

CHAIN REPORT 2023-1



**Women with HIV in the
Tri-County Region:
Service Needs,
Engagement in Care, and
Outcomes**

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C.H.A.I.N. REPORT

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Introduction

Women with HIV (WWH) are an understudied and underserved population (Dunaway et al., 2022; Labisi et al., 2022). In 2019, nearly one-fifth of all new HIV diagnoses in the United States (U.S.) were documented in women (CDC, 2022a); Black and African American women accounted for more than half of these (CDC, 2021). Heterosexual contact was the most common mode of transmission, and the greatest number of new diagnoses were concentrated in women ages 25-38 years (CDC, 2021). Prior research, including CHAIN reports, has shown women are less likely than men to be routinely tested for HIV, enter into HIV care later (Duffus et al., 2012; Yomogida & Aidala, 2015). WWH more often miss scheduled medical appointments relative to all people with HIV (PWH), more likely to drop out of care, and have lower rates of viral suppression (Aidala et al., 2023; CDC, 2022b; CDC, 2023).

The material conditions of women's day-to-day lives, as well as unique psychological and emotional needs, have contributed to gender- and HIV-related health disparities. Women at most risk of, or living with, HIV are more economically disadvantaged than their male counterparts (CDC, 2020b; Riley et al., 2007). Women with HIV (WWH) experience disproportionate rates of exposure to trauma and violence, especially interpersonal violence, and five times the rate of recent post-traumatic stress disorder (PTSD) compared to the female population nationally (Machtlinger et al., 2012; CDC 2024). They experience higher rates of mental health symptoms including depression, anxiety, and post-traumatic stress disorder than men with HIV, and women without HIV (Aidala et al., 2023; CDC, 2022b; Machtlinger et al., 2012; Waldron et al. 2021;).

In addition to behavioral health needs, several social factors impact the ability of WWH to be engaged with and adherent to HIV treatment and achieve sustained viral suppression. Housing instability, current or past, is a predictor for unsuppressed viral load (Aidala et al. 2023; Riley et al., 2019). Other social factors influencing treatment engagement and adherence include transportation, childcare, provider-patient relationships, intersectional stigma, and social support (Geter et al., 2019; Lambert et al., 2018).

Without due consideration for the specific needs of WWH, the Ending the Epidemic goal of increasing viral suppression among those diagnosed with HIV to 95% by 2025 and maintaining that figure will not be achieved (CDC, 2023).

Based on 2021 surveillance data, in the Tri-County Region (Tri-Co) of Westchester, Putnam, and Rockland Counties, there were 3540 individuals with diagnosed HIV, 1190 (33.6%) of whom are women. There are slight differences in the rates of engagement along the HIV care continuum between females and males with greatest disparities seen among PWH in Putnam County (Table 1). However, there are important differences when we examine women of different age groups and race/ethnicity.

The overall goal of this report is to examine facilitators and barriers to entry and retention in care and HIV health outcomes among cisgender women living with HIV in Tri-County. We consider if engagement in care is influenced by sociodemographics or life circumstances prior to HIV diagnosis. We also examine patterns of service need and service utilization and care continuum outcomes. We analyze potential differences among WWH by age and race/ethnicity. This information can be used to understand what may be the unique and unmet service needs of WWH in Tri-County to inform women-centered care, where appropriate.

Table 1. HIV Care Continuum among People Diagnosed with HIV in the Tri-County Region (2021)

Region and County	All	Female	Male
Tri-County Region			
HIV Prevalence	3540	1190	2350
Evidence of Care	88%	89%	88%
Retained in Continuous Care	68%	69%	66%
Virally Suppressed	81%	81%	82%
Westchester County			
HIV Prevalence	2820	970	1850
Evidence of Care	88%	90%	87%
Retained in Continuous Care	67%	69%	65%
Virally Suppressed	81%	81%	81%
Putnam County			
HIV Prevalence	140	30	110
Evidence of Care	93%	85%	95%
Retained in Continuous Care	59%	54%	60%
Virally Suppressed	86%	77%	89%
Rockland County			
HIV Prevalence	580	190	390
Evidence of Care	88%	87%	88%
Retained in Continuous Care	72%	72%	72%
Virally Suppressed	81%	79%	83%

*All percentages out of people living with diagnosed HIV.

Figures obtained from the Ending the Epidemic dashboard maintained by the CUNY Institute for Implementation Science in Population Health (<https://etedashboardny.org/data/prevalence-and-care/hiv-care-cascades-nys/>).

Key Findings

- Tri-County women with HIV (WWH)¹ face multiple socioeconomic disadvantages. Rates of high school completion are lower, and poverty level income rates are higher, compared to other PWH in the region. More than one-third (36%) has experienced two or more episodes of homelessness including substantial numbers without regular housing at the time of their diagnosis. Need for financial assistance or inability to pay for basic living expenses is high - reported by 77% of all women at their most recent interview.
- The great majority of women currently have their own housing where they have been living for six months or more. However, almost all (90%) nonetheless have a need for housing assistance. Substantial numbers of women (72%) are severely burdened by housing expenses, even though they may be receiving some type of assistance. In addition to rent burden, housing

¹ All results are specific to PWH. Any mention of women in the results refers to cisgender WWH in the Tri-County Region

problems also include inability to pay utilities, serious housing quality issues, need for accessible unit, or experiencing domestic violence or other unsafe situation.

- One-third of women were living with minor children in the household at their most recent interview. Reported need for childcare services was low.
- The largest gaps observed between the need for and receipt of services among women were for gynecological and other women's health services, transportation, housing, and mental health services. Annual visits for gynecological care are recommended for all women for breast, cervical, and other cancer screenings and family plan services as may be needed. However fewer than one-third of WWH had any visits for women's health services in the past 12 months. More than one in four WWH who needed transportation, housing, or mental health services at their most recent interview did not receive it.
- Reported reasons for not receiving mental health services were related to not being able to get an appointment with a mental health professional, not knowing where to go and/or distrusting that services would help with their problems. Both an expansion of services and better dissemination of information about service programs in Tri-County is needed.
- Over half of WWH (53%) have service needs in more than three medical, behavioral, or social service areas. Over three areas of service need substantially reduces rates of engagement in care, antiretroviral (ARV) adherence, and viral suppression in bivariate analyses. Need for mental health and/or substance use services is associated with worse care continuum outcomes in analyses controlling for demographics and other services. Need for transportation assistance is associated with not receiving HIV care that meets clinical practice standards in terms of recommended visits for monitoring and care, receiving appropriate examinations, and tests.
- Women were more likely than other PWH to report being diagnosed with non-HIV health conditions. Women reported an average of three comorbidities in addition to HIV at their most recent interview. Rates were especially high among women ages 50+ years. Over half report 4 or more diagnosed comorbidities, many associated with increased risk for mortality among PWH. It is important to further investigate support for care coordination to synchronize women's health care from multiple providers and specialists, including behavioral health providers.
- There were racial/ethnic disparities in service needs and care continuum outcomes. Although caution must be exercised when interpreting these results due to the relatively small subsample of White women in the current study, in general they had fewer unmet needs and better HIV outcomes. However, there were important differences when comparing Black and Latina women which warrants considering each a separate priority population.

Methods

Study Sample

The data for this report are based on personal interviews with New Yorkers living with HIV collected by the Community Health and Advisory Information Network (CHAIN) Project. Participants are recruited through a two-stage stratified probability sampling strategy designed to enroll a representative sample of PWH, ages 18 and older, who had some contact with the service system within the past 12 months. In the Tri-County region, a repeated cross-sectional design has been implemented since 2008. Recruitment occurs about every two years. After two years,

individuals are eligible for inclusion in the next cross-sectional sample and at each recruitment period; thus about 20% of the Tri-County cohort had participated in an earlier interview period and data are available for follow-up analyses. This study uses data from CHAIN interviews conducted with PWH living in the Tri-County region between 2008 - 2020. There are 539 observations from 334 cisgender women, 265 observations from 187 heterosexual cisgender men (no reported same sex experience), 198 observations from 139 men who have sex with men (MSM, men who have sex with men who may or may not also have sex with women), and 6 observations from 5 transgender PWH (transwomen or transmen).

Study Variables

The CHAIN Project gathers data from the perspective of PWH on their lives and experiences, including socioeconomic conditions, family and living situations, physical health and medical care, traumatic events, and experiences accessing medical and social services, as well as HIV care continuum and health outcome indicators. Variables used for analyses in this report are summarized below.

Background Characteristics and Experiences

Housing Status and Living Situation. Respondents were classified as living in stable, unstable, or homeless situations. Individuals who are unstably housed are those not currently in permanent housing, but not experiencing homelessness, including those in a transitional housing program, in alcohol or drug (AOD) treatment housing with no other address, or temporarily doubled up with friends or family in the past six months. Individuals who describe themselves as homeless or report living in a homeless shelter or a single room occupancy (SRO) or welfare hotel, or sleeping on the street or other place not meant for sleeping in the past six months were considered homeless. Household composition is noted through total household size, the presence or absence of children under 18 years, and partnership status.

Social Networks, Disclosure, and Stigma. Respondents were asked to indicate the number of close friends, family members, and acquaintances and separately the percentage of their social network aware of their HIV status. A standard measure (Berger et al., 2001) captured multiple dimensions of HIV-related stigma: enacted stigma (actual experiences of discrimination, devaluation, and prejudice by others based on HIV status); disclosure concerns (anticipated stigma and expectation of negative treatment following disclosure of HIV status); and internalized stigma (self-acceptance of negative beliefs and assumptions about PWH).

Physical Health Comorbidities and Medical Care Indicators. Non-HIV comorbid conditions and their prevalence were included measures for respiratory conditions (asthma, chronic sinusitis, and other breathing problems such as chronic obstructive pulmonary disease (COPD), bronchitis, or emphysema), hypertension/high blood pressure, cardiovascular disease (CVD) or heart disease, diabetes, arthritis or rheumatism, high cholesterol, cancer, hepatitis, and cervical abnormalities for women. HIV care was coded as "comprehensive primary medical care" if, during the past six months, the respondent answered there was always someone they could go to for routine checkups, vaccinations, or medical tests; or for information or advice about health concerns; and someone they could call 24 hours a day in case of a medical emergency. Satisfaction with current medical care provider was measured by a summary scale based on answers to a series of questions asking whether their current medical provider spends enough time with them, understands what may be

bothering them, shows interest and concern, and their overall rating of how satisfied they are with medical care they get from their provider.

HIV Clinical Care and Health Outcome Measures

The outcome measures selected for this study reflect participant engagement in HIV care and treatment and the quality of care received. Consistent care is a measure of retention in HIV care; respondents engaged in consistent care have not missed any or only one of their scheduled HIV-related medical appointments in the past six months, nor did they report a “dropout” period during which they intentionally stopped going to the doctor. Appropriate care is a quality measure that refers to care that meets the minimal clinical practice standards based on HHS HIV/AIDS Bureau (HAB) (HAB.HRSA.gov) and NIH AIDSInfo guidelines (AIDSinfo.nih.gov) at the time of their interview. Adherent ARV use indicates the participant is taking an HIV ARV medication recommended by a physician that is in line with DHHS guidelines at the time of the interview, “exactly as prescribed, almost never missing a dose.” Viral suppression is determined from a respondent’s self-reported viral load or, in limited cases, a medical provider’s description of their viral load, and their interview date.

Table 2. Service Need and Utilization Measures

Variable	Definition
Need Financial Assistance¹	Yes, if respondent did not have enough money in household for rent, utilities, food, out-of-pocket medical or dental care, transportation, ² clothing, or recreational activities “once in a while,” “fairly often,” or “very often” in past 6 months.
Receive Financial Assistance	Yes, if respondent and/or a member of household received unemployment insurance, worker’s compensation, Social Security Disability Income (SSDI), Supplemental Security Income (SSI), Temporary Assistance for Needy Families (TANF/welfare), and/or a cash check from the Department of Administrative Services (DAS).
Need Food Assistance³	Reporting not enough money for food that the individual or family needs sometimes to very often in past 6 months, or sometimes/often there is not enough to eat, or the respondent has gone a whole day without eating in past 30 days, or they report a need for services or help with food, groceries, or meals in past 6 months.
Receive Food Assistance	Yes, if respondent and/or a member of household received Supplemental Nutrition Assistance Program (SNAP) or Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) assistance in past 6 months OR if the respondent received group setting meals, home delivered meals, used a free food pantry, and/or received other self-reported food assistance in past 6 months.
Need Housing Assistance	Homeless or unstably housed in past 6 months; OR rent burdened (report difficulty paying rent in past 6 months or insufficient income to secure housing indicated by a Fair Market Rent (FMR) >50% of income); OR report needing help or assistance in area of housing in past 6 months to obtain stable, secure, and appropriate housing, address habitability issues (e.g., no heat, damaged wiring), or avoid eviction or other housing loss.

Variable	Definition
Receive Housing Assistance	Received tenant-based or facility-based permanent rental assistance OR “practical” housing assistance in past 6 months that resolved a need or problem or made “some” or “a great deal” of progress with resolving housing needs.
Need Transportation Assistance	Self-reported need for transportation assistance for any reason or report that a lack of transportation resulted in delayed or missed medical or social services in
Receive Transportation Assistance	An agency provided the respondent with ambulette, ride services (e.g., Access-A-Ride), transportation vouchers (e.g., MetroCards), or reimbursement for use of a private vehicle.
Need Childcare Assistance⁴	Self-reported need for childcare assistance for any reason or report that a lack of childcare resulted in delayed or missed medical or social services in past 6
Receive Childcare Assistance⁴	Self-reported receipt of childcare assistance.
Need Mental or Emotional Health Service(s)⁵	Self-reported need for help or assistance with emotional or psychological difficulties including relationship problems in past 6 months OR low mental health functioning (Mental Component Score (MCS) ≤ 42). ⁶
Receive Mental or Emotional Health	Any psychological or emotional counseling or therapy, including talking to a pastor or religious counselor or attending a support group.
Need Alcohol or Drug (AOD) Treatment	Self-report that alcohol or substance abuse treatment is moderately to extremely important OR current problem drinking ⁷ OR current hard drug use. ⁸
Receive AOD Treatment	Any alcohol and substance abuse treatment services including Alcoholics Anonymous (AA) and/or Narcotics Anonymous (NA) in past 6 months.
Need Medical Case Management (MCM)	1) No HIV primary care in the last 12 months OR (2) cessation of care or no appointments for 6 or more months OR (3) more than two missed scheduled appointments in past 6 months OR (4) no CD4 or VL test in past 6 months OR (5) no ARVs or incomplete adherence to ARVs.
Receive MCM	In past 6 months, a case manager helped with at least one of the following: (1) getting a referral for specific medical services OR (2) keeping an appointment for medical care OR (3) developing a plan to take your HIV medications in the right way OR (4) taking ARVs.
Need Social Services Case Management (SSCM)	Need for housing assistance OR food assistance OR transportation assistance.
Receive SSCM	In past 6 months, a case manager helped with at least one of the following: (1) revising or developing a plan for dealing with needs OR (2) helping with a referral for a specific social service need OR (3) periodically checking in to see how respondent is doing or asking if respondent is receiving the services they need OR (4) filling out forms for benefits or entitlements OR (5) keeping an appointment for social services.
Need Women’s Health Services⁹	All women need women’s health care services (e.g., gynecological care, breast, cervical or other screening for female cancers, and/or family planning services).
Receive Women’s Health Services⁹	Self-reported receipt of women’s health care services such as gynecological or family planning services in past 6 months.

Variable	Definition
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- ¹ Need financial assistance is the same measure to as “Inability to Pay Expenses” in earlier CHAIN reports.
- ² Transportation was not added to the question about unaffordable expenses until 2015.
- ³ Need food assistance is the same measure as “Food Insecurity” in earlier CHAIN reports.
- ⁴ Need for and receipt of childcare assistance was not asked in interviews conducted before 2009.
- ⁵ Need and Receive Mental or Emotional Health Services shortened to Need and Receive Mental Health Services for remainder of report.
- ⁶ Mental Component Summary Score (MCS) <42.0 on MOS-SF36 indicates clinically significant mental health symptoms (Ware et al, 1994).
- ⁷ Problem drinking refers to screening positive on a standardized measure, the CAGE questionnaire (Ewing, 1984), or drinking weekly or more often and having 5 or more drinks on days when drinking (indicator of ‘binge’ drinking).
- ⁸ Current hard drug indicated by use of heroin, cocaine, crack, or methamphetamine in the past 6 months.
- ⁹ Need for and receipt of women’s health care services are only evaluated for female respondents.

Table 3. HIV Clinical Care and Health Outcome Measures

Variable	Definition
Consistent Care	Missed no or only 1 scheduled appointment for HIV medical care during past 6 months AND did not have a period of ‘drop out’ since last interview when intentionally stopped going to the doctor and had no HIV medical appointments for 6 months or more.
Appropriate Care¹	Appropriate care meets minimal clinical practice standards at the time of interview. ¹ Prior to 2013, at least one visit with blood work and complete physical in past 6 months if CD4 count is 350 or above and viral load is 200 or less; or at least 2 visits with at least one blood work and one complete physical if CD4 count is less than 350 or viral load is over 200. After June 2013, not appropriate care if not taking ARV, regardless of CD4 count or viral load.
Adherent ARV Use	Adherent ARV use indicated by taking any recommended ARV regimen and report taking medications “exactly as prescribed, almost never missing a dose” and report not missing any medications in the two days preceding the interview. Not adherent includes those who are not taking any antiretroviral medication and those taking medications listed under “not recommended” or “should be changed” regimens in the DHHS’s guidelines in effect at the time of the interview.
Viral Suppression²	Self-reported most recent HIV viral load as an actual numerical value or report medical provider designation as “undetectable,” or “good.” Viral load of <200 copies or provider report as “undetectable,” or “good” were coded as “suppressed viral load” and >200 copies or provider report as “bad” were coded as “unsuppressed viral load.”

¹ Based on HHS HIV/AIDS Bureau (HAB) criteria for minimum clinical standards of care (HAB.HRSA.gov) and NIH AIDSInfo guidelines (AIDSinfo.nih.gov).
² Validation studies comparing CHAIN study coding of respondent self-report viral load results as ‘suppressed’ or unsuppressed has found 86% concordance or overall agreement with lab reports in HIV surveillance data (Penrose & Aidala, 2019).

Analysis

We used descriptive statistics (means, standard deviations, and percentages, etc.) to summarize the study sample’s sociodemographic characteristics, living situations, social networks, experiences with stigma, physical health and medical care, service needs, utilization, and gaps, entry into and engagement with HIV care, and health outcomes. If a respondent was interviewed more than once in the sample, data from their most recent interview is used for all descriptive statistics except for details about their life circumstances when they received their diagnosis and their entry into care, which was taken from their first CHAIN study interview.

We used bivariate and multivariate analyses to identify associations between potential facilitators of or barriers to timely entry into care, engagement with HIV medical care, and clinical health outcomes. Random effects logistic regression models adjusting for correlation among repeated observations on individuals will be used. Because the Tri-County sample is a repeated cross-sectional design, results will describe population or subgroup experiences.

While tables in the report and appendix will present data on the full sample as well as cisgender women, heterosexual cisgender men (no reported same sex experience), cisgender MSM (men who have sex with men who may or may not also have sex with women, and transgender respondents (transwomen or transmen), the text of the results section will focus on women. Women's results (tables and text) will also be disaggregated by race/ethnicity (Black, Latina, and White/Other) and age (18-34, 35-49, and 50+).

Results

Sample Characteristics

Women. Most women in this sample were ages 50 or older (Table 3). Over half were Black and slightly less than one-third were Latina. The majority of women were born inside the continental United States. The percentage of women that had less than a high school degree and a high school diploma or GED were about equivalent (42% and 41% respectively), and a few (17%) received an education more than high school. Just over a fourth of the sample were employed and 57 percent of the sample had income below the poverty threshold. The majority of women currently have stable housing but 15% are unstably housed (doubled up in someone else's home or in a temporary or transitional housing facility) or are homeless. One-third live in households with children under 18 years.

Gender comparisons. When comparing characteristics of women to respondents of other genders in the sample, women were most similar to heterosexual men across a few categories (e.g. place of birth, partner status, and employment status) (Table 3). Women were more similar to MSM in terms housing situation. A higher proportion of women had income below the poverty threshold and had children in the household than other Tri-County PWH. Women have similar lifetime rates of problem substance use (problem drinking and/or hard drug use) but are less likely than other to report current use.

Racial/ethnic comparisons among women are presented in Appendix Table 1. A majority of women, regardless of race/ethnicity did not have a partner (53%) and had poor physical health functioning (64%). In this sample, the only women that were born in Puerto Rico were Latinas; the majority of Black and White women were born in the United States. Similar percentages of Black and Latina women had partners that they were not living with (25% and 24% respectively). A greater proportion of White women had at least a high school/GED level of education. Additionally, in this sample, White women were slightly more likely to be aged 50 or older, live in Rockland County, be unemployed, and be homeless.

Sociodemographic characteristics of women by age. Across all age groups, the majority of women were born in the United States, lived in Westchester County, and had a stable housing situation (Appendix Table A2). A much greater proportion of women aged 50 or older had poor physical health functioning, compared to women who were less than 50 years old. The highest percentage of low mental health functioning (59%) was found among women aged 35 to 50 years old and the

lowest percentage was found among women aged 18 to 34 years old. Younger women reported the highest levels of employment, but yet were most likely to have income below the poverty threshold.

Table 3. Sample Characteristics by Gender

Total Number of Individuals:		Total Sample	Women	Hetero Men	MSM
		(n=665)	(n=334)	(n=187)	(n=139)
Age Group	Ages 18-34	11%	11%	5%	22%
	Ages 35-49	33%	36%	26%	36%
	Ages 50+	55%	53%	70%	42%
	Mean age (std dev)	49.8 (11.5)	49.4 (11.1)	53.3 (10.3)	46.2 (12.5)
Race/Ethnicity	White	12%	8%	12%	23%
	Black	55%	60%	58%	40%
	Latina/Latino	29%	28%	26%	35%
	Other	4%	4%	4%	2%
Place of Birth	United States	66%	67%	66%	66%
	Puerto Rico	5%	6%	6%	2%
	Foreign	28%	27%	28%	32%
County of Residence	Westchester	82%	82%	83%	82%
	Putnam	1%	1%	2%	2%
	Rockland	16%	17%	15%	16%
Partner Status	No partner	57%	53%	56%	68%
	Partner, not living with	23%	24%	22%	18%
	Partner, living with	21%	23%	22%	14%
Household with Children <18	Yes	22%	33%	14%	7%
Education	Less than High School	37%	42%	38%	22%
	High School/GED	44%	41%	49%	47%
	More than High School	19%	17%	13%	32%
Employment	Full-time	13%	11%	10%	23%
	Part-time/Irregular	15%	15%	13%	18%
	Not working	72%	74%	77%	59%
Income Below Poverty Threshold¹	Yes	50%	57%	50%	36%
Housing Situation²	Stable	83%	85%	80%	85%
	Unstable/Doubled Up	14%	13%	16%	15%
	Homeless	2%	2%	4%	0%
Problem Substance Use³	Never	40%	43%	36%	40%
	Past	41%	42%	43%	38%
	Current	18%	15%	21%	21%
Ever Jail or Prison	Yes	37%	31%	56%	24%
Low Mental Health Functioning⁴	Yes	48%	47%	43%	54%
Poor Physical Health Functioning⁵	Yes	58%	64%	62%	41%

	Total Sample	Women	Hetero Men	MSM
Total Number of Individuals:	(n=665)	(n=334)	(n=187)	(n=139)

The total sample includes transgender individuals (n=5); separate analysis of transgender PWA is not displayed as the sample size is too small for reliable estimates.

- ¹ Income below the U.S. Census Poverty Threshold calculated by household composition and household income.
- ² Homeless= sleeping on the street, in a shelter, or in an SRO or welfare hotel with no services. Unstably housed = not currently in permanent housing but not literally homeless, including those in a transitional housing program, in AOD treatment housing with no other address, or temporarily doubled up with friends or family during past six months.
- ³ Problem substance use indicated by hard drug use (heroin, cocaine, crack, methamphetamine; and/or problem drinking indicated by the CAGE assessment (Ewing, 1984) or drinking 5+ drinks weekly or more often.
- ⁴ Mental Component Summary score (MSC) ≤ 42.0 on MOS-SF12, indicating clinically significant mental health symptoms.
- ⁵ Physical Component Summary score (PCS) ≤ 50.0 on MOS-SF12, indicating experiencing limitations in physical health functioning.

Housing and Living Arrangements

The housing and living arrangements of women were similar to the total sample in many ways (Table 4). Nonetheless, 1 in five (19%) women were experiencing housing problems and need for assistance with housing issues – including not having a permanent place to live, being seriously rent burdened, facing eviction for any reason, living in housing that fails to meet habitability standards (heat, plumbing, electricity, mold etc.), experiencing violence or other dangerous situation or needing an accessible unit. Women were also less likely to live alone and more likely than others to live with children as a solo parent.

Racial/ethnic and age comparisons among women. When comparing racial/ethnic differences among women, Latina women were slightly more likely to be in a stable housing situation. (Appendix Table A1). The majority of women across all age groups reported having stable housing. However, younger women aged 18 to 34 were more likely to be in an unstable housing situation or doubled up compared to those aged 35-50 or 50 and older (17% compared to 12% and 13% respectively) (Appendix Table A2). Fifty-three percent of women aged 35 to 50 years were living in households with children under 18 years old.

Social Networks, Disclosure, and Stigma

The numbers of close friends or family were similar across genders, but the total number of people in social network, including friends, family, and acquaintances were slightly smaller in women than the total sample of PWH (Table 5). On average, half of a women’s social network members and a little over a third (37%) of their friends and family were unaware of their HIV status. A little less than half the women in the sample (46%) were living in households with at least one member unaware of their HIV status. Women appeared to have slightly higher scores than the total population for enacted stigma (Table 5).

Racial/ethnic comparisons among women. Social networks varied among different racial/ethnic groups (Appendix Table A3). White/Other women had the fewest number of close friends or family to help or advice, as well as the smallest total network size, including friends, family, and acquaintances. Black had the largest network size. However Black women had a larger proportion of social network members unaware of their HIV status, and Latinas were most likely to live in a household where at least one person was aware of their status. Latinas had higher scores on enacted and disclosure stigma subscales.

Age comparisons among women. Social networks also differed among age groups. Younger women between the ages of 18 and 34 had the lowest average number of close friends or family.

Additionally, total network size, including friends, family members, and acquaintances increased with each age group, suggesting that social networks grow with age. Younger women reported the highest percentages of friends, family, and social network members unaware of their HIV status. However, women ages 35 to 49 had the highest percentage of women who lived in a household with at least one member unaware of their HIV status. Older women aged 50 or older scored highest on enacted HIV stigma subscale, while women between the ages of 18 and 34 scored highest on disclosure and internalized HIV stigma scales (Appendix Table A4).

Table 4. Housing and Living Arrangements among Women

	Total Sample	Women
	(n=665)	(n=332)
Housing Situation		
Stable, in own place	84%	86%
Temporarily doubled up with others	10%	8%
Temporary/transitional housing program ¹	3%	4%
Homeless: in shelter, SRO, street, place not meant for sleeping ²	2%	2%
Self-reported Housing Problems³		
<i>Regardless of housing status respondent reported:</i>		
Homeless, don't have a permanent place to live, unable to pay rent, unable to pay utilities, facing eviction, being discharged from program with no resources to secure housing, lacking heat or working plumbing, experiencing domestic violence or other dangerous situation, in need of an accessible unit	17%	19%
Type of Need for Housing Assistance		
No housing need	11%	11%
Need rental assistance ⁴	72%	73%
Need permanent housing ⁵	13%	12%
Need permanent supportive housing ⁶	4%	4%
Household composition		
Lives alone	49%	41%
Lives with child(ren), solo parent	9%	15%
Lives with partner	12%	12%
Lives with partner and children	8%	10%
Lives with other adults	16%	14%
Lives with other adults and children	5%	8%

Note: Data from most recent interview.

1. Transitional housing program, mental health, drug treatment, other residential treatment setting, corrections halfway house.
2. Street, shelter, limited-stay SRO or welfare hotel, car, abandoned building, or another place not intended for sleeping
3. Answers to questions: "Please tell me if, in the last 6 months, that is since ___ (reference date), you had a problem or needed assistance in the area of housing? (if YES) Please tell me a little bit more about your need for assistance with housing or the problem you had.
4. Need Rental Assistance: Currently in own housing but seriously rent burdened indicated by reported difficulty paying rent fairly often or very often in the past 6 months; current income insufficient income to secure housing (FMR>50% of income).
5. Need Permanent Housing: Currently homeless, temporarily doubling up, or living in temporary or transitional housing for any time during the last 6 month; or currently in own housing but facing eviction (for any reason) or needing to move; and not needing supportive housing (defined below).
6. Need Permanent Supportive Housing: Currently homeless, temporarily doubling up, or living in a temporary/transitional housing program for any time during the last 6 months; or currently in own housing but facing eviction or housing loss due to non-payment or other reason, AND experiencing persistent mental illness or substance use disorder, or chronically homeless, as indicated by long duration or multiple episodes of homelessness.

Table 5. Social Networks, Disclosure, and HIV Stigma

	Total Sample	Women
	(n=)	(n=)
	(n=662)	(n=332)
Social Networks		
Mean (std) number of close friends or family to help or advise	14.48 (17.4)	13.90 (17.0)
Median number of close friends or family to help or advise	9	8
% no or only one close friend or family member	1%	<1%
Mean (std) number in total network (friends, family, & acquaintances)	28.97 (28.5)	26.18 (28.4)
Median number in total network (friends, family, & acquaintances)	19	16
Disclosure of HIV status		
Rate of Friends or family members unaware of HIV status	39%	37%
Rate of Social network members unaware of HIV status	52%	50%
% Living in household with at least one member unaware of HIV status ¹	44%	46%
HIV Stigma Scale Scores²		
Enacted stigma (mean, std)	56.33 (18.8)	58.18 (19.8)
Disclosure stigma (mean, std)	75.15 (16.3)	74.85 (17.3)
Internalized stigma (mean, std)	47.76 (17.3)	48.55 (18.6)

1. This percentage is calculated from the subset of individuals that live with others.

2. HIV-related stigma is measured by a shortened version of the instrument by Berger et al. (2001); scores standardized to range from 0 -100 with higher scores indicating greater HIV stigma. Full scale not administered at every interview. N=331 for enacted, 129 for internalized, 129 for disclosure stigma among women; and 661 for enacted, 251 for internalized, 251 for disclosure stigma among the full sample.

Exposure to Trauma and Violence

The Tri-County questionnaire included a brief screener for exposure to violence or trauma. Respondents were asked a series of questions: People sometimes have experiences that are really traumatic and frightening like being in a life-threatening accident, being physically attacked or raped, or seeing someone seriously injured or killed. 1. Did something terrible ever happen to you so that you thought you might get killed or hurt very badly? 2. Did you ever see anything terrible happen to someone else so that you thought they might get killed or hurt very badly? 3. Did anything like that happen in the past year (12 months)?

Exposure to trauma was highly prevalent among PWH across all gender groups (Table 6). Almost half of women (47%) have directly experienced a violent or traumatic event when they feared that they might get killed or hurt very badly. If we consider direct exposure or witnessing a violent or traumatic event 59% of women have had one or more traumatic experiences. Although most exposures happened in the past, 9% have experienced or witnessed a violent or traumatic event within the twelve months prior to most recent interview.

Although questions about specific events were not asked, a number of respondents volunteered additional descriptive information of the events that occurred. Among those that did volunteer an answer, some of the most common answers included being victims of sexual assault or gun violence or witnessing someone close to them being seriously injured or murdered.

Table 6. Exposure to Traumatic Experiences by Gender

		All	Women	Hetero Men	MSM
Total Number of Individuals		(n=492)	(n=254)	(n=129)	(n=105)
Experienced Traumatic Event	Yes	44%	47%	47%	32%
	No	56%	53%	53%	68%
Witnessed Traumatic Event	Yes	45%	46%	55%	31%
	No	55%	54%	45%	69%
Experienced or Witnessed Traumatic Event	Never	44%	41%	39%	58%
	> 12 months	47%	50%	53%	46%
	Within past 12 months	9%	9%	8%	7%

Racial/ethnic comparisons among women. Black women were less likely to report an exposure to traumatic experiences compared to women of another race/ethnicity (Table A5). White/Other women were most likely to have experienced an exposure to a traumatic or violent event, as well as have that event occur within the past 12 months.

Age comparisons among women. Women between the ages of 18 and 34 were most likely to not have experienced or witnessed a traumatic or violent event but more likely to report an exposure within the past 12 months if they have experienced. Women between the ages of 35 and 49 were most likely to have directly experienced a traumatic or violent event compared to the other age groups. Women 50 or older reported the highest percentage of having experienced an exposure to a traumatic experience greater than 12 months ago (Table A6).

Non-HIV Comorbid Health Conditions

Rates non-HIV comorbid conditions are very high among PWH, especially among older adults (age 50+) but beginning in middle adulthood. Seventy-nine percent (79%) of women have been diagnosed with one or more non-HIV comorbid health conditions with differences by gender seen in multiple diseases (Table 7). Women have substantially higher rates of asthma and other chronic respiratory diseases, higher rates of diabetes, as well as arthritis; and cardiovascular conditions are comparable. Women have a higher number of co-occurring comorbidities (mean 2.95). Over half of women in the sample have 3 or more conditions, many associated with increased mortality risk among PWH including CVD-related conditions, diagnosed cancer, chronic respiratory disease, diabetes, liver disease including hepatitis (NY DOHMH 2019 HIV Surveillance Annual Report). As a positive change from earlier CHAIN studies of comorbid conditions, women reported that their HIV primary care provider, with few exceptions, were aware of their non-HIV conditions (data not shown).

Table 7. Non-HIV Comorbid Health Conditions by Gender

	All	Women	Hetero Men	MSM
Total Number of Individuals	(n=665)	(n=334)	(n=187)	(n=139)
CVD Related Conditions				
High cholesterol	34%	33%	35%	35%
Hypertension	37%	40%	42%	23%
Heart Disease	16%	19%	15%	9%
Chronic Respiratory Diseases				
Asthma	29%	38%	18%	19%
Other chronic respiratory diseases (COPD, chronic bronchitis, emphysema)	34%	42%	25%	28%
Metabolic Diseases				
Diabetes	14%	18%	10%	10%
Non HIV-Related Cancers				
Cancer (lung, rectal/anal, cervical, liver, other)	11%	13%	11%	6%
Cervical dysplasia ¹	6%	11%	NA	NA
Infectious Diseases				
Hepatitis C	23%	17%	38%	17%
Hepatitis, other	9%	10%	10%	5%
Chronic sinusitis	18%	23%	12%	13%
Other				
Arthritis or rheumatism	31%	40%	27%	17%
Renal Disease	5%	2%	9%	5%
Number of comorbidities²				
Any of the listed comorbid conditions excluding Cervical Dysplasia (range 0-12)	77%	79%	79%	71%
Mean (std dev) comorbidities	2.60 (2.3)	2.95 (2.4)	2.50 (2.0)	1.86 (1.9)

Data from most recent interview . Comorbidities cumulative - reported as ever diagnosed

1 Cervical dysplasia is a potential risk for cancer - asked only of female respondents.

2. Number of comorbidities from among those listed excluding cervical dysplasia.

Racial/ethnic comparisons among women. The prevalence of non-HIV comorbid health conditions varied by race/ethnicity (Appendix Table A7). White/Other women reported higher prevalence of arthritis, cancer, hepatitis, and breathing-related conditions, such as COPD, chronic bronchitis, and/or emphysema. Black women reported the highest proportion of CVD related conditions including hypertension and heart disease. Latina women reported highest levels of asthma and high cholesterol, but the lowest levels of arthritis and other breathing problems. Regardless of condition type or race/ethnicity, women’s primary care doctors were generally aware of their co-occurring health conditions (data not shown).

Age comparisons among women. Not surprisingly, women’s comorbid chronic conditions varied by age (Appendix Table A8). Younger women between age 18 and 34 had the lowest prevalence across all non-HIV comorbid conditions, though this finding should be interpreted with caution

due to the relatively small sample size. Women aged 35 to 49 reported a mean of 2.68 diagnosed comorbid conditions; the mean for women 50 and older was 3.57 or on average four non-HIV comorbid conditions. Older women reported the highest levels of CVD conditions including hypertension (51%), high cholesterol (40%), and heart disease (23%); arthritis (51%) and diabetes (25%). Rates of respiratory diseases are also very high including asthma and other chronic respiratory diseases such as COPD, chronic bronchitis, and emphysema. For additional analyses of the role of non-HIV comorbid conditions on healthy aging see recent report based on CHAIN data prepared for the New York State AIDS Institute (Aidala et al. 2023).

Women's Quality of HIV Primary Care

All PWH need HIV primary care and almost all women reported there was a physician or other medical provider who they considered their primary provider, in charge of their overall HIV medical care (Table 8). However, not all had 'comprehensive primary care' indicated by having HIV care that is not only coordinated but also comprehensive and accessible - a medical provider that they could go to for routine check-ups, vaccinations, or medical tests, and for information or advice about health concerns not only related to their HIV; and a provider whom they could contact 24 hours a day in case of a medical emergency . Over 90% of women reported that their medical provider spent enough time with them, understood what was bothering them, and showed interest and concern for them at their last medical visit, indicators of a positive patient-provider relationship. However, 12% of women or one in eight were less than completely satisfied with their medical provider, slightly lower than men. Further investigation is needed to discern whether dissatisfaction is with the individual medical provider or their clinic or health care system.

Regarding racial/ethnic differences, Latina women reported the lowest levels of comprehensive primary care. Satisfaction with medical care and medical providers was lowest among White women (Appendix Table A9). Regarding differences among women by age, mid-adults (age 35-49 years old) are less likely to report their primary HIV provider understands their issues or shows concern and they are least likely to indicate they are completely satisfied with their care provider than younger or older WHW (Appendix Table A10).

Table 8. Women’s Quality of HIV Primary Care

	All	Women	Hetero Men	MSM
	(n=645)	(n=330)	(n=200)	(n=91)
My medical provider spends enough time with me	96%	96%	97%	96%
Medical provider understood what was bothering me				
Very well	92%	91%	93%	94%
Somewhat	6%	7%	6%	4%
Not very well	1%	2%	1%	1%
Not at all	<1%	<1%	0%	1%
Concern medical provider showed for me				
Very concerned	91%	90%	92%	93%
Somewhat concerned	7%	8%	7%	6%
Somewhat unconcerned	1%	1%	1%	1%
Very unconcerned	1%	1%	0%	0%
Satisfaction with medical care provider				
Very satisfied	90%	88%	92%	93%
Somewhat satisfied	7%	8%	7%	4%
Somewhat dissatisfied	2%	2%	1%	2%
Very dissatisfied	1%	2%	1%	1%
Has comprehensive HIV Primary Care¹	87%	86%	87%	90%
Has a medical provider in charge of overall HIV care	96%	96%	96%	96%
Has provider to go to for information or advice about a health concern	96%	96%	97%	96%
Can always contact provider in case of medical emergency (e.g. answering service, doctor on call, pager number etc.)	87%	86%	87%	91%

¹Comprehensive HIV Primary care is a primary care that is coordinated, comprehensive, and available for emergency as indicated by positive answer to all of the three questions

Service Needs and Utilization

In addition to patient-centered, comprehensive HIV primary care, the vast majority of PWH have multiple behavioral health and/or social needs that can impede engagement in care and positive health outcomes and exacerbate HIV-related disparities. We examined service need, service utilization and service ‘gaps’ in 10 service areas (Table 9). Service needs and service utilization are operationally defined in Table 2, above. Service gap refers to needing a service but not receiving any services or assistance to address the need.

The biggest unmet need or service gap for women in for women’s health services. Annual visits for gynecological care are recommended for all women for breast, cervical, and other cancer screenings and family plan services as may be needed. However fewer than one-third of WWH had any visits for women’s health services in the past 12 months. More than two-thirds of Tri-County WMH (68%) needed, but did not receive, women’s health services (Table 9).

In addition to women’s health services, women’s greatest service needs were for housing assistance, social services case management, financial assistance, and assistance with food and

nutrition. Over three-fourths of women had service needs in each of these areas. In addition, half of women needed mental health treatment or services, and need for transportation was also very high. In addition to the very large gap observed between the need for and receipt of women's health services, there was a large gap between needing and receiving housing, transportation, and mental health services (Table 9).

Nearly all women reported a need for some assistance with their basic subsistence needs need for financial, food, or housing assistance. Seventy-seven percent (77%) reported need for financial assistance, and 90% need for assistance with housing issues. However, receipt of services or some type of assistance for financial and food and nutrition needs was fairly high thus service gaps are relatively low. However, problem resolution is not always immediate and persons who may have had a service contact may not have had their need(s) entirely meet.

Women's service needs are similar to heterosexual men's in most service areas. Women are more likely than men to seek and access services. Thus, services gaps are often greater for men.

Racial/ethnic comparisons among women. Service needs and utilization differed across racial/ethnic groups (Appendix Table A11). Compared to women of other race/ethnicity, Latina women had the greatest need and greatest gap for many resources, including financial assistance, housing assistance, transportation assistance, and mental health services. White women had the greatest need for both food assistance and social services case management. However, almost 90% of Black and Latina women also needed social services case management. Black women had the greatest need as well as the greatest treatment gap for alcohol or drug treatment services.

Age comparisons among women. Women's service needs and utilization also varied by age (Table A12). Compared to women of other age groups, younger women aged 18 to 34 years had the smallest need and service gap for both mental health services and alcohol or drug treatment. However, they had the greatest need and gap in medical case management, and the greatest gap in financial, food, and housing assistance. Middle-aged women between 34 and 49 years old had the greatest need and greatest gap for mental health service. Older women aged 50 and older had the greatest need and gap for transportation assistance. Overall, younger women had the lowest average number of needs and middle-aged women had the highest average number of needs.

Table 9. Service Needs and Utilization by Gender

(n=)	Total Sample	Women	Hetero Men	MSM
	(n=665)	(n=334)	(n=187)	(n=139)
Need Financial Assistance	75%	77%	79%	66%
Receive Financial Assistance	66%	69%	70%	53%
Financial Assistance Gap	7%	8%	5%	6%
Need Food Assistance	71%	74%	71%	62%
Receive Food Assistance	79%	85%	79%	65%
Food Assistance Gap	8%	5%	9%	12%
Need Housing Assistance	90%	90%	95%	84%
Receive Housing Assistance	62%	69%	62%	42%
Housing Assistance Gap	32%	26%	35%	42%
Need Transportation Assistance	39%	44%	39%	26%
Receive Transportation Assistance	23%	33%	14%	11%
Transportation Assistance Gap	27%	27%	31%	22%
Need Childcare Assistance	1%	1%	1%	0%
Receive Childcare Assistance	<1%	1%	0%	0%
Childcare Assistance Gap	1%	1%	1%	0%
Need Mental Health Service(s)	49%	49%	45%	54%
Receive Mental Health Service(s)	32%	36%	23%	34%
Mental Health Service(s) Gap	28%	25%	30%	30%
Need Any AOD Treatment	28%	24%	37%	25%
Receive Any AOD Treatment	11%	12%	12%	6%
AOD Treatment Gap	18%	12%	27%	20%
Need Medical Case Management	23%	28%	19%	13%
Received Medical Case Management	48%	47%	47%	53%
Medical Case Management Gap	12%	15%	10%	9%
Need Social Services Case Management	85%	88%	85%	75%
Receive Social Services Case Management	75%	79%	68%	73%
Social Services Case Management Gap	21%	18%	27%	19%
Need Women’s Services	50%	100%	--	--
Receive Women’s Services	16%	32%	--	--
Women’s Services Gap	34%	68%	--	--
Mean (std dev) Number of Service Needs¹	4.60 (1.7)	4.75 (1.7)	4.70 (1.7)	4.04 (1.9)

Data from most recent interview.

Note: Service ‘gap’ refers to those who needed but have not received any services to address the need in the six months prior to indicate. Note that persons who had a service contact may not have had their need(s) entirely met.

¹ excluding women’s services

Testing and Entry into HIV Care

We examine HIV testing experience and entry into care of Tri-County CHAIN study participants, as well as descriptions of life circumstances during the year they were diagnosed HIV. Approximately half (51%) of women received their HIV diagnosis prior to the age of 35 and 40 percent of women were diagnosed between the ages of 35 to 49 (Table 10). Seventy-six percent (76%) of women entered HIV care within three months of diagnosis, with a small percentage (13%) delaying care for 12 months or more. Most women (74%) did not think about HIV testing prior to getting tested. Descriptions of reasons for getting tested for HIV indicate that among women, notification, awareness or suspicion of a partner's diagnosis; testing triggered by experiencing symptoms, or pregnancy were more common than any health care providers recommending testing (data not shown).

HIV risk exposure is classified based on information about sex and drug use behaviors, and perinatal infection. The risk exposure group for 87% of Tri-County WWH in our study sample is heterosexual contact and 13% are classified as injecting drug use exposure (Table 11). During the year they were diagnosed with HIV, half of women (52%) had no regular source of medical care however almost three-quarters (73%) of women had health insurance. Fifty one percent (51%) of women reported they were working when they tested positive, while 14 percent reported they were financially dependent on another person and 7% had no regular means of financial support. Almost 30% did not have a regular place to live. Approximately two-thirds of women were socially isolated when they tested positive, reporting only a few or "not really any" close friends. Almost three-quarters of women were in a relationship with a regular partner at time of diagnosis.

Racial/ethnic comparisons among women. Racial/ethnic differences among women's experience with HIV testing and diagnosis, as well as their life circumstances during the year of diagnosis are presented in Appendix Table A13 and Table A15. Latina women were more likely than Black and White/Other women to be diagnosed younger than age 35; only 4 percent of Latina women were diagnosed at age 50 or later. Latina women most frequently considered getting tested or sought out testing prior to their positive diagnosis. Close to a half of the sample of women (47%) tested for HIV at a hospital clinic, and Black and Latina women were more likely than White/Other women to be tested for HIV at a community clinic. White/Other women had a slightly higher percentage of delayed entry into care: 65 percent of White/Other women received care within 3 months of diagnosis, compared to 79 percent of Black women and 75 percent of Latina women. When they received their diagnosis, Latina women were most likely to be employed, but least likely to have medical insurance that would cover all or most of their care relative to Black and White/Other women. White/Other women were more likely to be married or in a relationship with a regular partner, and also be financially supported by another person during the year they were diagnosed with HIV.

Age comparisons among women. Entry into care and life circumstances at the time of HIV diagnosis were also examined by age when they were reporting on these experiences (i.e. when they completed their first CHAIN interview). See Appendix Table A14 and Appendix Table A16. Women between the ages of 18 and 35 were more likely to think about or receive testing prior to their positive diagnosis compared to older women. The percentage of women who reported medical problems at time of diagnosis increased with age, which could indicate delayed diagnosis. Older women with HIV were more likely to have had a stable living situation, be employed, yet experience social isolation at time of their diagnosis. Younger women with HIV were least likely

to be drinking a lot, using drugs recently, and be in a relationship with a regular partner at time of their diagnosis.

Table 9. Entry into Care by Gender

		All	Women	Hetero Men	MSM
Total Number of Individuals		(n=665)	(n=334)	(n=187)	(n=139)
Year of HIV Diagnosis	<1996	43%	42%	53%	32%
	1997-2004	29%	36%	22%	23%
	2005-2011	21%	19%	18%	29%
	2012+	6%	3%	7%	15%
Age at Diagnosis	<35 years	47%	51%	36%	52%
	35-49 years	43%	40%	53%	37%
	50+ years	10%	8%	11%	12%
	Didn't think about it	70%	74%	79%	51%
	Thought about it & didn't get	8%	6%	6%	16%
	Got tested & didn't get	1%	1%	0%	1%
	Got tested & negative	21%	20%	15%	32%
Testing Site¹	Hospital clinic	38%	47%	35%	25%
	CHC ² /Neighborhood	34%	30%	33%	45%
	Private practice/HMO ³	10%	9%	7%	17%
	Drug treatment or social service	4%	3%	5%	3%
	Prison or jail	7%	5%	12%	3%
	Other	7%	6%	9%	8%
Testing Site Pre-Discussion¹	Transmission Risks	68%	67%	68%	67%
	Treatment Options	66%	60%	74%	68%
Testing Site Linkage to Care¹	Yes, actively facilitate	75%	75%	68%	83%
Time from Diagnosis to HIV Care¹	0-3 Months	78%	76%	75%	86%
	4-12 Months	11%	11%	13%	6%
	>12 Months	11%	13%	12%	7%

The total sample includes transgender individuals (n=5); separate analysis of transgender PWA is not displayed as the sample size is too small for reliable estimates.

¹ Excludes the perinatally infected.

² CHC = Community Health Clinic

³ HMO = Health Maintenance Organization

Table 10. Life Circumstances when Diagnosed by Gender

Total Number of Individuals:		All	Women	Hetero Men	MSM
		(n=665)	(n=334)	(n=187)	(n=139)
Risk Exposure Group	MSM	17%	0%	0%	89%
	IV Drug Use	16%	13%	33%	0%
	MSM & IV Drug Use Ever	2%	0%	0%	11%
	Heterosexual/Other	65%	87%	67%	0%
Had regular source of medical care prior to HIV diagnosis	Yes	44%	48%	35%	47%
Health Status at first visit for HIV Care	No medical problems	49%	47%	52%	48%
	Minor medical problems	20%	21%	16%	24%
	Major health problems	32%	33%	31%	28%
Living situation when first tested positive	Regular place to live	66%	72%	49%	73%
	Doubled up	12%	12%	16%	5%
	Homeless	7%	5%	13%	4%
	In jail or a treatment program	6%	4%	15%	1%
	Other	10%	7%	8%	17%
Primary financial source when first tested positive	Working regular, full-time job	55%	48%	51%	77%
	Working odd jobs	4%	3%	7%	1%
	Receiving benefits	15%	22%	13%	4%
	Supported by another person	8%	14%	3%	2%
	No regular means of financial support	11%	7%	18%	10%
Friendships when first tested positive	Other	7%	6%	8%	6%
	Many close friends	37%	33%	37%	46%
	Only a few close friends	46%	46%	50%	45%
	Not really any close friends	16%	21%	13%	10%
I was married/in a relationship with a regular partner...		61%	73%	55%	46%
I was drinking a lot...		21%	16%	32%	19%
I was using drugs regularly...		34%	32%	41%	24%
I had medical insurance that would cover all or most of my care...		66%	73%	64%	55%

Care Continuum Indicators

CHAIN study operationalizes the stages along the HIV Care Continuum leading to and maintaining viral suppression. ‘*Consistent care*’ is a measure of retention in HIV care, indicated by not missing any or only one scheduled HIV-related medical appointment in the past six months, and not having a “dropout” when intentionally stopped going to the doctor. ‘*Appropriate care*’ is a quality measure that refers to receiving HIV care that meets clinical practice standards in terms of recommended visits for monitoring and care and receiving appropriate examinations and tests. *Adherent ARV use* indicates the participant is following her HIV ARV medication regimen “exactly as prescribed” and has not missed or been late taking any medications in the 2 days prior to interview. *Viral suppression* is determined from a respondent’s self-reported viral load or, review of lab records if available.

Most Tri-County WWH reported being in consistent care (77%) as well as appropriate care (84%) that met minimal practice standards (Table 12). Just over two-thirds of all women had adherent ARV use but 81% were virally suppressed at last interview. Rates of consistent care, and adherent ARV use are lower among women than men in the study sample.

There were race/ethnic and age differences in each of the Care Continuum indicators. Although Latina women reported the lowest percentage of consistent and appropriate care, they are also the most likely to be adherent ARV users (Appendix Table A17). White/Other women reported the lowest percentage of viral suppression. Black women had the highest levels of both consistent and appropriate care. Women aged 50 or older had highest rates of consistent care and 90% were virally suppressed (Appendix Table A18). Younger women ages 18 to 34 reported the lowest levels of appropriate care, only 50% were adherent ARV users, and only three-fourths achieved viral suppression.

Table 12. Engagement with HIV Clinical Care and Health Outcomes by Gender

	(n=)	Total Sample (n=665)	Women (n=334)	Hetero Men (n=187)	MSM (n=139)
Consistent care¹		79%	77%	81%	83%
Appropriate care		85%	84%	85%	85%
Adherent ARV use		67%	62%	71%	74%
Viral suppression		83%	81%	85%	87%
CD4 T-Cell Count	≤ 200	15%	16%	13%	16%
	201-350	19%	20%	21%	12%
	351-500	19%	18%	24%	16%
	500+	47%	46%	43%	56%

¹ Consistent care is a measure of retention in HIV care, indicated by not missing any or only one scheduled HIV-related medical appointment and no ‘drop out’ episodes, intentionally stopping going to the doctor.

² Appropriate refers to receiving HIV care that meets clinical practice standards at the time of interview

³ Adherent ARV is following HIV ARV medication regimen “exactly as prescribed” generally and specifically over 2 days prior to study interview.

⁴ Viral suppression is determined from a respondent’s self-reported viral load or, review of lab records /doctor report if available.

Self-Reported Barriers to Medical Care

During the interviews, respondents who reported they delayed or did not receive needed medical care in the past six months were asked to indicate reasons why, selecting from among a list of possible reasons. Logistical issues were raised most often but there were also concerns about providers. The most common specific reason among all groups were because of cost or that their medical care was not covered by insurance (Table 13). Women were also most frequently that the staff would not be good at listening. No women reported childcare as a reason for their delaying or not receiving needed medical care.

Table 13. Reasons Delayed or Did Not Get Needed Medical Care in the Past Six Months

(n=)	Total Sample	Women	Hetero Men	MSM
	(n=626)	(n=310)	(n=175)	(n=136)
Logistical Problem:	11%	9%	12%	16%
Cost/Not Covered by Insurance	6%	4%	7%	10%
Transportation	5%	5%	5%	6%
Didn't Know Where to Go	4%	3%	5%	4%
Childcare	2%	0%	5%	0%
Language	1%	1%	1%	1%
Office Not Open at Convenient Time	1%	1%	0%	3%
Care Provider Issue:	6%	6%	5%	6%
Don't Trust Providers to Be Confidential about Status	3%	3%	2%	2%
Staff Not Competent	3%	3%	2%	1%
Staff Disrespectful or Insensitive	3%	3%	3%	3%
Staff Not Good at Listening	3%	4%	2%	2%
Not Confident Staff Will Understand Problem	2%	2%	3%	1%
Nervous or Afraid of What Provider Might Say	1%	1%	2%	2%

Racial/ethnic comparisons among women. Racial/ethnic differences in women's reasons for delaying or not getting needed medical care in the past six months is presented in Appendix Table A19. The greatest barriers for White women were that they did not trust providers to be confidential about their HIV status and that the staff was disrespectful or insensitive. The most common reason for Black women was cost or that their care was not covered by insurance. For Latina women, the most common reason was related to transportation.

Age comparisons among women. Reasons delayed or not receiving medical care in the past six months were also examined by age (Appendix Table A20). Both younger women aged 18 to 34 and middle-aged women ages 35 to 49 cited transportation as their greatest barrier. However, middle-aged women also reported cost, not trusting their providers to be confidential about their HIV status, and that staff was not good at listening as the most common reasons (6% for each reason). For older women aged 50 and above, the most common reason was that the staff was disrespectful or insensitive.

Predicting Engagement in Care and HIV Outcomes

Associations between women's background characteristics, service needs and utilization, and HIV care continuum and health outcomes were further analyzed using bivariate and multivariate logistic regression. These analyses were performed for all women combined due to low numbers in each subgroup, Race/ethnicity and age are included in the models as covariates.

Associations with background characteristics (age, race/ethnicity, education, household with children, enacted HIV stigma scale score). Younger women ages 18 – 34 have reduced odds of adherent ARV use, whereas older women aged 50 and above have increased odds of receiving consistent care, both in the unadjusted and adjusted models. Latina women are 3.5 times as likely as White/Other women to achieve viral suppression while controlling for other background characteristics, experiences, and service needs.

Associations with needs for supportive services (need for housing, food, or transportation assistance). The need for transportation assistance reduced the odds that women were receiving appropriate care and adherent ARV use in both the unadjusted and adjusted models (Table 14). Needs for supportive services, most often those related to housing, food, and transportation needs, were associated with reduced odds of each HIV clinical care and health outcome in this study—though not all the results were statistically significant in the full adjusted models.

Associations with substance use and needs for behavioral health services. Women with behavioral health services needs and/or substance use consistently had lower odds of being engaged in clinical care or virally suppressed (Table 14). Women with poor mental health functioning, an indicator of need for mental or emotional health services, had reduced odds of adherent ARV in the unadjusted model. Current problem substance use was significantly associated with lower odds of consistent care both in a bivariate analysis and when controlling for background characteristics, experiences, and service needs.

Table 14. Women's Characteristics, Needs, and HIV Clinical Care and Health Outcomes

	Consistent Care		Appropriate Care		Adherent ARV Use		Viral Suppression	
	OR	AOR	OR	AOR	OR	AOR	OR	AOR
Background Characteristics								
<i>Age</i> ¹								
18-34	1.033	0.987	0.786	0.596	0.407*	0.301**	0.451	0.314#
50+	2.291**	2.280*	0.959	1.087	0.872	0.882	1.231	0.896
<i>Race/Ethnicity</i> ²								
Black	1.193	0.689	1.527	1.170	1.061	0.923	2.556*	2.553
Latina	0.900	0.595	0.602	0.531	1.296	1.478	2.607#	3.534*
<i>Education</i> ³								
Less than High School Diploma	0.904	1.275	1.042	1.284	0.907	1.283	2.647*	0.287**
More than High School Diploma	1.040	1.115	0.956	0.860	1.211	1.745	0.987	0.293*
<i>Household with Children <18</i>	0.712	1.011	0.894	0.872	0.993	0.978	0.434*	0.524
Past Experiences								
<i>Enacted Stigma Scale (discrimination)</i>	0.317	0.322	0.287#	0.519	0.217*	0.250*	0.494	0.831
Need for Behavioral Health Services								
<i>Poor Mental Health Functioning</i> ⁴	0.604#	0.694	0.769	0.835	0.791	0.750	0.919	0.941
<i>Current Problem Substance Use</i> ⁵	0.294***	0.367*	0.933	0.869	0.471*	0.524	0.566	0.655
Need for Supportive Services								
<i>Need Housing Services</i> ⁶	0.402	0.327	0.251#	0.388	1.036	1.531	0.226	0.273
<i>Need Transportation Assistance</i> ⁷	1.131	1.319	0.365***	0.429**	0.597*	0.546*	0.703	0.646
<i>Food Insecure</i> ⁸	0.498*	0.509#	0.736	0.928	0.715	0.736	0.629	0.808

OR =odds-ratio; AOR =adjusted odds ratio #p <.10 * p < .05; ** p < .01; *** p < .001

Note: Logistic regression equations. The first model examines predictors of continuous care (n= 316 respondents); Model 2 shows predictors of appropriate care (n=313 respondents); Model 3 shows predictors of adherent ARV use (n=316 respondents); and Model 4 shows predictors of viral suppression (n=292 respondents).

¹ Age 35-49 reference category

² White/Other reference category

³ High School Diploma or equivalent reference category

⁴ Mental Component Summary Score (MSC) ≤42.0 on MOS-SF36, indicating clinically significant mental health symptoms of depression, anxiety, impairment.

⁵ Problem drinking indicated by the CAGE assessment (Ewing, 1984) or drinking weekly or more often, consuming five or more drinks when drinking or current hard drug use indicated by heroin, cocaine, crack, methamphetamine use within past 6 months.

⁶ Homeless or unstably housed in past 6 months; OR rent burdened (report difficulty paying rent in past 6 months or insufficient income to secure housing indicated by a Fair Market Rent (FMR) >50% of income); OR report needing help or assistance in area of housing in past 6 months to obtain stable, secure, and appropriate housing, address habitability issues (e.g., no heat, damaged wiring), or avoid eviction or other housing loss.

⁷ Self-reported need for transportation assistance for any reason or report that a lack of transportation resulted in delayed or missed medical or social services in past 6 months

⁸ Food insecurity indicated by reporting not enough money for food that the individual or family needs sometimes to very often in past 6 months, or sometimes/often there is not enough to eat, or the individual has gone a whole day without eating in past 30 days

Summary and Discussion

Women with HIV have unique service needs and face different challenges that affect their risk for infection and affect course and consequences of living with HIV and achieving not only sustained viral suppression but positive health and wellbeing throughout their life course.

Considering the HIV Care Continuum, starting with diagnosis, very few women thought about HIV testing prior to their diagnostic test, and testing appears not to have been offered as part of general medical care. This is despite the fact that in general, women are more connected than men to medical care and services. This goes against existing New York State and City policies that mandates that HIV testing be offered to all patients 13 years and older receiving primary care services as patients seeking emergency services (NYS AIDS Institute, 2018). Most women entered care within the first months after diagnosis; however, one quarter were out of care for more than 4 months and half of these for more than one year. Women focused programs, focused not just on young women but reaching mid- and older adult women are needed to improve achieving Ending the Epidemic diagnosis and entry into care goals.

Women were generally connected to HIV care but engagement in care is less than optimal for one in five who are less likely than the general population of adults living with HIV to be engaged in consistent care and receiving HIV care that meets good practice standards. One-third report not being adherent to their ARV regimen. Current rates of viral suppression are encouraging but potential consequences over the life course of irregular care and adherence are concerning.

Examination of patterns of service need and initial analysis of predictors of Care Continuum outcomes suggests a number of health, behavioral health, and social needs that present challenges to sustained engagement, adherence and viral suppression among Tri-County women with HIV and point to potential points of intervention.

Tri-County women with HIV (WWH) face multiple socioeconomic disadvantages likely to have cumulative effects on their health and well-being. Rates of high school completion are lower, and poverty rates are higher, compared to other PWH in the region. More than one-third (36%) have experienced two or more episodes of homelessness including substantial numbers without regular housing at the time of their diagnosis. Most currently have their own housing; however, almost all (90%) nonetheless have a need for housing assistance. Substantial numbers of women (72%) are severely burdened by housing expenses (rent or utilities), even though they may be receiving some type of assistance. Need for financial assistance or inability to pay for basic living expenses is high - reported by 77% of all women at their most recent interview.

Not surprisingly, women with HIV have multiple service needs, not always met by services available in the Tri-County region. The largest gaps observed between the need for and receipt of services among women were for gynecological and other women's health services, housing, transportation, and mental health services. Despite recommendations for all women to have annual visits for gynecological care and cancer and other preventative screenings, fewer than one-third of WWH had any visits for women's health services in the past 12 months. Long waiting times for appointments at geographically unevenly distributed clinics create barriers to timely care. Moreover, the diverse needs of women with HIV, including maternal health, reproductive sexual health, and geriatric care may not be adequately addressed at existing clinics.

More than one in four WWH who needed housing, transportation, and mental health services at their most recent interview had not receive needed services. Reported reasons for not receiving mental health services were related to not being able to secure an appointment with a mental health professional, not knowing where to go and/or distrusting that available treatment or services would help with their problems. Both an expansion of services and better dissemination of information about service programs in Tri-County is needed. The COVID-19 pandemic has brought an expansion of telehealth services, with promise to expand access to mental health services in suburban and rural areas. However, as reported in our previous CHAIN briefing reports (Aidala et al., 2020; Harned et al., 2021), barriers to accessing telehealth resources including limited digital literacy, lack of broadband or other technology, lack of private space to discuss sensitive issues, and/or concerns for confidentiality using digital health resources were widespread. The lack of HIV-specific mental health providers and the lack of awareness of the needs of HIV positive women and the HIV service landscape among existing mental health providers, may be contributing to inadequate support even for WWH who have accessed mental health treatment or services. Given the high rates of exposure to traumatic experience among PWH, especially women, trauma-informed care should be implemented within all behavioral health services serving .

We found that WWH have higher rates of serious and impairing non-HIV chronic conditions than other PWH in the region. At their most recent interview, women reported an average of three diagnosed comorbidities in addition to HIV. Rates were especially high among women ages 50+ years. Over half report 4 or more diagnosed comorbidities, many associated with increased risk for mortality among PWH. It is important to further investigate support for care coordination to synchronize women's health care from multiple providers and specialists, including behavioral health providers.

There were racial/ethnic disparities in health and service needs and care continuum outcomes among women with HIV in the Tri-County Region.. Although caution must be exercised when interpreting these results due to the relatively small subsample of White women in the current study sample, in general they had fewer unmet needs and better HIV outcomes. However, there were also important differences when comparing Black and Latina women which warrants considering each a separate priority population.

Conclusion

There are socioeconomic and structural barriers that affect all PWH. However, there are multiple social and clinical factors that create unique barriers for women to maintain optimal engagement in HIV, access to and adherence to treatments not only for HIV but for multiple co-occurring physical and mental health co-occurring conditions. Not only patient-centered, but women-centered, coordinated, comprehensive care that addresses their day-to-day life challenges and unique medical, psychological and emotional needs is needed. Finally, the need for a review and update of Tri-County Resource book is needed to help PWH in Tri-County navigate the service system (https://nyhiv.org/wp-content/uploads/2019/12/tri-county_hiv-aids_resourceguide1.pdf).

Appendix

Table A1. Sample Characteristics by Race/Ethnicity

		All Women	Black	Latina	White/Other
Total Number of Individuals:		(n=334)	(n=202)	(n=92)	(n=40)
Age Group	Ages 18-34	11%	9%	13%	15%
	Ages 35-49	36%	39%	37%	23%
	Ages 50+	53%	52%	49%	63%
Place of Birth	United States	67%	74%	42%	90%
	Puerto Rico	6%	0%	22%	0%
	Foreign	27%	26%	36%	10%
County of Residence	Westchester	82%	82%	90%	65%
	Putnam	1%	1%	0%	5%
	Rockland	16%	17%	10%	30%
Partner Status	No partner	53%	54%	49%	50%
	Partner, not living with	24%	25%	24%	20%
	Partner, living with	23%	20%	26%	30%
Household with Children <18	Yes	33%	33%	34%	35%
Education	Less than High School	42%	38%	62%	20%
	High School/GED	41%	43%	26%	65%
	More than High School	17%	20%	12%	15%
Employment	Full-time	11%	15%	9%	0%
	Part-time/Irregular	15%	13%	17%	18%
	Not working	74%	72%	74%	83%
Income Below Poverty Threshold¹	Yes	57%	56%	59%	54%
Housing Situation²	Stable	85%	85%	87%	83%
	Unstable/Doubled Up	13%	14%	11%	10%
	Homeless	2%	1%	2%	8%
Problem Drinking³	Yes	4%	5%	2%	3%
Hard Drug Use⁴	Never	54%	51%	66%	40%
	Past	39%	39%	32%	55%
	Current	7%	10%	2%	5%
Ever Jail or Prison	Yes	31%	34%	25%	33%
Low Mental Health Functioning⁵	Yes	47%	42%	57%	50%
Poor Physical Health Functioning⁶	Yes	64%	61%	65%	73%

Data from most recent interview 2008-2019.

¹ Income below the U.S. Census Poverty Threshold calculated by household composition and household income.

² Homeless describe themselves as homeless or report sleeping on the street, in a shelter, or in an SRO or welfare hotel with no services.

Unstably housed are not currently in permanent housing but not literally homeless, e.g., in a transitional housing program, in AOD treatment housing with no other address, or temporarily doubled up with friends or family during 6 six months.

³ Problem drinking indicated by the CAGE assessment (Ewing, 1984) or drinking weekly, consuming 5 or more drinks when drinking.

⁴ Hard drug use = heroin, cocaine, crack, methamphetamine. Current drug use occurred within 6 six months.

⁵ Mental Component Summary score (MSC) ≤ 42.0 on MOS-SF36, indicating clinically significant mental health symptoms.

⁶ Physical Component Summary score (PCS) ≤ 50.0 on MOS-SF36, indicating experiencing limitations in physical health functioning.

Table A2. Sample Characteristics by Age

		All Women	18-34 Years	35-50 Years	50+ Years
Total Number of Individuals:		(n=334)	(n=36)	(n=121)	(n=176)
Race/Ethnicity	White/Other	12%	17%	7%	14%
	Black	61%	50%	64%	60%
	Latina	26%	33%	28%	26%
Place of Birth	United States	67%	57%	65%	71%
	Puerto Rico	6%	6%	4%	7%
	Foreign	27%	37%	31%	21%
County of Residence	Westchester	82%	81%	80%	84%
	Putnam	1%	6%	0%	1%
	Rockland	16%	14%	20%	15%
Partner Status	No partner	53%	33%	38%	67%
	Partner, not living with	24%	33%	32%	17%
	Partner, living with	23%	33%	30%	16%
Household with Children <18	Yes	33%	47%	53%	17%
Education	Less than High School	42%	33%	44%	43%
	High School/GED	41%	42%	41%	41%
	More than High School	17%	25%	15%	17%
Employment	Full-time	12%	11%	14%	10%
	Part-time/Irregular	15%	28%	16%	11%
	Not working	74%	61%	70%	79%
Income Below Poverty Threshold¹	Yes	56%	76%	59%	50%
Housing Situation²	Stable	85%	81%	84%	87%
	Unstable/Doubled Up	13%	17%	12%	13%
	Homeless	2%	3%	4%	1%
Problem Drinking³	Yes	4%	6%	5%	3%
Hard Drug Use⁴	Never	54%	83%	50%	50%
	Past	39%	17%	39%	44%
	Current	7%	0%	11%	6%
Ever Jail or Prison	Yes	31%	17%	35%	32%
Low Mental Health Functioning⁵	Yes	47%	36%	59%	41%
Poor Physical Health Functioning⁶	Yes	64%	36%	59%	73%

Data from most recent interview 2008-2019.

¹ Income below the U.S. Census Poverty Threshold calculated by household composition and household income.

² Homeless describe themselves as homeless or report sleeping on the street, in a shelter, or in an SRO or welfare hotel with no services.

Unstably housed are not currently in permanent housing but not literally homeless, e.g., in a transitional housing program, in AOD treatment housing with no other address, or temporarily doubled up with friends or family during 6 six months.

³ Problem drinking indicated by the CAGE assessment (Ewing, 1984) or drinking weekly, consuming 5 or more drinks when drinking.

⁴ Hard drug use = heroin, cocaine, crack, methamphetamine. Current drug use occurred within 6 six months.

⁵ Mental Component Summary score (MSC) ≤ 42.0 on MOS-SF36, indicating clinically significant mental health symptoms.

⁶ Physical Component Summary score (PCS) ≤ 50.0 on MOS-SF36, indicating experiencing limitations in physical health functioning.

Table A3. Women’s Social Networks, Disclosure, and HIV Stigma by Race/Ethnicity

	All Women	White/Other	Black	Latina
(n=)	(n=330)	(n=40)	(n=202)	(n=92)
Social Networks				
Mean (std) number of close friends or family to help or advise	13.90 (17.0)	8.21 (7.1)	14.52 (18.1)	14.96 (17.0)
Median number of close friends or family to help or advise	8.0	6.0	8.0	9.0
% no or only one close friend or family member	<1%	0%	0%	1%
Mean (std) total number in network (friends, family & acquaintances)	26.18 (28.4)	17.69 (15.8)	27.72 (30.9)	26.42 (26.5)
Median total network size (friends, family, acquaintances)	16.0	14.0	17.0	15.5
Disclosure of HIV status				
% Friends or family members unaware of HIV status	37%	18%	43%	33%
% Social network members unaware of HIV status	50%	37%	54%	47%
% Living in household with at least one member unaware of HIV status ¹	46%	47%	44%	50%
HIV Stigma Scale Scores²				
Enacted stigma (mean, std)	58.18 (19.8)	58.11 (20.5)	56.22 (17.4)	62.50 (23.6)
Disclosure stigma (mean, std)	74.85 (17.3)	73.13 (11.4)	73.63 (18.2)	77.17 (17.0)
Internalized stigma (mean, std)	48.55 (18.6)	46.25 (14.5)	48.97 (17.7)	48.37 (20.9)

1. This percentage is calculated from the subset of individuals that live with others.

2. HIV-related stigma is measured by a shortened version of the instrument by Berger et al. (2001); scores standardized to range from 0 -100 with higher scores indicating greater HIV stigma.

Table A4. Women’s Social Networks, Disclosure, and HIV Stigma by Age

	All Women	18-34	35-49	50+
(n=)	(n=330)	(n=36)	(n=121)	(n=173)
Social Networks				
Mean (std) number of close friends or family to help or advise	13.90 (17.0)	11.64 (11.3)	12.02 (17.1)	15.73 (17.6)
Median number of close friends or family to help or advise	8.0	9.5	6.0	9.5
% no or only one close friend or family member	<1%	0%	1%	0%
Mean (std) number in total network (friends, family, & acquaintances)	26.18 (28.4)	19.67 (16.9)	23.71 (29.5)	29.35 (29.3)
Median total network size (friends, family, acquaintances)	16.0	15.5	14.0	17.0
Disclosure of HIV status				
% Friends or family members unaware of HIV status	37%	52%	37%	34%
% Social network members unaware of HIV status	50%	59%	49%	49%
% Living in household with at least one member unaware of HIV status ¹	46%	50%	59%	30%
HIV Stigma Scale Scores²				
Enacted stigma (mean, std)	58.18 (19.8)	55.71 (20.3)	57.50 (20.2)	59.33 (19.4)
Disclosure stigma (mean, std)	74.85 (17.3)	87.50 (14.6)	76.88 (21.3)	73.08 (15.7)
Internalized stigma (mean, std)	48.55 (18.6)	59.38 (26.7)	48.75 (19.9)	47.53 (17.3)

¹This percentage is calculated from the subset of individuals that live with others.

²HIV-related stigma is measured by a shortened version of the instrument by Berger et al. (2001); scores standardized to range from 0 -100 with higher scores indicating greater HIV stigma.

Table A5. Women’s Exposure to Traumatic Experiences by Race/Ethnicity

		All Women	White/Other	Black	Latina
Total Number of Individuals		(n=254)	(n=31)	(n=146)	(n=77)
Experienced Traumatic or Violent Event	Yes	47%	55%	45%	49%
	No	53%	45%	56%	51%
Witnessed Traumatic or Violent Event	Yes	46%	55%	40%	52%
	No	54%	45%	60%	48%
Experienced or Witnessed Traumatic Event	Never	41%	29%	47%	35%
	>12 months ago	50%	52%	45%	57%
	Within past 12 months	9%	19%	8%	8%

Table A6. Women’s Exposure to Traumatic Experiences by Age

		All Women	18-34	35-49	50+
Total Number of Individuals		(n=253)	(n=23)	(n=82)	(n=148)
Experienced Traumatic or Violent Event	Yes	47%	30%	52%	47%
	No	53%	70%	48%	53%
Witnessed Traumatic or Violent Event	Yes	46%	30%	43%	50%
	No	54%	70%	57%	50%
Experienced or Witnessed Traumatic Event	Never	41%	52%	40%	40%
	>12 months ago	50%	35%	50%	52%
	Within past 12 months	9%	13%	10%	8%

Table A7. Women’s Non-HIV Comorbid Health Conditions by Race/Ethnicity

	All Women	White/Other	Black	Latina
Total Number of Individuals	(n=334)	(n=40)	(n=202)	(n=92)
CVD Related Conditions				
High cholesterol	33%	33%	31%	37%
Hypertension	40%	20%	48%	30%
Heart Disease	19%	15%	22%	14%
Chronic Respiratory Diseases				
Asthma	38%	33%	36%	46%
Other chronic respiratory diseases (COPD, chronic bronchitis, emphysema)	42%	53%	41%	38%
Metabolic Diseases				
Diabetes	18%	20%	18%	17%
Non HIV-Related Cancers				
Cancer (lung, rectal/anal, cervical, liver, other)	13%	18%	12%	12%
Cervical dysplasia ¹	11%	3%	12%	12%
Infectious Diseases				
Hepatitis C	17%	33%	15%	15%
Hepatitis, other	10%	13%	10%	9%
Chronic sinusitis	23%	28%	21%	26%
Other				
Arthritis or rheumatism	40%	45%	41%	36%
Renal Disease	2%	0%	1%	3%
Number of comorbidities²				
Any of the listed comorbid conditions excluding Cervical Dysplasia (range 0-12)	79%	85%	80%	76%
Mean (std dev) comorbidities	2.95 (2.4)	3.08 (2.4)	2.98 (2.36)	2.84 (2.6)

Data from most recent interview . Comorbidities cumulative - reported as ever diagnosed

1 Cervical dysplasia is a potential risk for cancer - asked only of female respondents.

2. Number of comorbidities from among those listed excluding cervical dysplasia.

Table A8. Women’s Non-HIV Comorbid Health Conditions by Age

	All Women	18-34	35-49	50+
Total Number of Individuals	(n=333)	(n=36)	(n=121)	(n=176)
CVD Related Conditions				
High cholesterol	32%	11%	27%	40%
Hypertension	40%	8%	33%	51%
Heart Disease	19%	0%	19%	23%
Chronic Respiratory Diseases				
Asthma	38%	28%	41%	39%
Other chronic respiratory diseases (COPD, chronic bronchitis, emphysema)	42%	17%	39%	49%
Metabolic Diseases				
Diabetes	18%	3%	13%	25%
Non HIV-Related Cancers				
Cancer (lung, rectal/anal, cervical, liver, other)	13%	8%	17%	11%
Cervical dysplasia ¹	11%	3%	9%	14%
Infectious Diseases				
Hepatitis C	17%	3%	14%	23%
Hepatitis, other	10%	0%	6%	15%
Chronic sinusitis	23%	8%	23%	27%
Other				
Arthritis or rheumatism	40%	3%	36%	51%
Renal Disease	2%	0%	1%	3%
Number of comorbidities²				
Any of the listed comorbid conditions excluding Cervical Dysplasia (range 0-12)	79%	56%	78%	85%
Mean (std dev) comorbidities	2.95 (2.4)	0.89 (1.1)	2.68 (2.3)	3.57 (2.5))

Data from most recent interview . Comorbidities cumulative - reported as ever diagnosed

1 Cervical dysplasia is a potential risk for cancer - asked only of female respondents.

2. Number of comorbidities from among those listed excluding cervical dysplasia.

Table A9. Women’s Quality of HIV Care Indicators by Race/Ethnicity

(n=)	All Women	White/Other	Black	Latina
	(n=330)	(n=39)	(n=200)	(n=91)
My medical provider spends enough time with me	96%	90%	97%	97%
Medical provider understood what was bothering me				
Very well	91%	85%	93%	88%
Somewhat	7%	10%	6%	9%
Not very well	2%	3%	1%	3%
Not at all	<1%	3%	0%	0%
Concern medical provider showed for me				
Very concerned	90%	79%	91%	90%
Somewhat concerned	8%	13%	8%	5%
Somewhat unconcerned	1%	3%	0%	3%
Very unconcerned	1%	5%	1%	1%
Satisfaction with medical care provider				
Very satisfied	88%	87%	88%	88%
Somewhat satisfied	8%	3%	10%	7%
Somewhat dissatisfied	2%	5%	2%	2%
Very dissatisfied	2%	5%	1%	3%
Has comprehensive HIV Primary Care¹	86%	84%	90%	79%
Has a medical provider in charge of overall HIV care	96%	95%	96%	96%
Has provider to go to for information or advice about a health concern	96%	95%	96%	96%
Can always contact provider in case of medical emergency (e.g. answering service, doctor on call, pager number etc.) ⁸	86%	87%	89%	78%

¹ HIV care is coordinated, comprehensive, and available for emergency as indicated by positive answer to all of the three questions

Table A10. Women’s Quality of HIV Care Indicators by Age

	All Women	18-34 Years	35-49 Years	50+ Years
(n=)	(n=330)	(n=36)	(n=121)	(n=176)
My medical provider spends enough time with me	96%	100%	94%	96%
Medical provider understood what was bothering me				
Very well	91%	97%	87%	92%
Somewhat	7%	3%	10%	6%
Not very well	2%	0%	3%	2%
Not at all	<1%	0%	1%	0%
Concern medical provider showed for me				
Very concerned	90%	94%	88%	90%
Somewhat concerned	8%	6%	10%	7%
Somewhat unconcerned	1%	0%	1%	2%
Very unconcerned	1%	0%	2%	1%
Satisfaction with medical care provider				
Very satisfied	88%	94%	83%	90%
Somewhat satisfied	8%	6%	12%	6%
Somewhat dissatisfied	2%	0%	2%	2%
Very dissatisfied	2%	0%	2%	2%
Has comprehensive HIV Primary Care¹	86%	86%	84%	88%
Has a medical provider in charge of overall HIV care	96%	94%	96%	97%
Has provider to go to for information or advice about a health concern	96%	91%	95%	97%
Can always contact provider in case of medical emergency (e.g. answering service, doctor on call, pager number etc.) ⁸	86%	80%	84%	88%

¹HIV care is coordinated, comprehensive, and available for emergency as indicated by positive answer to all of the three questions

Table A11. Women's Service Needs, Service Use, and Gaps by Race/Ethnicity

	All Women	White/Other	Black	Latina
<i>(n=)</i>	<i>(n=334)</i>	<i>(n=40)</i>	<i>(n=202)</i>	<i>(n=92)</i>
Need Financial Assistance	77%	80%	72%	85%
Receive Financial Assistance	69%	75%	70%	64%
Financial Assistance Gap	8%	5%	6%	14%
Need Food Assistance	74%	88%	71%	75%
Receive Food Assistance	85%	95%	81%	88%
Food Assistance Gap	5%	0%	7%	4%
Need Housing Assistance	90%	93%	88%	93%
Receive Housing Assistance	69%	68%	72%	63%
Housing Assistance Gap	26%	30%	23%	33%
Need Transportation Assistance	44%	40%	40%	53%
Receive Transportation Assistance	33%	46%	32%	29%
Transportation Assistance Gap	27%	15%	24%	39%
Need Childcare Assistance	1%	0%	1%	1%
Receive Childcare Assistance	1%	0%	1%	0%
Childcare Assistance Gap	1%	0%	1%	1%
Need Mental Health Service(s)	49%	51%	44%	60%
Receive Mental Health Service(s)	36%	36%	30%	47%
Mental Health Service(s) Gap	25%	26%	24%	28%
Need Any AOD Treatment	24%	23%	28%	14%
Receive Any AOD Treatment	12%	20%	11%	10%
AOD Treatment Gap	12%	3%	17%	5%
Need Medical Case Management	28%	43%	24%	33%
Receive Medical Case Management	47%	51%	53%	33%
Medical Case Management Gap	15%	15%	10%	26%
Need Social Services Case Management	88%	93%	87%	89%
Receive Social Services Case Management	79%	83%	80%	75%
Social Services Case Management Gap	18%	13%	17%	22%
Need Women's Services	100%	100%	100%	100%
Receive Women's Services	32%	18%	31%	41%
Women's Services Gap	68%	82%	69%	59%
Mean (Std dev) Number of Service Needs¹	4.75 (1.7)	5.08 (1.6)	4.55 (1.7)	5.02 (1.6)

Data from most recent interview.

Note: Service 'gap' refers to those who needed but have not received any services to address the need in the six months prior to indicate. Note that persons who had a service contact may not have had their need(s) entirely met.

¹excluding women's services

Table A12. Women's Service Needs, Service Use, and Gaps by Age

	All Women	18-34 Years	35-49 Years	50+ Years
<i>(n=)</i>	<i>(n=333)</i>	<i>(n=36)</i>	<i>(n=121)</i>	<i>(n=176)</i>
Need Financial Assistance	77%	72%	80%	75%
Receive Financial Assistance	70%	53%	61%	78%
Financial Assistance Gap	8%	17%	12%	3%
Need Food Assistance	74%	61%	76%	76%
Receive Food Assistance	85%	81%	80%	89%
Food Assistance Gap	5%	8%	7%	4%
Need Housing Assistance	90%	89%	88%	92%
Receive Housing Assistance	69%	56%	71%	71%
Housing Assistance Gap	26%	39%	24%	25%
Need Transportation Assistance	44%	25%	41%	49%
Receive Transportation Assistance	33%	19%	30%	39%
Transportation Assistance Gap	27%	17%	27%	30%
Need Childcare Assistance	1%	8%	0%	1%
Receive Childcare Assistance	1%	6%	0%	0%
Childcare Assistance Gap	1%	3%	0%	1%
Need Mental Health Service(s)	49%	36%	60%	44%
Receive Mental Health Service(s)	36%	31%	39%	34%
Mental Health Service(s) Gap	25%	17%	32%	22%
Need Any AOD Treatment	24%	14%	28%	23%
Receive Any AOD Treatment	12%	8%	17%	9%
AOD Treatment Gap	12%	6%	12%	14%
Need Medical Case Management	29%	44%	31%	24%
Receive Medical Case Management	47%	44%	50%	46%
Medical Case Management Gap	15%	21%	15%	14%
Need Social Services Case Management	88%	86%	88%	88%
Receive Social Services Case Management	79%	75%	74%	82%
Social Services Case Management Gap	18%	19%	21%	15%
Need Women's Services	100%	100%	100%	100%
Receive Women's Services	32%	36%	36%	28%
Women's Services Gap	68%	64%	64%	72%
Mean (Std Dev) Number of Service Needs¹	4.75 (1.7)	4.36 (1.6)	4.83 (1.7)	4.70 (1.7)

Data from most recent interview.

Note: Service 'gap' refers to those who needed but have not received any services to address the need in the six months prior to indicate. Note that persons who had a service contact may not have had their need(s) entirely met.

¹excluding women's services

Table A13. Women’s Entry into Care by Race/Ethnicity

Total Number of Individuals:		All Women	White/Other	Black	Latina
		(n=319)	(n=38)	(n=192)	(n=89)
Year of HIV Diagnosis	≤ 1996	42%	39%	38%	53%
	1997-2004	36%	37%	43%	21%
	2005-2011	19%	16%	18%	24%
	2012+	3%	8%	2%	2%
Age at HIV Diagnosis	< 35	51%	53%	46%	63%
	35-49	40%	32%	46%	33%
	50+	8%	16%	9%	4%
Testing	Didn’t think about it	74%	74%	79%	61%
	Thought about it & didn’t get	6%	5%	7%	5%
	Got tested & didn’t get result	1%	0%	0%	2%
	Got tested & negative	20%	21%	14%	32%
Testing Site	Hospital clinic	47%	64%	44%	46%
	CHC/Neighborhood clinic	30%	13%	33%	33%
	Private practice/HMO	9%	3%	10%	10%
	Drug treatment or social service agency	3%	3%	4%	1%
	Prison or jail	5%	6%	4%	6%
	Other	6%	10%	5%	5%
Testing Site Pre-Discussion	Transmission Risks	67%	47%	69%	73%
	Treatment Options	60%	53%	57%	70%
Testing Site Linkage to Care	Yes, actively facilitate	75%	68%	74%	78%
Time from Diagnosis to HIV Care	0-3 months	76%	65%	79%	75%
	4-12 months	11%	23%	8%	12%
	>12 months	13%	13%	12%	13%

¹ Excludes the perinatally infected.

² CHC = Community Health Clinic

³ HMO = Health Maintenance Organization

Table A14. Women’s Entry into Care by Age

Total Number of Individuals:		All Women	18-34	35-49	50+
		(n=333)	(n=36)	(n=121)	(n=176)
Year of HIV diagnosis	≤ 1996	42%	15%	36%	52%
	1997-2004	36%	38%	39%	34%
	2005-2011	19%	38%	25%	11%
	2012+	3%	9%	0%	3%
Age at HIV diagnosis	< 35	51%	100%	68%	29%
	35-49	40%	0%	32%	55%
	50+	9%	0%	0%	16%
Testing	Didn’t think about it	73%	50%	74%	80%
	Thought about it & didn’t get	6%	9%	7%	5%
	Got tested & didn’t get result	1%	0%	2%	0%
	Got tested & negative	20%	41%	18%	16%
Testing Site	Hospital clinic	47%	35%	49%	48%
	CHC/Neighborhood clinic	30%	44%	32%	24%
	Private practice/HMO	9%	6%	8%	11%
	Drug treatment or social service agency	3%	5%	1%	6%
	Prison or jail	5%	3%	4%	6%
	Other	6%	6%	6%	5%
Testing Site Pre-Discussion	Transmission Risks	67%	76%	67%	65%
	Treatment Options	60%	57%	63%	58%
Testing Site Linkage to Care	Yes, actively facilitate	74%	68%	78%	74%
Time from Diagnosis to HIV Care	0-3 months	76%	66%	81%	75%
	4-12 months	11%	14%	9%	12%
	>12 months	13%	20%	10%	13%

¹ Excludes the perinatally infected.

² CHC = Community Health Clinic

³ HMO = Health Maintenance Organization

Table A15. Women's Life Circumstances when Diagnosed by Race/Ethnicity

Total Number of Individuals:		All Women	White/Other	Black	Latina
		(n=333)	(n=40)	(n=202)	(n=92)
Risk Exposure Group	IV Drug Use, Ever	13%	25%	10%	12%
	Heterosexual/Other	87%	75%	90%	88%
Had regular source of medical care prior to HIV diagnosis	Yes	48%	42%	51%	43%
Health Status at first visit for HIV Care	No medical problems	47%	40%	49%	44%
	Minor medical problems	21%	13%	22%	21%
	Major health problems	32%	47%	29%	35%
Living situation when first tested positive	Regular place to live	72%	84%	75%	60%
	Doubled up	12%	11%	12%	13%
	Homeless	5%	5%	4%	7%
	In jail or a treatment program	4%	0%	3%	7%
	Other	7%	0%	6%	13%
Primary financial source when first tested positive	Working regular, full-time job	48%	42%	49%	47%
	Working odd jobs	2%	0%	2%	7%
	Receiving benefits	22%	32%	23%	16%
	Supported by another person	14%	21%	12%	16%
	No regular means of financial support	7%	0%	9%	7%
	Other	6%	5%	5%	9%
Friendships when first tested positive	Many close friends	33%	32%	34%	33%
	Only a few close friends	46%	47%	46%	46%
	Not really any close friends	21%	21%	21%	22%
I was married/in a relationship with a regular partner...		73%	84%	74%	67%
I was drinking a lot...		16%	5%	20%	11%
I was using drugs regularly...		33%	37%	37%	20%
I had medical insurance that would cover all or most of my care...		74%	95%	75%	59%

Table A16. Women's Life Circumstances when Diagnosed by Age

Total Number of Individuals:		All Women	18-34	35-49	50+
		(n=333)	(n=36)	(n=121)	(n=176)
Risk Exposure Group	IV Drug Use, Ever	13%	8%	7%	18%
	Heterosexual/Other	87%	92%	93%	82%
Had regular source of medical care prior to HIV diagnosis	Yes	48%	47%	47%	49%
Health Status at first visit for HIV Care	No medical problems	47%	64%	52%	36%
	Minor medical problems	21%	18%	19%	24%
	Major health problems	32%	18%	29%	41%
Living situation when first tested positive	Regular place to live	72%	52%	65%	83%
	Doubled up	12%	17%	21%	5%
	Homeless	5%	4%	7%	4%
	In jail or a treatment program	4%	0%	4%	5%
	Other	7%	26%	4%	4%
Primary financial source when first tested positive	Working regular, full-time job	48%	22%	44%	58%
	Working odd jobs	2%	4%	4%	1%
	Receiving benefits	22%	22%	19%	24%
	Supported by another person	14%	30%	14%	10%
	No regular means of financial support	7%	4%	16%	2%
	Other	6%	17%	4%	5%
Friendships when first tested positive	Many close friends	33%	43%	33%	31%
	Only a few close friends	46%	30%	45%	51%
	Not really any close friends	21%	26%	22%	18%
I was married/in a relationship with a regular partner...		73%	58%	76%	75%
I was drinking a lot...		16%	8%	16%	18%
I was using drugs regularly...		33%	13%	34%	37%
I had medical insurance that would cover all or most of my care...		74%	88%	59%	80%

Table A17. Women’s Engagement with HIV Clinical Care and Health Outcomes by Race/Ethnicity

	(n=)	All Women	White/Other	Black	Latina
		(n=334)	(n=40)	(n=202)	(n=92)
Consistent care¹		81%	80%	83%	78%
Appropriate care²		81%	80%	86%	71%
Adherent ARV use³		67%	65%	66%	71%
Viral suppression⁴		87%	76%	89%	89%
CD4 T-Cell Count	≤ 200	16%	18%	15%	18%
	201-350	20%	28%	17%	22%
	351-500	18%	15%	17%	20%
	500+	46%	40%	50%	40%

¹ Consistent care is a measure of retention in HIV care, indicated by not missing any or only one scheduled HIV-related medical appointment and no ‘drop out’ episodes, intentionally stopping going to the doctor.

² Appropriate refers to receiving HIV care that meets clinical practice standards at the time of interview

³ Adherent ARV is following HIV ARV medication regimen “exactly as prescribed” generally and specifically over 2 days prior to study interview.

⁴ Viral suppression is determined from a respondent’s self-reported viral load or, review of lab records /doctor report if available.

Table A18. Women’s Engagement with HIV Clinical Care and Health Outcomes by Age

	(n=)	All Women	18-34	35-49	50+
		(n=333)	(n=36)	(n=121)	(n=176)
Consistent care¹		81%	75%	74%	87%
Appropriate care²		81%	78%	82%	81%
Adherent ARV use³		67%	50%	71%	68%
Viral suppression⁴		87%	76%	87%	90%
CD4 T-Cell Count	≤ 200	16%	14%	15%	18%
	201-350	20%	26%	18%	19%
	351-500	18%	0%	21%	19%
	500+	46%	60%	45%	44%

¹ Consistent care is a measure of retention in HIV care, indicated by not missing any or only one scheduled HIV-related medical appointment and no ‘drop out’ episodes, intentionally stopping going to the doctor.

² Appropriate refers to receiving HIV care that meets clinical practice standards at the time of interview

³ Adherent ARV is following HIV ARV medication regimen “exactly as prescribed” generally and specifically over 2 days prior to study interview.

⁴ Viral suppression is determined from a respondent’s self-reported viral load or, review of lab records /doctor report if available.

Table A19. Women’s Reasons Delayed or Did Not Get Needed Medical Care in the Past Six Months by Race/Ethnicity

(n=)	All Women	White/Other	Black	Latina
	(n=310)	(n=38)	(n=186)	(n=86)
Logistical Problem:				
Cost/Not Covered by Insurance	4%	3%	5%	3%
Transportation	5%	5%	3%	7%
Didn’t Know Where to Go	3%	3%	2%	6%
Childcare	0%	0%	0%	0%
Language	1%	0%	0%	3%
Office Not Open at Convenient Time	1%	0%	0%	3%
Care Provider Issue:				
Don’t Trust Providers to Be Confidential about Status	3%	8%	3%	1%
Staff Not Competent	3%	5%	3%	3%
Staff Disrespectful or Insensitive	3%	8%	1%	6%
Staff Not Good at Listening	4%	5%	2%	6%
Not Confident Staff Will Understand Problem	2%	5%	2%	2%
Nervous or Afraid of What Provider Might Say	1%	3%	1%	0%

Table A20. Women’s Reasons Delayed or Did Not Get Needed Medical Care in the Past Six Months by Age

(n=)	All Women	18-34	35-49	50+
	(n=333)	(n=36)	(n=121)	(n=176)
Logistical Problem:				
Cost/Not Covered by Insurance	4%	3%	6%	3%
Transportation	5%	6%	6%	3%
Didn’t Know Where to Go	3%	3%	4%	2%
Childcare	0%	0%	0%	0%
Language	1%	0%	0%	2%
Office Not Open at Convenient Time	1%	5%	1%	0%
Care Provider Issue:				
Don’t Trust Providers to Be Confidential about Status	3%	3%	6%	1%
Staff Not Competent	3%	0%	5%	3%
Staff Disrespectful or Insensitive	3%	0%	4%	4%
Staff Not Good at Listening	4%	0%	6%	3%
Not Confident Staff Will Understand Problem	2%	0%	4%	2%
Nervous or Afraid of What Provider Might Say	1%	0%	2%	1%

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