FY 2018 Houston EMA/HSDA Ryan White Part A Service Definition **Service Linkage at Testing Sites** (Revision Date: 03/03/14)	
HRSA Service Category Title: **RWGA Only**	**Non-medical Case Management**
Local Service Category Title:	**A. Service Linkage targeted to Not-In-Care and Newly-Diagnosed PLWHA in the Houston EMA/HDSA** **Not-In-Care PLWHA** are individuals who know their HIV status but have not been actively engaged in outpatient primary medical care services for more than six (6) months. **Newly-Diagnosed** PLWHA are individuals who have learned their HIV status within the previous six months and are not currently receiving outpatient primary medical care or case management services as documented in the CPCDMS data system. **B. *Youth targeted Service Linkage, Care and Prevention:*** Service Linkage Services targeted to Youth (13 – 24 years of age), including a focus on not-in-care and newly-diagnosed Youth in the Houston EMA. *Not-In-Care PLWHA are Youth who know their HIV status but have not been actively engaged in outpatient primary medical care services in the previous six (6) months. *Newly-Diagnosed Youth are Youth who have learned their HIV status within the previous six months and are not currently receiving outpatient primary medical care or case management services as documented in the CPCDMS data system.
Budget Type: **RWGA Only**	Fee-for-Service
Budget Requirements or Restrictions: **RWGA Only**	Early intervention services, including HIV testing and Comprehensive Risk Counseling Services (CRCS) must be supported via alternative funding (e.g. TDSHS, CDC) and may not be charged to this contract.
HRSA Service Category Definition: **RWGA Only**	***Case Management (non-Medical)*** includes the provision of advice and assistance in obtaining medical, social, community, legal, financial, and other needed services. Non-medical case management does not involve coordination and follow-up of medical treatments, as medical case management does. ***Early intervention services (EIS)*** include counseling individuals with respect to HIV/AIDS; testing (including tests to confirm the presence of the disease, tests to diagnose to extent of immune deficiency, tests to provide information on appropriate therapeutic measures); referrals; other clinical and diagnostic services regarding HIV/AIDS; periodic medical evaluations for individuals with HIV/AIDS; and providing therapeutic measures.
Local Service Category	**A. *Service Linkage:*** Providing allowable Ryan White Program

Definition:	outreach and service linkage activities to newly-diagnosed and/or ***Not-In-Care*** PLWHA who know their status but are not currently enrolled in outpatient primary medical care with information, referrals and assistance with linkage to medical, mental health, substance abuse and psychosocial services as needed; advocating on behalf of clients to decrease service gaps and remove barriers to services helping clients develop and utilize independent living skills and strategies. Assist clients in obtaining needed resources, including bus pass vouchers and gas cards per published HCPHES/RWGA policies. **B. *Youth targeted Service Linkage, Care and Prevention:*** Providing Ryan White Program appropriate outreach and service linkage activities to newly-diagnosed and/or not-in-care HIV-positive Youth who know their status but are not currently enrolled in outpatient primary medical care with information, referrals and assistance with linkage to medical, mental health, substance abuse and psychosocial services as needed; advocating on their behalf to decrease service gaps and remove barriers to services; helping Youth develop and utilize independent living skills and strategies. Assist clients in obtaining needed resources, including bus pass vouchers and gas cards per published HCPHES/RWGA policies. Provide comprehensive medical case management to HIV-positive youth identified through outreach and in-reach activities.
Target Population (age, gender, geographic, race, ethnicity, etc.):	**A. Service Linkage:** Services will be available to eligible HIV-infected clients residing in the Houston EMA/HSDA with priority given to clients most in need. All clients who receive services will be served without regard to age, gender, race, color, religion, national origin, sexual orientation, or handicap. Services will target low income individuals with HIV/AIDS who demonstrate multiple medical, mental health, substance use/abuse and psychosocial needs including, but not limited to: mental health counseling, substance abuse treatment, primary medical care, specialized care, alternative treatment, medications, placement in a medical facility, emotional support, basic needs for food, clothing, and shelter, transportation, legal services and vocational services. Services will also target clients who cannot function in the community due to barriers which include, but are not limited to, mental illness and psychiatric disorders, drug addiction and substance abuse, extreme lack of knowledge regarding available services, inability to maintain financial independence, inability to complete necessary forms, inability to arrange and complete entitlement and medical appointments, homelessness, deteriorating medical condition, illiteracy, language/cultural barriers and/or the absence of speech, sight, hearing, or mobility. **Service Linkage** is intended to serve eligible clients in the Houston EMA/HSDA, especially those underserved or unserved population groups which include: African American, Hispanic/Latino, Women

	and Children, Veteran, Deaf/Hard of Hearing, Substance Abusers, Homeless and Gay/Lesbian/Transsexual. **B. *Youth targeted Service Linkage, Care and Prevention:*** Services will be available to eligible HIV-infected Youth (ages 13 – 24) residing in the Houston EMA/HSDA with priority given to clients most in need. All Youth who receive services will be served without regard to age (i.e. limited to those who are between 13- 24 years of age), gender, race, color, religion, national origin, sexual orientation, or handicap. Services will target low income Youth living with HIV/AIDS who demonstrate multiple medical, mental health, substance use/abuse and psychosocial needs including, but not limited to: mental health counseling, substance abuse treatment, primary medical care, specialized care, alternative treatment, medications, placement in a medical facility, emotional support, basic needs for food, clothing, and shelter, transportation, legal services and vocational services. Services will also target Youth who cannot function in the community due to barriers which include, but are not limited to, mental illness and psychiatric disorders, drug addiction and substance abuse, extreme lack of knowledge regarding available services, inability to maintain financial independence, inability to complete necessary forms, inability to arrange and complete entitlement and medical appointments, homelessness, deteriorating medical condition, illiteracy, language/cultural barriers and/or the absence of speech, sight, hearing, or mobility. ***Youth Targeted Service Linkage, Care and Prevention*** is intended to serve eligible youth in the Houston EMA/HSDA, especially those underserved or unserved population groups which include: African American, Hispanic/Latino, Substance Abusers, Homeless and Gay/Lesbian/Transsexual.
Services to be Provided:	**Goal (A): Service Linkage:** The expectation is that a single Service Linkage Worker Full Time Equivalent (FTE) targeting Not-In-Care and/or newly-diagnosed PLWHA can serve approximately 80 newly-diagnosed or not-in-care PLWH/A per year. The purpose of **Service Linkage** is to assist clients with the procurement of needed services so that the problems associated with living with HIV are mitigated. **Service Linkage** is a working agreement between a client and a Service Linkage Worker (SLW) for an indeterminate period, based on client need, during which information, referrals and service linkage are provided on an as-needed basis. The purpose of **Service Linkage** is to assist clients who do not require the intensity of *Clinical or Medical Case Management*, as determined by RWGA Quality Management guidelines. **Service Linkage** is both office- and field-based and **may include the issuance of bus pass vouchers and gas cards per**

	published guidelines. Service Linkage targeted to Not-In-Care and/or Newly-Diagnosed PLWHA extends the capability of existing programs with a documented track record of identifying Not-In-Care and/or newly-diagnosed PLWHA by providing "hands-on" outreach and linkage to care services to those PLWHA who are not currently accessing primary medical care services. In order to ensure linkage to an ongoing support system, eligible clients identified funded under this contract, including clients who may obtain their medical services through non-Ryan White-funded programs, must be transferred to a Ryan White-funded Primary Medical Care, Clinical Case Management or Service Linkage program within 90 days of initiation of services as documented in both ECLIPS and CPCDMS data systems. Those clients who choose to access primary medical care from a non-Ryan White source, including private physicians, may receive ongoing service linkage services from provider or must be transferred to a Clinical (CCM) or Primary Care/Medical Case Management site per client need and the preference of the client**.** **GOAL (B):** This effort will continue a program of ***Service Linkage, Care and Prevention to Engage HIV Seropositive Youth*** targeting youth (ages 13-24) with a focus on Youth of color. This service is designed to reach HIV seropositive youth of color not engaged in clinical care and to link them to appropriate clinical, supportive, and preventive services. The specific objectives are to: (1) conduct outreach (service linkage) to assist seropositive Youth learn their HIV status, (2) link HIV-infected Youth with primary care services, and (3) prevent transmission of HIV infection from targeted clients.
Service Unit Definition(s): **RWGA Only**	One unit of service is defined as 15 minutes of direct client services and allowable charges.
Financial Eligibility:	Refer to the RWPC's approved *Financial Eligibility for Houston EMA Services*.
Client Eligibility:	Not-In-Care and/or newly-diagnosed HIV-infected individuals residing in the Houston EMA.
Agency Requirements:	**Service Linkage** services will comply with the HCPHES/RWGA published **Service Linkage** Standards of Care and policies and procedures as published and/or revised, including linkage to the CPCDMS data system. Agency must comply with all applicable City of Houston DHHS *ECLIPS* and RWGA/HCPHES *CPCDMS* business rules and policies & procedures. **Service Linkage** targeted to Not-In-Care and/or newly diagnosed PLWHA must be planned and delivered in coordination with local HIV prevention/outreach programs to avoid duplication of services

	and be designed with quantified program reporting that will accommodate local effectiveness evaluation. Contractor must document established linkages with agencies that serve HIV-infected clients or serve individuals who are members of high-risk population groups (e.g., men who have sex with men, injection drug users, sex-industry workers, youth who are sentenced under the juvenile justice system, inmates of state and local jails and prisons). Contractor must have formal collaborative, referral or Point of Entry (POE) agreements with Ryan White funded HIV/AIDS primary care providers.
Staff Requirements:	Service Linkage Workers must spend at least 42% (867 hours per FTE) of their time providing direct client services. Direct service linkage and case management services include any activities with a client (face-to-face or by telephone), communication with other service providers or significant others to access client services, monitoring client care, and accompanying clients to services. Indirect activities include travel to and from a client's residence or agency, staff meetings, supervision, community education, documentation, and computer input. Direct case management activities must be documented in the CPCDMS according to system business rules. *Must comply with applicable HCPHES/RWGA published Ryan White Part A/B Standards of Care:* Minimum Qualifications: **Service Linkage Workers** must have at a minimum a Bachelor's degree from an accredited college or university with a major in social or behavioral sciences. Documented paid work experience in providing client services to PLWH/A may be substituted for the Bachelor's degree requirement on a 1:1 basis (1 year of documented paid experience may be substituted for 1 year of college). All Service Linkage Workers must have a minimum of one (1) year paid work experience with PLWHA. Supervision: The Service Linkage Worker must function within the clinical infrastructure of the applicant agency and receive ongoing supervision that meets or exceeds HCPHES/RWGA published Ryan White Part A/B Standards of Care for Service Linkage.
Special Requirements: **RWGA Only**	Contractor must be have the capability to provide Public Health Follow-Up by qualified Disease Intervention Specialists (DIS) to locate, identify, inform and refer newly-diagnosed and not-in-care PLWHA to outpatient primary medical care services. Contractor must perform CPCDMS new client registrations and, for those newly-diagnosed or out-of-care clients referred to non-Ryan White primary care providers, registration updates per RWGA

	business rules for those needing ongoing service linkage services as well as those clients who may only need to establish system of care eligibility. This service category does not routinely distribute Bus Passes. However, if so directed by RWGA, Contractor must issue bus pass vouchers in accordance with HCPHES/RWGA policies and procedures.

FY 2019 RWPC "How to Best Meet the Need" Decision Process

Step in Process: **Council**		Date: **06/14/18**
Recommendations:	Approved: Y:_____ No: _____ Approved With Changes:_____	If approved with changes list changes below:
1.		
2.		
3.		

Step in Process: **Steering Committee**		Date: **06/07/18**
Recommendations:	Approved: Y: _____ No: _____ Approved With Changes:_____	If approved with changes list changes below:
1.		
2.		
3.		

Step in Process: **Quality Improvement Committee**		Date: **05/15/18**
Recommendations:	Approved: Y: _____ No: _____ Approved With Changes:_____	If approved with changes list changes below:
1.		
2.		
3.		

Step in Process: **HTBMN Workgroup**	Date: **04/24/18**
Recommendations:	Financial Eligibility:
1.	
2.	
3.	

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Building a Healthy Community

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FY 2016 PERFORMANCE MEASURES HIGHLIGHTS

RYAN WHITE GRANT ADMINISTRATION

HARRIS COUNTY PUBLIC HEALTH (HCPH)

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Highlights from FY 2016 Performance Measures

Non-Medical Case Management / Service Linkage

- During FY 2016, 6,824 clients utilized Part A non-medical case management / service linkage. According to CPCDMS, 3,072 (45%) of these clients accessed primary care two or more times at least three months apart during this time period after utilizing non-medical case management.
- Among these clients, 508 (53%) clients utilized primary medical care for the first time after accessing service linkage for the first time.
- Among these clients, the average number of days between the first service linkage visit and the first primary medical care visit was 36 days during this time period.

Ryan White Part A
HIV Performance Measures
FY 2016 Report

Non-Medical Case Management / Service Linkage
All Providers

For FY 2016 (3/1/2016 to 2/28/2017), 6,824 clients utilized Part A non-medical case management.

HIV Performance Measures	FY 2015	FY 2016	Change
A minimum of 70% of clients will utilize Part A/B/C/D primary care two or more times at least three months apart after accessing non-medical case management (service linkage)	2,870 (45.9%)	3,072 (45.0%)	**-0.4%**
Percentage of clients who utilized primary medical care for the first time after accessing service linkage for the first time	423 (54.4%)	508 (52.5%)	**-1.9%**
Number of days between first ever service linkage visit and first ever primary medical care visit:			
Mean 29		36	**24.1%**
Median 14		21	**50.0%**
Mode 7		14	**100.0%**
60% of newly-enrolled clients will have a medical visit in each of the four-month periods of the measurement year	105 (49.3%)	132 (46.3%)	**-3.0%**

SUMMARY FOR HOW TO BEST MEET THE NEED

Harris County
Public Health
Building a Healthy Community

RYAN WHITE PART A QUALITY MANAGEMENT PROGRAM
HOUSTON EMA
CLIENT SATISFACTION REPORT, 2016
PREPARED BY HARRIS COUNTY PUBLIC HEALTH
RYAN WHITE GRANT ADMINISTRATION

MARCH 2017

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CLIENT SATISFACTION SURVEY SERVICE CATEGORY SUMMARY

There were 252 respondents for case management services and the general consensus was favorable. See the *Attachments* section for the comprehensive output for case management services.

CASE MANAGEMENT SERVICES

HOW OFTEN	ALWAYS	MOST OF THE TIME	SOMETIMES	NOT VERY OFTEN	NEVER	NOT APPLICABLE	TOTAL
does your case manager treat you with dignity and respect?	231 92%	9 4%	4 2%	0 0%	1 0%	7 3%	**252**
are your meetings with your case manager at times and locations that are based on your preferences? (How often do you have a "say so" on when and where you meet?)	162 65%	47 19%	16 6%	3 1%	9 4%	11 4%	**248**
does the staff ask if you have other problems or needs that are not being addressed?	168 69%	45 18%	18 7%	4 2%	8 3%	1 0%	**244**
do you find the information provided to you by the staff to be correct and helpful?	180 72%	46 19%	10 4%	5 2%	0 0%	0 0%	**241**
HOW SATISFIED	VERY SATISFIED	SATISFIED	NOT SATISFIED	VERY UNSATISFIED	NOT APPLICABLE		TOTAL
are you with your case manager's knowledge of community services and	193 78%	43 17%	5 2%	1 0%	5 2%		**247**

his/her ability to connect you with those services?							
are you with the staff's efforts to make sure that all of your personal information stays confidential?	206 85%	30 12%	1 0%	2 1%	3 1%		**242**
are you with the quality of the service you receive from this agency overall?	192 80%	42 18%	2 1%	0 0%	4 2%		**240**
CULTURAL COMPETENCY	**VERY MUCH**	**A LOT**	**SOME**	**A LITTLE**	**NOT AT ALL**	**NOT APPLICABLE**	**TOTAL**
How would you rate the staff's understanding and respect of your cultural / ethnic background and/or your lifestyle?	178 72%	48 20%	9 4%	4 2%	3 1%	4 2%	**246**
If English is not your primary language, how well does the staff communicate with you in your language?	89 37%	24 10%	6 3%	1 0%	0 0%	118 50%	**238**
HELPFULNESS	**VERY MUCH**	**SOME**	**A LITTLE**	**NOT AT ALL**	**NOT APPLICABLE**		**TOTAL**

How much would you say that the case management you receive from this agency has helped you to improve the problems, feelings, or situations that brought you here?	203 83%	28 11%	8 3%	5 2%	2 1%		**246**
WAIT TIME	**VERY MUCH**	**A LOT**	**SOME**	**A LITTLE**	**NONE**	**NOT APPLICABLE**	**TOTAL**
How much time usually passes between the time of your appointment, and the time you actually receive service?	135 56%	70 29%	19 8%	6 2%	5 2%	5 2%	**240**
CONVENIENCE	**VERY OFTEN**	**A LOT**	**SOMETIMES**	**NOT OFTEN**	**NOT AT ALL**	**NOT APPLICABLE**	**TOTAL**
If you make appointments, how often are you able to get them scheduled for a reasonable date and during hours that are convenient for you?	155 64%	61 25%	16 7%	4 2%	0 0%	6 2%	**242**
RECOMMEND	**VERY HIGHLY**	**HIGHLY**	**NOT HIGHLY**	**RELUCTANTLY**	**NOT AT ALL**	**NOT APPLICABLE**	**TOTAL**
How highly would you recommend this agency to others?	191 80%	40 17%	2 1%	0 0%	1 0%	5 2%	**239**
CONVENIENCE	**VERY CONVENIENT**	**CONVENIENT**	**SOMEWHAT**	**A LITTLE**	**INCONVENIENT**	**NOT APPLICABLE**	**TOTAL**
How would you rate the convenience of the office hours here?	141 58%	64 26%	25 10%	4 2%	3 1%	5 2%	**242**

Positivity linked to better health outcomes in people living with HIV

Written by Caitlin Mahon Knowledge Sharing & News Officer

Teaching men recently diagnosed with HIV skills to increase positive emotions has resulted in lower viral loads and lower antidepressant use, compared to those not receiving any happiness intervention.

The study, conducted by researchers from Northwestern University Feinberg School of Medicine in the USA, forms part of a larger study looking at positivity mentoring in patients with chronic illnesses – including diabetes and breast cancer.

Eighty subjects, consisting mostly of men, were taught a set of eight skills over a five week period, to help increase positive attitudes in relation to their new HIV diagnosis. A further 79 participants were in a control group which received no counselling.

At the end of a 15-month period, 91% of the men who received the positive emotion intervention had a suppressed viral load, compared to just 76% in the control group.

Moreover, antidepressant use more than doubled in the control group over the 15 month period. At the beginning of the study, 17% of participants in both groups reported being on antidepressants, by the end of the study, the use of antidepressants reached 35% in the control group, and remained constant in the positivity intervention group.

Among the skills taught were keeping a daily mindfulness journal; recognising positive events each day; daily meditation and breathing exercises; reappraising daily life events and finding the positive elements; practicing small daily acts of kindness; listing skills and setting goals.

Having a lower viral load is not only beneficial for the patient, but also has public health benefits, as people are less likely to transmit HIV when their viral load is suppressed.

"Even in the midst of this stressful experience of testing positive for HIV, coaching people to feel happy, calm and satisfied -- what we call positive affect -- appears to influence important health outcomes," said lead author Judith Moskowitz.

Linkage to HIV Care

This is a PDF version of the following document:
Section 1: Screening and Diagnosis
Topic 5: Linkage to HIV Care

You can always find the most up to date version of this document at https://www.hiv.uw.edu/go/screening-diagnosis/linkage-care/core-concept/all.

Background

Linkage to care is a crucial early step in successful HIV treatment and is typically defined as the completion of a first medical clinic visit after an HIV diagnosis. Linkage to care plays a crucial role in the HIV care continuum because it is a necessary precursor to retention in care, antiretroviral therapy initiation, and viral suppression. Evidence clearly demonstrates that antiretroviral treatment significantly reduces the risk of developing HIV-related complications and the risk of death.[1,2,3,4] In addition, antiretroviral therapy dramatically reduces HIV transmission to others.[5,6] Without timely entry into care, individuals with HIV infection miss an opportunity to benefit from HIV treatment at the earliest stage feasible; linkage to care within 3 months significantly increases the likelihood of achieving viral suppression.[7] Delayed linkage to care also is a major barrier to the potential for “treatment as prevention” to reduce HIV transmission rates in the United States. Thus, identifying persons with HIV infection and successfully linking them to care plays a critical role in the overall HIV epidemic, both from a treatment and a prevention standpoint (Figure 1). This following provides a review of the current state of linkage to care in the United States, examines barriers to linkage to care, and explores future opportunities for improving engagement in care.

Process for Estimating and Monitoring Linkage to Care

Metrics Used for Estimating Linkage to Care

In the United States, the recently established federal benchmark for successful linkage to care is completion of a visit with an HIV medical provider within 1 month (30 days) of HIV diagnosis.[8] The Centers for Disease Control and Prevention (CDC) monitors linkage to care after HIV diagnosis for two timeframes—within 1 month (30 days) and within 3 months (90 days).[9] The CDC surveillance data are based on documentation of an HIV RNA level (viral load) or CD4 cell count within 1 month or 3 months of diagnosis as evidence for linkage to care.[9] From a practical standpoint, the laboratory HIV RNA or CD4 cell count test results serve as an easily measurable surrogate marker for a clinic visit for HIV medical care. Most published population-based studies have defined linkage to care as having at least one CD4 count or HIV RNA level (viral load) report within 3 months of HIV diagnosis based on the federal benchmark prior to 2015. Using the standard metric for linkage to care, a first visit more than 1 month (or 3 months if using older criteria) after HIV diagnosis is considered “failed linkage” or “delayed entry into care”. Linkage to care is considered a one-time event, whereas retention in care reflects ongoing engagement or reengagement in care. The start of antiretroviral therapy is not part of the definition of linkage to care in the United States, although this is a key part of the UNAIDS “90-90-90” goals for the HIV care continuum worldwide.

HIV Case and Laboratory Surveillance

In areas where laboratory-based reporting of HIV RNA (viral load) and CD4 cell count results is mandated by law, state and local Health departments and the CDC use this information to monitor linkage to care. As of March 2015, 41 states and the District of Columbia required reporting of all CD4 and viral load test results.[10] The HIV surveillance programs within state and local health departments also collect sociodemographic data and are able to track differences among risk groups and among jurisdictions, thus providing an opportunity to develop HIV interventions that are appropriate at the local level.[11] HIV surveillance data has the important advantage of being population-based. Surveillance integrates data across care sites and includes more than 80% of persons living with HIV in the United States.[9,12]

Medical Monitoring Project

A supplemental surveillance project, the Medical Monitoring Project (launched by the CDC in 2005), was designed to collect data from a nationally representative sample of adults receiving care for HIV. It collects data on health care reform, such as access to and sources of health coverage, unmet needs for mental health, substance use, and supportive services. The Medical Monitoring Project data reflect the experience of individuals with HIV infection who are in care, including services provided by different payers (Medicaid, Medicare, Ryan White Program), but have been limited by low participant response rates and, prior to 2014, did not include out-of-care persons.[13] In 2014, the CDC adopted a new methodology using surveillance data for sampling adults with HIV infection with the goal of including persons at all steps in the HIV care continuum after diagnosis, including those who are out of care.

Current State of Linkage to Care in the United States

Estimates of Successful Linkage to Care in United States

Based on data from the 33 jurisdictions that reported complete CD4 and HIV RNA laboratory values to CDC for 27,281 persons diagnosed with HIV infection in 2014, 74.5% were linked to HIV medical care within 1 month after the HIV diagnosis, and 84.0% were linked within 3 months of the HIV diagnosis.[9] From 2010 to 2014, the percentage of persons linked to care within 1 month or 3 months increased steadily (Figure 2).[9] These recent CDC linkage data for the United States show a major improvement from earlier studies that estimated only 59 to 66% of persons newly diagnosed with HIV infection were linked to clinical HIV care within 3 months.[1,14,15] In response to the persistent gaps in the HIV care continuum, efforts have intensified to focus and coordinate resources to improve the HIV care continuum, including linkage to care. The United States federal benchmark linkage to care goal is for at least 85% of persons to be linked to HIV medical care within 30 days of HIV diagnosis.[8] Researchers are increasingly finding that estimates of engagement in care along the entire HIV continuum need ongoing refinement through better HIV surveillance data, with the expectation that estimates of linkage may continue to evolve.[16,17]

Risk Factors for Delayed Linkage to Care

Multiple studies have consistently identified risk factors that predict delayed linkage to care: poverty, housing insecurity, lack of insurance or access to primary care prior to HIV diagnosis, substance use disorders, and mental illness.[16,18,19,20,21,22,23] The CDC Surveillance Report based on 2014 data shows disparities in linkage to care at both 1 month (Figure 3) and 3 months (Figure 4) among non-Hispanic blacks and Hispanics compared to non-Hispanic whites.[9] These same data show higher rates of linkage with older age at the time of diagnosis (Figure 5), and slightly higher rates of linkage with women than men (Figure 6).[9] A 2013 analysis for linkage to care in women diagnosed with HIV found higher linkage rates among pregnant women than non-pregnant women.[24] Additional risk factors for delayed linkage to care include psychosocial, emotional, and structural barriers. A 2009 national survey conducted to assess perceived barriers to HIV testing, care, and treatment revealed that healthcare providers more often attributed non-engagement in care to structural barriers (finances, transportation, family care, lack of time off from work, and substance use) whereas patients more often reported psychosocial issues (fear of people knowing their diagnosis, concern about medication side effects, stigma, and shame) as the most important barriers to care.[25] Other barriers, such as inconveniently located medical services, long appointment wait times, and language barriers, also likely contribute to delayed linkage to care. Persons who are required to undergo HIV testing, such as for insurance, employment, or court-ordered purposes, have been found to delay linkage after receiving a diagnosis of HIV, compared with individuals who self-initiate testing or have HIV testing recommended by their medical provider.[26]

Linkage Based on Site of Testing

In a study from New York City involving persons diagnosed with HIV in 2003, investigators reported that persons undergoing routine HIV testing many non-primary care settings, such as sexually transmitted disease clinics, correctional facilities, or community testing sites, are less likely to be linked to care than those who are diagnosed at a site that offers co-located primary medical care (Figure 7).[20] In these settings, improvements in linkage can occur as shown by follow-up data from New York City that showed a steady increase in rates of linkage to care from 2006 to 2014.[27] Studies have highly variable rates of linkage to care following a diagnosis of HIV when testing is performed in an emergency department setting.[28,29,30] One review of 31 articles related to HIV testing in the emergency department setting found an overall linkage to care rate of 74%, with higher linkage rates associated with emergency departments that had intensive linkage to care programs.[30] Although the optimal approach to testing for HIV in a busy emergency department setting remains uncertain, studies have identified strategies to improve linkage to care from the

emergency department. For example, a retrospective study of rapid HIV testing in the San Francisco General Hospital emergency department showed that more than 90% of patients were successfully linked to care by a dedicated linkage team from the hospital's associated HIV clinic.[31]

Interventions to Improve Linkage to Care

Although a multitude of barriers to HIV care have been identified, few randomized controlled trials have evaluated interventions to overcome these barriers. Moreover, published studies that have evaluated linkage to care interventions have not used standardized outcomes, making comparisons between studies problematic.[32]

Expert Panel Recommendations

In 2015, an expert panel from the International Association of Physicians in AIDS Care published evidence-based recommendations for improving the HIV care continuum.[33] The following summarizes four key panel recommendations for improving linkage to care:

1. Immediate referral to HIV care is recommended following an HIV diagnosis to improve linkage to antiretroviral therapy.
2. Use of case managers and patient navigators to increase linkage to care is recommended.
3. Proactive engagement and reengagement of patients who miss clinic appointments and/or are lost to follow-up, including intensive outreach for those not engaged in care within 1 month of a new HIV diagnosis, is recommended.

   a. Case management to retain person living with HIV in care and to locate and reengage patients lost to follow-up is recommended.

   b. Transportation support for persons living with HIV to attend their clinic visits is recommended.

Monitoring Linkage to Care

Monitoring linkage to care provides data essential to the development, tracking, and evaluation of cost-effective linkage interventions. The responsibility for ensuring successful entry into HIV care primarily falls on the medical provider (or another staff member) at the site where the diagnosis of HIV is made, although local health departments and HIV clinics would ideally also be involved in this process. It is incumbent upon each local community to define roles and accountability for the linkage to care process. Integrating data and surveillance systems also is important in coordinating linkage to care. It is important to recognize that linkage to care does not ensure retention in care, and clinics and health departments should also develop systems to maximize retention in care.

Strengths-Based Case Management

Strengths-based case management is one of the few interventions that have been studied rigorously. Strengths-based case management employs the technique of asking individuals to identify their internal strengths and skills in order to attain needed resources such as medical coverage, transportation to appointments, housing, mental health treatment, or addiction treatment. The ARTAS and ARTAS-II studies, taken together, showed increased rates of linkage to care with intensive strengths-based case management compared to standard procedures (78 to 79% versus 60% within 6 months); this led to the recommendation to use strengths-based case management for improving linkage to care. The primary barrier to widespread implementation of the findings from ARTAS is that the intervention is relatively resource intensive.

- **ARTAS:** The Antiretroviral Treatment Access Study (ARTAS) was a randomized controlled trial in 11 United States cities that examined the impact of strengths-based case management on linkage to care rates.[34] Investigators randomized individuals with recently diagnosed HIV infection to receive either standard of care passive referral (patients were given information about HIV and local resources) or intensive case management support with

linkage to nearby HIV clinics. Intensive case management consisted of up to 5 contacts over 90 days with a case manager who emphasized strengths-based techniques). Strengths-based case management employs the technique of asking individuals to identify their internal strengths and skills in order to attain needed resources that may include medical coverage, transportation to appointments, housing, mental health treatment, or addiction treatment. The results of the study showed the intensive management group had significantly higher rates of receiving HIV care within 6 months compared with the standard of care group (78% versus 60%).

- **ARTAS-II:** In a follow-up non-randomized study, ARTAS-II, all persons recently diagnosed with HIV received case management (up to 5 contacts).[35] Of the individuals newly diagnosed with HIV, 79% received HIV clinical care within 6 months of enrolling in the study.

Intensive Outreach

The important role for early and intensive outreach efforts was demonstrated in the U.S. Special Projects of National Significance (SPNS) Outreach Initiative, a 5-year initiative to enhance service delivery strategies to engage and retain persons living with HIV in HIV primary medical care. This program consisted of non-randomized interventions at 10 urban areas across the United States and implemented various combinations of strategies. Most interventions included components of outreach and support services in different forms, such as appointment reminders, health system navigation, health literacy training, and provision of food and transportation. Inclusion criteria and program staff training varied by site.[36] All sites focused on individuals considered to be underserved or marginalized by the health care system (such as women, youth, and people with a history of substance use or mental illness); each newly diagnosed person living with HIV received an average of 19 contacts over 12 months, with an average contact time of 15 minutes per contact. Within 6 months of enrollment, 92% of newly diagnosed study participants attended medical appointments, rates of virologic suppression in the study population improved from 14% at baseline to 45% after 12 months of follow-up, and participants reported an overall reduction in structural, financial, and personal barriers to care.[37]

Patient Navigators

Persons living with HIV infection are often uniquely qualified to assist individuals newly diagnosed with HIV infection as they try and navigate the healthcare system; trained peers (individuals with established HIV infection) often have shared characteristics and circumstances as well as direct disease-relevant experience and knowledge of local community strengths, challenges, and resources.[38] The California Bridge Project concluded that the characteristics of the persons responsible for recruiting and linking the patient to HIV care strongly influenced the success of linkage to care efforts, with the highest success rates occurring when the staff member and client had similar social and cultural backgrounds.[39] Navigators are concerned with the individual patient rather than the health care system as a whole.[40] Although acceptance of the patient navigator model is widespread, there is little empiric evidence that this intervention is effective. No controlled studies of peer navigators have been published.

HIV Partner Services

The term “HIV partner services” encompasses a variety of services that health departments may offer to persons newly diagnosed with HIV and to their sex and needle-sharing partners.[41,42,43] An important goal of partner services is to detect previously undiagnosed HIV infections and prevent further HIV transmission by helping persons newly diagnosed with HIV to notify their partners and to connect the partners with testing services. Partner services can also assist in linking these individuals newly diagnosed with HIV, as well as any newly diagnosed partners, to HIV medical care. Health departments across the U.S. vary widely in the extent to which they conduct HIV partner services, but they are increasingly using surveillance data to guide partner services and increasingly

include linkage to care as a key goal. No controlled studies have been conducted, but health departments have reported improved rates of linkage to care after implementation of public health partner services.[41] The Centers for Disease Control and Prevention (CDC) promotes the use of HIV partner services to improve linkage to care.

Financial Incentives

Use of financial incentives for linkage to care was studied as a component of HPTN-065 (“TLC-Plus”), a feasibility study evaluating an enhanced testing, linkage to care, and treatment strategy in the United States. The Linkage to Care component of the study was a randomized intervention involving 37 HIV test sites (18 in Bronx, NY and 19 in Washington D.C.) to determine whether financial incentives (gift cards) improved linkage to care. Results presented in 2015 showed that financial incentives did not increase linkage to care; interestingly, though, financial incentives did improve overall continuity of care by 8% and improved rates of viral suppression in certain clinical settings.[44] Results from the viral suppression component of the study indicate that most patients found the use of financial incentives to be acceptable and validating.[45]

Strategies for Clinics to Improve Linkage to Care

Clinics that provide HIV clinical care can also play a role to ensure that successful linkage to care occurs and to improve the likelihood that patients will engage in continuous HIV care. Although there are few published, evidence-based interventions in this area, examining the “best practices” of HIV clinics yields several suggestions. In addition, the CDC maintains an online Compendium of Evidence-Based Interventions and Best Practices for HIV Prevention that includes information on best practices in promoting linkage to, retention in, and re-engagement in care.[46]

Shorten Wait Times for Initial Appointment

Very short wait time for new patient visits may increase the likelihood of appointment completion. In a study at the University of Alabama at Birmingham (UAB) 1917 Clinic, among patients who called to establish HIV care from 2004 to 2006, 31% failed to attend a clinic visit within 6 months of their initial call.[47] To address this problem, the UAB 1917 Clinic launched Project CONNECT (Client-Oriented New Patient Navigation to Encourage Connection to Treatment), which established a clinic standard of scheduling an intake and orientation appointment for all new patients within 5 days of initial request for a new appointment.[48] The orientation visit includes an intake questionnaire, baseline laboratory testing, case manager visit, initiation of opportunistic infection prophylactic medication if needed, and mental health and substance abuse referrals when indicated. The initial visit no-show rate decreased from 31% at baseline to 19% after the implementation of Project CONNECT. The cost of this systems-level intervention was $200 per patient, which translated to $1628 per additional patient linked to care; this was considered a reasonable expenditure.

Follow-up After Missed Initial Appointment

Calling or otherwise conducting outreach to follow up with patients who do not show up for their first scheduled HIV care visit should ideally be part of an HIV clinic protocol. Certain patient characteristics have been associated with higher “no-show” rates, including minority race/ethnicity (especially minority women) and having public health insurance or no health insurance.[48] Specific strategies, such as improving the initial clinic orientation process, implementing reminder phone calls, using peer navigators, and accompanying patients to medical appointments should be implemented at the clinic level to engage populations at risk for higher no-show rates.[49]

Retention in Care

Linkage to sustained care, but not linkage to initial care, has been significantly associated with subsequent virologic suppression and survival, and patients who miss visits in the first year after initiating HIV medical care have more than twice the rate of long-term mortality compared with patients who attend all of their scheduled clinic appointments.[50,51] Many of the strategies that have been proven to help with linkage to care apply to retention in care as well; in particular, clinics providing HIV care should address barriers to care such as transportation problems, unstable housing, substance abuse, and mental illness, and clinics should consider longitudinal programs that can continuously engage patients who fall in and out of care. Nonetheless, despite the overlap, linkage to care and retention in care are distinct processes. Retention in care is discussed in detail in Module 2.

Summary Points

- Linkage to care is the first step in engaging in HIV care and is typically defined as the completion of a first medical clinic visit after an HIV diagnosis.
- The benchmark for successful linkage to HIV care is completion of a visit with an HIV medical provider within 1 month after HIV diagnosis, though reporting still occurs for linkage within 3 months. The United States national goal for linkage to care is 85% within 1 month.
- The CDC estimates that approximately 75% of persons were linked to care within 1 month of HIV diagnosis and 84% were linked within 3 months.
- Key risk factors for delayed linkage include lack of insurance and primary care prior to HIV diagnosis, substance abuse, residence in a high poverty area.
- Linkage to care is lower among non-Hispanic black/African-American and Hispanics compared to non-Hispanic whites.
- Ensuring linkage to care is a crucial part of any HIV testing program. Active assistance with arranging care linkage is more effective than passive referral to care.
- The Antiretroviral Treatment Access Study (ARTAS) intervention, which includes multiple sessions of strengths-based counseling, is an evidence-based linkage to care model.
- Assisting persons with linkage to HIV care is a primary goal of public health HIV partner services.
- HIV clinical programs can increase rates of linkage to care by shortening their wait times for new patient visits, conducting outreach to persons who no-show to their first scheduled visit, and conducting case management intake for new patients prior to the HIV medical provider visit.

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Figures

Figure 1 Linkage to Care: Main Goals

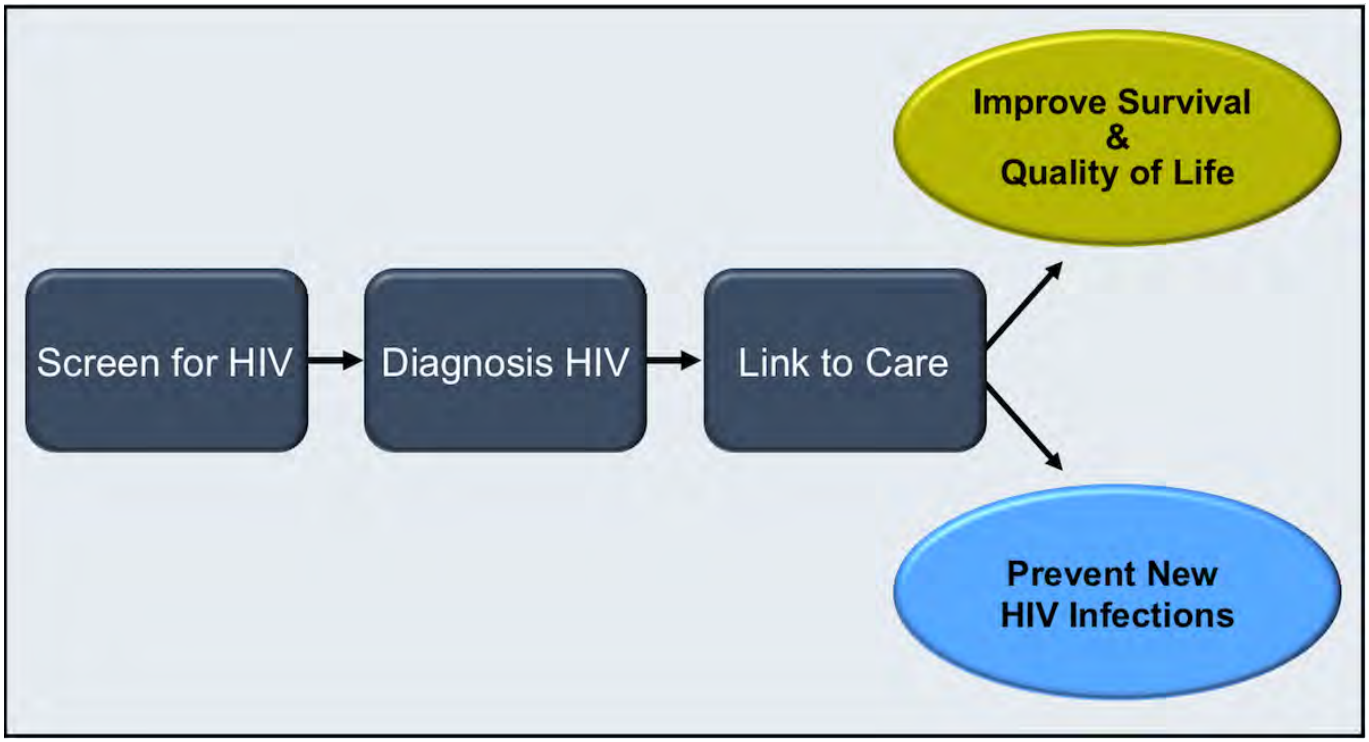

Figure 2 Linkage to Care Within 1 Month or 3 Months of HIV Diagnosis, 2010-2014

Sources: (1) Centers for Disease Control and Prevention. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data--United States and 6 U.S. dependent areas, 2014. HIV Surveillance Supplemental Report. 2016;21(No. 4):1-87. Published July 2016. (2) Centers for Disease Control and Prevention. National HIV Prevention Progress Report, 2015.

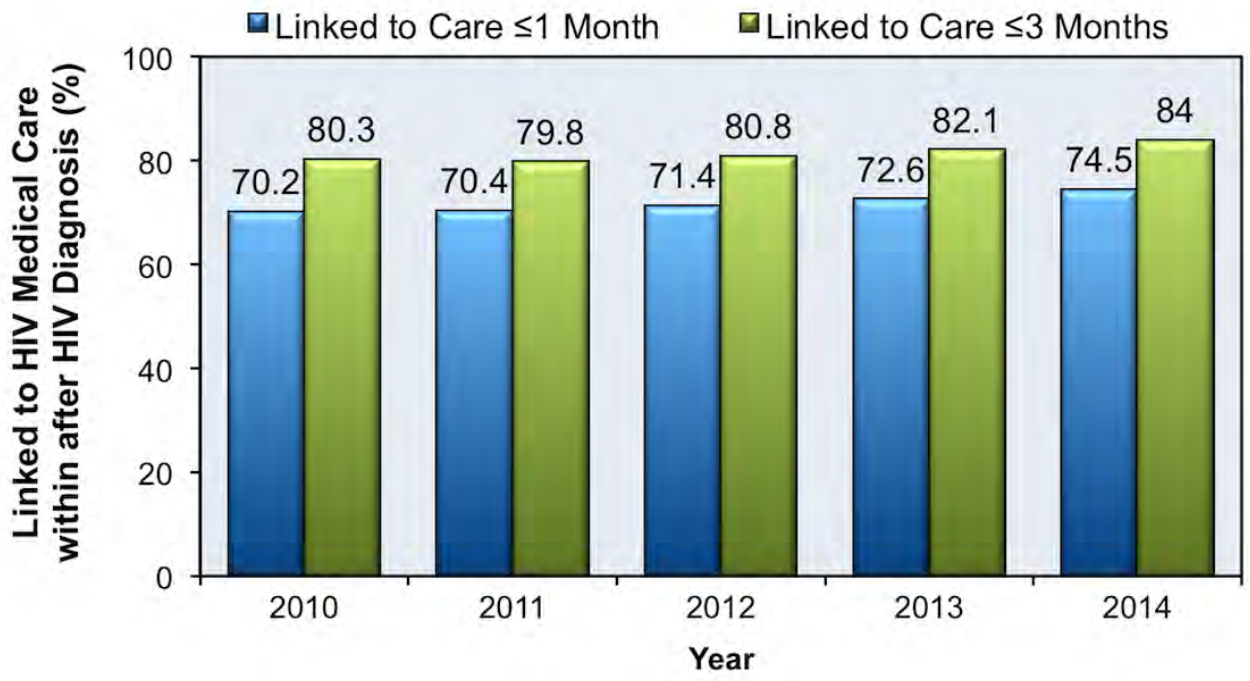

Figure 3 Linkage to Care Within 1 Month of HIV Diagnosis, by Ethnicity/Race, 2014

Source: Centers for Disease Control and Prevention. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data--United States and 6 U.S. dependent areas, 2014. HIV Surveillance Supplemental Report. 2016;21(No. 4):1-87. Published July 2016.

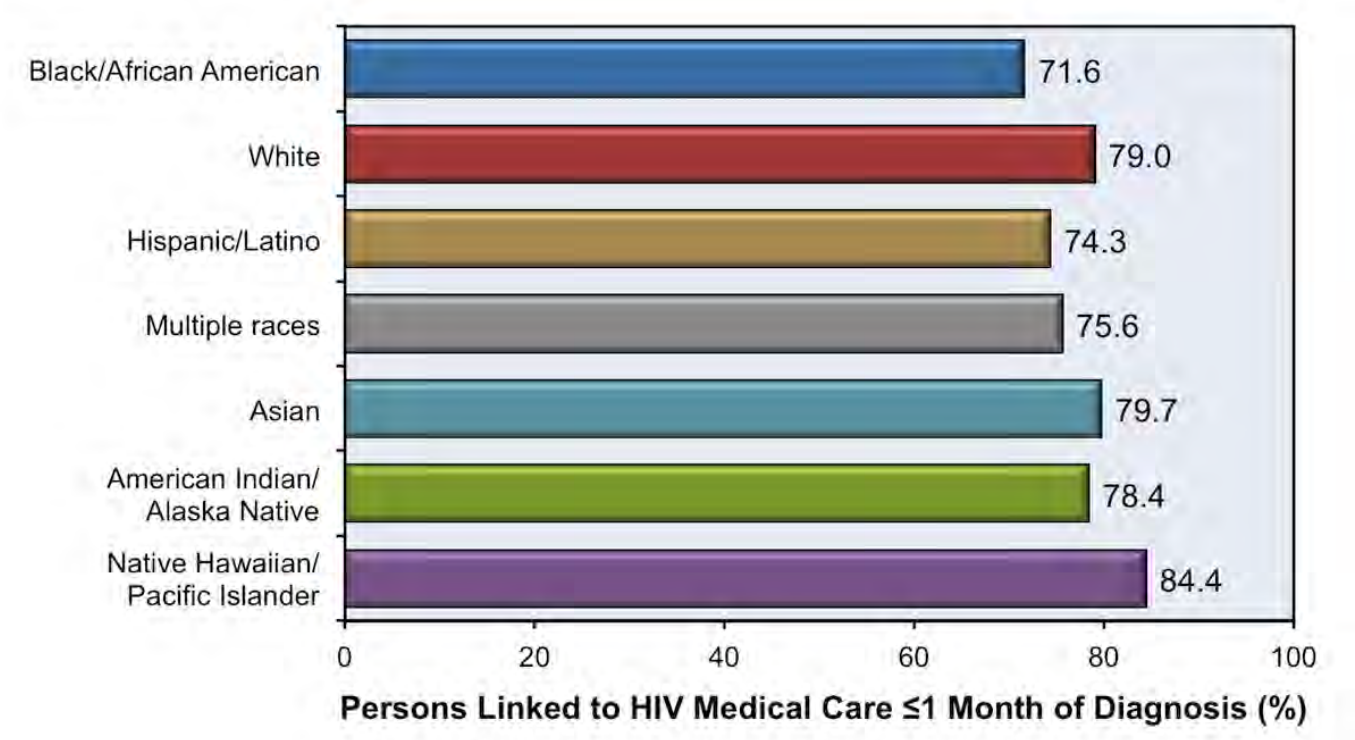

Figure 4 Linkage to Care Within 3 Months of HIV Diagnosis, by Ethnicity/Race, 2014

Source: Centers for Disease Control and Prevention. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data--United States and 6 U.S. dependent areas, 2014. HIV Surveillance Supplemental Report. 2016;21(No. 4):1-87. Published July 2016.

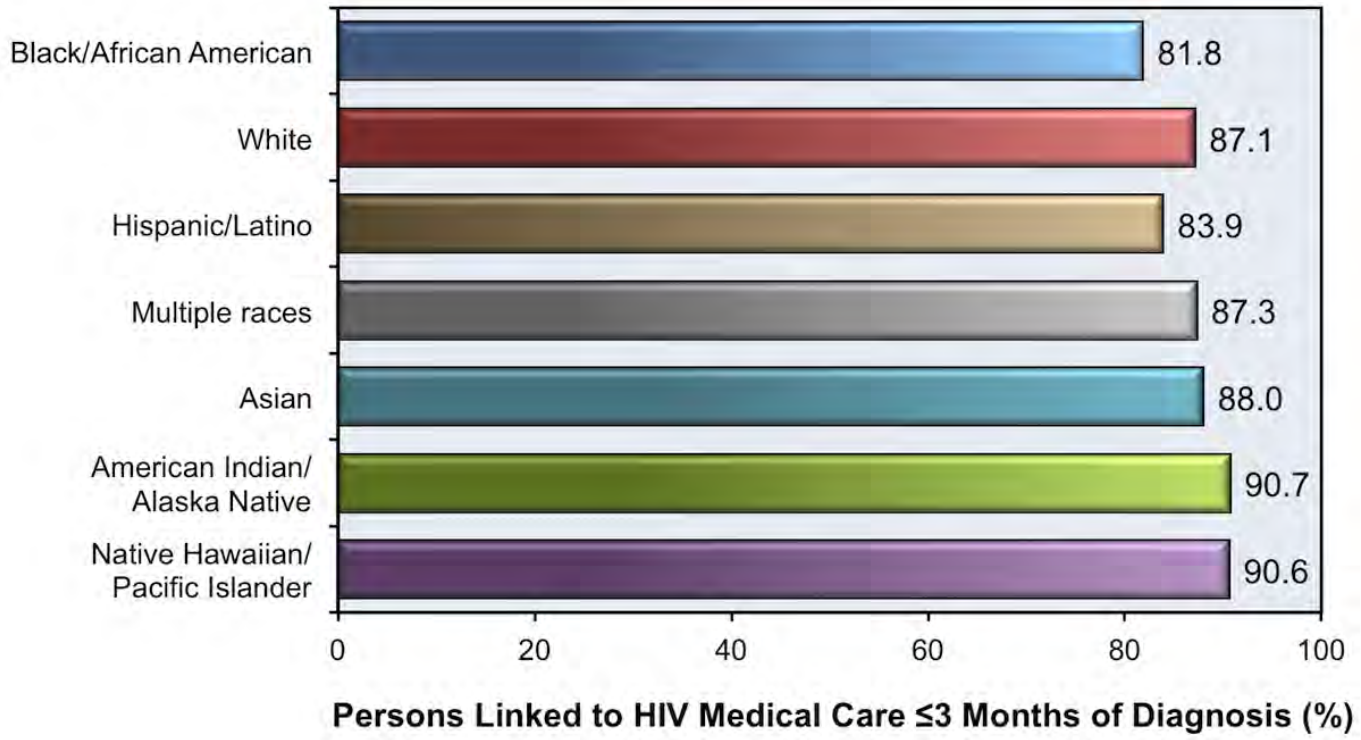

Figure 5 Linkage to Care Within 1 Month or 3 Months of HIV Diagnosis, by Age, 2014

Source: Centers for Disease Control and Prevention. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data--United States and 6 U.S. dependent areas, 2014. HIV Surveillance Supplemental Report. 2016;21(No. 4):1-87. Published July 2016.

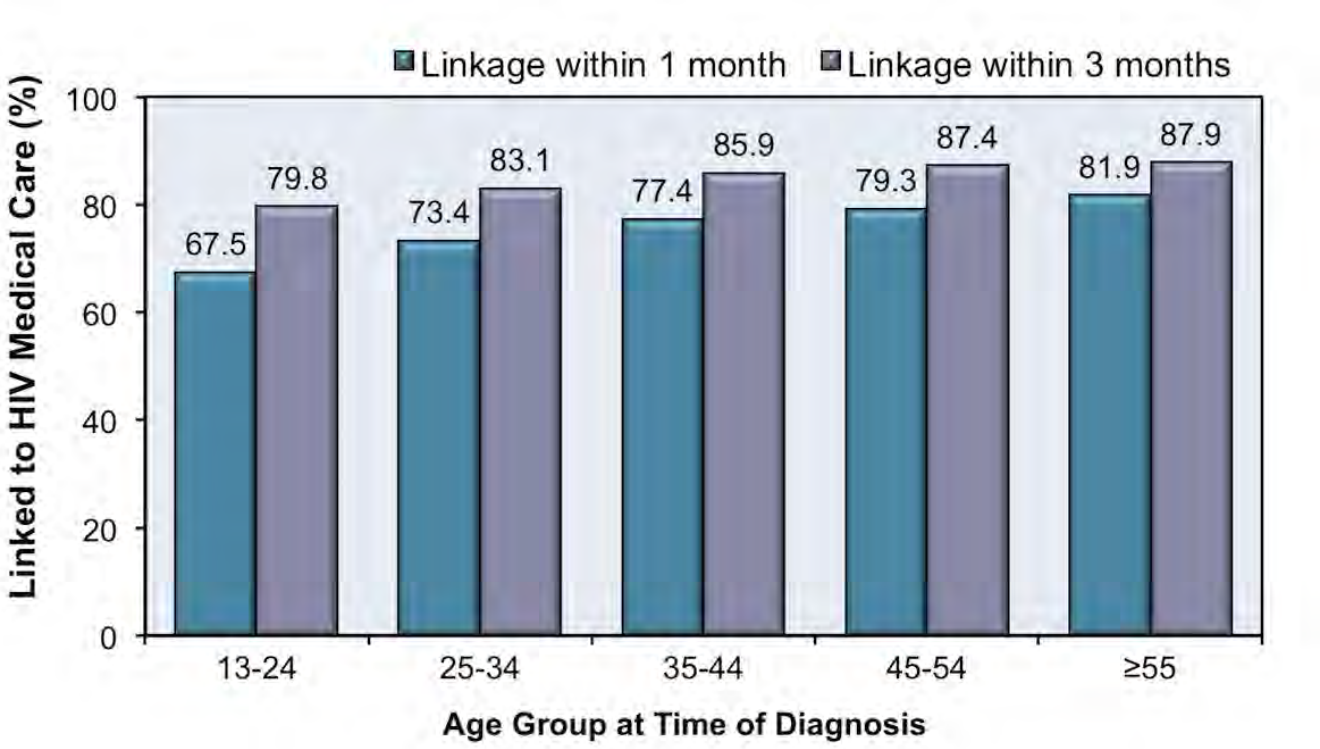

Figure 6 Linkage to Care Within 1 Month or 3 Months of HIV Diagnosis, by Sex, 2014

Source: Centers for Disease Control and Prevention. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data--United States and 6 U.S. dependent areas, 2014. HIV Surveillance Supplemental Report. 2016;21(No. 4):1-87. Published July 2016.

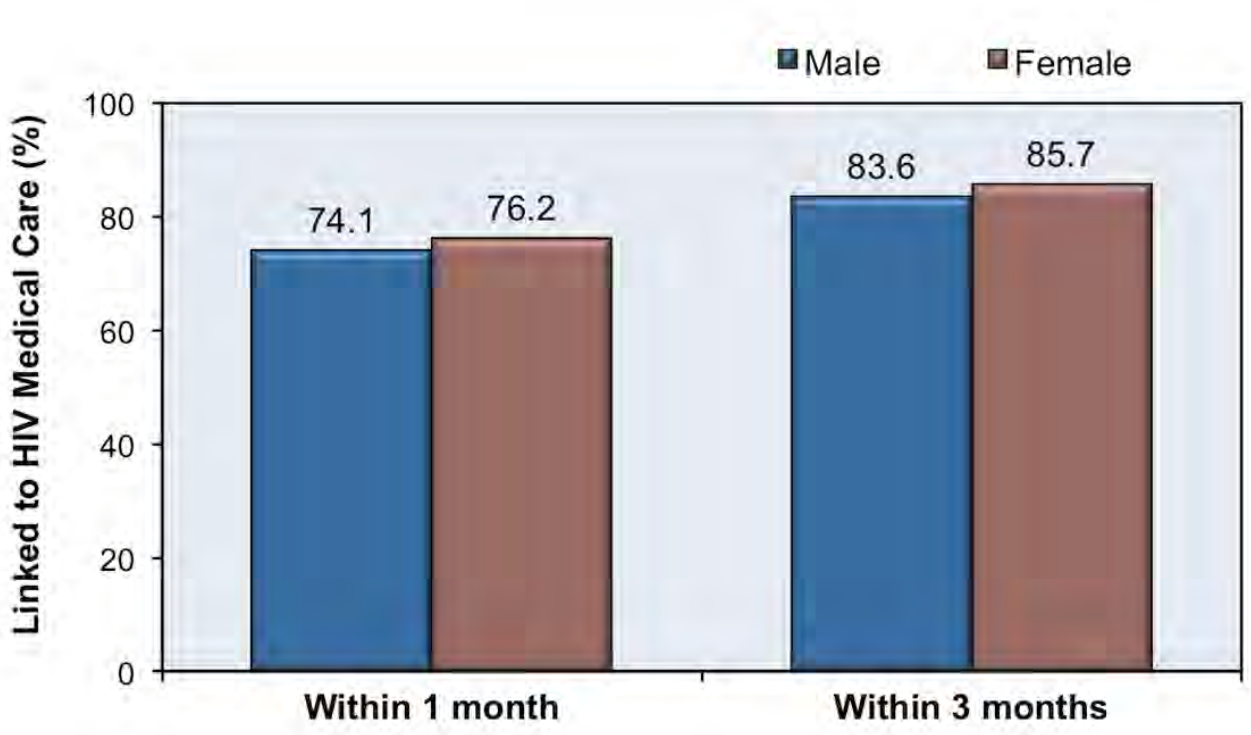

Figure 7 Risk factors for Delayed Linkage to Medical Care after HIV Diagnosis, New York City

This graphic shows difference in rates of delayed linkage to care (linkage after 3 months) based on site of HIV diagnosis in New York City in 2003.

Source: Torian LV, Wiewel EW, Liu KL, Sackoff JE, Frieden TR. Risk factors for delayed initiation of medical care after diagnosis of human immunodeficiency virus. Arch Intern Med. 2008;168:1181-7.