Non-medical Case Management (Service Linkage)	Pg
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FY 2020 Houston EMA Ryan White Part A/MAI Service Definition **Service Linkage at Testing Sites**	
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 Definition:	**A.** ***Service Linkage:*** Providing allowable Ryan White Program 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 HCPHS/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 HCPHS/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, <u>may receive ongoing service linkage services from provide</u>r 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/HSDA 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 HCPHS/RWGA published **Service Linkage** Standards of Care and policies and procedures as published and/or revised, including linkage to the CPCDMS data system. <u>Agency must comply with all applicable City of Houston DHHS *ECLIPS* and RWGA/HCPHS *CPCDMS* business rules and policies & procedures.</u> **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 HCPHS/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 HCPHS/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 HCPHS/RWGA policies and procedures.

FY 2022 RWPC "How to Best Meet the Need" Decision Process

Step in Process: **Council**		Date: **06/10/2021**
Recommendations:	Approved: Y:_____ No: ______ Approved With Changes:______	If approved with changes list changes below:
1.		
2.		
3.		
Step in Process: **Steering Committee**		Date: **06/03/2021**
Recommendations:	Approved: Y:_____ No: ______ Approved With Changes:______	If approved with changes list changes below:
1.		
2.		
3.		
Step in Process: **Quality Improvement Committee**		Date: **05/18/2021**
Recommendations:	Approved: Y:_ ___ No: ______ Approved With Changes: _______	If approved with changes list changes below:
1.		
2.		
3.		
Step in Process: **HTBMTN Workgroup #1**		Date: **04/20/2021**
Recommendations:	Financial Eligibility:	
1.		
2.		
3.		

Umair A. Shah, M.D., M.P.H.
Executive Director
2223 West Loop South
Houston, Texas 77027
Tel: (713) 439-6000
Fax: (713) 439-6080

Harris County
Public Health
Building a Healthy Community

Michael Ha
Disease Control & Clinical Prevention Division
2223 West Loop South
Houston, Texas 77027
Tel: (713) 439-6000
Fax: (713) 439-6199

FY 2019 PERFORMANCE MEASURES HIGHLIGHTS
RYAN WHITE GRANT ADMINISTRATION
HARRIS COUNTY PUBLIC HEALTH (HCPH)

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Highlights from FY 2019 Performance Measures

Measures in this report are based on the 2019/2020 Houston Ryan White Quality Management Plan, Appendix B. HIV Performance Measures.

Service Linkage (Non-Medical Case Management)

- During FY 2019, 8,717 clients utilized Part A non-medical case management / service linkage. According to CPCDMS, 4,174 (48%) 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, 50% of clients utilized primary medical care for the first time after accessing service linkage for the first time.
- The median number of days between the first service linkage visit and the first primary medical care visit was 14 days during this time period.

Ryan White Part A
HIV Performance Measures
FY 2019 Report

Service Linkage / Non-Medical Case Management
All Providers

For FY 2019 (3/1/2019 to 2/29/2020), 8,717 clients utilized Part A non-medical case management.

HIV Performance Measures	FY 2018	FY 2019	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)	3,548 (46.4%)	4,174 (47.9%)	**1.5%**
60% of clients will access RW primary medical care for the first time after accessing service linkage for the first time	459 (48.9%)	501 (49.6%)	**0.7%**
Mean of less than 30 days between first ever service linkage visit and first ever primary medical care visit:			
Mean	32	28	**-12.5%**
Median	15	14	**-6.7%**
Mode	1	1	**0.0%**
60% of newly enrolled clients will have a medical visit in each of the four-month periods of the measurement year	133 (47.7%)	128 (45.2%)	**-2.5%**

Harris County
Public Health
Building a Healthy Community

Ryan White Part A
Quality Management Program- Houston EMA
Case Management Chart Review FY 19-20
Ryan White Grant Administration

CUMMULATIVE SUMMARY, DE-IDENTIFIED

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Overview

Each year, the Ryan White Grant Administration Quality Management team conducts chart review in order to continuously monitor case management services and understand how each agency implements workflows to meet quality standards for their funded service models. This process is a supplemental complement to the programmatic and fiscal audit of each program, as it helps to provide an overall picture of quality of care and monitor quality performance measures.

A total of 661 medical case management client records were reviewed across seven of the ten Ryan White-Part A funded agencies, including a non-primary care site that provides Clinical Case Management services. The dates of service under review were March 1, 2019- February 28, 2020. The sample selection process and data collection tool are described in subsequent sections.

Case Management is defined by the Ryan White legislation as a, "range of client-centered services that link clients with health care, psychosocial, and other services," including coordination and follow-up of medical treatment and "adherence counseling to ensure readiness for and adherence to HIV complex treatments." Case Managers assist clients in navigating the complex health care system to ensure coordination of care for the unique needs of People Living With HIV. Continuous assessment of need and the development of individualized service plans are key components of case management. Due to their training and skill sets in social services, human development, psychology, social justice, and communication, Case Managers are uniquely positioned to serve clients who face environmental and life issues that can jeopardize their success in HIV treatment, namely, mental health and substance abuse, poverty and access to stable housing and transportation, and poor social support networks.

Ryan White Part-A funds three distinct models of case management: Medical Case Management, Non-Medical Case Management (or Service Linkage Work), and Clinical Case Management, which must be co-located in an agency that offers Mental Health treatment/counseling and/or Substance Abuse treatment. Some agencies are also funded for Outreach Services, which complement Case Management Services and are designed to locate and assist clients who are on the cusp of falling out of care in order to re-engage and retain them back into care.

The Tool

A copy of the Case Management Chart Review tool is available in the Appendix of this report.

The Case Management Chart Review tool is a pen and paper form designed to standardize data collection and analysis across agencies. The purpose of the tool is to capture information and quantify services that can present an overall picture of the quality of case management services provided within the Ryan White Part-A system of care. This way, strengths and areas of improvement can be identified and continuously monitored.

The coversheet of the chart abstraction tool captures basic information about the client, including their demographics, most recent appointments and lab results, and any documented psychological, medical, or social issues or conditions that would be documented in their medical record.

The content of the second sheet focuses on coordination of case management services. There is space for the chart abstractor to record what type of worker assisted the client (Medical Case Manager, Service Linkage Worker, Outreach Worker or Clinical Case Manager) and what types of services were provided. Any notes about case management closure are recorded, as well as any assessments or service plans or documented reasons for the absence of assessments or service plans.

The Sample

In order to conduct a thorough and comprehensive review, a total of 661 client records were reviewed across seven agencies for the 2019-2020 grant year. This included eighty-four (84) Clinical Case Management charts at a non-primary care site. In this Case Management Chart Review Report, any section that evaluated a primary care related measure excludes the sample of the non-primary care site. Minimum sample size was determined in accordance with *Center for Quality Improvement & Innovation* sample size calculator[2] based on the total eligible population that received case management services at each site.

Agency	A	B	C	D	E	F	G
# of Charts Reviewed	105	105	105	97	79	86	84

TOTAL 661 (577 excluding non-PCare site)

For each agency, a randomized sample of clients who received a billable Ryan White- A service under at least one (1) of eleven (11) case management subcategory codes during the March 1, 2019- February 28, 2020 grant year was queried from the Centralized Patient Care Data Management System data base. Each sample was determined to be comparable to the racial, ethnic, age, and gender demographics of each site's overall case management patient population.

Cumulative Data Summaries

APPOINTMENTS & ENCOUNTERS

The number of HIV-related primary care appointments and case management encounters in the given year were counted for each client.

HIV-RELATED PRIMARY CARE APPOINTMENTS

For this measure, the number of face-to-face encounters for an HIV-related primary care appointment with a medical provider was counted. Any number of appointments above three per year was simply coded as 3 appointments. Any Viral Load/CD4 count lab test that accompanied the appointment was also recorded.

HIV MEDICAL # appt	A	B	C	D	E	F	TOTAL	PERCENT
0	10	10	16	16	4	14	70	**12%**
1	22	13	18	4	21	18	96	**17%**
2	39	20	16	8	20	15	118	**20%**
3	34	62	55	69	34	39	293	**51%**
Total	*105*	*105*	*105*	*97*	*79*	*86*	*577*	

The overall sample trends towards a higher number of primary care appointment in the year, with the majority of the case management review clients having at least 3 appointments in the year (51%), followed by 20% of the clients having 2 appointments in the year.

CASE MANAGEMENT ENCOUNTERS

Frequency of case management encounters were also reviewed. The number and types of the encounters (face-to-face vs. phone), as well as who provided the service (Clinical, Medical, Non-Medical Case Manager or Outreach Worker) were also recorded.

The distribution of frequency of case management encounters could be described as an inverted bell curve, with most of the clients clustering either at the low end of one encounter (33%) within the year or more than 5 encounters (26%).

> *"Overall, the average number of case management encounters for the entire sample was* ***three (3)****."*

CASE MGMNT # appointments	A	B	C	D	E	F	G	TOTAL	PERCENT
1	39	32	36	31	30	27	25	220	**33%**
2	24	26	19	16	15	12	11	123	**19%**
3	18	13	14	13	10	13	6	87	**13%**
4	11	8	10	12	7	6	3	57	**9%**
5	13	26	26	25	17	28	39	174	**26%**
Total	*105*	*105*	*105*	*97*	*79*	*86*	*84*	*661*	

VIRAL SUPPRESSION

Any results of HIV Viral Load + CD4 count laboratory tests that accompanied HIV-related primary care appointments were recorded as part of the case management chart abstraction. Up to three laboratory tests could be recorded. Lab results with an HIV viral load result of less than 200 copies per milliliter were considered to be virally suppressed.

Upon coding, clients who were suppressed for all of their recorded labs (whether they had one, two, or three tests done within the year), were coded as "Suppressed." Clients who were unsuppressed (>200 copies/mL) for all of their labs were coded as "Unsuppressed." Clients who had more than one laboratory test done and were suppressed for at least one and unsuppressed for at least one were coded as "Mixed Status," and clients who had no laboratory tests done within the entire year were coded as "Unknown."

SUPPRESSION STATUS	A	B	C	D	E	F	TOTAL	PERCENT
Suppressed for all labs	69	64	68	54	51	64	370	**64%**
Mixed status	10	12	9	13	14	6	64	**11%**
Unknown (no recent labs on file)	13	10	18	18	7	13	79	**14%**
Unsuppressed for all labs	13	19	10	12	7	3	64	**11%**
Total	*105*	*105*	*105*	*97*	*79*	*86*	*577*	

Across all primary care sites, the case management clients reviewed for these samples had a viral load suppression rate of 64%. In contrast, this result is much lower than what is typical for the Ryan White Part A Houston Primary Care Chart review, which has hovered around 85% for the past several years. This difference may be due to a number of factors, most likely of which is the difference in characteristics of the two reviews' samples. The Primary Care chart review sample is collected from a pool of clients who are considered *in care*, or have at least two medical appointments with a provider with prescribing privileges in the review year. Additionally, "fluctuating viral load" is one of the eligibility criteria for medical case management, so clients who have challenges maintaining a suppressed viral load are more likely to be seen by case management and be included in this sample.

CARE STATUS

The chart abstractor also documented any circumstances in the record for which a client was new, lost, returning to care, or some combination of those care statuses. A client was considered "New to Care," if they were receiving services for the first time at that particular agency (so not necessarily new to HIV treatment or the Houston Ryan White system of care). "Lost to Care" was defined as not being seen for an HIV-related primary care appointment within the last six months and not having a future appointment scheduled, even beyond the review year. "Re-engaged in Care" was defined as any client who was previously lost to care, either during or before the review year, and later attended an HIV-related primary care appointment.

CARE STATUS	**A**	**B**	**C**	**D**	**E**	**F**	**TOTAL**	**PERCENT**
New to Care	4	2	7	4	6	5	28	**5%**
Lost to Care	7	12	13	3	3	8	46	**8%**
Re-engaged in Care	7	14	8	6	10	0	45	**8%**
Both New and later Lost to Care in the same review year	1	0	1	0	0	0	2	**<1%**
Re-engaged and later lost again	1	3	0	3	0	2	9	**2%**
N/A	85	77	76	80	60	71	449	**78%**
Total	*105*	*105*	*105*	*97*	*79*	*86*	*577*	

Overall, 5% of the sample was considered New to Care, 8% was Lost to Care, and 8% was Re-engaged in Care.

When a client's attendance met one of the above care statuses, their medical record was reviewed to understand if case management or other staff was involved in coordinating their care. Activities that counted as "Coordination of Care" were any actions that welcomed the client into or back into care or attempted to retain them in care, such as: reminder phone calls, follow-up calls, attendance or introduction at the first appointment, or home visits. For agencies funded for Outreach Services, several progress notes appeared for clients who were lost or re-engaged in care.

COMORBIDITIES

In an effort to understand and document common comorbidities within the Houston Ryan White system of care, co-occurring conditions were recorded, including mental health and substance abuse issues, other medical conditions, and social conditions. This inventorying of co-morbidities may prove particularly helpful for selecting future training topics for case management staff.

MENTAL HEALTH & SUBSTANCE USE DISORDER (history or active)

Any diagnosis of a mental health disorder (MH) or substance use disorder issue (SUD) was recorded in the chart review tool, including a history of mental illness or substance use. All Electronic Medical Records include some variation of a "Problem List" template. This list was often a good source of information for MH and SUD diagnoses, but providers sometimes also documented diagnoses or known histories of illness within progress notes without updating the Problem List. Clients sometimes also self-reported that they had been diagnosed with one of the below conditions by a previous medical provider. Any indication of the presence of mental illness or SUD, regardless of where the information was housed within the medical record, was recorded on the chart abstraction tool. Clients could also have or have had more than one of the MH or SUD issues. Any conditions other than alcohol misuse, other SUD, depression, bipolar disorder, anxiety, or schizophrenia were recorded as "Other." The most common types of conditions that became coded as "Other" were Post-Traumatic Stress Disorder and Adjustment Disorder.

Diagnosis or Issue	A	B	C	D	E	F	G	TOTAL	PERCENT
Alcohol abuse/dependence	5	6	3	4	3	3	11	35	**5%**
Other Substance dependence	17	18	19	16	11	4	19	104	**16%**
Depression	25	41	32	26	13	15	39	191	**29%**
Bipolar disorder	10	6	4	5	4	3	12	44	**7%**
Anxiety	4	21	11	16	8	12	29	101	**15%**
Schizophrenia	4	1	2	0	0	2	6	15	**2%**
Other	11	16	16	29	4	4	15	95	**14%**

Overall, 41% of the sample had either an active diagnosis or history of a mental health or substance abuse issue documented somewhere within their medical record. This is inclusive of the Clinical Case Management site, for which diagnosis with or clinical indication of a MH or SUD issue is an eligibility criteria.

MENTAL HEALTH & SUBSTANCE USE DISORDER REFERRALS

For clients with an *active* diagnosis of a mental health or SUD issue, the chart abstractor recorded if they were referred or already engaged in MH/SUD services. This measure was *not* inclusive of clients who had a previous history of symptoms or whose recovery treatment was considered long complete. Because of this, the percentage in the top row of the previous chart and the percentage of clients considered "N/A" for a MH/SA referral do not equal 100%.

MH referral	A	B	C	D	E	F	TOTAL	PERCENT
N/A	70	54	65	56	57	63	365	**63%**
Yes	28	42	34	34	20	19	177	**31%**
No	7	9	6	7	2	4	35	**6%**
Total	105	105	105	97	79	86	577	

Overall, 63% of the sample would not have been appropriate for a MH or SUD referral based on the information available in their medical record. An additional 31% either did receive a referral or were already engaged in treatment and 6% did not receive a referral.

MEDICAL CONDITIONS

Medical conditions other than HIV were also recorded in an effort to understand what co-occurring conditions may be considered commonly managed alongside HIV within the case management population. Sexually Transmitted Infections and Hypertension were common, at 24% and 23% prevalence within the sample, respectively. Obesity was the most common co-occurring condition that was coded in the "Other" category.

Medical Condition	A	B	C	D	E	F	TOTAL	PERCENT
Smoking (hx or current)	54	31	18	12	10	5	130	**23%**
Opportunistic Infection	3	2	1	1	1	2	10	**2%**
STIs	20	37	28	19	23	9	136	**24%**
Diabetes	16	18	9	11	3	9	66	**11%**
Cancer	1	1	0	0	0	0	2	**0%**
Hepatitis	18	8	3	3	2	3	37	**6%**
Hypertension	43	24	20	22	9	17	135	**23%**
Other	8	33	21	24	11	30	127	**22%**

SOCIAL CONDITIONS

Any indication within the medical record that a client had experienced homelessness/housing-related issues, pregnancy/pregnancy-related issues, a release from jail or prison, or intimate partner violence at any point within the review year was recorded in the chart abstraction tool. Homelessness and housing issues were the most commonly identified "Social Condition" within the sample.

Social Issue	A	B	C	D	E	F	G	TOTAL	PERCENT
Homelessness or housing-related issues	6	14	5	4	10	1	6	46	**7%**
Pregnancy or pregnancy-related issues	0	0	1	0	4	2	0	7	**1%**
Recently released	4	3	4	2	3	0	2	18	**3%**
Intimate Partner Violence	1	2	2	1	2	2	12	22	**3%**

COMPREHENSIVE ASSESSMENTS

A cornerstone of service provision within case management is the opportunity for the client to be formally assessed at touchpoints throughout the year for their needs, treatment goals, and action steps for how they will work with the case manager or care team to achieve their treatment goals. Agencies need to use an approved assessment tool and service plan, which may either be the sample tools available through Ryan White Grant Administration or a pre-approved tool of the agency's choosing.

The Ryan White Part-A Standards for medical case management state that a comprehensive assessment should be completed with the client at intake and that they should be re-assessed at least every six months for as long as they are receiving medical case management services. A more formal, comprehensive assessment should be used at intake and annually, and a brief reassessment tool is sufficient at the 6-month mark. In other words, the ideal standard is that every client who receives case management services for an entire year should have at least two comprehensive assessments on file. A service plan should accompany each comprehensive assessment to outline the detailed plan of how the identified needs will be addressed with the client.

# of Comp assessments	A	B	C	D	E	F	G	TOTAL	PERCENT
0	4	13	16	31	5	21	26	116	**18%**
1	1	24	21	12	10	36	23	127	**19%**
2	1	0	3	1	0	4	6	15	**2%**
N/A	99	68	65	53	64	25	31	405	**61%**
Total	105	105	105	97	79	86	84	661	

The client was considered "N/A" for a comprehensive assessment if they did not work with a medical case manager throughout the year. As outlined above, 61% of the sample did not work with a Medical Case Manager within the year. 18% of the sample received zero comprehensive assessments, 19% received one, and 2% received two.

SERVICE PLANS

As mentioned, each comprehensive assessment should be accompanied by a service plan, otherwise known as a care plan, to outline what action will be taken to address the needs that are identified on the comprehensive assessment. A service plan can be thought of as an informal, working contract between client and social worker of who will be accountable for which actions in order for the client to meet their determined treatment goals. As with the comprehensive assessment, each completed service plan was recorded in the chart abstraction tool, along with any documented justification for why a service plan was missing if it should have been completed.

# of service plans	A	B	C	D	E	F	G	TOTAL	PERCENT
0	4	22	26	33	6	29	29	149	**23%**
1	2	15	11	10	9	29	20	96	**15%**
2	0	0	3	1	0	3	6	13	**2%**
N/A	99	68	65	53	64	25	31	405	**61%**
Total	105	105	105	97	79	86	84	661	

It is notable that less service plans are completed than comprehensive assessments, even though the two processes are intended to occur together, one right after the other.

BRIEF ASSESSMENTS

Like Medical Case Management, Non-Medical Case Management is guided by a continuous process of ongoing assessment, service provision, and evaluation. Clients should be assessed at intake using a Ryan White Grant Administration approved brief assessment form and should be reassessed at six-month intervals if they are still being serviced by a Non-Medical Case Manager.

# of Brief assessments	A	B	C	D	E	F	TOTAL	PERCENT
0	20	33	53	63	5	52	226	**39%**
1	50	43	31	12	47	13	196	**34%**
2	8	1	4	0	4	1	18	**3%**
N/A	27	28	17	22	23	20	137	**24%**
Total	105	105	105	97	79	86	577	

Completion of brief assessments were recorded, along with any justification of why an assessment was not completed if one would have been expected. 24% of the sample would not been applicable for a brief assessment, as they did not receive services from a Non-Medical Case Manager. 39% of the sample received zero brief assessments, 34% received one, and 3% received two.

ASSESSED NEEDS

All data from assessment tools was captured in the chart review tool. A total of 173 Comprehensive Assessments and 211 Brief Assessments were reviewed and recorded in order to quantify the frequency of needs. The count recorded is a raw count of how many times a need was recorded, encompassing both comprehensive and brief assessments and including clients who may have had the same need identified more than once at different points in time.

The most frequently assessed needs were: 1) Medical/Clinical, 2) Dental Care, 3) Vision Care, 4) Medication Adherence Counseling, 5) Mental Health, and (6) Insurance. It should be noted, however, that there are no universal standards or instructions across case management systems on how to use these tools or how these needs are defined. Anecdotally, some case managers reported that they automatically checked “Medical/Clinical” and “Medication Adherence Counseling” as a need, regardless of whether or not the client needed assistance accessing medical care, because it was their understanding that this section *always* needed to be checked in order to justify billing for medical case management services. Therefore, this compilation of comprehensive and brief assessments should not be considered representative of *true need* within the HIV community in Houston, but rather, as representative of issues that case managers are discussing with clients.

Need identified on assessment	A	B	C	D	E	F	G	TOTAL	PERCENT
Medical/Medication	30	17	25	10	38	18	9	147	**22%**
Vaccinations	5	1	2	0	2	1	0	11	**2%**
Nutrition/Food Pantry	0	13	4	1	21	4	5	48	**7%**
Dental	13	22	11	2	30	10	8	96	**15%**
Vision	13	18	10	3	28	13	3	88	**13%**
Hearing Care	0	1	0	0	5	1	3	10	**2%**
Home Health Care	0	1	0	1	4	0	2	8	**1%**
Basic Necessities/Life Skills	2	11	1	1	8	2	1	26	**4%**
Mental Health	5	19	9	8	23	13	12	89	**13%**
Substance Use Disorder	1	8	2	3	8	2	1	25	**4%**
Abuse	0	0	3	1	4	1	1	10	**2%**
Housing/Living Situation	3	12	6	5	18	6	18	68	**10%**
Support Systems	1	5	2	3	14	1	6	32	**5%**
Child Care	0	0	0	0	0	1	1	2	**0%**
Insurance	8	6	14	4	33	10	9	84	**13%**
Transportation	25	12	6	7	17	7	2	76	**11%**
HIV-Related Legal Assistance	0	2	2	2	2	0	3	11	**2%**
Cultural/Linguistic	0	0	0	2	1	4	0	7	**1%**
Self-Efficacy	0	0	0	2	4	2	2	10	**2%**
HIV Education/Prevention	3	4	3	4	11	1	1	27	**4%**
Family Planning/ Safer Sex	2	6	4	1	10	1	1	25	**4%**
Employment	0	3	4	4	9	4	3	27	**4%**
Education/Vocation	0	0	0	2	7	0	5	14	**2%**
Financial Assistance	1	5	3	0	16	6	6	37	**6%**
Medication Adherence Counseling	7	18	18	8	37	19	6	113	**17%**
Client Strengths	0	1	0	0	3	0	3	7	**1%**

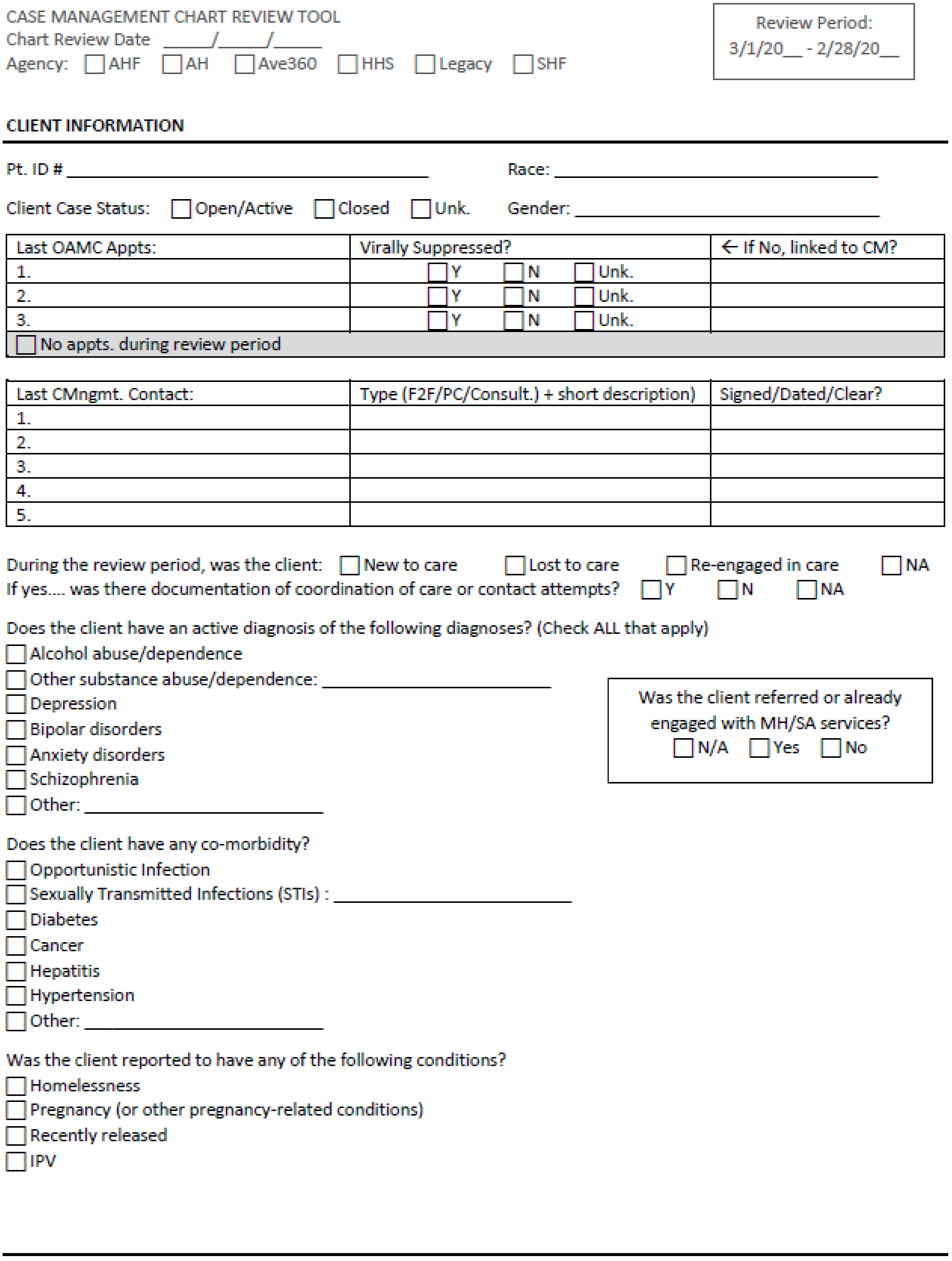
Conclusion

The 2019-2020 Case Management chart review highlighted many trends about the case management client population, strengths in case management performance, and areas identified for future attention and improvement.

Overall, we continue to learn more about the needs of this patient population by expanding the sample size of the review and adding new elements to the chart abstraction tool. The most common co-occurring conditions were: Sexually Transmitted Infections (24%), Depression (29%), and Hypertension (23%). Diabetes and Obesity were also relatively common and providing overview information on nutrition counseling may be a useful topic for future frontline case management trainings. The prevalence of complex co-morbidities emphasizes the unique benefit that case managers contribute to the HIV treatment setting.

There were also many areas of high performance displayed in this chart review. Most (51%) of the clients in the sample had at least three HIV-related primary care appointments within the review year. Case Management staff demonstrated a high level of coordination of care in many areas. For example, 88% of those with active mental health or substance abuse symptoms either received a referral for further treatment or counseling or were already engaged in services. 87% of the clients who were New, Lost, or Returning to Care (or some combination) received coordination of care activities from case management in an effort to retain them in care.

Appendix (Case Management Chart Review Tool)



CASE MANAGEMENT CHART REVIEW TOOL
Chart Review Date _____/_____/_____
Agency: ☐ AHF ☐ AH ☐ Ave360 ☐ HHS ☐ Legacy ☐ SHF

Review Period:
3/1/20__ - 2/28/20__

CLIENT INFORMATION

Pt. ID # ______________________________

Race: ______________________________

Client Case Status: ☐ Open/Active ☐ Closed ☐ Unk.

Gender: ______________________________

Last OAMC Appts:	Virally Suppressed?	← If No, linked to CM?
1.	☐ Y ☐ N ☐ Unk.	
2.	☐ Y ☐ N ☐ Unk.	
3.	☐ Y ☐ N ☐ Unk.	
☐ No appts. during review period		

Last CMngmt. Contact:	Type (F2F/PC/Consult.) + short description)	Signed/Dated/Clear?
1.		
2.		
3.		
4.		
5.		

During the review period, was the client: ☐ New to care ☐ Lost to care ☐ Re-engaged in care ☐ NA
If yes.... was there documentation of coordination of care or contact attempts? ☐ Y ☐ N ☐ NA

Does the client have an active diagnosis of the following diagnoses? (Check ALL that apply)

☐ Alcohol abuse/dependence
☐ Other substance abuse/dependence: ______________________
☐ Depression
☐ Bipolar disorders
☐ Anxiety disorders
☐ Schizophrenia
☐ Other: ______________________

Was the client referred or already engaged with MH/SA services?
☐ N/A ☐ Yes ☐ No

Does the client have any co-morbidity?

☐ Opportunistic Infection
☐ Sexually Transmitted Infections (STIs) : ______________________
☐ Diabetes
☐ Cancer
☐ Hepatitis
☐ Hypertension
☐ Other: ______________________

Was the client reported to have any of the following conditions?

☐ Homelessness
☐ Pregnancy (or other pregnancy-related conditions)
☐ Recently released
☐ IPV

INSURANCE, BENEFITS, AND INCOME INFORMATION

Health Insurance: ☐ Uninsured ☐ Medicaid ______ ☐ Medicare______ ☐ Commercial _________
☐ VA ☐ Other? ________

Spouse/partner:	Children:	Other Dependents:	TOTAL HOUSEHOLD SIZE 1 2 3 4 5 6 7 8 9 10 Unk
Client Income $:	Spouse Income $:	Other Income $:	TOTAL HOUSEHOLD INCOME $:

Did the client lose insurance or coverage during the review period? ☐ Y N ☐ Unk. ☐
If so, were they provided with information/education or assistance? ☐ Y N ☐ NA ☐

CASE MANAGEMENT SERVICES

What types of services were provided by a **Medical Case Manager** (MCM?)	What types of services were provided by a **Service Linkage Worker** (SLW?)	Was the client referred for **Clinical Case Management** services in the review period?
☐ **NA (Client not assisted by MCM)** ☐ Comprehensive assessment ☐ Service Plan ☐ Medication adherence counseling ☐ Coordination of medical care ☐ Transportation ☐ ADAP/medication assistance ☐ Eligibility ☐ Community resource/benefits brokerage ☐ Other ________________ Did client meet criteria for MCM? Y ☐ N ☐ Unk. ☐	☐ **NA (Client not assisted by SLW)** ☐ Brief assessment ☐ SLW referred client to OAMC ☐ OAMC visit scheduled by SLW ☐ SLW accompanied client to OAMC ☐ SLW called client to remind about OAMC visit ☐ Client did not keep OAMC appt. and SLW contacted them ☐ ADAP/medication assistance ☐ Transportation voucher ☐ Eligibility Were any of the above services provided by an Outreach Worker? Y ☐ N ☐ Unk. ☐	☐ **No- not applicable** ☐ No- applicable, but no referral documented ☐ Yes- and there is evidence of coordination of services ☐ Yes- and there is no evidence of coordination of services ☐ Yes- but client refused services or is already engaged in treatment

Was the case discharged/closed for CM during the review period? Y ☐ N ☐ NA ☐ Unk. ☐
If yes……. Client met agency criteria for closure? Y ☐ N ☐ NA ☐ Unk. ☐
Client completed treatment program (CCM) Y ☐ N ☐ NA ☐ Unk. ☐
Date and reason noted? Y ☐ N ☐ NA ☐ Unk. ☐
Summary of services received? Y ☐ N ☐ NA ☐ Unk. ☐
Referrals noted? Y ☐ N ☐ NA ☐ Unk. ☐
Instructions given to client at discharge? Y ☐ N ☐ NA ☐ Unk. ☐

ASSESSMENTS & SERVICE PLANS

		If no assessment or plan:		
Brief Assess. Date 1:	Brief Assess. Date 2:	☐ evidence of one just outside of review period	☐ reason documented	☐ enough info to complete
Comp. Assess. Date 1:	Comp. Assess. Date 2:	☐ evidence of one just outside of review period	☐ reason documented	☐ enough info to complete
Service Plan Date 1:	Service Plan Date 2:	☐ evidence of one just outside of review period	☐ reason documented	☐ enough info to complete

COMPLETED ASSESSMENTS

	MOST RECENT ASSESSMENT TYPE (circle one) Comprehensive Brief					NEXT MOST RECENT ASSESSMENT TYPE (circle one) Comprehensive Brief				
Domain	Assessed?	Need Identified?	Accounted for in Service Plan?	Accounted for in progress notes?	Follow-up (referral, action, etc.)	Assessed?	Need Identified?	Accounted for in Service Plan?	Accounted for in progress notes?	Follow-up (referral, action, etc.)
Medical/Clinical										
Vaccination										
Nutrition/Food Pantry										
Dental Care										
Vision Care										
Hearing Care										
Home Care Needs										
Basic Necessities/Life Skills										
Mental Health										
Substance/Alcohol Use										
Abuse History										
Housing/Living Situation										
Support System										
Child Care/Guardianship										
Insurance Benefits										
Transportation										
HIV-Related Legal										
Cultural/Linguistic										
Self-Efficacy										
HIV Education/Prevention										
Family Planning/Safer Sex										
Employment/Income										
General Education/Vocation										
Financial Assistance										
Medication Adherence										
Client Strengths										
Other										

Linkage to HIV Care

This is a PDF version of the following document:

Module 1: Screening and Diagnosis
Lesson 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 HIV diagnosis. Linkage to care plays a key role in the HIV care continuum—it is a necessary precursor to antiretroviral therapy initiation and viral suppression. Evidence clearly demonstrates that antiretroviral treatment significantly reduces the risk of developing HIV-related complications.[1,2,3,4] In addition, antiretroviral therapy dramatically reduces HIV transmission to others.[5,6] Without timely entry into care, individuals with HIV miss an opportunity to benefit from HIV treatment at the earliest stage feasible;[7,8] rapid initiation of antiretroviral therapy after HIV diagnosis is a key pillar of the national initiative, Ending the HIV Epidemic: A Plan for America.[9] In addition, delayed linkage to care is a major barrier to “treatment as prevention” to reduce HIV transmission rates in the United States. Thus, identifying persons with HIV and successfully linking them to care plays a key role in the overall HIV epidemic, both from a treatment and a prevention standpoint (Figure 1). The following provides a review of the current state of linkage to care in the United States, examines the major barriers to linkage to care, and explores strategies for improving linkage to 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.[10] 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).[11,12] 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.[11,12] 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. 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 May 12, 2020, a total of 47 states and the District of Columbia have enacted laws (or regulations) that require laboratory reporting of CD4 cell counts and viral load test results.[13] Three states—Idaho, New Jersey, and Pennsylvania—have laws that do not meet criteria for requiring all CD4 and viral load data to be reported.[13] 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.[14] HIV surveillance data has the important advantage of being population-based. Surveillance integrates data across care sites and includes more than 80% of persons with HIV in the United States.[15,16]

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; and 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.[17,18] 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.[18]

Current State of Linkage to Care in the United States

Estimates of Successful Linkage to Care in the United States

The United States federal benchmark for the linkage to care goal is that at least 85% of persons with a new HIV diagnosis are linked to HIV medical care within 30 days of HIV diagnosis.[10] Based on data from 41 states and the District of Columbia, the CDC reported complete CD4 and HIV RNA laboratory values for 33,500 persons aged 13 years and older newly diagnosed with HIV in 2018; these data provide information for determining linkage to care rates.[12]

- In 2018, following an HIV diagnosis, 80.2% were linked to HIV medical care within 1 month and 87.8% within 3 months.[12]
- From 2010 through 2018, the percentage of persons linked to care within 1 month or 3 months increased steadily (Figure 2).[11,12]
- In 2018, the rates of linkage to care at 1 month and 3 months were lower among persons who are Black/African American or American Indian/Alaska Native compared to persons in other racial/ethnic groups (Figure 3) and (Figure 4).[12]
- Linkage rates were lower in younger age groups than older age groups (Figure 5).[12]
- Rates for linkage to care were similar in 2018 based on gender (Figure 6).[12]

Factors Associated with Delayed Linkage to Care

Studies have consistently identified several factors that predict delayed linkage to care, including Black race, poverty, housing insecurity, lack of insurance or access to primary care prior to HIV diagnosis, substance use disorders, and mental health conditions.[12,19,20,21,22,23] Additional risk factors for delayed linkage to care include psychosocial, emotional, and structural barriers. A 2009 national survey revealed that healthcare providers more often attributed nonengagement in care to structural barriers (finances, transportation, family care, lack of time off from work, and substance use), whereas persons with HIV 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.[24] 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.[25]

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 in many nonprimary 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).[22] 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.[26] Studies have highly variable rates of linkage to care following a diagnosis of HIV when testing is performed in an emergency department setting.[27,28,29] 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.[29] 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.[30]

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.[31]

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.[32] The following summarizes key panel recommendations for improving linkage to care:

- Immediate referral to HIV care is recommended following an HIV diagnosis to improve linkage to antiretroviral therapy.
- Use of case managers and patient navigators to increase linkage to care is recommended.
- 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.
    - Case management to retain persons with HIV in care and to locate and reengage patients lost to follow-up is recommended.
    - Transportation support for persons 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 to ensure 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 tested in a controlled study. 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.[33] 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 nonrandomized study, ARTAS-II, all persons recently diagnosed with HIV received case management (up to 5 contacts).[34] 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 with HIV in primary medical care. This program consisted of nonrandomized 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.[35] 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 health conditions); each newly diagnosed person 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.[36]

Patient Navigators

Persons with HIV are often uniquely qualified to assist individuals newly diagnosed with HIV as they try and navigate the health care system; trained peers (individuals with established HIV) often have shared characteristics and circumstances as well as direct disease-relevant experience and knowledge of local community strengths, challenges, and resources.[37] 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.[38] Navigators are concerned with the individual patient rather than the health care system as a whole.[39] 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.[40,41,42] An important goal of partner services is to detect persons with previously undiagnosed HIV 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 United States 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. Health departments have reported improved rates of linkage to care after implementation of public health partner services and improved linkage to care within 30 days among individuals who receive partner services.[40,43] The 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, New York 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, but did increase regular clinic attendance and viral suppression.[44] Results from the viral suppression component of the study indicated that most individuals with HIV found the use of financial incentives to be acceptable and helpful.[45,46]

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, thereby improving 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 reengagement in care.[47]

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.[48] 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.[49] 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 client, which translated to $1,628 per additional person 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.[49] 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.[50]

Retention in Care

Linkage to sustained care, but not linkage to initial care, has been significantly associated with subsequent virologic suppression and survival, and persons who miss visits in the first year after initiating HIV medical care have more than twice the rate of long-term mortality compared with those who attend all of their scheduled clinic appointments.[23,51] 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 health conditions, 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, Lesson 8.

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 within 30 days after an HIV diagnosis.
- For persons newly diagnosed with HIV, ensuring rapid linkage to care and starting antiretroviral therapy, ideally within 7 days, is a key pillar of the national initiative, Ending the HIV Epidemic: A Plan for America.
- 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.
- For the year 2018, the CDC estimates that approximately 80% of persons were linked to care within 1 month of HIV diagnosis and 88% were linked within 3 months.
- Key risk factors for delayed linkage include substance use, lack of medical insurance and access to primary care prior to HIV diagnosis, and residence in a high poverty area.
- Linkage to care rates are lower among blacks/African Americans and Hispanics compared to 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 clinic visits, conducting outreach to persons who no-show to their first scheduled visit, and conducting case management intake for new clients prior to the HIV medical provider visit.

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Figures

Figure 1 Linkage to HIV Care: Main Goals

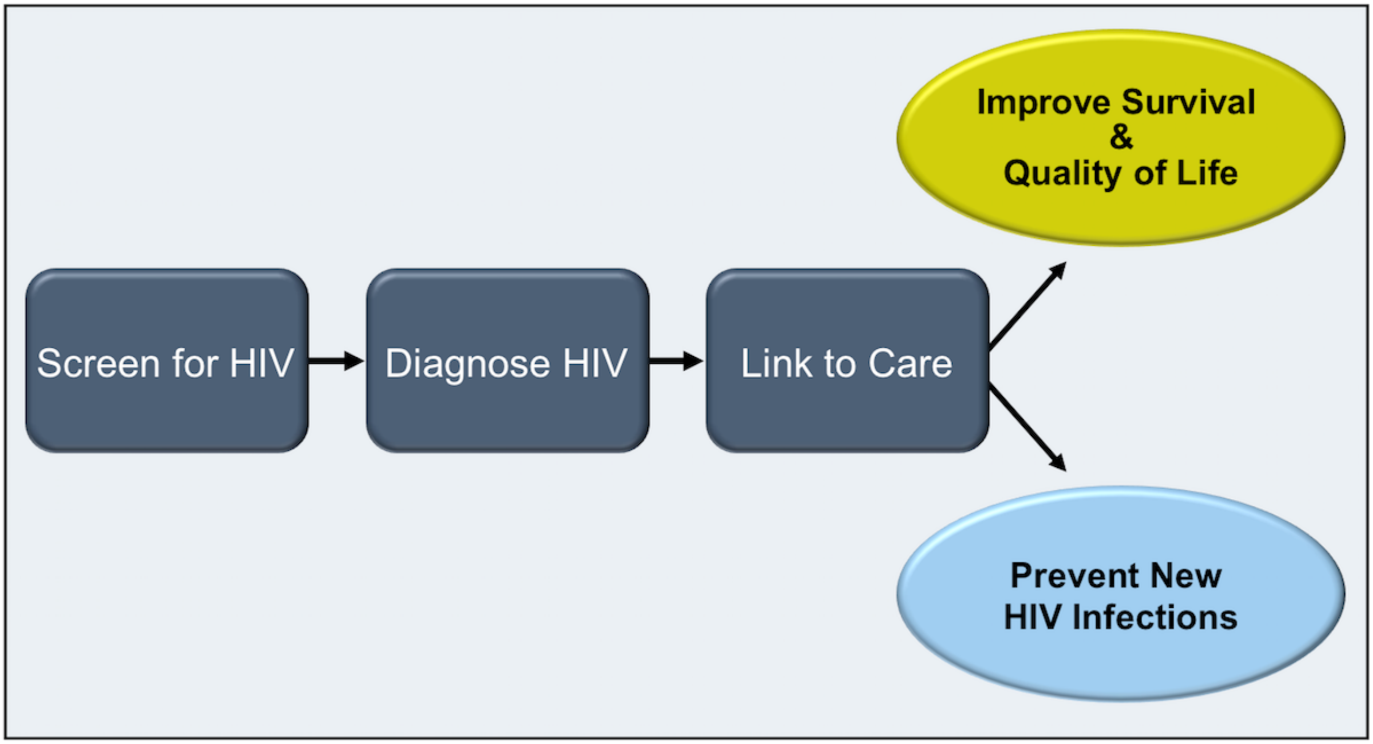


Figure 2 Linkage to Care within 1 Month or 3 Months of HIV Diagnosis, 2010 through 2018

These data from the Centers for Disease Control and Prevention (CDC) are reported from states and the District of Columbia. Note the number of states reporting data changed during this time period.

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, 2017. HIV Surveillance Supplemental Report. 2019;24(No. 3):1-74. Published June 2019. (2) 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, 2018. HIV Surveillance Supplemental Report. 2020;25(No. 2):1-104. Published May 2020.

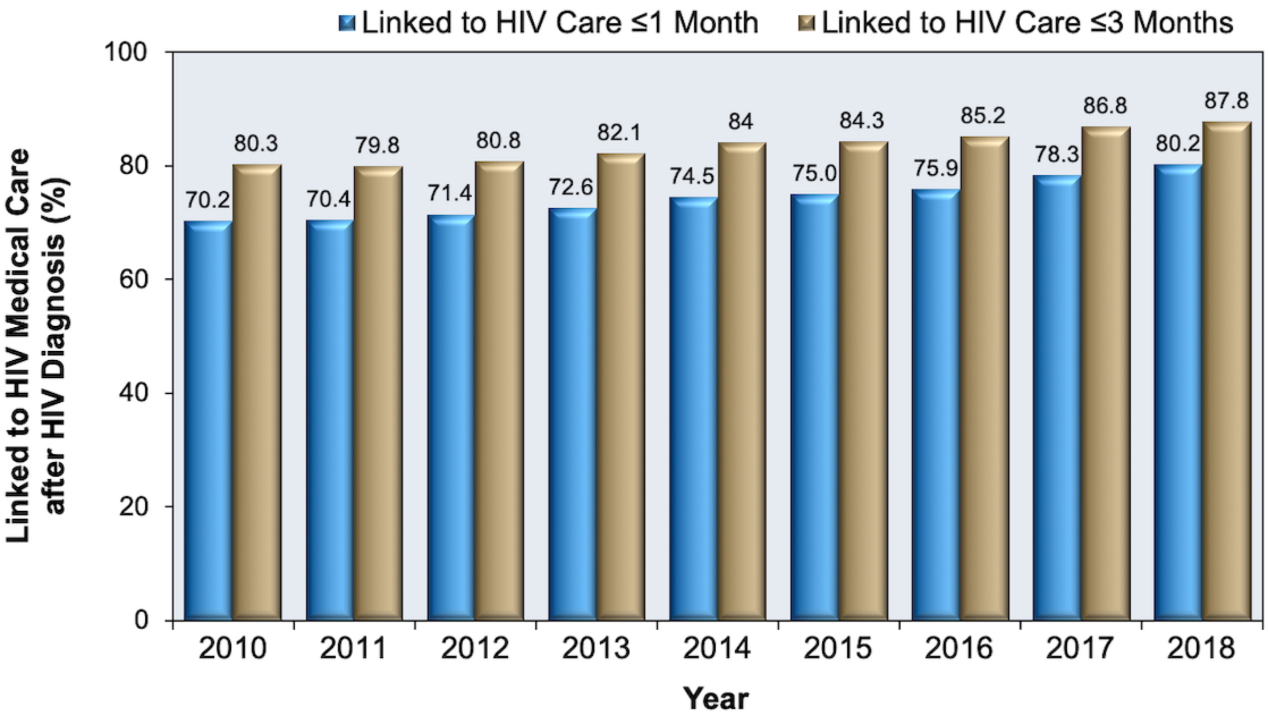


Figure 3 Linkage to Care within 1 Month of HIV Diagnosis, by Ethnicity/Race, 2018

These data from the Centers for Disease Control and Prevention (CDC) are reported from 41 states and the District of Columbia.

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, 2018. HIV Surveillance Supplemental Report. 2020;25(No. 2):1-104. Published May 2020.

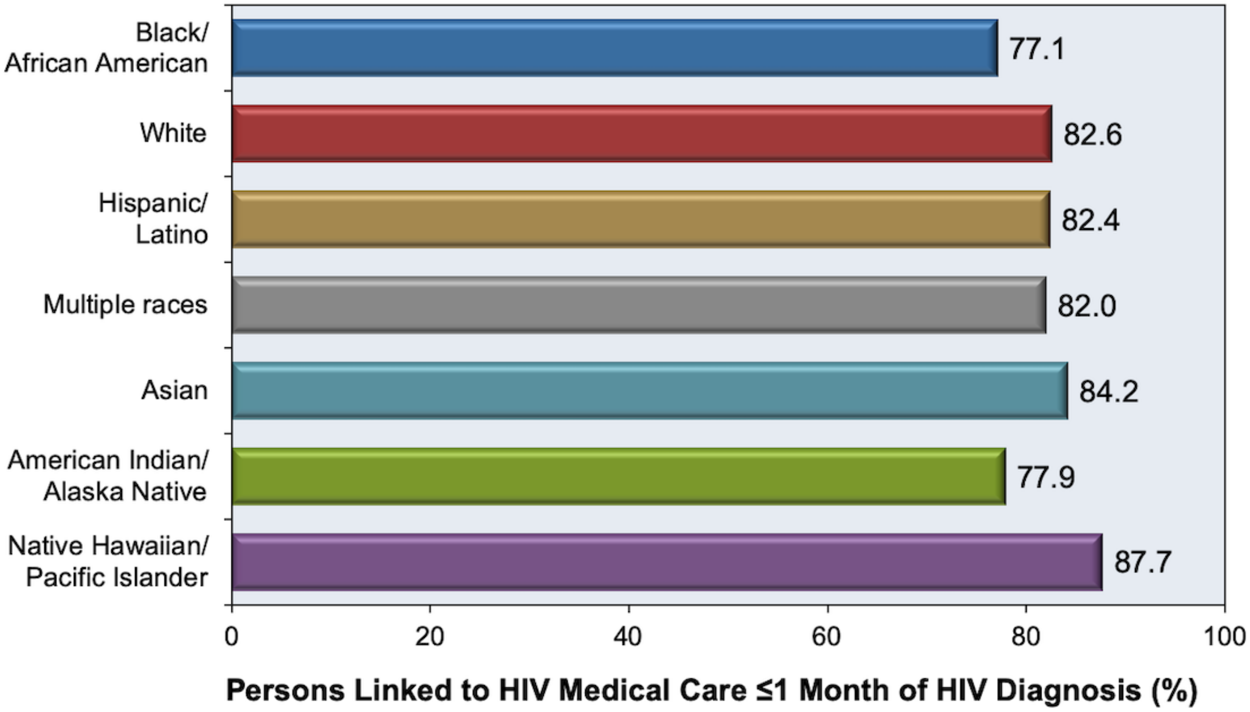


Figure 4 Linkage to Care within 3 Months of HIV Diagnosis, by Ethnicity/Race, 2018

These data from the Centers for Disease Control and Prevention (CDC) are reported from 41 states and the District of Columbia.

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, 2018. HIV Surveillance Supplemental Report. 2020;25(No. 2):1-104. Published May 2020.

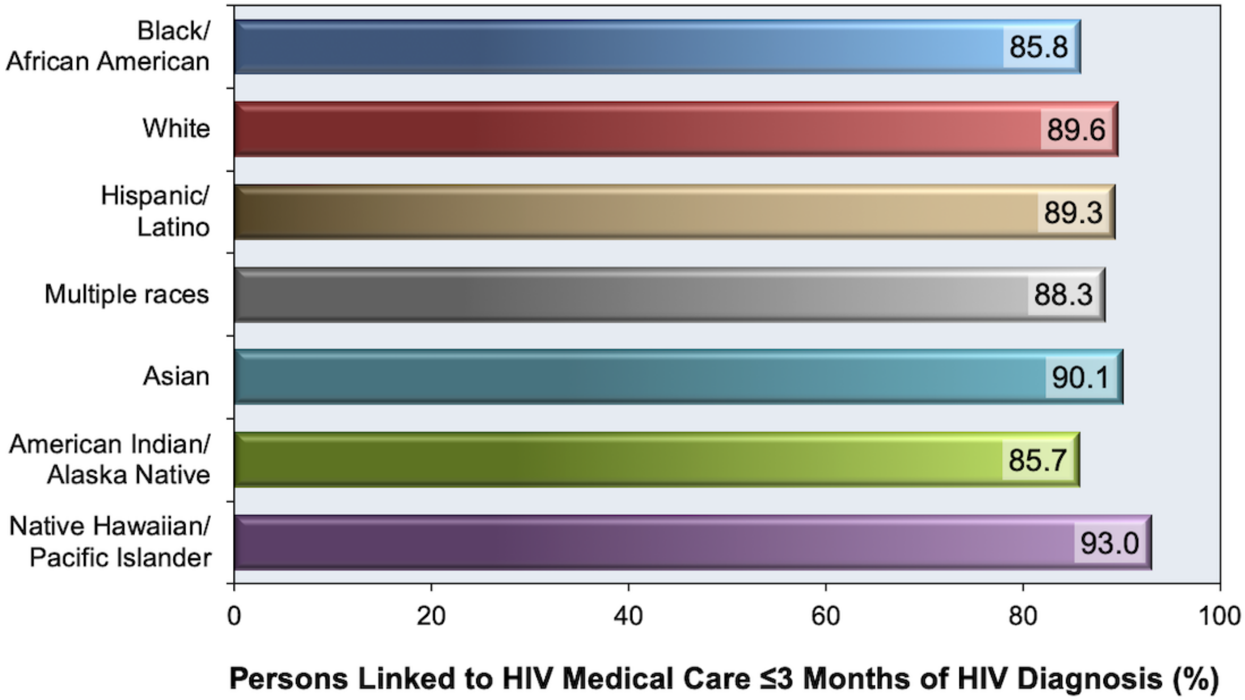


Figure 5 Linkage to Care within 1 Month or 3 Months of HIV Diagnosis, by Age Group, 2018

These data from the Centers for Disease Control and Prevention (CDC) are reported from 41 states and the District of Columbia.

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, 2018. HIV Surveillance Supplemental Report. 2020;25(No. 2):1-104. Published May 2020.

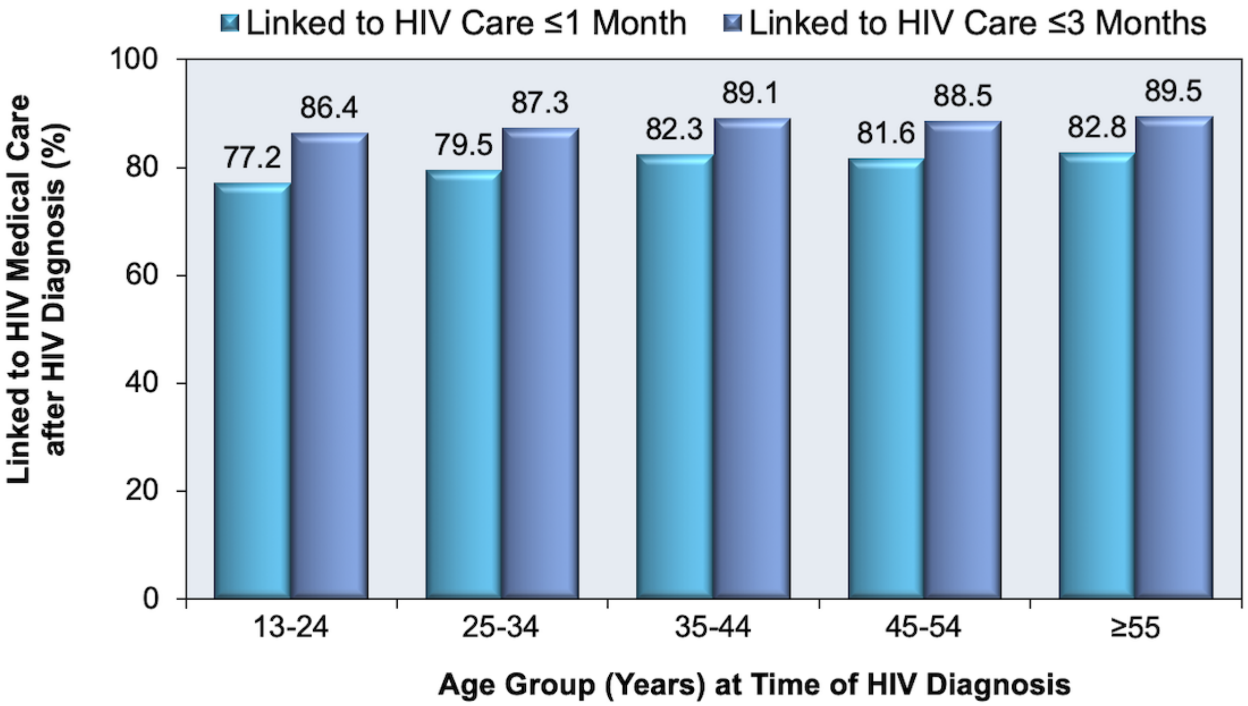


Figure 6 Linkage to Care within 1 Month or 3 Months of HIV Diagnosis, by Gender, 2018

These data from the Centers for Disease Control and Prevention (CDC) are reported from 41 states and the District of Columbia.

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, 2018. HIV Surveillance Supplemental Report. 2020;25(No. 2):1-104. Published May 2020.

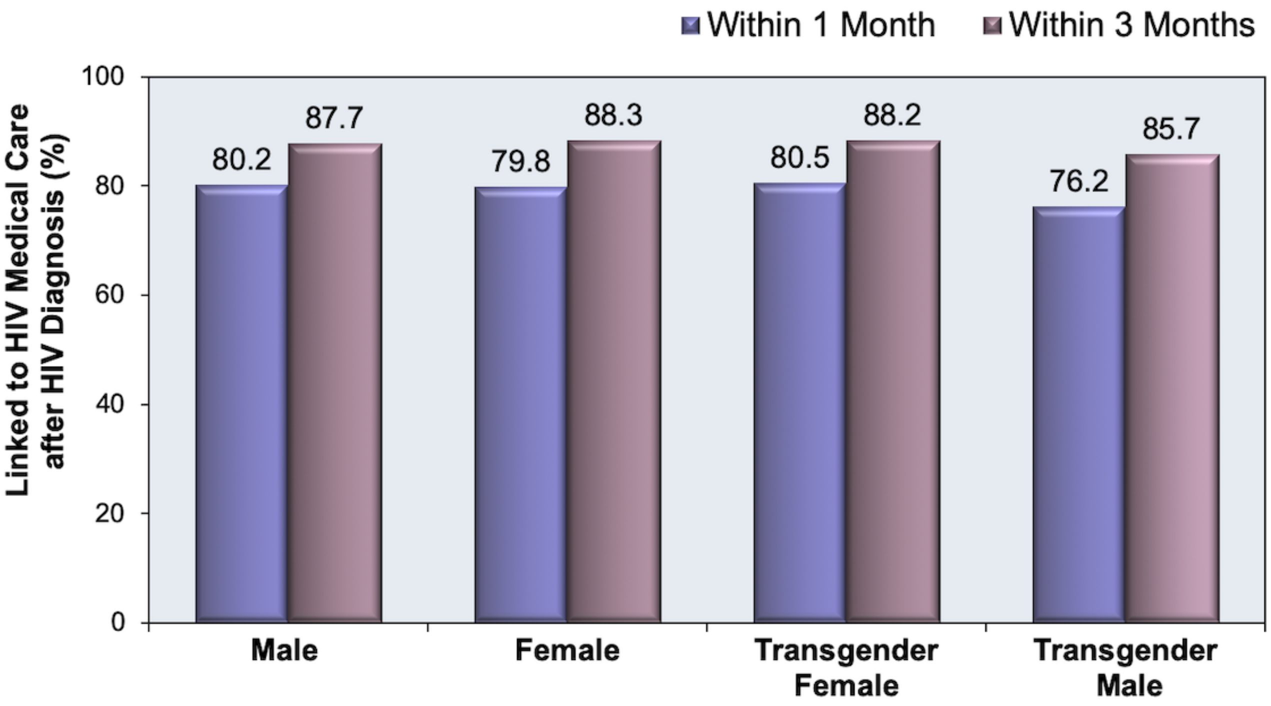
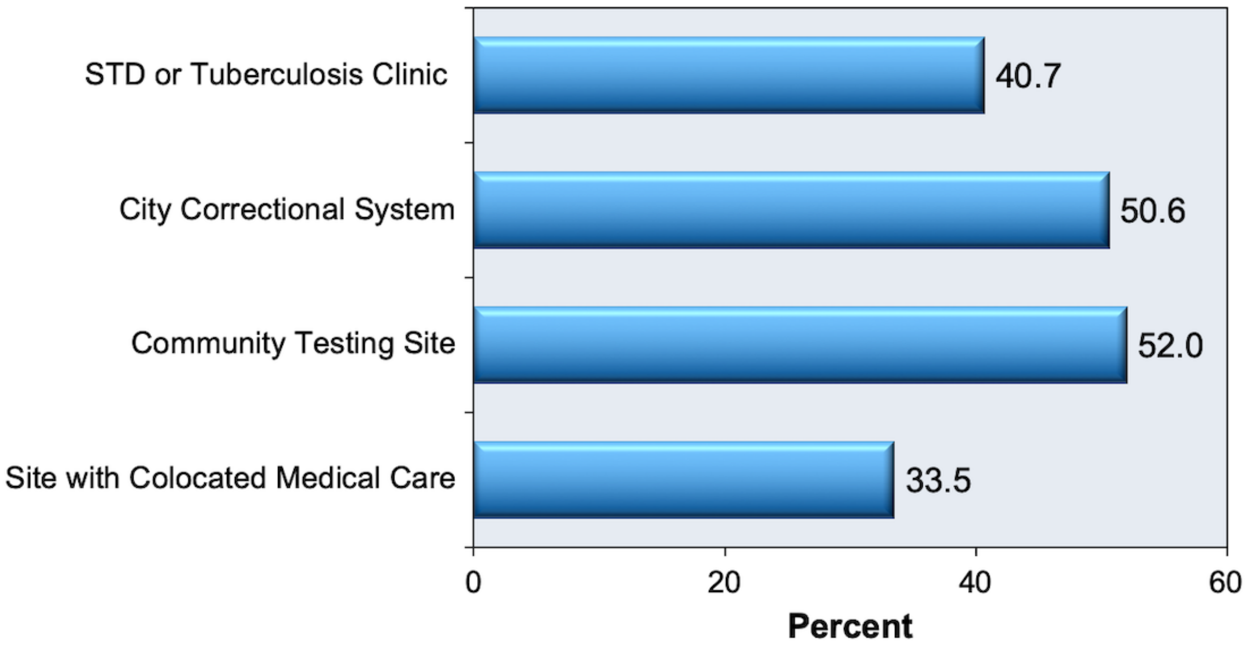


Figure 7 Risk factors for Delayed Linkage to Medical Care after HIV Diagnosis, New York City

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.



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Trends in Diagnosis of HIV Infection, Linkage to Medical Care, and Viral Suppression Among Men Who Have Sex with Men, by Race/Ethnicity and Age — 33 Jurisdictions, United States, 2014–2018

William L. Jeffries IV, PhD[1]; André F. Dailey, MSPH[1]; Chan Jin, PhD[2]; Jarvis W. Carter, Jr., PhD[1]; Lamont Scales, MA[1]

During 2018, gay, bisexual, and other men who have sex with men (MSM) accounted for 69.4% of all diagnoses of human immunodeficiency virus (HIV) infection in the United States (*1*). Moreover, in all 42 jurisdictions with complete laboratory reporting of CD4 and viral load results,* percentages of MSM linked to care within 1 month (80.8%) and virally suppressed (viral load <200 copies of HIV RNA/mL or interpreted as undetected) within 6 months (68.3%) of diagnosis were below target during 2018 (*2*). African American/Black (Black), Hispanic/Latino (Hispanic), and younger MSM disproportionately experience HIV diagnosis, not being linked to care, and not being virally suppressed. To characterize trends in these outcomes, CDC analyzed National HIV Surveillance System† data from 2014 to 2018. The number of diagnoses of HIV infection among all MSM decreased 2.3% per year (95% confidence interval [CI] = 1.9–2.8). However, diagnoses did not significantly change among either Hispanic MSM or any MSM aged 13–19 years; increased 2.2% (95% CI = 1.0–3.4) and 2.0% (95% CI = 0.6–3.3) per year among Black and Hispanic MSM aged 25–34 years, respectively; and were highest in absolute count among Black MSM. Annual percentages of linkage to care within 1 month and viral suppression within 6 months of diagnosis among all MSM increased (2.9% [95% CI = 2.4–3.5] and 6.8% [95% CI = 6.2–7.4] per year,

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* CDC established three criteria for complete laboratory reporting: 1) the jurisdiction's laws/regulations required reporting of all CD4 and viral load results to the state or local health department; 2) laboratories that perform HIV-related testing for the areas must have reported a minimum of 95% of HIV-related test results to the state or local health department; and 3) by December 31, 2019, the jurisdiction had reported to CDC at least 95% of all CD4 and viral load results received during January 2017–September 2019. Additional information is available at https://www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-supplemental-report-vol-25-2.pdf.

† The National HIV Surveillance System is the primary source for monitoring HIV trends in the United States. Through the system, CDC funds and assists state and local health departments collecting data on cases of HIV infection. Health departments provide deidentified data to CDC.

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U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

respectively). These findings, albeit promising, warrant intensified prevention efforts for Black, Hispanic, and younger MSM.

CDC used data reported to the National HIV Surveillance System by December 2019 to identify cases of HIV infection that met CDC's HIV infection case definition among MSM, including MSM aged ≥13 years who inject drugs (*3*). Multiple imputation was used to adjust for unknown or missing transmission category (15.6% of cases) (*4*). At the time of diagnosis, all MSM resided in one of 33 jurisdictions[§] with complete laboratory reporting for each year during 2014–2018. Linkage-to-care analyses included MSM with HIV infection diagnosed during the calendar year when the diagnosis was first made. Linkage to care was defined as one or more CD4 or viral load tests performed within 1 month of diagnosis. Viral suppression within 6 months of diagnosis was measured for MSM whose infection was diagnosed during the outcome year and who resided in any of the 33 jurisdictions at the time of diagnosis of HIV infection. Viral suppression was defined as a viral load result of <200 copies/mL or a viral load test interpretation value of undetected.

Results are presented by race/ethnicity (Black, Hispanic, other, and White) and age group (13–19, 20–24, 25–34, 35–44, 45–54, and ≥55 years). The estimated annual percentage change (EAPC) was calculated for each MSM group. Because of unknown population denominators, case counts were used to analyze diagnoses by transmission category; the EAPCs in case counts were calculated by using a Poisson distribution. EAPCs indicate the per-year change, on average, in the number of diagnoses, percentage linked to care, or percentage virally suppressed. EAPC p-values <0.05 indicated statistically significant trends, whereas p-values ≥0.05 indicated no significant change. Analyses were conducted using SAS (version 9.4; SAS Institute).

During 2014–2018, the number of diagnoses of HIV infection among all MSM decreased 2.3% (95% CI = 1.9–2.8) per year (from 19,789 to 18,034), on average (Table 1). Among Black MSM, diagnoses decreased 1.3% per year overall and 6.0% and 5.6% among those aged 20–24 and 45–54 years, respectively. Diagnoses did not significantly change among Black MSM aged 13–19, 35–44, and ≥55 years, but increased 2.2% annually among those aged 25–34 years. Among Hispanic MSM, diagnoses did not significantly change overall or among those aged 13–19, 35–44, 45–54, and ≥55 years. Diagnoses decreased 3.7% per year among Hispanic MSM aged 20–24 years but increased 2.0% among those aged 25–34 years. Among White MSM, diagnoses decreased 4.8% per year overall and 5.6%, 2.1%, 7.8%, and 9.3% among those aged 20–24, 25–34, 35–44, and 45–54 years, respectively. Diagnoses did not significantly change among White MSM aged 13–19 or ≥55 years.

[§] Alabama, Alaska, California, District of Columbia, Georgia, Hawaii, Illinois, Indiana, Iowa, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New Mexico, New York, North Dakota, Oregon, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

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TABLE 1. Diagnoses of human immunodeficiency virus (HIV) infection and linkage to medical care within 1 month of diagnosis among men who have sex with men,[*] by race/ethnicity and age — 33 jurisdictions,[†] United States, 2014–2018[§]

Race/ Ethnicity	Diagnoses, no.					EAPC[¶] (95% CI)	Linkage to medical care, no. (%)					EAPC[¶] (95% CI)
	2014	2015	2016	2017	2018	2014–2018	2014	2015	2016	2017	2018	2014–2018
African American/Black												
Age at diagnosis (yrs)												
13–19	574	613	593	600	584	0.1 (−2.4 to 2.7)	335 (58.4)	376 (61.3)	388 (65.4)	417 (69.5)	399 (68.3)	4.4 (1.2 to 7.8)
20–24	2,262	2,163	2,085	1,861	1,784	−6.0 (−7.3 to −4.7)	1,243 (55.0)	1,279 (59.1)	1,326 (63.6)	1,216 (65.3)	1,232 (69.1)	5.7 (3.9 to 7.6)
25–34	2,627	2,731	2,853	2,872	2,860	2.2 (1.0 to 3.4)	1,618 (61.6)	1,685 (61.7)	1,879 (65.8)	1,945 (67.7)	2,024 (70.8)	3.8 (2.3 to 5.3)
35–44	925	912	908	911	933	0.2 (−1.9 to 2.2)	609 (65.9)	593 (65.0)	605 (66.6)	641 (70.4)	662 (71.0)	2.3 (−0.2 to 4.9)
45–54	624	618	583	520	509	−5.6 (−8.0 to −3.1)	423 (67.8)	410 (66.4)	387 (66.3)	356 (68.5)	350 (68.8)	0.6 (−2.6 to 3.8)
≥55	317	278	290	310	297	−0.3 (−3.8 to 3.4)	222 (70.1)	184 (66.2)	198 (68.2)	207 (66.8)	214 (72.1)	0.6 (−3.6 to 5.0)
Subtotal	**7,328**	**7,314**	**7,312**	**7,074**	**6,967**	**−1.3 (−2.0 to −0.6)**	**4,450 (60.7)**	**4,525 (61.9)**	**4,781 (65.4)**	**4,783 (67.6)**	**4,881 (70.1)**	**3.8 (2.9 to 4.8)**
Hispanic/Latino[**]												
Age at diagnosis (yrs)												
13–19	222	234	228	242	222	0.4 (−3.6 to 4.6)	131 (59.1)	157 (67.2)	154 (67.5)	156 (64.2)	163 (73.4)	3.8 (−1.3 to 9.3)
20–24	1,130	1,170	1,108	1,027	995	−3.7 (−5.5 to −1.9)	719 (63.6)	775 (66.2)	763 (68.9)	706 (68.8)	736 (74.0)	3.4 (1.1 to 5.8)
25–34	2,071	2,100	2,264	2,226	2,221	2.0 (0.6 to 3.3)	1,391 (67.2)	1,433 (68.3)	1,659 (73.2)	1,647 (74.0)	1,679 (75.6)	3.2 (1.6 to 4.8)
35–44	1,158	1,125	1,106	1,113	1,071	−1.6 (−3.5 to 0.2)	806 (69.6)	806 (71.7)	807 (73.0)	837 (75.2)	869 (81.1)	3.6 (1.4 to 5.9)
45–54	594	648	569	597	590	−1.0 (−3.5 to 1.5)	416 (70.0)	463 (71.4)	437 (76.8)	455 (76.2)	464 (78.7)	3.0 (0.1 to 6.1)
≥55	191	205	199	213	231	4.4 (0.0 to 9.0)	152 (79.9)	153 (74.4)	151 (75.9)	166 (78.0)	177 (76.6)	−0.3 (−5.1 to 4.7)
Subtotal	**5,366**	**5,482**	**5,473**	**5,417**	**5,331**	**−0.2 (−1.1 to 0.6)**	**3,616 (67.4)**	**3,787 (69.1)**	**3,970 (72.5)**	**3,967 (73.2)**	**4,089 (76.7)**	**3.2 (2.2 to 4.3)**
Other race/ethnicity												
Age at diagnosis (yrs)												
13–19	67	75	65	63	53	−6.0 (−13.0 to 1.5)	39 (58.0)	44 (58.6)	46 (70.9)	48 (76.3)	43 (81.0)	9.9 (−0.2 to 20.9)
20–24	332	337	305	286	215	−9.2 (−12.4 to −5.8)	203 (61.1)	237 (70.4)	215 (70.4)	209 (73.0)	170 (79.1)	5.6 (1.0 to 10.4)
25–34	568	613	605	528	499	−3.9 (−6.4 to −1.3)	408 (71.9)	457 (74.6)	444 (73.3)	405 (76.8)	376 (75.2)	1.2 (−1.9 to 4.4)
35–44	313	269	278	259	216	−7.4 (−10.8 to −3.8)	233 (74.4)	202 (75.1)	218 (78.3)	200 (77.3)	175 (80.7)	1.9 (−2.4 to 6.5)
45–54	199	181	157	179	122	−8.9 (−13.2 to −4.4)	150 (75.3)	138 (76.4)	122 (78.0)	142 (79.4)	106 (86.4)	3.0 (−2.5 to 8.8)
≥55	58	70	87	60	65	0.5 (−6.8 to 8.3)	37 (64.3)	52 (74.4)	65 (74.3)	45 (75.9)	54 (83.9)	5.5 (−3.7 to 15.6)
Subtotal	**1,537**	**1,544**	**1,495**	**1,375**	**1,170**	**−6.1 (−7.7 to −4.6)**	**1,070 (69.6)**	**1,130 (73.2)**	**1,108 (74.1)**	**1,050 (76.3)**	**923 (78.9)**	**3.0 (1.0 to 5.0)**
White												
Age at diagnosis (yrs)												
13–19	105	97	121	121	115	4.0 (−1.9 to 10.3)	56 (53.4)	64 (66.0)	79 (65.2)	77 (63.7)	78 (68.1)	4.4 (−3.1 to 12.5)
20–24	753	671	637	675	560	−5.6 (−7.9 to −3.3)	461 (61.2)	451 (67.3)	417 (65.4)	503 (74.6)	405 (72.2)	4.6 (1.5 to 7.7)
25–34	1,700	1,740	1,617	1,586	1,605	−2.1 (−3.6 to −0.6)	1,179 (69.3)	1,261 (72.4)	1,178 (72.8)	1,154 (72.8)	1,246 (77.6)	2.4 (0.5 to 4.2)
35–44	1,213	1,072	943	905	888	−7.8 (−9.6 to −6.0)	912 (75.2)	809 (75.4)	702 (74.4)	702 (77.5)	694 (78.2)	1.0 (−1.2 to 3.3)
45–54	1,178	1,082	1,034	888	791	−9.3 (−11.1 to −7.5)	904 (76.7)	832 (76.9)	824 (79.7)	689 (77.6)	628 (79.4)	0.8 (−1.5 to 3.1)
≥55	610	585	621	573	607	−0.3 (−2.8 to 2.3)	450 (73.9)	450 (77.0)	479 (77.1)	438 (76.4)	470 (77.4)	0.9 (−2.0 to 3.8)
Subtotal	**5,559**	**5,247**	**4,973**	**4,748**	**4,566**	**−4.8 (−5.7 to −4.0)**	**3,961 (71.3)**	**3,867 (73.7)**	**3,678 (74.0)**	**3,564 (75.1)**	**3,521 (77.1)**	**1.8 (0.7 to 2.8)**
Total	**19,789**	**19,586**	**19,254**	**18,614**	**18,034**	**−2.3 (−2.8 to −1.9)**	**13,097 (66.2)**	**13,308 (67.9)**	**13,538 (70.3)**	**13,362 (71.8)**	**13,414 (74.4)**	**2.9 (2.4 to 3.5)**

Abbreviations: CI = confidence interval; EAPC = estimated annual percentage change.

[*] Men who have sex with men were persons whose sex at birth was male and whose transmission category was either male-to-male sexual contact or male-to-male sexual contact and injection drug use.

[†] Data are based on residence at time of diagnosis of HIV infection. The 33 jurisdictions were Alabama, Alaska, California, District of Columbia, Georgia, Hawaii, Illinois, Indiana, Iowa, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New Mexico, New York, North Dakota, Oregon, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

[§] Data have been statistically adjusted by using multiple imputation to account for unknown or missing transmission category; therefore, values might not sum to column subtotals and total.

[¶] EAPCs indicate the per-year change, on average, in the number of diagnoses of HIV infection or percentage linked to medical care. EAPC p-values <0.05 indicated statistically significant trends, whereas EAPC p-values ≥0.05 indicated no significant trend.

[**] Hispanics/Latinos might be of any race.

The percentage of all MSM who were linked to care within 1 month of diagnosis increased 2.9% per year, on average, from 2014 (66.2%) to 2018 (74.4%). Among Black MSM, the percentage linked to care increased 3.8% per year overall, and it increased among those aged 13–19, 20–24, and 25–34 years. It did not significantly change among those aged 35–44, 45–54, and ≥55 years. Among Hispanic MSM, the percentage linked to care increased 3.2% per year overall, and it increased among those aged 20–24, 25–34, 35–44, and 45–54 years. However, the percentage linked to care did not significantly change among those aged 13–19 and ≥55 years. Among White MSM, the percentage linked to care increased 1.8% per year overall, and it increased among those aged 20–24 and 25–34 years but did not significantly change among all other age groups.

The percentage of all MSM who achieved viral suppression within 6 months of diagnosis increased 6.8% per year, on average, from 2014 (51.1%) to 2018 (67.2%) (Table 2). Among Black MSM, the percentage who achieved viral suppression

TABLE 2. Viral suppression within 6 months of diagnosis among men who have sex with men,[*] by race/ethnicity and age — 33 jurisdictions,[†] United States, 2014–2018[§]

	No. (%)					EAPC[¶] (95% CI)
Race/Ethnicity	**2014**	**2015**	**2016**	**2017**	**2018**	**2014–2018**
African American/Black						
Age at diagnosis (yrs)						
13–19	220 (38.4)	277 (45.2)	304 (51.3)	365 (60.9)	372 (63.7)	13.8 (9.7 to 17.9)
20–24	865 (38.2)	966 (44.7)	1,064 (51.0)	985 (52.9)	1,085 (60.8)	11.5 (9.3 to 13.8)
25–34	1,134 (43.2)	1,302 (47.7)	1,495 (52.4)	1,637 (57.0)	1,764 (61.7)	9.3 (7.5 to 11.1)
35–44	445 (48.1)	468 (51.4)	494 (54.4)	533 (58.6)	590 (63.2)	7.0 (4.1 to 10.0)
45–54	313 (50.1)	322 (52.2)	317 (54.3)	309 (59.4)	303 (59.5)	4.8 (1.2 to 8.6)
≥55	153 (48.2)	150 (53.9)	151 (52.1)	153 (49.3)	180 (60.4)	3.8 (−1.1 to 9.1)
Subtotal	**3,130 (42.7)**	**3,485 (47.6)**	**3,826 (52.3)**	**3,982 (56.3)**	**4,294 (61.6)**	**9.4 (8.3 to 10.5)**
Hispanic/Latino[**]						
Age at diagnosis (yrs)						
13–19	112 (50.7)	128 (54.5)	127 (55.7)	135 (55.5)	145 (65.3)	5.4 (−0.2 to 11.4)
20–24	533 (47.2)	621 (53.1)	639 (57.7)	641 (62.4)	642 (64.5)	8.1 (5.4 to 10.9)
25–34	1,088 (52.5)	1,200 (57.2)	1,403 (62.0)	1,439 (64.7)	1,592 (71.7)	7.7 (5.9 to 9.6)
35–44	647 (55.9)	687 (61.1)	663 (60.0)	727 (65.3)	775 (72.3)	6.1 (3.6 to 8.6)
45–54	338 (56.9)	395 (60.9)	360 (63.2)	384 (64.4)	403 (68.4)	4.3 (1.0 to 7.7)
≥55	111 (58.0)	121 (58.8)	139 (69.8)	131 (61.6)	151 (65.4)	2.8 (−2.6 to 8.5)
Subtotal	**2,829 (52.7)**	**3,152 (57.5)**	**3,330 (60.9)**	**3,456 (63.8)**	**3,708 (69.6)**	**6.8 (5.6 to 8.0)**
Other race/ethnicity						
Age at diagnosis (yrs)						
13–19	31 (46.0)	35 (46.5)	35 (53.9)	43 (68.2)	37 (69.6)	13.2 (1.8 to 25.8)
20–24	146 (44.0)	199 (59.2)	176 (57.7)	188 (65.7)	166 (77.2)	12.7 (7.4 to 18.3)
25–34	322 (56.7)	393 (64.1)	396 (65.4)	371 (70.3)	350 (70.1)	5.2 (1.8 to 8.8)
35–44	202 (64.5)	166 (61.8)	203 (73.0)	192 (74.0)	156 (72.2)	4.2 (−0.5 to 9.1)
45–54	119 (59.5)	121 (66.7)	106 (68.0)	118 (65.7)	95 (77.9)	5.1 (−0.9 to 11.6)
≥55	32 (55.2)	43 (62.2)	49 (56.1)	37 (62.6)	46 (70.5)	5.2 (−4.9 to 16.4)
Subtotal	**851 (55.4)**	**957 (62.0)**	**964 (64.5)**	**949 (69.0)**	**850 (72.6)**	**6.7 (4.5 to 9.0)**
White						
Age at diagnosis (yrs)						
13–19	50 (47.7)	56 (57.9)	69 (57.0)	79 (65.3)	81 (70.7)	9.5 (1.3 to 18.3)
20–24	391 (51.9)	403 (60.0)	373 (58.6)	450 (66.7)	382 (68.2)	6.8 (3.5 to 10.2)
25–34	964 (56.7)	1,098 (63.1)	1,035 (64.0)	1,058 (66.7)	1,147 (71.4)	5.3 (3.3 to 7.3)
35–44	748 (61.7)	693 (64.6)	632 (67.0)	620 (68.5)	648 (73.0)	4.0 (1.6 to 6.5)
45–54	754 (64.1)	708 (65.4)	725 (70.2)	614 (69.2)	567 (71.6)	2.9 (0.4 to 5.4)
≥55	390 (64.0)	378 (64.6)	404 (65.0)	397 (69.3)	433 (71.4)	2.9 (−0.2 to 6.2)
Subtotal	**3,297 (59.3)**	**3,335 (63.6)**	**3,239 (65.1)**	**3,219 (67.8)**	**3,258 (71.4)**	**4.4 (3.3 to 5.6)**
Total	**10,107 (51.1)**	**10,928 (55.8)**	**11,359 (59.0)**	**11,607 (62.4)**	**12,110 (67.2)**	**6.8 (6.2 to 7.4)**

Abbreviations: CI = confidence interval; EAPC = estimated annual percentage change; HIV = human immunodeficiency virus.

[*] Men who have sex with men were persons whose sex at birth was male and whose transmission category was either male-to-male sexual contact or male-to-male sexual contact and injection drug use.

[†] Data are based on residence at time of diagnosis of HIV infection. The 33 jurisdictions were Alabama, Alaska, California, District of Columbia, Georgia, Hawaii, Illinois, Indiana, Iowa, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New Mexico, New York, North Dakota, Oregon, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

[§] Data have been statistically adjusted by using multiple imputation to account for unknown or missing transmission category; therefore, values might not sum to column subtotals and total.

[¶] EAPCs indicate the per-year change, on average, in the percentage virally suppressed. EAPC p-values <0.05 indicated statistically significant trends, whereas EAPC p-values ≥0.05 indicated no significant trend.

[**] Hispanics/Latinos can be of any race.

increased 9.4% per year overall, and it increased among those aged 13–19, 20–24, 25–34, 35–44, and 45–54 years. The percentage virally suppressed did not significantly change among Black MSM aged ≥55 years. Among Hispanic MSM, the percentage who were virally suppressed increased 6.8% per year overall, and it increased among those aged 20–24, 25–34, 35–44, and 45–54 years; it did not significantly change among those aged 13–19 or ≥55 years. The percentage of White MSM who achieved viral suppression increased 4.4% per year overall, and it increased among those aged 13–19, 20–24, 25–34, 35–44, and 45–54 years; it did not significantly change among those aged ≥55 years.

Summary

What is already known about this topic?

Men who have sex with men (MSM) account for two thirds of annual diagnoses of human immunodeficiency virus (HIV) infection. Increased linkage to care and viral suppression among MSM with HIV infection can prevent transmission.

What is added by this report?

During 2014–2018, diagnoses of HIV infection among MSM in 33 jurisdictions decreased 2.3% per year overall, but Black, Hispanic/Latino, and younger (aged 13–19 years) MSM experienced a small or no decrease. Linkage to care within 1 month and viral suppression within 6 months of diagnosis increased overall (2.9% and 6.8% per year, respectively) and among all racial/ethnic groups.

What are the implications for public health practice?

Intensified prevention efforts for Black, Hispanic/Latino, and younger MSM are needed.

Discussion

Annual diagnoses of HIV infection among MSM in the 33 analyzed jurisdictions decreased during 2014–2018. However, the rate of annual decrease among Black MSM (1.3%) was less than that among White MSM (4.8%), diagnoses did not significantly change among Hispanic MSM or any MSM aged 13–19 years, and diagnoses increased among Black and Hispanic MSM aged 25–34 years. In addition, more diagnoses occurred overall among Black MSM than among other racial/ethnic MSM groups. CDC recently reported that racial/ethnic disparities in estimated rates of diagnosis of HIV infection among MSM increased during 2010–2015, and Black MSM had an HIV diagnosis rate that was 9.3 times that of White MSM in 2015 (*5*). These data warrant intensified prevention efforts for Black and Hispanic MSM, especially those aged 25–34 years, and all MSM aged 13–19 years.

Increased linkage to care promotes viral suppression, which effectively prevents HIV transmission. During 2014–2018, linkage to care within 1 month and viral suppression within 6 months of diagnosis increased (2.9% and 6.8% per year, respectively). Increases were highest among Black and Hispanic MSM. However, among all MSM included in the 2018 analysis, only 67.2% achieved viral suppression within 6 months of diagnosis. Moreover, during 2018, proportionally fewer Black MSM were linked to care and achieved viral suppression than did other racial/ethnic MSM groups. Limited health care access, housing instability, poverty, and systemic racism commonly impede linkage to care and viral suppression (*6*,*7*). Addressing these factors might improve outcomes.

The findings in this report are subject to at least two limitations. First, only 33 of the 51 U.S. jurisdictions had complete laboratory reporting of CD4 and viral load results during 2014–2018. Therefore, data do not represent all diagnoses of HIV infection among MSM during 2014–2018. Second, using EAPCs with p-values <0.05 to identify trends might result in clinically meaningful temporal changes being deemed as having no significant change.

Providing antiretroviral therapy for both HIV preexposure prophylaxis and treatment can prevent HIV infection and, subsequently, the need for linkage to care and viral suppression among MSM (*8*,*9*). However, during 2017, Black and Hispanic MSM who had discussed preexposure prophylaxis with a medical provider were less likely than were White MSM to receive prescriptions for preexposure prophylaxis in 23 jurisdictions (*8*). Providers' implicit racial biases toward Blacks and Hispanics often promote treatment nonadherence (*10*), which inhibits viral suppression (*9*). Therefore, interventions might need to address systemic racism and concomitant racial biases within health care systems (*7*). CDC encourages use of interventions that address social determinants of health[¶] that underlie the high risk for HIV infection among MSM of all races/ethnicities and ages. Such interventions might help prevent HIV infection and eliminate racial/ethnic disparities in HIV infection among MSM.

[¶] https://www.cdc.gov/socialdeterminants/docs/sdh-white-paper-2010.pdf.

Corresponding author: William L. Jeffries IV, wjeffries@cdc.gov, 404-639-5388.

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[1]Division of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, CDC; [2]ICF International, Inc., Atlanta, Georgia

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The Community Health Worker Role on the HIV Care Continuum

A Community Health Worker (CHW) is a member of the health care workforce who reduces the burden and stress of large caseloads and enhances traditional Ryan White HIV/AIDS Program care teams. This fact sheet is an introduction to CHWs. It defines CHW, lists other titles by which CHWs are referred, describes how CHWs enhance HIV care teams, and identifies the roles CHWs perform.

CHW Defined

As defined by the American Public Health Association, a "CHW is a frontline public health worker who is a trusted member of and/or has an unusually close understanding of the community served. This trusting relationship enables the CHW to serve as a liaison/link/intermediary between health/social services and the community to facilitate access to services and improve the quality and cultural competence of service delivery.

A CHW also builds individual and community capacity by increasing health knowledge and self-sufficiency through a range of activities, such as outreach, community education, informal counseling, social support, and advocacy."[1]

CHWs Are Also Known As . . .

CHWs are known by a variety of titles. Some of the most common are:

- Peer Educators
- Outreach Workers
- Patient/Peer Navigators
- Peer Counselors
- Health System Navigators
- Linkage to Care Coordinators

How CHWs Enhance HIV Care Teams

CHWs enhance HIV care teams by working in partnership with case managers, nurses, doctors, social workers, and other service providers to address the medical, social, and economic needs of people living with HIV (PLWH). CHWs are often referred to as a bridge between the client, the community where the client lives and medical clinics or community-based organizations. As such their work is bi-directional. CHWs have a role in improving the health of clients and their communities and they also influence the program and the clinical setting in which they function. CHWs unique ability to connect with the community can have an impact on all aspects of the *Triple Aim*: "improving client experience, improving health care, and lowering cost."[2]

Within HIV care, CHWs are a bridge between HIV clinics and support service agencies and health care organizations.

CHW Roles

The *Community Health Worker Core Consensus Project* (C3) developed 10 core CHW roles. Although these roles are not HIV-specific, they can be used to develop tasks and responsibilities for CHWs on your HIV care team.

The following table lists the CHW roles developed by C3 and provides an example of how each role is performed in one or more stages of the HIV Care Continuum.

CHW Role[3]	How the Role is Performed Across the HIV Care Continuum
1. Cultural Mediation Between Individuals, Communities and Health and Social Systems	Support and increase linkage to and retention in care and adherence to treatment by educating clients about treatment and the appropriate use of services
2. Providing Culturally Appropriate Health Education and Information	Improve adherence to treatment by providing structured educational sessions on topics such as HIV, viral life cycle, treatment, and side effects
3. Care Coordination, Case Management, and System Navigation	Support retention in care by assisting clients with referrals for transportation, housing, behavioral health treatment, and other support services
4. Providing Coaching and Social Support	Support retention in care and treatment adherence by providing emotional support to clients
5. Advocating for Individuals and Communities	Support the entire HIV Care Continuum by serving on Ryan White Planning Councils
6. Building Individual and Community Capacity	Support retention in care and reduce barriers by collaborating with medical, behavioral health, and social services providers
7. Providing Direct Service	Support treatment adherence by picking up prescriptions for clients and educating them on the medication and its side effects
8. Implementing Individual and Community Assessments	Support linkage to and retention in care by working with case managers to assess clients' needs and develop care plans
9. Conducting Outreach	Support linkage to and retention in care by re-engaging clients lost to follow-up
10. Participating in Evaluation and Research	Document activities in electronic health records

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Boston University School of Social Work
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