

Baseline Social Characteristics and Barriers to Care from a Special Projects of National Significance Women of Color with HIV Study: A Comparison of Urban and Rural Women and Barriers to HIV Care

Elizabeth A. Eastwood, MD,¹ Jason Fletcher, MD,² E. Byrd Quinlivan, MD,^{3,4} Niko Verdecias, MPH,⁵ Jeffrey M. Birnbaum, MD,⁶ and Arthur E. Blank, PhD^{5,7}

Abstract

We describe the baseline sociodemographic characteristics of the Health Resources and Services Administration's Special Programs of National Significance Women of Color (WOC) Initiative. Between November 2010 and July 2013, 921 WOC were prospectively enrolled in HIV medical care at nine sites, six urban ($N=641$) and three rural sites ($N=280$) across the US. We describe the study sample, drawing comparisons between urban and rural sites on sociodemographics, barriers to HIV care, HIV care status at study entry, substance use and sexual risk factors, and the relationship among these variables. Urban sites' participants differed from rural sites on all sociodemographic variables except age (median=42.3). Women at urban sites were more likely to be Hispanic, less educated, single, living alone, unstably housed, unemployed, and to have reported lower income. More urban women were transferring care to HIV care or had been lost to care. Urban women reported more barriers to care, many relating to stigma or fatalism about HIV care. Urban women reported more substance use and sexual risk behaviors. A better understanding of how HIV care is embedded in communities or fragmented across many sites in urban areas may help understand barriers to long-term engagement in HIV care encountered by WOC.

Introduction

THE FRAGMENTED US HEALTHCARE SYSTEM is often ill-equipped to deal with myriad social and economic problems that confound consistent HIV care. Women of color (WOC) experience the effects of these problems in a variety of ways, leading to disengagement in care. Despite well-established clinics, these problems continue to affect care for WOC. Minority women continue to report difficulties entering and staying in care.^{1–5} Women report being disconnected from medical care providers, and while experiencing competent and caring providers, women report they do not have sufficient information to live safely with HIV.^{6–8}

The epidemiology of HIV/AIDS in the United States reflects a shift towards people of color and the poor. African Americans currently account for 47% of new HIV diagnoses in the United States. Among females, 64% of new HIV diagnoses were among black/African Americans and 89% of HIV infections were through heterosexual contact.⁹ Among newly diagnosed women across the US, the rate of HIV infection is 7.7/100,000, but among black/African Americans the rate is more than five times greater: 40.0/100,000 and among Hispanic/Latinas, the rate is second highest at 7.9/100,000 and lowest among white women. Despite widespread availability of HIV testing, an estimated 24–27% of people infected do not know their serostatus.¹⁰ The White House Office of National AIDS Policy has made knowing

¹Brooklyn College and CUNY School of Public Health, City University of New York, New York City, New York.

²New York University College of Nursing, New York, New York.

³Institute for Global Health and Infectious Diseases, and ⁴Center for AIDS Research, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina.

Departments of ⁵Family and Social Medicine and ⁷Epidemiology and Population Health, Albert Einstein College of Medicine, Bronx, New York.

⁶SUNY Downstate Medical Center and SUNY School of Public Health, Brooklyn, New York.

serostatus, being in regular medical care, and a goal of being virally-suppressed the major focus in HIV/AIDS policy in the US.¹¹

To address the increasing incidence of HIV among rural, minority women and the overall high prevalence of HIV among urban women, HRSA specifically provided funding for sites to represent rural and urban locations, in order to assess differences in barriers to care which might inform more specific recommendations on ways to improve entry and retention in consistent HIV care. Other reports in this supplement report on health history of WOC (Quinlivan et al.) and their retention in care and viral suppression (Blank et al.). In this article, we address several questions HRSA had for this initiative: (1) how do sociodemographic characteristics and barriers to HIV medical care differ by urban/rural location; (2) how does HIV care status differ in their self-reported barriers to care; and (3) how do risk behaviors across urban/rural sites associated with barriers to care and HIV status. In this article, we report descriptive sociodemographic characteristics, barriers to care, behavioral and substance use risks, and domestic violence findings from baseline surveys of all women enrolling in the WOC multisite evaluation between November 2010 and July 2013.

Methods

The WOC initiative was a prospective study of women with HIV at nine sites across the United States. The nine sites represent areas affected by HIV. Six sites were in urban areas (Brooklyn, Chicago, Los Angeles, Miami, San Antonio, and Springfield, MA) and three in rural areas (Alabama, North Carolina, and Longview, Texas). Besides the nine sites, the initiative also funded a national evaluation and technical assistance center (ETAC), the Albert Einstein College of Medicine, which was responsible for all cross-site research and evaluation activities.

Eligibility for the multi-site evaluation was determined by patient identification as being nonwhite, female, aged 18 or older, and not currently receiving HIV medical care.¹² Patients self-identified themselves at study entry into one of five groups: newly diagnosed with HIV (newly diagnosed); diagnosed more than 3 months previously but had never received HIV care (new to care); transferred into care from another service provider (transfer of care); had only one visit with the current provider in 12 months (sporadic care); or, had at least one visit with the current provider between 12–24 months ago, without a visit in the past 12 months (lost to care). Participants were recruited into the demonstration programs in several ways (e.g., through outreach, identification at testing sites, physician referral) beginning in November 2010 and concluding in July 2013.

Instrument development

Survey data. Survey questions were developed by the ETAC from existing, published surveys, and input from the programs. The baseline survey had approximately 120 items. The Spanish survey was translated from English, then back-translated to Spanish by an IRB-approved translator at the Albert Einstein College of Medicine. All surveys were piloted in English and Spanish at three demonstration sites. The baseline and follow-up surveys included questions about sociodemographic characteristics, risk behaviors (sexual

practices, substance use, and alcohol), self-assessed health status, health related quality of life, domestic violence, medical care history, medication adherence, health history, and HIV medical care history. A list of potential barriers to accessing or seeking care was developed from existing surveys and with input from the demonstration sites. Information was also collected from the medical charts on lab test values for CD4 and viral load.

Each study site received permission for its study from their Institutional Review Boards, as did the ETAC. Common language was developed by the ETAC and employed in each of the programs consent forms.

Measures. Sociodemographics included age; gender (female/transgender female); education level; primary language spoken at home; sexual orientation and marital/partnership status; current living arrangements (house, apartment, etc.); children and household composition; sources of income and health insurance. HIV care status was based on self-report of meeting one of the five eligibility HIV criteria given above.

Barriers to care were adapted for this study from a comprehensive list of barriers developed by Patel et al.¹³ that urban and rural sites collectively thought affected their HIV populations and coded as a trichotomy: affects me a great deal; affects me somewhat; and does not affect me at all.

Behavioral risks were assessed by a set of 13 questions adapted from Rapkin et al.¹⁴ asking about smoking, alcohol consumption, drug use, and sexual risk behaviors, which were ranked on frequency from several times a day to not in the last 3 months or never. Intimate partner violence was measured by the Woman's Experience with Battering (WEB), a standard scale developed to capture the way women perceive violence done to them.¹⁵ The 10-items on the WEB are ranked on a six-point scale from strongly disagree to agree strongly (1–6). The scale has good internal consistency and reliability.¹⁶ In this study, the language was changed to be gender-neutral. The criterion score for history or current presence of domestic violence is ≥ 20 .¹⁷ Comparisons between urban and rural women were evaluated using *t*-tests for independent groups for continuous variables, and by chi-square with an analysis of the studentized residuals for categorical data. Significance was set at $p < 0.05$ for all analyses. All analyses were conducted using SPSS Statistics for Windows, version 21.

Results

Between November 2010 and July 2013, 921 women had enrolled in the WOC Initiative, with 641 (69.6%) from urban sites and 280 (30.4%) from rural sites (Table 1). Median age was 42.3 years and the WOC were predominantly non-Hispanic black (67.3%) or Hispanic (26.6%). Women from urban and rural sites differed in all sociodemographic characteristics except for age (Table 1).

Urban sites had a statistically significant higher proportion of Hispanic women (35.2% urban, 7.1% rural) and fewer other/multi-racial women (4.7% vs. 9.3%) and born in other countries (22.8% vs. 4.6%). Urban sites had higher proportions of single women (63.7% vs 55.0%) women and lower rates of completion of high school (55.4% vs. 66.8%).

TABLE 1. SOCIODEMOGRAPHIC VARIABLES BY GEOGRAPHIC LOCATION (N=921)

	<i>Urban</i> <i>N=641</i> <i>(69.6%)</i>	<i>Rural</i> <i>N=280</i> <i>(30.4%)</i>	<i>Total</i> <i>N=921^a</i> <i>(100.0%)</i>	<i>Chi-square</i> <i>df</i> <i>p value</i>
Median age	43.3	39.3	42.3	
Age categories				
Younger than 30	114 (17.8)	59 (21.1)	173 (18.8)	$\chi^2=3.1, 2,$ 0.213
30–50	392 (61.2)	154 (55.0)	546 (59.3)	
51 and older	135 (21.1)	67 (23.9)	202 (21.9)	
Ethnicity (race/racial groups)				
Non-Hispanic black	383 (60.1)	234 (83.6) ^b	617 (67.3)	$\chi^2=80.0, 2,$ <0.0005
Hispanic/Latina	224 (35.2)	20 (7.1)	244 (26.6)	
Other/multiracial	30 (4.7)	26 (9.3)	56 (6.1)	
Primary language spoken at home				
English	534 (83.3)	267 (95.4)	801 (87.0)	$\chi^2=25.0, 2$ <0.0005
Spanish	87(13.8)	10 (3.6)	96 (10.5)	
Other	20 (3.1)	3 (1.1)	25 (2.5)	
Born in USA				
Yes	492 (77.2)	267 (95.4)	759 (82.8)	$\chi^2=44.8, 1$ <0.0005
No	145 (22.8)	13 (4.6)	158 (17.1)	
Education				
Less than HS	286 (44.8)	93 (33.2)	379 (41.2)	$\chi^2=10.5, 1$ 0.001
HS or greater	355 (55.4)	187 (66.8)	542 (58.8)	
Marital status				
Single	408 (63.7)	154 (55.0)	562 (61.0)	$\chi^2=8.3, 2,$ 0.016
Married/partner	91 (14.2)	59 (21.1)	150 (16.3)	
Other	142 (22.0)	67 (23.9)	209 (22.7)	
Sexual orientation				
Heterosexual	567 (88.9)	263 (94.3)	830 (90.5)	$\chi^2=6.6, 1,$ 0.010
Other	71 (11.1)	16 (5.7)	87 (9.5)	
HIV care status at study entry				
Newly diagnosed	112 (17.5)	61 (21.8)	173 (18.8)	$\chi^2=40.1, 4$ <0.0005
New to care	99 (15.5)	34 (12.1)	133 (14.5)	
Transferred to care	170 (26.6)	46 (16.4)	216 (26.1)	
Sporadic care	134 (20.9)	106 (37.9)	240 (26.2)	
Lost to care	125 (19.5)	33 (11.8)	158 (17.2)	
Residence				
Rented/own house/apt.	369 (57.9)	206 (73.6)	575 (62.7)	$\chi^2=37.5, 3,$ <0.0005
Institution	62 (9.7)	6 (2.1)	68 (7.4)	
Someone else's place	149 (23.3)	63 (22.5)	212 (23.1)	
Street/SRO	57 (8.9)	5 (1.8)	62 (6.8)	
Living here < 1 year? (yes)	337 (52.6)	125 (44.8)	462 (50.2)	$\chi^2=4.9, 1$ 0.027
Have children < 18 years old? (yes)	272 (42.6)	145 (51.8)	417 (45.4)	$\chi^2=6.5, 1$ 0.010
Household members				
Alone	244 (38.5)	57 (20.4)	301 (32.9)	$\chi^2=36.7, 2$ <0.0005
Children, no adults	151 (23.8)	64 (22.9)	216 (23.5)	
Adults	239 (37.7)	159 (56.8)	398 (43.5)	
Employment status				
Full/part-time	89 (13.9)	76 (27.1)	165 (17.9)	$\chi^2=48.8, 4,$ <0.0005
School	14 (2.2)	10 (3.6)	24 (2.6)	
Disabled	158 (24.6)	93 (33.2)	251 (27.3)	
Not working/other	345 (53.8)	88 (31.4)	433 (47.9)	
Other	35 (5.5)	13 (4.6)	48 (5.2)	
Income last month				
No income	168 (27.1)	51 (18.3)	219 (24.4)	$\chi^2=42.7, 3$ <0.0005
\$1–500	147 (23.7)	40 (14.3)	187 (20.8)	
\$501–1000	237 (38.3)	115 (41.4)	352 (39.2)	
\$1001 +	67 (10.8)	72 (25.9)	139 (15.3)	

(continued)

TABLE 1. (CONTINUED)

	<i>Urban</i> <i>N=641</i> <i>(69.6%)</i>	<i>Rural</i> <i>N=280</i> <i>(30.4%)</i>	<i>Total</i> <i>N=921^a</i> <i>(100.0%)</i>	<i>Chi-square</i> <i>df</i> <i>p value</i>
Income last month came from				
Salary from work	100 (16.4)	80 (29.9)	180 (20.5)	$\chi^2=31.6, 3$ <0.0005
Public sources	290 (47.5)	88 (32.8)	378 (43.1)	
Disability	31 (5.1)	25 (9.3)	56 (6.4)	
Other	189 (31.0)	75 (28.0)	264 (30.1)	
Health insurance				
Private	21 (3.3)	24 (8.6)	45 (4.9)	$\chi^2=14.8, 3$ 0.002
Medicaid	221 (35.0)	84 (30.1)	304 (33.3)	
Medicare/other public	119 (18.8)	41 (14.7)	160 (17.5)	
None	271 (42.9)	130 (46.6)	405 (44.3)	

^aTotals may not equal 921 due to missing data.

^bItalicized numbers and % indicate that that column is significantly different between urban and rural samples at $p < 0.05$.

Women's HIV care status varied significantly between urban and rural sites. Urban women more frequently transferred to their current care provider from another provider (26.6% vs. 16.4%); were less frequently in sporadic care (one visit in the last 12 months) (20.9% vs. 37.9%), and were more likely to have been lost to care (19.5% vs. 11.8%). About one-fifth of each group was newly diagnosed with HIV, and the urban rural differences were very small in those who were new to care.

Urban women had a statistically significant lower proportion of living in their own apartment or house (57.9% vs. 73.6%) but a higher proportion living in an institution such as substance abuse treatment or halfway house (9.7% vs. 2.1%) or living in an SRO or on the street (8.9% vs. 1.8%). Both geographic groups reported nearly one-quarter of women living in someone else's home. More than half (52.6%) of urban women had been living in their current living arrangement less than a year compared to 44.8% of rural women. Urban women had lower proportion of children under the age of 18 (42.6% vs. 51.8%). More urban women reported also living alone (38.5% vs. 20.4%) and less frequently living with other adults (39.3% vs. 56.9%).

Women in urban sites reported lower income categories than rural women and were more likely to report income from public assistance sources (Table 1). More than 44% of the entire sample reported no health insurance at the time they enrolled in care. Barriers to HIV care revealed a high self-report of multiple barriers and distinct differences between the urban and rural women. The 10 most frequently reported barriers are shown on Table 2. Comparisons showed that 9 of the 10 most frequently reported barriers were from participants from urban sites. The five most frequently reported barriers to receiving HIV care were reported by 65–80% of women. These five barriers were: needing more information; thought you might be judged; get back on track on your own; should learn to live with it; and felt embarrassed or uncomfortable. An additional four barriers were reported as being present somewhat or a great deal by more than half the sample: too upset to deal with the problem; had transportation problems; uncertainty about housing or finances; and afraid nothing would help. (A full table of all 30 barriers is available from the first author.)

Drug use, alcohol use, HIV sexual risk behaviors, and domestic violence are shown in Table 3. Three-fourths of all

women (74.9%) had lifetime use of alcohol, and one-third had smoked cigarettes (33.5%) but there were no significant differences between the groups. However, the urban and rural groups had significantly different usage of other substances where urban women reported more frequent use of heroin, cocaine, and injected drugs (Table 3). Urban women reported statistically significant greater experience of having had sex with someone who used drugs in the last 3 months (3.2%), having never had unprotected sex (17.3%), and less likely to ever have had sex with someone known to have HIV (38.9%), but more likely to have had sex with someone HIV+ in the last 3 months (47.4%). With respect to intimate partner violence, 43.2% of the sample reported IPV with a past partner, and 15.2% experienced IPV with their current partner, but there were no differences between the two groups.

The five most frequently occurring barriers (need more information, thought you might be judged, get back on track on own, learn to live with it, and feeling embarrassed/uncomfortable) were compared among the five HIV care status categories and urban and rural participants. Three of the five barriers bore a statistically significant relationship to care status among the urban women but not among rural women: need more information; get back on one's own track; and learn to live with it. Among urban women, needing more information as a barrier that was "a great deal" was significantly related to transfers to care participants (72.4%), new to care (67.6%), sporadic care (63.4%), and newly diagnosed (62.5%) ($\chi^2=25.1, df=8, p=0.001$). Getting back on track as a "great deal" barrier was reported significantly less frequently among the newly diagnosed (33.9%) and most frequently by those new to care (46.4%) ($\chi^2=20.1, df=8, p<0.0005$). Learning to live with it was only significant because it was "not at all" a barrier for newly diagnosed women (47.3%) compared to all other care groups (25.5–29.6%) ($\chi^2=23.4, df=8, p=0.003$). In other words, women newly diagnosed were least likely to state they needed to get back on track on their own.

Discussion

The results of this study show that urban and rural samples of women enrolling in HIV care differed in important socio-demographic characteristics, exposure to risk factors, and

TABLE 2. BARRIERS TO CARE BY GEOGRAPHIC LOCATION, RANKED BY SELF-REPORT OF BEING PRESENT IN TOTAL SAMPLE (N = 921)

Level of barrier experienced	Urban ^a			Rural			Total		
	Great deal N (%)	Somewhat N (%)	Not at all N (%)	Great deal N (%)	Somewhat N (%)	Not at all N (%)	Great deal N (%)	Somewhat N (%)	Not at all N (%)
Need more information about help ^b	408 (63.7)	114 (17.8)	119 (18.6)	160 (57.1)	54 (19.3)	66 (23.6)	568 (61.7)	168 (18.2)	185 (20.1)
Thought you might be judged	304 (47.4)	131 (20.4)	206 (32.1)	114 (40.7)	92 (32.9) ^c	74 (26.4)	418 (45.4)	223 (24.2)	280 (30.4)
Get back on track on your own	331 (51.6)	129 (20.1)	181 (28.2)	93 (33.2)	81 (28.9)	106 (37.9)	424 (46.0)	210 (22.8)	287 (31.2)
Should learn to live with it	281 (44.0)	156 (24.4)	202 (31.6)	86 (30.7)	93 (33.3)	100 (35.8)	367 (40.0)	249 (27.1)	302 (32.9)
Felt embarrassed/uncomfortable	252 (39.4)	153 (23.9)	235 (36.7)	97 (34.6)	94 (33.6)	89 (31.8)	349 (37.9)	247 (26.8)	324 (35.2)
Too upset to deal w/ problem	228 (35.6)	129 (20.1)	284 (44.3)	78 (27.9)	77 (27.5)	125 (44.6)	306 (33.2)	206 (22.4)	409 (44.4)
Had transportation problems	226 (35.3)	140 (21.9)	274 (42.8)	72 (25.7)	49 (17.5)	159 (56.8)	298 (32.4)	189 (20.5)	433 (47.1)
Uncertainty about housing/finances	230 (35.9)	142 (22.2)	269 (42.0)	50 (17.9)	61 (21.9)	168 (60.2)	280 (30.4)	203 (22.1)	437 (47.5)
Afraid nothing would help	180 (28.0)	152 (23.6)	311 (48.4)	51 (18.1)	89 (31.7)	141 (50.2)	231 (25.0)	241 (26.1)	452 (48.9)
Thought help would bring unwanted changes in care	192 (30.0)	137 (21.4)	310 (48.5)	54 (19.3)	64 (22.9)	162 (57.9)	246 (26.8)	201 (21.9)	472 (51.4)

^aTotals may not equal 921 due to missing data. ^bAll χ^2 were significant with $df = 2$ and $p < 0.05$ except this barrier. ^cItalicized numbers and % indicate that that column is significantly different between urban and rural samples at $p < 0.05$.

barriers to care. Women in urban settings had lower educational attainment, more likely to be single, were more unstably housed, to live alone, had shorter time at current residence, not working, with lower income, and income from public assistance programs. These characteristics point to several interpretations. First, in large urban areas, women may experience greater social isolation despite large populations around them. There are often more safety net services in large urban areas such as homeless shelters, soup kitchens, and other local resources delivered through faith-based or secular charity organizations.

Second, the proportion of women living in their own rented or owned dwellings was only 57.9% in urban areas but 73.6% in rural locations. Women who have unstable housing have constant competing demands for security that make consistent HIV medical care a difficult task among many difficult tasks. Lower reported income and low rates of women working may be a direct result stemming from unstable housing.

Third, the social isolation among urban women may also occur as result of fragmented social, economic, and health services, driven by disparate public policies that require participants meet contradictory conditions of service. These conditions may vary from program to program within a city or state. In order to receive income support, one might need to prove residence. To receive housing support, one must meet lower income requirements that may mean concealing sources of income or being incentivized to not work or work fewer hours in order to receive benefits.

Health insurance differences across urban and rural locations may also be driven by public policy. To qualify for Medicaid, one must meet income and other criteria, which vary among states. Before the Patient Protection and Affordable Care Act, the income criterion for Medicaid eligibility was 100% of federal poverty level (FPL) in more progressive states. In some states, Medicaid eligibility was as low as 50% of FPL. We received anecdotal evidence throughout WOC about the complexities of negotiating income, housing, social, and medical care needs from participants that warrant studies examining the cumulative impact of public policies on women seeking HIV care. These and other variations in health insurance among locations are influenced by state and national public policy rather than local policy and our findings can be expected to be representative of the experiences of WOC at locations not included in this study.

The difference in reporting of barriers between urban and rural sites was expected but also surprising, raising numerous questions. Women reported several barriers related to how others may perceive and stigmatize them (feeling judged, embarrassed, getting back on track on one's own). That these barriers were reported with greater frequency and at higher levels (affecting me "a great deal") among the urban group was surprising. The rural group was expected to experience these more, since there are often limited HIV services, and the local population knows where these services are offered. In general, the urban settings were large and had been offering HIV services for decades. Why then, did clients need more information, need to just learn to live with HIV, or were fearful that nothing would help? Education was not strongly associated with the barriers of stigma and fatalism. This is congruent with a previous report that education was not associated with the number of barriers to care (including stigma) reported by HIV + WOC.⁵ Investigation into the role of social networks may address and deepen these findings. Similarly, women in

TABLE 3. LEVEL OF RISK BEHAVIORS AND DOMESTIC VIOLENCE BY GEOGRAPHIC LOCATION (N=921)

Level of Behavior	Urban ^a			Rural			Total		
	Never N (%)	Not in 3 months N (%)	In last 3 months N (%)	Never N (%)	Not in 3 months N (%)	In last 3 months N (%)	Never N (%)	Not in 3 months N (%)	In last 3 months N (%)
Smoked more than one pack of cigarettes a day	420 (66.1)	95 (15.0)	120 (18.9)	186 (67.4)	33 (12.0)	57 (20.7)	606 (66.5)	128 (14.1)	177 (19.4)
Drank alcoholic beverages	175 (27.3)	168 (26.3)	297 (46.4)	55 (19.9)	77 (27.9)	144 (52.2)	230 (25.1)	245 (26.7)	441 (48.1)
Used heroin ^b	535 (83.5)	76 (11.9)	30 (4.7)	259 (93.2)	19 (6.8)	0 (0.0)	794 (86.4)	95 (10.3)	30 (3.3)
Used cocaine (any type) ^b	343 (53.8)	210 (32.9)	85 (13.3)	174 (63.0)	73 (29.0)	22 (8.0)	517 (56.6)	290 (31.7)	107 (11.7)
Used amphetamines, ecstasy, crystal meth	586 (91.7)	46 (7.2)	7 (1.1)	246 (88.8)	27 (9.7)	4 (1.4)	832 (90.8)	73 (8.0)	11 (1.2)
Injected drugs ^b	557 (87.6)	64 (10.1)	15 (2.4)	248 (89.2)	30 (10.8)	0 (0.0)	805 (88.1)	94 (10.3)	15 (1.6)
Had sex with someone who Injects drugs ^b	443 (79.4)	97 (17.4)	18 (3.2)	205 (82.7)	43 (17.3)	0 (0.0)	648 (80.4)	140 (17.4)	18 (2.2)
Had sex for money or goods	427 (67.4)	164 (25.8)	43 (6.8)	201 (72.6)	67 (24.2)	9 (3.2)	628 (68.9)	231 (25.4)	52 (5.7)
Had unprotected sex ^b	108 (17.3)	364 (58.1)	154 (24.6)	28 (10.3)	149 (54.6)	96 (35.2)	136 (15.1)	513 (57.1)	250 (27.8)
Had sex with someone HIV + ^b	199 (38.9)	242 (47.4)	70 (13.7)	117 (49.4)	93 (39.2)	27 (11.4)	316 (42.2)	335 (44.8)	97 (13.0)
	Urban ^a			Rural			Total		
Screen positive for domestic violence ^c :	No N (%)	Yes N (%)		No N (%)	Yes N (%)		No N (%)	Yes N (%)	
Current partner	264 (83.8)	51 (16.2)		126 (86.9)	19 (13.1)		390 (84.6)	70 (15.2)	
Past partner	177 (56.9)	134 (43.1)		251 (56.8)	51 (16.2)		251 (56.8)	191 (43.2)	

^aTotals may not equal 921 due to missing data. ^bChi-square comparing urban vs. rural significant, $df=2, p<0.05$. ^cFrom CDC Women's Experience with Battering, score of > 20 threshold for positive domestic violence.

urban settings report higher transportation barriers, despite having more extensive public transportation.

In conclusion, WOC at urban sites of care report more impairment in socioeconomic status, more risk behavior and report barriers to care more frequently. Despite the availability of well-established HIV care systems in the local study sites, and an articulated national policy that is meant to attract and engage people in care, WOC frequently reported needing “more information” as their number one barrier. Needing will-power or other motivating factors (“getting back on track on one’s own,” “learn to live with it”) and dealing with stigma (“might be judged” and “embarrassed/uncomfortable”) were the next most commonly described barriers. As barriers reported by women are diverse, multidisciplinary intervention will need to be developed before effective assistance for WOC is available.

Acknowledgments

This research was supported by funds from HRSA’s Special Projects of National Significance Initiative: Enhancing Engagement and Retention in Quality HIV Care for Women of Color to the recruitment sites: University of North Carolina at Chapel Hill, Chapel Hill, NC (H97HA15148), The Research Foundation of SUNY, Brooklyn, NY (H97HA15155); Health Services Center, Inc, AL (H97HA15149); The CORE Foundation/Ruth M. Rothstein CORE Center, Chicago, IL (H97HA15144); JWCH Institute, Inc, Los Angeles, CA (H97HA15145); Care Resource, Miami, FL (H97HA15151); Special Health Resources for Texas, Inc., Longview, TX (H97HA15147); University of Texas Health Science Center at San Antonio, San Antonio, TX (H97HA15154); New North Citizens Council, Inc., MA (H97HA15150); and the Evaluation and Technical Assistance Center, Albert Einstein College of Medicine, Department of Epidemiology and Population Health (H97HA15152). This study was conducted with the approval of the Institutional Review Boards of the participating institutions. The authors also acknowledge the clinic staff, providers, and patients for their invaluable contributions to this research. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health or the Health Resources and Services Administration.

Author Disclosure Statement

No competing financial interests exist.

References

1. Kempf MC, McLeod J, Boehme AK, et al. A qualitative study of the barriers and facilitators to retention-in-care among HIV-positive women in the rural southeastern United States: Implications for targeted interventions. *AIDS Patient Care STDs* 2010;24:515–520.
2. Moneyham L, McLeod J, Boehme A, et al. Perceived barriers to HIV care among HIV-infected women in the Deep South. *J Assoc Nurses AIDS Care* 2010;21:467–477.
3. Messer LC, Quinlivan EB, Parnell H, et al. Barriers and facilitators to testing, treatment entry, and engagement in care by HIV-positive women of color. *AIDS Patient Care STDs* 2013;27:398–407.

4. Quinlivan EB, Messer LC, Adimora AA, et al. Experiences with HIV testing, entry, and engagement in care by HIV-infected women of color, and the need for autonomy, competency, and relatedness. *AIDS Patient Care STDs* 2013; 27:408–415.
5. Toth M, Messer LC, Quinlivan EB. Barriers to HIV care for women of color living in the Southeastern US are associated with physical symptoms, social environment, and self-determination. *AIDS Patient Care STDs* 2013;27:613–620.
6. Boehme AK, Moneyham L, McLeod J, et al. HIV-infected women’s relationships with their health care providers in the rural deep south: An exploratory study. *Health Care Women Intl* 2012;33:403–419.
7. Finocchiaro-Kessler S, Mabachi N, Darlotis JK, Anderson J, Goggin K, Sweat M. “We weren’t using condoms because we were trying to conceive”: The need for reproductive counseling for HIV-positive women in clinical care. *AIDS Patient Care STDs* 2012;26:700–707.
8. Blackstock OJ, Addison DN, Brennan JS, Alao OA. Trust in primary care providers and antiretroviral adherence in an urban HIV clinic. *J Health Care Poor Underserved* 2012;23: 88–98.
9. Prevention CfDca. HIV Surveillance by Race/Ethnicity. 2013.
10. Infection CfDca. Vital Signs: HIV Prevention Through Care and Treatment. *Morbidity Mortality Week Rep* 2011;60: 1618–1623.
11. Policy WHOoNA. National HIV/AIDS Strategy for the United States. Washington, DC 2010 July, 2010.
12. Blank AE, Ryerson Espino SL, Eastwood B, Matoff-Stepp S, Xavier J, Women of Color i. The HIV/AIDS women of color initiative improving access to and quality of care for women of color. *J Health Care Poor Underserved* 2013;24:15–26.
13. Patel S, Weiss E, Chhabra R, et al. The Events in Care Screening Questionnaire (ECSQ): A new tool to identify needs and concerns of people with HIV/AIDS. *AIDS Patient Care STDs* 2008;22:381–393.
14. Rapkin B, Weiss E, Chhabra R, et al. Beyond satisfaction: Using the Dynamics of Care assessment to better understand patients’ experiences in care. *Health Quality Life Outcomes* 2008;6:20.
15. Smith PH, Earp JA, DeVellis R. Measuring battering: Development of the Women’s Experience with Battering (WEB) Scale. *Women’s Health* 1995;1:273–288.
16. Basile KC HM, Back SE. *Intimate Partner Violence and Sexual Violence Victimization Assessment Instruments for Use in Healthcare Settings: Version 1*. In: DHHS, ed.: Atlanta (GA): Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, 2007.
17. Coker AL, Smith PH, McKeown RE, King MJ. Frequency and correlates of intimate partner violence by type: Physical, sexual, and psychological battering. *Am J Public Health* 2000;90:553–559.

Address correspondence to:

Dr. Elizabeth A. Eastwood
 Department of Health and Nutrition Sciences
 Brooklyn College
 2900 Bedford Ave
 Brooklyn, NY 11210

E-mail: eastwood@brooklyn.cuny.edu