coordination's primary focus is on ensuring access to medication and HIV medical care for recently released clients, including facilitation of coverage and support for and tracking of medication pickup and medical appointments. This includes referral for expedited ADAP coverage and supply of ART upon release.

Sources: Virginia Department of Health. *Care Coordination Implementation Manual: Virginia Department of Health, Special Projects of National Significance, System Linkages and Access to Care Initiative.* Final Report. October 2015.

Virginia Department of Health. *Active Referral Implementation Manual: Virginia Department of Health, Special Projects of National Significance, System Linkages and Access to Care Initiative.* Final Report. October 2015.

Staffing Requirements & Considerations

Staffing Capacity

Based on the VDH work, here are the types of staff necessary to replicate this intervention.

Care coordinator: This is a full-time position and includes the following responsibilities:

- Recruiting local/regional jails to participate in the care coordination intervention
- Helping maintain client-tracking database in real time
- Coordinating with certified application counselors, ADAP, DOC, and community partners (including, case managers, patient navigators, pharmacists, local health departments, ID clinics)
- Processing and facilitating new referrals for soon-to-be released clients
- Supporting linkage to case management and medical care
- Communicating with case managers to address any barriers to adherence or accessing of services
- Supporting client follow-up for up to 12 months (special cases up to 18 months).

Client caseload and the number of partnering correctional facilities will inform how many care coordinators there should be (VDH began with one care coordinator and, as the intervention expanded, a second coordinator was hired).

Note: *Care Coordination does not replace case management.* Care coordinators are an extra layer of support to ensure medications, referrals, and other service offerings. Care coordinators do not meet directly with clients, whereas case managers do.

ADAP counselors: These persons facilitate expedited enrollment into ADAP to ensure longer-term access to HIV medications from all appropriate sources (e.g., direct ADAP for the uninsured, pharmaceutical/patient assistance programs, Medicaid, Medicare, or other third-party payers).

Certified application counselor: This person helps with client insurance applications and clearance for insurance enrollment to enable longer-term access to care. This position may be at the same site as the care coordinator or at a partnering site.

Partnering positions: These are persons to whom the care coordinators should have access within community and organizational partners. In particular, it includes the DOC for referrals, pharmacists, case managers, patient navigators (if available), and disease intervention specialists or outreach workers (for out-of-care follow-up).

Staff Characteristics

Core competencies include

- background working with low-income populations;
- interpersonal skills;
- familiarity and comfort with correctional system;
- knowledge of health and social system supports and services;
- cultural competency and sensitivity with target population;
- fluency in other languages that are common to the target population; and
- for those working directly within DOC (such as care coordinators), ability to pass required security clearance.

Sources: Virginia Department of Health. Care Coordination Implementation Manual. Virginia Department of Health, Special Projects of National Significance, System Linkages and Access to Care Initiative. Final Report. October 2015.

Replication Tips for Intervention Procedures and Client Engagement

This section provides tips for readers interested in replicating the intervention and, where applicable, includes grantee examples for further context.

Do the Necessary Planning

Create a project-planning group to help guide the overall project design and subsequent implementation. This group should include key stakeholders as well as individuals working across the state in other related interventions. This will help identify any possible overlap or intersection across intervention strategies as well as identify synergistic opportunities for linkage and retention efficiencies. For VDH, this group met on a monthly basis in early intervention years, and then on a quarterly basis after the project was fully up and running.

Engage individuals who will be directly involved in the intervention to create a standardized protocol, narrative description of the intervention, and list of tools as well as conduct Plan, Do, Study, Act (PDSA) cycles.

Build Trusting Relationships

To get started on a Care Coordination intervention, it is critical to establish relationships with the correctional facility where you're hoping to work. Spend the time to facilitate these relationships with DOC and bring them to the table. It is important to learn the DOC structure and how their medical contractors and other contractors work within the system. Building the communication and "buy-in" piece will help ensure DOC understands what a Care Coordination intervention is trying to do. If your intervention is addressing regional/local jails, then you will need to spend time learning each individual system, as they are usually regulated and managed locally.

In addition, look at where CHARLI (or other similar programs) are located and what they do. Take the time to adequately introduce the care coordination program and underscore synergies. It is important that other programs see that you're all working toward a shared goal (patient and public health) rather than competing with one another.

After planning has taken place and protocols have been developed, the care coordinators begin orientation and training.

Train Care Coordinators

Care coordinators undergo a 90-day orientation to familiarize themselves with the position and associated HIV programs (e.g., Ryan White Part B, ADAP, and other HIV care and prevention programs across the state and within the jail). Orientation training covers HIV basics, correctional setting rules and regulations as well as tips for building relationships with correctional staff, available client resources in the community (including use of resource inventories), and motivational interviewing training. In addition to the 90-day

orientation, new care coordinators can shadow veteran care coordinators to "learn the ropes" of the job. This type of shadowing or mentorship can help expedite the training process and learning curve. During the orientation period, care coordinators receive assistance and oversight from the assistant director for medication access. This person provides input and guidance on any implementation protocols and addresses any care coordinator questions or concerns. Monthly meetings take place thereafter.

Implement the Care Coordination Intervention

Once trained and oriented, care coordinators actively seek referrals from DOC and local/regional jails of HIV-positive individuals soon to be released. When clients are within 30 days of their release date, the corrections medical staff will develop a medical discharge summary (including client demographics, date of diagnosis, list of HIV medications, and signed authorization to exchange and disclose health information). This information is sent, via secure fax, to the care coordinator.

Within 48 hours of referral receipt, the care coordinator will work with the Central Pharmacy to expedite client ADAP eligibility. Meanwhile, corrections staff schedule a medical appointment for clients to be released. Corrections staff schedule these appointments within 60 days post-release.

Upon release, clients are linked to case management services, patient navigation, and CHARLI as well as given a supply of HIV medications from the correctional facility (in Virginia, prisons provide a 30-day supply of ART and jails provide a 3–7 day supply). The care coordinator ensures ADAP has dispensed an additional 30-day supply to a local health department or other ADAP medication distribution site near where the client is planning to live.

Then, care coordinators help monitor client engagement, including:

- confirmation that the client has picked up their initial HIV medication supply (and continues to pick up medications thereafter);
- confirmation that the client has attended their initial medical appointment (and continues to attend appointments thereafter);
- helping maintain the client-tracking database in real time, including documentation of medication pick-up and medical appointments; and
- contacting case managers at least on a monthly basis, to verify client information and discuss any barriers to adherence or accessing of services and, for clients not readily engaging, discuss whether or not a re-engagement intervention is necessary.

Care coordinators conduct these activities for up to 12 months (or 18 months in special cases).

Securing Buy-in

Find the right people to connect with; these may be top officials or they may be frontline staff, such as medical providers and nurses. Existing contractors within the jail may be able to point you in the right direction for key contacts. Because of high turnover, as well as the need for access and information, it

is critical to maintain and frequently update a contact list. Be sure to educate new contacts about the intervention and the value-add.

Show partners you're accessible, interested, and easy to work with. This includes returning calls quickly and streamlining requests to avoid overburdening individuals as well as taking the time to get to know them and the work that they do.

Overcoming Implementation Challenges

Because other organizations or interventions may exist within the correctional facility, it's imperative that roles be clarified so as to avoid duplication of services and feelings of "turf wars."

It may be necessary to schedule meetings with the DOC medical provider and other individuals coming into contact with your program and other community partners operating in the jail. Printed informational materials may also help illustrate the work you're doing—or proposing to do.

Promoting Sustainability

VDH continues to track data on the care coordination intervention and can point to the increase in medication pickups that have taken place since the intervention's rollout. The work is sustained through Ryan White HIV/AIDS Program funding, particularly Part B.

Conclusion

The importance of medication access and its role in curtailing HIV incidence cannot be underscored enough. As the VDH project demonstrated, effectively creating an intervention like care coordination requires developing successful partnerships with various institutions and ensuring access to medication (e.g., through ADAP).

Although correctional populations can be challenging to reach and engage in care, this work is certainly feasible. VDH found that clients appreciated having options for their care upon release, and in knowing there were services on the outside to which they could engage in to meet their needs and help them stay healthy.

Other Available Resources

- **Systems Linkages and Access to Care for Populations at High Risk of HIV Infection (System Linkages) Initiative**
- ***The Impact of Care Coordination Services on HIV Care Outcomes Among Formerly Incarcerated Individuals in Virginia***

Beyond the Care Continuum

Addressing HCV Comorbidity & Coinfection

Beyond the Care Continuum

Addressing HCV Comorbidity & Coinfection

In the U.S., hepatitis C virus (HCV) is the most common blood-borne infection. It affects over 3.5 million people.[135] According to Centers for Disease Control and Prevention (CDC), cases of new acute HCV infections increased by 250% from 2010–2014. "The CDC has determined that this increase is linked to the ongoing opioid abuse epidemic in the United States."[136]

HCV is often called the "silent killer" because it slowly damages the liver over many years, without noticeable symptoms.[137] An estimated 75–85% of acute HCV infections become chronic, and approximately 75% of individuals with chronic HCV are unaware of their infection.[138]

HCV is a common and serious coinfection among HIV-positive persons. In the U.S., an estimated 25% of all people with HIV are coinfected with HCV.[139] HIV and HCV have overlapping transmission routes. Coinfection rates are substantially higher among African Americans, prisoners, homeless populations, "baby boomers," and current and former injection drug users.[140] In urban areas in the U.S., an estimated 50–90% of injection drug users living with HIV are coinfected with HCV.[141]

Now that antiretroviral therapy (ART) has significantly improved health outcomes and longevity among HIV-positive individuals, HCV coinfection has emerged as a significant contributor to morbidity and mortality among people living with HIV (PLWH). HIV accelerates HCV progression.[142,143] End-stage liver

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[135] U.S. Department of Health and Human Services, Office of HIV/AIDS and Infectious Disease Policy. "Hepatitis C Basic Information." May 13, 2016. Available at: **www.hhs.gov/hepatitis/learn-about-viral-hepatitis/hepatitis-c-basics/index.html** Accessed September 19, 2016.

[136] U.S. Department of Health and Human Services, Office of HIV/AIDS and Infectious Disease Policy. "Hepatitis C Basic Information." May 13, 2016. Available at: **www.hhs.gov/hepatitis/learn-about-viral-hepatitis/hepatitis-c-basics/index.html** Accessed September 19, 2016.

[137] National Viral Hepatitis Roundtable. Closing the Gap in Hepatitis C Prevention, Screening and Care. June 27, 2011. Available at: **http://nvhr.org/sites/default/files/NVHR_HCV_Advocacy_Brief_06_27_11_0.pdf.**

[138] Institute of Medicine (IOM). *Hepatitis and Liver Cancer: A National Strategy for Prevention and Control of Hepatitis B and C*. Washington, DC: National Academies Press, 2010.

[139] Sulkowski MS. Current Management of Hepatitis C Virus Infection in Patients with HIV Co-infection. *J Infect Dis*. 2013.207 Suppl 1:S26–32.

[140] Chak E, Talal AH, Sherman KE, et al. Hepatitis C Virus Infection in USA: an Estimate of True Prevalence. *Liver Int*.2011.31(8):1090–101.

[141] Strader DB. Coinfection with HIV and Hepatitis C Virus in Injection Drug Users and Minority Populations. *Clin Infect Dis*. 2005.41(Suppl 1):S7–S13.

[142] U.S. Department of Health and Human Services, Health Resources and Services Administration, HIV/AIDS Bureau, Special Projects of National Significance. Hepatitis C Treatment Expansion Initiative: Evaluation and Technical Assistance Center. FOA: HRSA-10-216. 2010.

[143] Reiberger T, Ferlitsch A, Sieghart W, et al. HIV-HCV Co-infected Patients with Low CD4+ Cell Nadirs are at Risk for Faster Fibrosis Progression and Portal Hypertension. *J Viral Hepat*. 2010;17(6):400–9.

disease and liver cancer from HCV are leading causes of death among HIV-positive people, despite use of HIV treatment.[144,145,146]

The American Association for the Study of Liver Diseases recommends HCV treatment (at any fibrosis stage). This recommendation is in alignment with the Institute of Medicine and the U.S. Department of Health and Human Services' *Action Plan for the Prevention, Care, & Treatment of Viral Hepatitis.*

HCV treatment is a lifesaving intervention for coinfected PLWH. Being cured of HCV—an outcome called sustained virologic response (SVR)—lowers AIDS-related, liver-related, and "all-cause" death rates among coinfected people, even if they are cirrhotic.[147,148]

HCV treatment has improved dramatically. Interferon has been replaced by safe, tolerable oral regimens of direct-acting antivirals (DAAs) that have cured most of the people treated with them, regardless of HIV status. Now that HCV is easy to cure, the focus on screening individuals and linking them to care has increased. Because HIV and HCV have a disproportionate impact on similar populations, an opportunity exists to develop testing and care strategies for HCV simultaneously with HIV-related services.

Opioid Abuse Gives Way to Increased HIV & HCV Infections

Recently, rates of new HCV infections have increased, apparently related to increases in injection-drug use among individuals with a history of prescription opioid abuse. In one important case, an HIV outbreak in a rural county of southeastern Indiana reported in early 2015 where 135 such persons were diagnosed with new HIV infection and 114 (84%) of these individuals were diagnosed with HCV coinfection. The public health emergency in Indiana highlights the need for improved efforts to prevent HIV and HCV transmission among people who inject drugs.

Source: Conrad C, Bradley HM, Broz D, Buddha S, et al. Community Outbreak of HIV Infection Linked to Injection Drug Use of Oxymorphone—Indiana, 2015. *MMWR Weekly*. 2015;64(16):443–444.

[144] De Ledinghen V, Barreiro P, Foucher J, et al. Liver Fibrosis on Account of Chronic Hepatitis C is More Severe in HIV-positive than HIV-negative Patients Despite Antiretroviral Therapy. *J Viral Hepat*. 2008.15(6):427–33.
[145] Salmon-Ceron D, Rosenthal E, Lewden C, et al. ANRSEN19 Mortalite Study Group and Mortavic. Emerging Role of Hepatocellular Carcinoma Among Liver-Related Causes of Deaths in HIV-infected Patients: The French National Mortalite 2006 study. *J Hepatol*. 2009.50(4):736–45.
[146] Weber R, Sabin CA, Friis-Moller N, et al. Liver-related Deaths in Persons Infected with the Human Immunodeficiency Virus: the D:A:D Study. *Arch Intern Med*. 2006.166(15):1632–41.
[147] Berenguer J, Alvarez-Pellicer J, Martín PM, et al; GESIDA3603/5607 Study Group. Sustained Virological Response to Interferon Plus Ribavirin Reduces Liver-related Complications and Mortality in Patients Coinfected with Human Immunodeficienty Virus and Hepatitis C Virus. *Hepatology*. 2009.50(2):407–13.
[148] Berenguer J, Rodríguez E, Miralles P, et al; GESIDA HIV/ HCV Cohort Study Group.Sustained Virological Response to Interferon Plus Ribavirin Reduces Non-liver-related Mortality in Patients Coinfected with HIV and Hepatitis C Virus. *Clin Infect Dis*. 2012.55(5):728–36.

Many coinfected clients are poor and from underserved communities. Often, they face significant barriers that make it difficult for them to enter the healthcare system and to access services. As HCV treatment has become increasingly efficacious, there are new barriers associated with it, such as insurance coverage for costly HCV medication.

As HIV-positive clients move along the Care Continuum, it is critical to address coinfections and comorbidities. Just as HIV viral suppression improves health outcomes and lengthens lives, so does HCV SVR.

Ryan White HIV/AIDS Program grantees and other treating PLWHA are uniquely positioned to help address HCV, given both the high prevalence of this disease among HIV-positive individuals and their familiarity with addressing the barriers facing marginalized communities. The prevalence and severity of HCV coinfection among HIV-positive clients—combined with the known benefits of being cured from HCV—call for expanded HCV care and treatment to coinfected clients within the HIV services system.

To provide an overview of the types of HCV screenings readers may want to consider, a resource sheet is provided on the following page.

Initial HCV Screenings

1) Confirm HCV infection

- All HCV antibody-positive clients should have confirmatory testing with an HCV ribonucleic acid (RNA), as a proportion of them will clear their infection without treatment.
- Seronegative HCV infection: Clients with HCV infection may lack HCV antibodies (Ab) due to recent infection, or because of a low CD4 cell count (usually < 200 cell/mm3). HIV-infected clients with low CD4 cell counts that test negative for HCV antibody but have a history of HCV exposure or persistent transaminitis should undergo HCV RNA testing to confirm or rule out active HCV infection.

2) Targeted HCV History

- Assess for acute HCV infection: If HCV RNA positive, obtain a history for possible acute HCV (new HCV infection within the past 12 months). Acute HCV is often asymptomatic but may present with jaundice, malaise, and right upper quadrant pain. Ask about a known exposure to HCV (such as an HCV-infected sexual partner, particularly if client is a man who has sex with men [MSM], or through injection drug use).
- Add a note on laboratory confirmation of acute HCV.
- Estimated duration of infection with HCV.
- History and signs of hepatic decompensation: Ask about history of hepatic decompensation (variceal bleeding, ascites, hepatic encephalopathy) and signs/symptoms of decompensated disease (increased abdominal girth, reversal of day/night sleep patterns, easy bruising/bleeding).
- Prior HCV treatment history.

3) Evaluation of Comorbidities

- Assess current ART and HIV-associated medications, as important drug-drug interactions can exist with certain ART and HCV medications (particularly cobicistat-boosted ART, ritonavir-boosted protease inhibitors or nonnucleotide reverse transcriptase inhibitors like efavirenz and etravirine).
- Presence of opiate replacement therapy: document what agents.
- Concomitant liver disease: hepatitis B virus (HBV), heavy alcohol, other conditions affecting the liver.
- Severe cardiac and/or pulmonary disease.
- Comorbidities that are anticipated to reduce life expectancy (e.g., metastatic cancer, severe pulmonary or cardiac disease).
- Severe renal impairment.
- Mental health.

4) Check reproductive capacity and report

5) Review current medications

6) Review substance abuse

7) Review labs

8) Staging of Liver disease

9) Hepatocellular Carcinoma (HCC) Screening

- HCC screening is only indicated in HCV-infected clients with cirrhosis.

10) Prevention

- Assess immunity to hepatitis A virus (HAV) and HBV, offer vaccination as indicated.
- Counsel reduction of alcohol and discuss possible role of marijuana in accelerating liver fibrosis.
- Discuss HCV routes of transmission and how to reduce the risk of infection to sexual partners (particularly MSM) and, if currently injecting or snorting drugs, harm reduction. HCV-infected clients should be advised to not share potentially blood-contaminated implements with contacts or household members, including razors and toothbrushes.
- Counsel women of childbearing potential about risk of maternal-child transmission, which is low but does occur. Pregnant women or women seeking pregnancy should discuss their chronic HCV infection with their obstetrician.

Source: Adapted from University of California San Francisco. San Francisco Hepatitis C: A Primary Care Initiative Protocol, Hepatitis C Treatment and Management. May 8, 2012.

Improving Health Outcomes

Moving Patients Along the HIV Care Continuum and Beyond

Diagnosing HIV

INTERVENTION OVERVIEW & REPLICATION TIPS

Social Networks Testing
Wisconsin Department of Health Services

Linkage to Care

INTERVENTION OVERVIEW & REPLICATION TIPS

Assess, Test, Link: Achieve Success (ATLAS) Program
Care Alliance Health Center (OH)

Enhancing Linkages to Care for Women Leaving Jail
University of Illinois at Chicago

Video Conferencing Intervention
Louisiana Department of Health and Hospitals

Active Referral Intervention
Virginia Department of Health

Louisiana Public Health Information Exchange (LaPHIE)
Louisiana State University, Health Science Center and Louisiana Department of Health Hospitals, Office of Public Health

Retention in Care

INTERVENTION OVERVIEW & REPLICATION TIPS

My Health Profile
New York-Presbyterian Hospital

Prescription of ART & Medication Access

INTERVENTION OVERVIEW & REPLICATION TIPS

Care Coordination Intervention
Virginia Department of Health

Beyond the Care Continuum: Addressing HCV Comorbidity and Coinfection

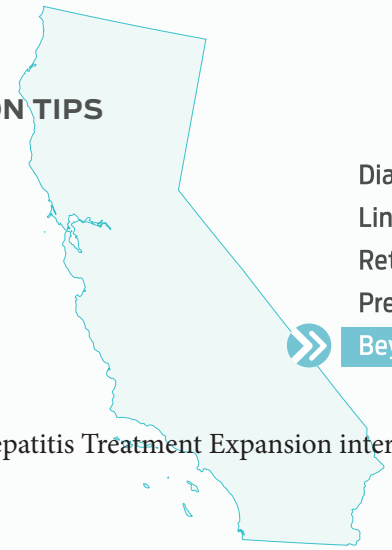
INTERVENTION OVERVIEW & REPLICATION TIPS

▶ Hepatitis Treatment Expansion Initiative
University of California, San Francisco, San Francisco General Hospital HIV Clinic

Hepatitis Treatment Expansion Initiative
Washington University School of Medicine (MO)

Hepatitis Treatment Expansion Initiative

University of California, San Francisco, San Francisco General Hospital HIV Clinic



The table below provides a general overview of the Hepatitis Treatment Expansion intervention so readers can assess the necessary steps required for replication.

Intervention at-a-Glance	
Step 1	**Consult on HCV Coinfected Client Health Record** Upon HCV diagnosis, the HIV primary-care physician sends client electronic health record to the internal physician lead at the HCV coinfection clinic. Internal HCV physician lead provides technical review of proposed treatment plan and complexity of client case.
Step 2	**Conduct Electronic Review of Client Health Record** HCV physician lead reviews client health record: • More complicated cases are referred for in-person evaluation in HCV coinfection clinic for more involved oversight, lab work, and ART regimen change. • For more straightforward cases, the HCV physician lead sends an e-script to the pharmacist for a 12-week treatment regimen.
Step 3	**Conduct Lab Work** At 4 weeks into the treatment regimen, conduct lab work to verify beneficial impact to date.
Step 4	**Provide Pharmacist Adherence Monitoring** Pharmacist continues adherence monitoring and counseling with the coinfected client.
Step 5	**Monitor Clients on Ribavirin** Clients on ribavirin have lab visits every 2–4 weeks and nursing visits, if necessary, to monitor for anemia until treatment is complete.

Source: Leutkemeyer, A and Robb, V. University of California, San Francisco, San Francisco General Hospital, HIV Clinic. Personal Interview. February 2, 2016

Resource Assessment Checklist

Organizations should walk through a Resource (or Readiness) Checklist to assess their ability to conduct this work. If organizations do not have these components in place, they are encouraged to develop their capacity so that they can successfully conduct the Hepatitis Treatment Expansion intervention. Questions to consider include:

- ☐ Does your organization currently have routinized HCV screening in place? If not, is this something it can establish?
- ☐ Does your organization currently have an HCV provider champion in place that is dedicated to staying up-to-date on the changing HCV treatment landscape and can serve as the HCV physician lead? If not, is there someone who would be interested in taking this on?
- ☐ Does your organization have a hepatitis nurse or other provider who can assist the HCV physician lead with tracking lab work and client HCV treatment adherence education? If not, is there someone who is interested and available to take this on?
- ☐ Does your organization have an in-house pharmacist or partner with a specialty pharmacy that can provide HCV treatment coverage support and is familiar with your state Medicaid and pharmaceutical patient assistance program requirements?

Sources: University of California, San Francisco. Hepatitis C Treatment Expansion Initiative. Final Report. 2012.
Leutkemeyer, A and Robb, V. University of California, San Francisco, San Francisco General Hospital, HIV Clinic. Personal Interview. February 2, 2016

Setting the Stage: Grantee Intervention Background

University of California, San Francisco's San Francisco General Hospital (SFGH) HIV Clinic is located on the campus of a large, urban public health hospital with an academic affiliation. The HIV clinic serves nearly 3,000 people living with HIV.[149] SFGH received ***Hepatitis C Treatment Expansion SPNS Initiative*** funding to expand their HCV work and change to a care model that would increase capacity to evaluate and treat HCV among their coinfected clients. This included moving from a clinic-wide hepatitis initiative to a dedicated hepatitis clinic with a multidisciplinary team that meets twice monthly.

The hypothesis at the onset of the project was that a dedicated onsite hepatitis clinic model would result in an increase in capacity to evaluate and treat HCV, as well as result in improved treatment outcomes by SVR/cure rates among coinfected PLWHAs. During the SPNS grant cycle, SFGH increased HCV treatment capacity by 45%.[150]

Why HCV Treatment in an HIV Clinic?

According to SFGH,

> "The primary responsibility for managing and treating HCV in persons coinfected with HIV has gradually shifted away from hepatology clinics to primary care HIV clinics. This transition has occurred, at least in part, because of the need to fill gaps in appropriate management and treatment of HCV in PLWHA and the willingness of some Ryan White HIV clinics to take on a greater role in providing HCV services."

Source: University of California, San Francisco. Hepatitis C Treatment Expansion Initiative. Final Report. 2012.

HCV coinfection rate at SFGH decreased from

30-35% to 20%

due to the number of clients **cured.**[151]

SFGH was able to refine their HCV care model infrastructure during the SPNS grant so that when the safe, tolerable, and highly effective HCV DAA medications came out, they had everything necessary to exponentially expand HCV treatment even further. In the interferon era, for example, SFGH treated 10–20 HCV clients a year; today, thanks to increased capacity and more efficacious medications, they treat >90–100 annually. The HCV coinfection rate at the clinic has decreased from 30–35% to less than 20% because of client cure rates. With only 300 HCV-infected clients left to treat, SFGH is on track to eliminate HCV in their clinic over the next 3 years. Continued surveillance will take place for new infections, reinfection, and HCV clients transferring care to this clinic.

SFGH treats **90-100** clients annually. With only **300** HCV-infected clients left to treat, SFGH could **eradicate HCV** in its clinic altogether.[151]

To date,

98%

of SFGH's clients treated for HCV have **cleared their infection.**[151]

[149] University of California, San Francisco. Hepatitis C Treatment Expansion Initiative. Final Report. 2012.
[150] University of California, San Francisco. Hepatitis C Treatment Expansion Initiative. Final Report. 2012.
[151] Luetkemeyer A and Robb V. [Personal communication.] University of California, San Francisco, San Francisco General Hospital. February 2, 2016.

Description of Intervention Model

CHALLENGE ACCEPTED

THE CHALLENGE: Modifying the existing HCV care model to improve HCV treatment delivery to, medication adherence among, and treatment outcomes for a large HIV/HCV coinfected population.

Intervention Model:
Integrated HCV Treatment with a Designated HCV Clinic

SFGH offers **integrated care within a designated HCV clinic physically located in the HIV primary care clinic.** The twice-monthly HCV coinfection clinic is staffed by an HIV primary care physician who is an infectious disease specialist with extensive experience in HIV management and HIV/HCV coinfection, along with two medical fellows.

A dedicated "hepatitis nurse" has an expanded role in client support, team coordination, and program management. This model relocates responsibility for HCV treatment from primary care providers to a hepatitis coinfection clinic lead physician. By expanding the role of the hepatitis nurse and concentrating care with a dedicated physician and fellows, this model facilitates treatment expansion in a more controlled, organized, and efficient manner that increases access to and completion of HCV treatment for coinfected clients. Other team members include a pharmacist, pharmacy intern, and a social worker, all of which have been critical to ensuring ongoing appropriate insurance, harm reduction services, and stable housing.

The transition to co-located care with a specialist model facilitated by SPNS and sustained today has led to increases in treatment initiation, as well as improved morale among treatment team members. The clinic is identified as a local resource for HIV/HCV coinfection treatment and offers mentoring and advice to other primary care sites and clinicians.

SFGH is able to provide a full spectrum of care to their coinfected clients. Although they still hold a twice-monthly dedicated HCV clinic with the HCV-specialized ID physician and hepatitis nurse, the rapidly shifting HCV treatment landscape has since led SFGH to a number of evolutions in day-to-day operations. Less time is spent on doctor's review and nurse-led client education; instead, selecting the optimal HCV regimen for each client and obtaining medications through insurance are the biggest areas of focus, requiring the pharmacist to become increasingly involved.

During the era of interferon-based treatment, all HCV-coinfected clients needed to be seen at the HCV clinic because of poor tolerability, side effects, and the need for medical assessment. This limited the number of clients that could be seen and subsequently treated. Today, only complicated cases require more in-depth evaluation at the clinic.

More complicated cases typically include individuals with the following:

- Decompensated liver disease
- Renal dysfunction/renal disease
- Advanced cirrhosis
- Ribavirin treatment, requiring monitoring for anemia
- Drug-drug interactions between HIV and HCV regimens that necessitate a change in ART. For example, clients who are taking tenofovir disoproxil fumarate with a ritonavir- or cobicistat-boosted protease inhibitor (such as darunavir or atazanavir) may be switched to a different regimen and be stabilized before starting HCV treatment with a ledipasvir-based regimen, or they will be more closely monitored for renal impairment if ART is not modified.

All other cases are handled in a more standard manner:

- Upon referral, the lead physician of the HCV clinic conducts an electronic review of the client's record from their regular HIV primary care provider at SFGH.
- After 4 weeks of treatment, clients have laboratory monitoring and an adherence checkup.
- After the checkup, the pharmacist continues to provide adherence counseling.

If the client is taking ribavirin, then every 2–4 weeks, he/she will be monitored for anemia and may see a nurse for additional monitoring. If the HCV RNA is below the limit of detection at week 4 and the client is not on ribavirin, additional laboratory monitoring is usually not needed. HCV RNA is checked 12 weeks after treatment has been completed for SVR12. Throughout treatment and after treatment, clients are counseled about the possibility of HCV reinfection and what steps they can take to reduce this risk, and they are screened for reinfection with HCV RNA on a regular basis.

Given the data supporting that effective HCV therapy is feasible in active substance users, SFGH does not require that clients prove they're drug-free to receive HCV treatment. Those with active substance use are counseled about harm reduction, offered referral for cessation, and, as with all clients being treated at the clinic for HCV, are provided adherence counseling throughout. Demonstration of a suppressed HIV viral load is an excellent marker for ability to adhere to daily medications, and the clinic works to ensure HIV suppression for most HCV/HIV clients prior to initiating HCV treatment.

Currently, more than 80% of SFGH's clients qualify for HCV treatment coverage through California's Medicaid program, called Medi-Cal. Remaining clients are covered through a mix of other public insurance programs and pharmaceutical assistance programs. To date, the clinic's SVR12 rates have exceeded 98% with DAA-based regimens.

Staffing Requirements & Considerations

Staffing Capacity

Based on the SFGH work, here are the types of staff necessary to replicate this intervention.

HCV coinfection physician lead. Responsibilities include:

- Serves as the primary resource person for clients and providers
- Stays up-to-date on HCV treatment and care issues
- Acts as a champion for the HCV work
- Reviews all client results and prescriptions prior to initiating therapy with pharmacy and physician consultant
- Reviews client health records and provides e-scripts for easily managed cases and refers harder-to-treat clients to the HCV clinic
- Monitors and treats complicated coinfected clients
- Collaborates with hepatitis nurse
- Coordinates e-scripts with pharmacist.

Hepatitis nurse. Responsibilities include:

- Day-to-day management of the HCV clinic
- Conducts lab work and monitoring
- Provides client HCV treatment adherence education
- Coordinates with HCV provider champion, research associate, and pharmacist.

Pharmacist

- Determines payer source issues and assists with prior authorization
- Monitors drug-drug interactions before and at regular intervals during HCV treatment
- Client adherence education and counseling.

Social worker

- Ensures insurance is active
- Provides linkage to substance abuse treatment, mental health services, and housing assistance as needed.

Staff Characteristics

Core competencies include:

- Commitment to treating HIV/HCV coinfected clients, including those with comorbidities, mental illness, and active substance use
- Interest in, and ability to stay up-to-date on HCV medications and recommendations for their use, given the rapid changes in this field
- Cultural competency.

Source: University of California, San Francisco. Hepatitis C Treatment Expansion Initiative. Final Report. 2012.

Replication Tips for Intervention Procedures and Client Engagement

This section provides tips for readers interested in replicating the intervention and, where applicable, includes grantee examples for further context.

To implement and routinize an HCV treatment intervention, it's important to take the time to do the necessary advance think-work required. This includes the following steps:[152]

- **Assess the clinic environment,** including current services, screening assessments, internal capacity, community resources, and HCV treatment gaps.
- **Map out what your HCV coinfection clinic** will look like within your current organization's infrastructure. What elements are already in place, what needs to be modified, and what needs to be added?
- **Evaluate staff expertise and interest** in HCV and coinfection and provide available trainings, if necessary.
- **Establish a coordinated team.** This team includes:
  - ⇨ *A provider champion*. This doesn't necessarily have to be a physician, but it is critical that there be a core person who helps move this work forward, is willing and able to stay up-to-speed on the rapidly changing HCV treatment landscape, and recognizes who they can or can't treat and when to bring clients in.
  - ⇨ *Hepatitis nurse*. This person provides support for the HCV provider champion and checks labs.
  - ⇨ *Specialty pharmacist*. Having a dedicated onsite pharmacist or a specialty pharmacy in the community is necessary to do this work. The pharmacist should review drug-drug interactions, readily work on securing client coverage (e.g., Medicaid, pharmaceutical assistance programs), and process e-scripts.
  - ⇨ *Adherence counseling*. Someone, whether the pharmacist, hepatitis nurse, or other team member, needs to be providing adherence counseling and check-ins to make sure that the client is taking their medications and talking with them about how they will get through the 12 weeks of HCV treatment.
- **Establish an HCV screening system.** A screening system should be in place to screen all clinic clients and to monitor those successfully treated for reinfection.
- **Monitor and evaluate client treatment readiness.** Adherence is important when it comes to HCV medication. Clients need to be ready to adhere to their HCV regimen once initiated. For coinfected clients, a good indicator of adherence is an undetectable HIV viral load, since it demonstrates that they can take medication consistently. Monitoring client readiness also includes assessing comorbidities

[152] University of California, San Francisco. Hepatitis C Treatment Expansion Initiative. Final Report. 2012.

and ART regimens that may require changing in advance of HCV treatment receipt.

- **Put HCV treatment protocol in place and provide clinic education.** Establish a treatment protocol and ensure staff are aware of and have access to the protocol or utilize protocols/guidelines that are available. Additionally, educate all staff (including front desk staff) about HCV.

- **Monitor labs, any adverse events, and possible presence of liver fibrosis** (when indicated). Evaluate the client's degree of fibrosis and progression of liver disease before starting treatment and monitor for adverse events during treatment.

- **Establish medication access and payment coverage.** Ensure staff (particularly the pharmacist) are well versed in insurance coverage requirements and know how to tap into private funding sources, such as patient/pharmaceutical assistance programs to help cover medication costs. SFGH suggests that if providers aren't able to secure coverage from one drug company, they may need to move on to another drug company that has an effective but less popular treatment, since these companies may be more willing to provide assistance.

- **Establish client education** to prevent initial infection and reinfection after successful treatment. Additionally, educate clients about safe dispensing and storage of HCV treatment. With HCV medication costing as much as $1,000 per pill, SFGH is finding it necessary to talk to clients the way they have with opioid treatment—such as not leaving medications in backpacks, not advertising presence of medication, storing in a safe place, etc.

SFGH Model Replicated

The San Francisco Health Network rolled out a primary care-based HCV initiative with a central pharmacist and physician and other core tenets from the SFGH HIV/HCV clinic. If clients meet criteria as "low complexity clients," including but not specific to those with HIV, then they are monitored by the primary care provider and primary care nurse. As Dr. Annie Luetkemeyer at SFGH explains, "Although we're not responsible for staffing that model, I see it as a sign of success because we've partnered in this effort to expand HCV-based treatment in primacy care settings. It's exciting to see our experience being used to expand treatment in San Francisco."

Securing Buy-in

Readers interested in replicating this model can help secure buy-in by providing HCV education to stakeholders (including providers and clients alike), underscoring the unique role HIV clinics have to play in addressing coinfection, and mapping out the staff capacity piece up front.

For example, Dr. Luetkemeyer, the SFGH HCV lead physician, along with Valerie Robb, the hepatitis nurse, provide education to the following groups in an effort to further expand their HCV work:

- *SFGH-based HIV primary care physicians interested in the group's HCV work*. At SFGH there are approximately 30 physicians (most are part-time) who work within the broader HIV clinic and are excited to tackle HCV with their clients after seeing the work of Leutkemeyer and her team. With some initial support, and a walk through of the care model (whereby charts are sent to Dr. Luetkemeyer for preliminary review and low-complexity clients receive e-scripts), these physicians now manage the remaining components of the clients' care.
- *Methadone Clinics*. The HIV/HCV team has partnered with the methadone clinic co-located in the same building to provide directly observed HCV therapy to clinic clients who receive methadone maintenance. By doing so, Dr. Leutkemeyer and her team leverage existing resources to expand HCV offerings as much as possible.

As for clients, there are some who don't think they qualify for new HCV treatments because they didn't previously. Fortunately, because SFGH treats even complicated cases and has cured them, word-of-mouth has spread and created a "snowball effect." Even previously hesitant clients are now coming in to talk about treatment.

Overcoming Implementation Challenges

Organizations looking to replicate this intervention need to take time up front and map out what the model will really look like once implemented within their infrastructure. It's also important that dedicated time for an HCV clinic is truly carved out, and that staff working that clinic are freed up enough to do so. It's easy to like the idea of an HCV clinic; however, the intervention can only be successful if the necessary time and capacity are truly dedicated to this work. Part of this capacity must include a pharmacist who is insurance and pharmaceutical program-savvy and familiar with HIV and HCV, as the pharmacist's role in benefits support is a particularly important one when it comes to HCV.

Today, a primary challenge is simply keeping up with the new information and treatments surrounding HCV. A staff member really has to be interested—and dedicated—to keeping up.

Entities looking to replicate this work may also want to survey what HCV resources and specialists already exist in their community and assess how their clinic's coinfection work fits into the larger picture. People who are already working in this area may be able to offer useful insights about integrating this work into your organization's clinic.

Promoting Sustainability

SFGH's HCV work is fully self-sustaining thanks to Medicaid coverage, pharmaceutical assistance programs, and demonstrated efficacy and subsequent buy-in of their HCV intervention. Because of variability of HCV treatment and Medicaid coverage from place to place, entities should survey available resources, insurance coverage and formularies, and whether existing funding streams may cover either HCV treatment or provider time.

Conclusion

Ryan White HIV/AIDS Program clinics are uniquely positioned to address HCV, given the high rates of coinfection among their clients and grantees' proficiency in providing culturally competent care to high-need, often hard-to-reach populations. Given the prevalence and severity of HCV among HIV-positive clients, coupled with today's easily tolerated, incredibly effective HCV medications, the time is ripe to tackle this work and expand treatment.

As Dr. Luetkemeyer says, "What will be interesting for us is that we talk a lot about elimination of HCV in our clinic. [Now] with only 300 people left to treat, we're nearing that place in another 2 to 3 years. We need to focus on keeping our cured clients HCV free, screening for reinfection, and expanding HCV treatment throughout San Francisco."

Other Available Resources

- **Hepatitis C Treatment Expansion Initiative**

Improving Health Outcomes

Moving Patients Along the HIV Care Continuum and Beyond

Diagnosing HIV

INTERVENTION OVERVIEW & REPLICATION TIPS

Social Networks Testing
Wisconsin Department of Health Services

Linkage to Care

INTERVENTION OVERVIEW & REPLICATION TIPS

Assess, Test, Link: Achieve Success (ATLAS) Program
Care Alliance Health Center (OH)

Enhancing Linkages to Care for Women Leaving Jail
University of Illinois at Chicago

Video Conferencing Intervention
Louisiana Department of Health and Hospitals

Active Referral Intervention
Virginia Department of Health

Louisiana Public Health Information Exchange (LaPHIE)
Louisiana State University, Health Science Center and Louisiana Department of Health Hospitals, Office of Public Health

Retention in Care

INTERVENTION OVERVIEW & REPLICATION TIPS

My Health Profile
New York-Presbyterian Hospital

Prescription of ART & Medication Access

INTERVENTION OVERVIEW & REPLICATION TIPS

Care Coordination Intervention
Virginia Department of Health

Beyond the Care Continuum: Addressing HCV Comorbidity and Coinfection

INTERVENTION OVERVIEW & REPLICATION TIPS

Hepatitis Treatment Expansion Initiative
University of California, San Francisco, San Francisco General Hospital HIV Clinic

▶ Hepatitis Treatment Expansion Initiative
Washington University School of Medicine (MO)

Hepatitis Treatment Expansion Initiative

Washington University School of Medicine (MO)

The table below provides a general overview of the Hepatitis Treatment Expansion intervention so readers can assess the necessary steps required for replication.

Intervention at-a-Glance	
Step 1	**Develop and Implement HCV Screening Standards** Create standardized screening procedures for HCV infection that identify all persons infected—and coinfected—with HCV. Ensure a mechanism exists to collect and store client-level screening data (e.g., create a database, develop queries to extract data from electronic medical records).
Step 2	**Create a Multidisciplinary HCV Team and HCV Clinic Session** Designate a specific clinic session to address HIV/HCV coinfection. Standardize evaluation, treatment, and monitoring of coinfected clients and identify a physician to serve as medical lead of the program. Train staff.
Step 3	**Create Treatment Protocols** Create treatment protocols and a process to update them to stay aligned with the changing HCV treatment landscape.
Step 4	**Screen Clients** Screen clients for CD4 count, active substance use, adherence to HIV therapy, psychiatric illness, medication contraindication, and liver fibrosis.
Step 5	**Work With Specialty Pharmacy on Client HCV Treatment Coverage** Pharmacy should be familiar with HCV treatment and with navigating their way through insurance paperwork and approval processes as well as patient assistance program requirements. Specialty pharmacy doesn't need to be physically close as long as they are HCV and insurance coverage savvy.
Step 6	**Initiate HCV Treatment** Initiate 12-week treatment regimen and provide adherence information. Identify if clients require laboratory monitoring and review indications and dosing of factors to support neutropenia or anemia.
Step 7	**Monitor Client Database** Input and track client data. This provides a more complete picture of clinic activities and outcomes as well as the identification of clients for HCV treatment.
Step 8	**Quality Improvement** Share outcome data with multidisciplinary HCV team. If areas for improvement are identified, implement Plan, Do, Study, Act (PDSA) cycles.

Source: Washington University School of Medicine. *Special Projects of National Significance (SPNS): Hepatitis Treatment Expansion Initiative*. Final Report. December 31, 2012.

Resource Assessment Checklist

Organizations should walk through a Resource Assessment (or Readiness) Checklist to assess their ability to conduct this work. If organizations do not have these components in place, they are encouraged to develop this capacity in order to conduct the Hepatitis Treatment Expansion intervention. Questions to consider include:

- ☐ Does your organization have a physician interested in treating HIV/HCV coinfected clients and dedicated to keeping up with the changing HCV medication landscape?
- ☐ Does your organization have access to an in-house or specialty pharmacy that can provide support with health insurance companies and pharmacy assistance programs to secure client HCV medication coverage and assess any HIV/HCV drug-drug interactions? If not, are you willing to foster a relationship with a specialty pharmacy?
- ☐ Are there enough coinfected clients in your clinic to treat, given the time required to keep up with evolving HCV requirements?

Source: Washington University School of Medicine. *Special Projects of National Significance (SPNS): Hepatitis Treatment Expansion Initiative*. Final Report. December 31, 2012.

Setting the Stage: Grantee Intervention Background

Washington University School of Medicine's HIV Clinic is a major provider of HIV clinical care and supportive services to PLWH in the seven-county St. Louis region. Washington University is also the Part C and D grantee for the region, which allows the clinic to offer a one-stop-shop integrated model of care. Services include HIV primary care, laboratory services, medical case management, mental health services, client education, treatment adherence counseling, support groups, transportation assistance, and access to clinical trials research.[153]

Washington University HIV Clinic has the ability to refer clients to the clinic's affiliate Barnes-Jewish Hospital radiology department for outpatient liver biopsies[154] when needed to evaluate the degree of a client's fibrosis and progression of liver disease.

Washington University received support from the SPNS ***Hepatitis C Treatment Expansion SPNS Initiative.*** During the award period, the clinic served approximately 1,711 clients each year, among whom 174 had a detectable HCV viral load.[155]

Injection drug use (IDU), which is correlated with increased risk for both HIV and HCV, is generally lower in St. Louis than in other major U.S. cities. As such, the total number of coinfected clients seen by Washington University is generally lower than in other parts of the country with larger IDU epidemics.

The intervention had three primary objectives:

1. focusing on improved HCV screening within the clinic;
2. implementing a model of integrated care with a designated HIV/HCV coinfection clinic; and
3. providing wraparound services to HIV/HCV coinfected clients to minimize barriers to ongoing engagement in HCV care.[156]

Washington University sought to demonstrate the potential of a multidisciplinary HCV team and a specific coinfection clinic session to improve evaluation, treatment, and monitoring of coinfected clients.

[153] Washington University School of Medicine. *Special Projects of National Significance (SPNS) Hepatitis Treatment Expansion Initiative*. Final Report. December 31, 2012.
[154] For uninsured clients, liver biopsies may be covered by the clinic's Ryan White Part C grant.
[155] Washington University School of Medicine. *Special Projects of National Significance (SPNS) Hepatitis Treatment Expansion Initiative*. Final Report. December 31, 2012.
[156] Washington University School of Medicine. *Special Projects of National Significance (SPNS) Hepatitis Treatment Expansion Initiative*. Final Report. December 31, 2012.

Description of Intervention Model

CHALLENGE ACCEPTED

THE CHALLENGE: The challenge the intervention sought to address was HCV infection (and any fibrosis stage) among HIV-positive clients within the Washington University HIV Clinic.

Intervention Model: Co-located Care with a Specialist

Washington University offers integrated, comprehensive care for HIV/HCV coinfected clients onsite at its HIV clinic. This includes integrating expert HCV therapy into the HIV primary care setting to further facilitate a medical home model, without requiring all HIV physicians in the clinic be fully responsible for HCV treatment.

The Washington University treatment model requires a dedicated HCV physician lead. This can be either a hepatologist or an infectious disease doctor with an interest in managing coinfected clients and a dedication to stay abreast of the constantly changing HCV treatment landscape.

Washington University has a coinfection clinic session within the HIV clinic to offer a distinct, coordinated approach to care for this high-need population rather than referring clients out for HCV evaluation and treatment.

At Washington University, although there are some supportive staff members, three primary individuals make up the crux of the care model. These include:

- *A Lead HCV physician*. This individual oversees the intervention. The lead physician also serves as a leading investigator of Washington University's AIDS Clinical Trial Group, which supports swift access to research trials for new HCV therapies.
- *A Lead HCV nurse*. The HCV lead nurse manages day-to-day responsibilities and offers client education, provides monitoring, oversees scheduling and follow-up on referrals for diagnostic procedures like liver biopsies (though this is becoming less common), and coordinates with clients' multidisciplinary providers to enhance client care.
- *Specialty pharmacist*. This individual provides support in navigating HCV treatment coverage with health insurance agencies and patient assistance programs. As newer and more effective HCV treatments became available, yet health insurance coverage for such drugs has become more stringent, there has been a shift from the time involved for medical care and oversight on the clinical end to more paperwork and benefits management on the pharmacy end.

With the clinical trials group located at Washington University, the clinic was able to quickly treat clients with new HCV medications early on. This helped attract the attention of a lot of HIV providers as they saw that HCV could be cured, and much more readily.

With the new HCV medications available, all clients who been treated have been cured. Having a smaller coinfected population allows the clinic to more closely tailor its approach to each individual client.

Staffing Requirements & Considerations

Staffing Capacity

Based on the Washington University work, here are the types of staff necessary to replicate this intervention.

Lead HCV physician. Responsibilities include:

- Primary physician of the HCV clinic session
- Prescribing HCV medications for clients
- Staying abreast of new HCV care and treatment guidelines and best practices
- Coordinating with nursing and pharmacy staff as needed.

Lead HCV nurse. Responsibilities include:

- Managing day-to-day HCV clinic session activities
- Providing client HCV and adherence education
- Providing monitoring
- Overseeing scheduling
- Following up on any referrals for diagnostic procedures like liver biopsy (though this is becoming less common)
- Coordinating with client's multidisciplinary providers to enhance client care
- Coordinating with lead physician and pharmacy staff as needed.

Specialty pharmacist. Responsibilities include:

- Assisting with client insurance coverage (e.g., health insurance paperwork and processes; patient assistance programs)
- Familiarity with HIV and HCV and ability to recognize any potential for drug-drug interactions
- Interest in partnering with a Ryan White clinic.

Staff Characteristics

Core competencies include:

- Genuine interest in treating HIV/HCV coinfected clients
- Interest in and ability to stay up-to-date on HCV medications and recommendations given the pace at which this field is changing
- Cultural competency.

Source: Washington University School of Medicine. *Special Projects of National Significance (SPNS) Hepatitis Treatment Expansion Initiative*. Final Report. December 31, 2012.

Replication Tips for Intervention Procedures and Client Engagement

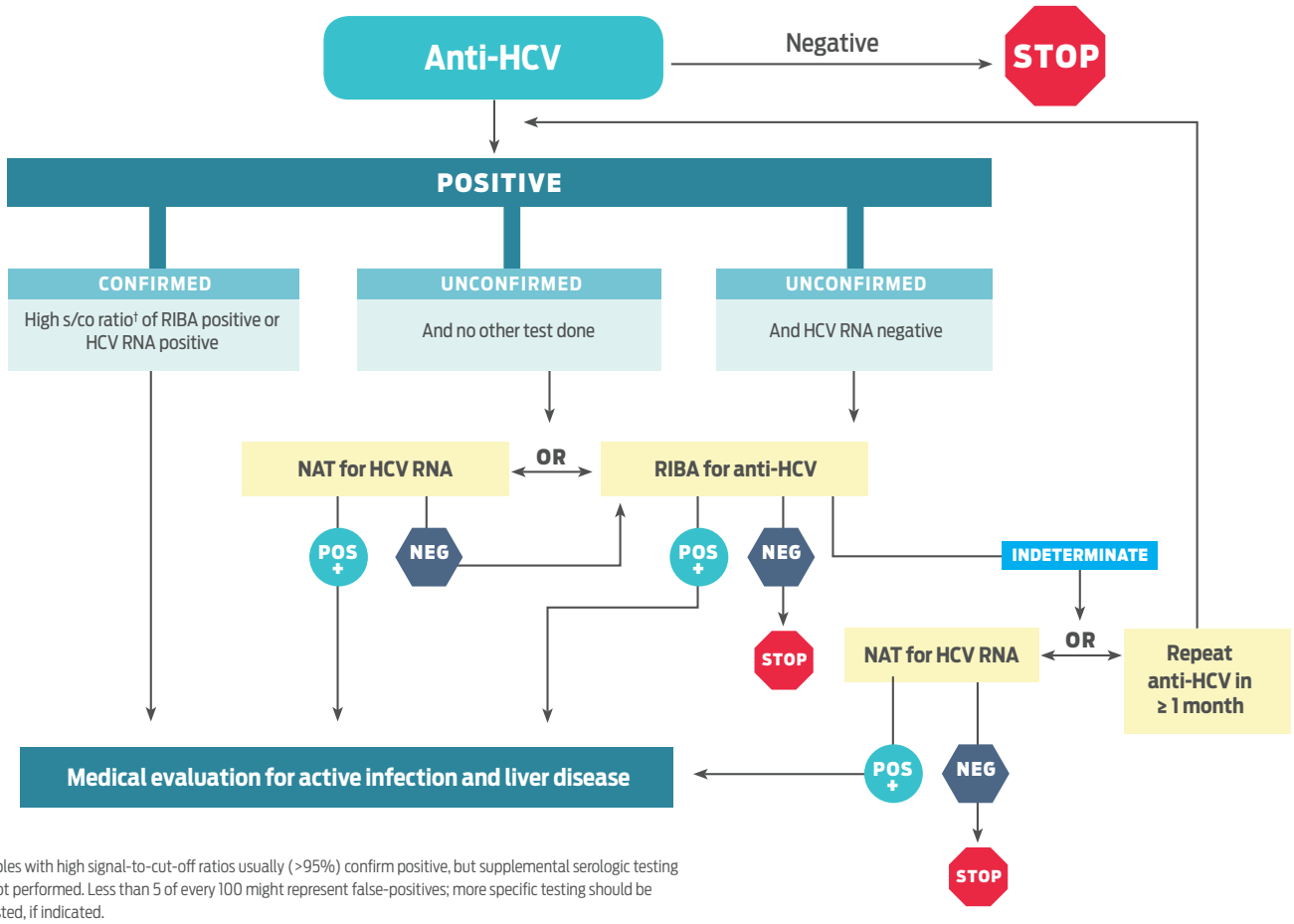
This section provides tips for readers interested in replicating the intervention and, where applicable, includes grantee examples for further context.

Intervention procedures include the following:

- **Establish a standardized HCV screening protocol at the start of HCV care.** Screen clients at initiation of HIV primary care and at least annually thereafter. Testing steps for HCV infection can be found in the **figure below.**

- **Create protocols around laboratory monitoring and frequency of clinic visits.** Clients are monitored for alcohol use, drug treatment, and psychiatric disorders and are evaluated for liver fibrosis (when indicated). Washington University has found that in standardizing the clinic's process to evaluate clients

Hepatitis C Virus (HCV) Infection Testing for Diagnosis



† Samples with high signal-to-cut-off ratios usually (>95%) confirm positive, but supplemental serologic testing was not performed. Less than 5 of every 100 might represent false-positives; more specific testing should be requested, if indicated.

Anti-HCV: Antibody to HCV

NAT: Nucleic acid testing

RIBA: Recombinant immunoblot assay

RNA: Ribonucleic acid

for active HCV infection, there has also been an improvement in the proportion of coinfected clients who have an undetectable HIV viral load.

- **Create procedures for identifying and tracking client data.** Identify the information your organization wants to track and put as much of this as possible into a database so that there is an accurate picture of all HCV-infected clients. Each quarter, pull the list of clients who have an HCV-positive antibody test and provide this list to the lead HCV physician. The lead HCV physician then reviews each client's medical record to confirm if the client has active HCV infection or is in need of further diagnostic screening, according to the protocol. The list is updated on a quarterly basis. As Dr. Rachel Presti, HCV physician at the Washington University, explains, "It's really important to do that data analysis piece up front, and separate out who is ready for treatment and who isn't. A full clinic assessment should be done initially when you're about to kick off HCV treatment. It's time consuming but well worth it."[157]

- **Assess client readiness.** Although HCV medication has become increasingly more tolerable, adherence is particularly important. Therefore, all clients are assessed as to their readiness to follow medication regimens. HIV viral load is used as a marker for this. According to Washington University, "Achieving an undetectable HIV viral load is not only a desirable health outcome for all clients with HIV/AIDS, but it also demonstrates a client's ability to adhere to his/her prescribed medication regimen [as] adherence is an important consideration when assessing a client's readiness for HCV therapy."[158]

- **Refer clients to the co-located HCV clinic session.** HCV clinic staff check what HIV medications clients are on and whether or not they are compatible with HCV treatment. If not, the client is switched to a new HIV regimen. Staff then check that the patient is still viral load suppressed, and the request for HCV coverage begins.

- **Provide client education.** Some clients are hesitant to start HCV treatment if they remember the interferon days (with many side effects). As such, clinic staff should work to educate them on new treatments, including disseminating information about the efficacy of new HCV medications and using data to show clients how well new treatments are tolerated.

- **Procure treatment coverage.** Finding specialty pharmacies familiar with HCV and HIV is key. The pharmacies don't have to be physically close by, as long as they are familiar with navigating their way through paperwork and approval processes. Pharmacists should be looking for any drug-drug interactions to make sure folks are on regimens that are compatible with HCV treatment. Pharmacists should also have relevant client information on record (e.g., fibrosis score, information on HIV care, urine analysis), so that clients can better qualify for insurance coverage and/or pharmaceutical assistance.

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[157] Presti, R. Personal interview. January 11, 2016.
[158] Washington University School of Medicine. *Special Projects of National Significance (SPNS) Hepatitis Treatment Expansion Initiative*. Final Report. December 31, 2012.

Having a centralized place or person who is familiar with patient assistance programs is very important, because HCV insurance coverage is really hard to obtain, particularly because the requirements are changing so rapidly. Even "easy" clients can take about a month to obtain coverage for HCV medications.

To cover HCV medications, particularly in a non-Medicaid expansion state like Missouri, organizations can look to the State AIDS Drug Assistance Program (ADAP) and pay for insurance for qualifying clients. This will enable some clients to receive HCV treatment, although this is not always the case. For clients who are denied insurance coverage, pharmacists should keep asking insurance companies because, sometimes, if insurance denies a request a certain number of times, then patient assistance will step in or at least assist with co-pays.

- **Have clients begin treatment and have providers stay abreast of available treatment.** Most clients need just 12 weeks of treatment; however, the availability of HCV medications—and for which genotype—is constantly changing.

- **Provide access to services that reduce barriers to care.** A multidisciplinary approach is especially helpful for treating HIV/HCV coinfected clients. Access to case management, mental health counseling, and transportation assistance are important services to reduce barriers and keep clients retained in care.

- **Disseminate information to raise awareness about HCV.** Consider hosting a forum or community meeting. Invite community advocates and providers in the region to come and hear about the experience and importance of screening and tackling HCV. This can help spread the word about and increase interest in the intervention.

Securing Buy-in

Create awareness among multidisciplinary team members about the needs of coinfected clients. Consider the following activities:

1. Hold clinic staff meetings devoted to educating multidisciplinary team members about the intervention, its goals and objectives, and the screening protocol. Place an emphasis on the importance of case managers and mental health staff in retaining coinfected clients and on treatment adherence.
2. Meet with others who have or who are offering HCV treatment. For example, Washington University's HIV clinic nurses and the university's hepatology clinic staff met to discuss the difficulties of prior hepatology-led HCV treatment of coinfected clients. Discussions helped clarify nursing staff requirements and type of monitoring for HCV treatment.

Keep providers within the broader HIV clinic, as well as in the community, abreast of the importance of addressing HCV and how, today, this work is more feasible and achievable than ever.

Overcoming Implementation Challenges

The largest challenge in doing this work is health insurance coverage. Because of this, it's important to devote resources to working with a specialized and dedicated pharmacist who is savvy in navigating the health insurance landscape within your organization's respective state.

Promoting Sustainability

Washington University is able to sustain the HCV intervention work through Ryan White Part C and other grant sources. Organizations are encouraged to similarly assess current funding streams and whether HCV care, treatment, or intervention staff salaries/activities may be covered.

Conclusion

Curing HCV among coinfected clients has never been easier. New regimens have enabled Washington University to cure all clients who have undergone treatment. A specialty pharmacist assists with coverage issues and enrollment while an HCV nurse lead ensures clients are educated on the latest treatments and on the continued importance of medication adherence.

The work being done at Washington University aligns with federal guidelines and recommendations, national goals, and the National Action Plan for the Prevention, Care & Treatment of Viral Hepatitis.

Other Available Resources

- **Hepatitis C Treatment Expansion SPNS Initiative**
- **Washington University ID-CRU and AIDS Clinical Trial Unit**
- **Washington University, School of Medicine, Infectious Disease Division, HIV/AIDS**

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