



Roles of Race, Drug Use & Health Insurance in Use of HAART Among HIV-Positive Women: 2002-2005

Marsha Lillie-Blanton¹; Valerie E. Stone²; Alison Snow Jones³; Jeff Levi⁴; Elizabeth T. Golub⁵; Mardge Cohen⁶; Nancy A. Hessel⁷; Tracey E. Wilson⁸

¹George Washington University School of Public Health and Health Services, DC; ²Massachusetts General Hospital, MA; ³Wake Forest University School of Medicine, North Carolina; ^{4,5}John Hopkins Bloomberg School of Public Health, MD; ⁶Cook County/Stroger Hospital, IL; ⁷University of California, San Francisco, CA; ⁸SUNY Downstate Medical Center, NY.



BACKGROUND

- Racial disparities have been documented in the use of HAART and in patterns of substance abuse use among women^{1,2}
- Numerous studies have assessed the independent effects of race/ethnicity, gender, substance use, and insurance coverage on the use of medical care by persons living with HIV
- Relatively little is known about how these factors operate in combination to affect the medical care received by HIV positive women.
- Although financial barriers for accessing medications for HIV have been reduced, several studies provide evidence that having health insurance and type of insurance continue to affect use of HIV medications^{3,4,5,6}
- One study analyzing a nationally representative data source of men and women provided evidence that racial differences in insurance coverage explain, in part, racial disparities in the receipt of HAART³.

OBJECTIVES

- To examine whether racial differences in receipt of HAART among HIV-positive women are moderated by health insurance coverage, when controlling for substance abuse and sociodemographic characteristics
- To assess whether race and health insurance interact to result in an elevated risk of non-receipt of HAART

METHODS

SAMPLE

- Women's Interagency HIV Study (WIHS)
 - Six study sites (Brooklyn, Bronx, Chicago, Washington DC, San Francisco Bay area; Los Angeles)
- Women recruited and enrolled in 1994-95 and 2001-02
- Subset of women who are
 - HIV-infected
 - Self identified as either White, African American/Black, or Hispanic/Latina
 - Clinically eligible for HAART as defined by either
 - reported current HAART use
 - CD4+ cell count of <350/mm³
 - HIV RNA Viral load of > 50,000 copies
- N= 1463 in 2002 and N= 1354 in 2005

STATISTICAL ANALYSIS

1. Descriptive Cross-Sectional Analysis, 2002 & 2005

2. Logistic regression models:

2a. Logistic regression, model 1

Outcome: not receiving HAART
Independent variable: race/ethnicity

2b. Logistic regression, model 2

Outcome: not receiving HAART
Key independent variables: race/ethnicity, substance use, insurance other (demographics, clinical indicators, study site, cohort, ADAP)

2c. Logistic regression, model 3

All of the variables in 2b + Interactions terms for race/ethnicity X insurance coverage

2d. Logistic regression, model 4

All of the variables in 2b + Usual source of medical care

Key Independent Study Variables

- Race/Ethnicity & Insurance Coverage
- Demographics (age, poverty)
- Clinical Indicators (Hepatitis C, depressive symptoms: CES-D =>23)
- Substance use (crack, cocaine, heroin; alcohol)

STATISTICAL ANALYSIS

Table 1 - Characteristics of Study Sample

	2002		2005	
	N (%)	%	N (%)	%
Race/Ethnicity	1463	100%	1354	100%
African American/Black	430	29.4%	378	27.9%
Hispanic	430	29.4%	390	28.8%
White	603	41.2%	586	43.3%
Age				
40-49	706	48.3%	697	51.2%
50-59	597	40.8%	574	42.4%
60-69	160	10.9%	163	12.0%
70-79	100	6.8%	120	8.8%
Family Poverty Level				
0-1	102	7.0%	104	7.7%
2-3	497	33.9%	474	34.9%
4-5	864	59.1%	776	57.4%
Insurance Coverage				
Uninsured	390	26.7%	327	24.1%
Private/Other	1063	72.9%	1027	75.9%
Medicaid	100	6.9%	100	7.4%
Medicare	10	0.7%	10	0.7%
ADAP	10	0.7%	10	0.7%
Substance Use				
Crack	10	0.7%	10	0.7%
Cocaine	10	0.7%	10	0.7%
Heroin	10	0.7%	10	0.7%
Alcohol	10	0.7%	10	0.7%
Depression				
CES-D >=23	100	6.9%	100	7.4%
CES-D <23	1363	93.1%	1254	92.6%
Usual Source of Care				
USC is Unknown	100	6.9%	100	7.4%
USC is a Physician Office	1363	93.1%	1254	92.6%

Table 2 - Key Findings: Bivariate Results

Year	Proportion of Clinically Eligible Women Not Using HAART
2002	30.4% (n=445)
2005	28.8% (n=390)

Figure 1 - Percent Clinically Eligible Women Not Using HAART by Race/Ethnicity and Insurance, 2002 & 2005

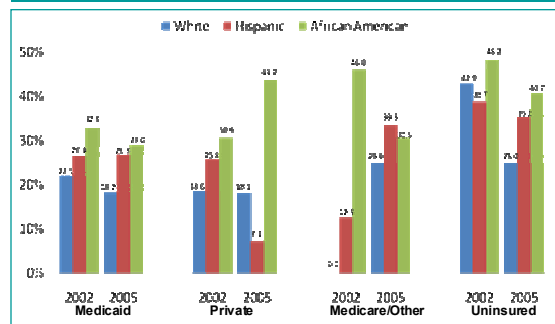


Table 3 - Multivariate Results: Likelihood of Clinically Eligible Women Not Using HAART, 2002

	Model 1	Model 2	Model 3	Model 4
Race/Ethnicity				
African American/Black	2.00 (1.38 - 2.91)	2.38 (1.52 - 3.78)	2.37 (1.51 - 4.30)	2.38 (1.51 - 4.03)
Hispanic	1.20 (0.80 - 1.81)	1.58 (0.95 - 2.63)	1.60 (0.83 - 3.08)	1.58 (0.95 - 2.64)
White	1	1	1	1
Drug Use (crack, cocaine, or heroin)				
Only prior to study enrollment	0.81 (0.63 - 1.11)	0.81 (0.63 - 1.10)	0.83 (0.62 - 1.20)	0.83 (0.62 - 1.20)
During study but not currently	1.03 (0.67 - 1.51)	1.03 (0.67 - 1.60)	0.93 (0.60 - 1.43)	0.93 (0.60 - 1.43)
Currently within last 6 months	1.35 (0.80 - 2.27)	1.36 (0.80 - 2.29)	1.23 (0.72 - 2.08)	1.23 (0.72 - 2.08)
None	1	1	1	1
Alcohol Use				
Light/Drunk	1.27 (0.82 - 1.70)			
None	1	1	1	1
Insurance				
Uninsured	4.17 (2.78 - 6.31)	5.61 (1.81 - 18.60)	4.16 (2.72 - 6.97)	4.16 (2.72 - 6.97)
Private/Other	1.71 (1.08 - 2.66)	1.61 (0.95 - 2.75)	1.71 (1.08 - 2.66)	1.71 (1.08 - 2.66)
Medicaid/Student/Unemployed/Other	1.81 (0.99 - 3.70)	1.60 (1.00 - 3.72)	1.82 (0.95 - 3.49)	1.82 (0.95 - 3.49)
None	1	1	1	1
ADAP				
Yes	0.27 (0.24 - 0.29)	0.38 (0.24 - 0.69)	0.39 (0.25 - 0.61)	0.39 (0.25 - 0.61)
None	1	1	1	1
Depression				
CES-D >=23	1.58 (1.16 - 2.03)	1.92 (1.16 - 2.92)	1.59 (1.19 - 2.12)	1.59 (1.19 - 2.12)
CES-D <23	1	1	1	1
Race X Insurance				
AA & Uninsured		0.74 (0.20-2.61)		
AA & Private		1.24 (0.44-3.44)		
Latina & Uninsured		0.68 (0.17-2.64)		
Latina & Private		1.31 (0.57-2.64)		
White & Medicaid		1		
Usual Source of Care				
USC is Unknown		2.33 (1.26 - 4.30)		
USC is a Physician Office		1		

* Bold means adjusted odds are statistically significant. Values are adjusted ORs (95% Confidence Interval) p<0.05
 † Includes race, age, poverty status, education, employment, insurance coverage, crack/cocaine/heroin use, alcohol use, Hepatitis C antibody result, CES-D over 22 indicator, study site
 ‡ Includes all the variables in model 2 plus the interaction terms African American/Uninsured, African American/Private, Hispanic/Uninsured, and Hispanic/Private
 § Includes usual source of care

Table 4 - Multivariate Results: Likelihood of Clinically Eligible Women Not Using HAART, 2005

	Model 1	Model 2	Model 3	Model 4
Race/Ethnicity				
African American/Black	2.06 (1.39 - 3.07)	2.61 (1.22 - 5.51)	1.71 (0.85 - 3.52)	2.00 (1.21 - 3.31)
Hispanic	1.67 (1.02 - 2.41)	1.37 (0.80 - 2.37)	1.39 (0.69 - 2.79)	1.32 (0.74 - 2.28)
White	1	1	1	1
Drug Use (crack, cocaine, or heroin)				
Only prior to study enrollment	0.80 (0.53 - 1.21)	0.82 (0.54 - 1.24)	0.82 (0.54 - 1.24)	0.82 (0.54 - 1.24)
During study but not currently	1.33 (0.89 - 1.99)	1.38 (0.80 - 2.41)	1.38 (0.80 - 2.41)	1.38 (0.80 - 2.41)
Currently within last 6 months	1.07 (0.62 - 1.84)	1.11 (0.65 - 1.91)	1.02 (0.59 - 1.77)	1.02 (0.59 - 1.77)
None	1	1	1	1
Alcohol Use				
Light/Drunk	1.39 (1.03 - 1.89)			
None	1	1	1	1
Insurance				
Uninsured	2.88 (1.92 - 4.73)	1.70 (0.43 - 6.95)	2.21 (1.38 - 3.48)	2.21 (1.38 - 3.48)
Private/Other	2.06 (1.25 - 3.40)	2.71 (0.95 - 4.50)	2.00 (1.25 - 3.40)	2.00 (1.25 - 3.40)
Medicaid/Student/Unemployed/Other	1.40 (0.69 - 2.69)	1.43 (0.50 - 4.30)	1.43 (0.50 - 4.30)	1.43 (0.50 - 4.30)
None	1	1	1	1
ADAP				
Yes	0.54 (0.34 - 0.84)	0.51 (0.34 - 0.84)	0.57 (0.37 - 0.90)	0.57 (0.37 - 0.90)
None	1	1	1	1
Depression				
CES-D >=23	1.8 (0.91 - 3.41)	1.35 (0.60 - 3.09)	1.36 (1.11 - 1.64)	1.36 (1.11 - 1.64)
CES-D <23	1	1	1	1
Race X Insurance				
AA & Uninsured		1.38 (0.23-8.59)		
AA & Private		1.82 (0.64-5.14)		
Latina & Uninsured		1.80 (0.33-9.64)		
Latina & Private		0.98 (0.41-2.37)		
White & Medicaid		1		
Usual Source of Care				
USC is Unknown		1.70 (1.03 - 2.80)		
USC is a Physician Office		1		

* Bold means adjusted odds are statistically significant. Values are adjusted ORs (95% Confidence Interval) p<0.05
 † Includes race, age, poverty status, education, employment, insurance coverage, crack/cocaine/heroin use, alcohol use, Hepatitis C antibody result, CES-D over 22 indicator, study site
 ‡ Includes all the variables in model 2 plus the interaction terms African American/Uninsured, African American/Private, Hispanic/Uninsured, and Hispanic/Private
 § Includes usual source of care

SUMMARY OF KEY FINDINGS

- Overall**
 - Nearly one-third of clinically eligible women in 2002 and in 2005 were not using HAART at the time of the study visit
- Race/Ethnicity**
 - In 2002, African Americans were twice as likely as Whites not to be using HAART; no statistical difference between Latinas and White women, but elevated risk
 - After adjusting for potential confounders, likelihood of not using HAART remained higher for AAs than Whites
 - In 2005, disparities between African American and White women persisted; statistically significant disparities between Latinas and White women also observed
 - Disparity in HAART use between Latinas and White women in 2005 explained by sociodemographic characteristics; this was not the case for the disparities in HAART use between African Americans and Whites.
- Substance use**
 - Alcohol use was related to non-use of HAART in 2002 and 2005
 - Illicit drug use was not related to non-use of HAART in either year
- Insurance**
 - Being uninsured was associated with a 2 times higher likelihood of not using HAART as compared to Medicaid enrollees in both 2002 and 2005
 - Having private insurance was associated with a 2 times higher likelihood of not using HAART as compared to Medicaid enrollees in both 2002 and 2005
 - ADAP enrollees had lower odds of not using HAART in 2002 and 2005

CONCLUSIONS

- Substantial disparities persist in the use of HAART among racial/ethnic minority women compared to white women.
- This analysis did not support hypothesis that race and insurance interact in a way that increases risk of non-use of HAART.
- However, lack of insurance was associated with poorer access to HAART. ADAP was found to be serving the uninsured and underinsured as intended and increasing the apparent access to HAART.
- Efforts to improve insurance coverage could improve access to HIV medications for women of all race/ethnicities
- Assessments of substance use should include use of alcohol and as well as illicit drugs
- Concerted efforts to address racial disparities in HIV care among women are warranted

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