

Sociodemographic Differences in Access to Care Among Hispanic Patients Who Are HIV Infected in the United States

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This study evaluated associations between sociodemographic factors and access to care, use of highly active antiretroviral therapy, and patients' ratings of care among Hispanic patients who are HIV infected; we used data from the HIV Cost and Services Utilization Study. Gender, insurance, mode of exposure, and geographic region were associated with access to medical care. Researchers and policymakers should consider sociodemographic factors among Hispanic patients who are HIV positive when designing and prioritizing interventions to improve access to care. (*Am J Public Health*. 2004;94:1118–1121)

Hispanic patients who are HIV infected have worse access to care than do White patients.^{1,2} Strategies to remedy this problem necessitate learning the extent to which access to care varies among Hispanic subgroups, so that interventions can be tailored and the most vulnerable population prioritized. In this study, we examined sociodemographic differences in access to medical and dental care, receipt of highly active antiretroviral therapy, and patients' evaluations of care.

METHODS

Subjects

We studied Hispanic patients who completed the HIV Cost and Services Utilization Study baseline survey. The HIV Cost and Services Utilization Study was a representative

study of adults who are HIV positive receiving care in the United States.^{1,3,4}

Regression Analyses

Dependent variables. We examined 9 dichotomous indicators of access to care, including an access scale (dichotomized at mean),⁵ having a usual source of care at HIV diagnosis, having 3 or more outpatient visits in the 6 months before interview, having any emergency department visits not associated with hospitalizations in the 6 months before interview, receiving highly active antiretroviral therapy before December 1996, and receiving highly active antiretroviral therapy by the second follow-up HIV Cost and Services Utilization Study survey.⁶ Patients' evaluations of care were assessed by a single rating item (*excellent vs very good to poor*). Access to dental care was assessed by indicators of having a usual source of dental care and having trouble obtaining needed dental care.⁷

Independent variables. Independent variables were age, gender, educational attainment, income, insurance status, mode of exposure to HIV, geographic location, acculturation,^{8–11} survey language, and US citizenship.

Estimation. We estimated 9 logistic regressions, controlling for independent variables and CD4 cell count. All analyses were weighted to account for sampling and survey nonresponse.¹²

RESULTS

Sample Characteristics

The 415 Hispanics included in the HIV Cost and Services Utilization Study represent an estimated 34 180 (95% Confidence Interval = 18 613, 49 747) Hispanics infected with HIV who were receiving care at the time of the baseline survey in the United States (Table 1). Of the Hispanic patients who were HIV infected, 49% were aged 31 to 40 years, 72% were male, 44% had not completed high school, 23% had an annual income of less than \$5000, and 25% were uninsured. Forty percent were exposed to HIV by male-to-male sex, 38% were located in the Northeast, 83% were US citizens, 85% answered the English survey, and 58% were highly acculturated.

Descriptive Results

Of the Hispanic patients who were HIV infected, 64% had a usual source of care at

TABLE 1—Sociodemographic Characteristics of Hispanics in the HIV Cost and Services Utilization Study

	Unweighted No.	Weighted % (95% CI)
Age, y		
18–30	89	20 (15, 25)
31–40	198	49 (43, 55)
≥41	128	31 (26, 36)
Sex		
Male	263	72 (63, 81)
Female	152	28 (19, 37)
Exposure		
Male-to-male	155	40 (24, 57)
Injection drug use	110	30 (18, 43)
Heterosexual sex	107	22 (15, 29)
Other	43	8 (4, 11)
Education		
< High school	184	44 (34, 54)
High school graduate	96	23 (20, 27)
> High school	135	32 (21, 43)
Annual income, \$		
0–4999	103	23 (17, 30)
5000–9999	116	28 (22, 33)
10 000–24 999	117	29 (23, 34)
≥ 25 000	79	21 (13, 28)
Region of residence		
West	145	32 (14, 51)
Northeast	160	38 (14, 62)
Midwest	10	2 (0, 3)
South	100	28 (5, 51)
Insurance status		
No insurance	109	25 (16, 33)
Medicaid	163	38 (26, 50)
Private, HMO	55	13 (8, 18)
Private, not HMO	37	11 (3, 19)
Medicare	51	13 (9, 18)
US citizenship		
Yes	341	83 (75, 91)
No	74	17 (9, 25)
Survey language		
English	347	85 (79, 91)
Spanish	68	15 (9, 21)
Acculturation^a		
More acculturated	195	58 (48, 67)
Less acculturated	143	42 (33, 52)

Note. CI = confidence interval; HMO = health maintenance organization. A total of 415 Hispanics were included in the HIV Cost and Service Utilization Study. ^aInformation on acculturation was missing for 77 respondents.

HIV diagnosis, 34% rated their care as excellent, 72% had 3 or more outpatient visits, and 74% had no emergency department visits without hospitalizations. Seventy-four percent were taking highly active antiretroviral therapy by the second follow-up survey, an increase from 34% by the end of 1996. Fifty-four percent had a usual source of dental care, and 80% had no trouble obtaining needed dental care.

Regression Results

Worse access to care was associated with being male, having no insurance, and receiving care in the South (Table 2). Having no usual source of care at HIV diagnosis was associated with being male and being exposed to HIV by drug use and heterosexual sex. Having 3 or fewer outpatient visits was associated with being male and being exposed to HIV by heterosexual sex. Having 1 or more emergency department visits without hospitalization was associated with being female. Receiving less than excellent care was less likely in the South. Not taking highly active antiretroviral therapy by the second follow-up survey was associated with being female and receiving care in the Northeast. Not having a usual source of dental care was associated with US citizenship. Difficulty obtaining needed dental care was associated with being less acculturated and receiving care in the South.

DISCUSSION

In contrast to prior findings, women in this study reported better access to care than did men.¹ Women had a 67% lower adjusted odds ratio than men of not having a usual source of care at HIV diagnosis. Not having a usual source of care at HIV diagnosis has been associated with delays in care, subsequent hospitalizations, and decreased use of antiretrovirals.^{2,13,14} Hispanic persons exposed to HIV by drug use and heterosexual sex also were at increased risk for not having had a usual source of care at HIV diagnosis. These results suggest that Hispanic men and Hispanic patients exposed to HIV by drug use and heterosexual sex should receive special attention when interventions to improve access to care for

Hispanic patients who are HIV infected are considered.

We were surprised by the weak associations between access to care and acculturation, survey language, and citizenship status. Language was not significantly associated with any access variable, and acculturation and citizenship status were significant in only 1 regression each. Future research should seek to explain these findings.

This study had limitations. First, data limitations prevented us from identifying the national origin of the Hispanic patients. This limitation was somewhat mitigated by the inclusion of geographic regions that were roughly correlated with concentrations of Hispanic populations of some national origins.¹⁵ Second, Hispanic patients may have been less well represented in the HIV Cost and Services Utilization Study than were other racial/ethnic groups. The HIV Cost and Services Utilization Study sampled noninstitutionalized persons receiving care for HIV, whereas Hispanic persons are overrepresented among the incarcerated and the uninsured (thus, not receiving care).⁴

This study should alert policymakers and researchers to important sociodemographic subgroup differences among Hispanic patients who are HIV positive. Future research should avoid the inclusion of Hispanic patients without characterizing Hispanic subgroups; otherwise, these studies risk obscuring important subgroup variations. ■

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Contributors

L.S. Morales and W.E. Cunningham led the analysis for this study, with assistance from F.H. Galvan, R.M. Andersen, and T.T. Nakazono. L.S. Morales led the writing of this brief. M.F. Shapiro and W.E. Cunningham conceived the study and supervised all aspects of its implementation. All of the authors helped to conceptualize ideas and interpret findings and reviewed drafts of the brief.

Human Participant Protection

The RAND institutional review board reviewed all procedures, forms, and materials used in this study. Subjects were asked for informed consent for participation in the study.

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TABLE 2—Subgroup Differences in Odds Ratios Among Hispanic Patients for Access to Medical and Dental Care, After Control for All Independent Variables and CD4 Cell Count

	Odds Ratios (95% CI)								
	Poor Access to Care ^a	No Usual Source of Care at Time of HIV Diagnosis	3 Ambulatory Visits in 6 Mo	≥ 1 Emergency Department Visit(s) Without Associated Hospital Stay	Low Ratings of Quality of Care ^b	No Highly Active Antiretroviral Therapy by December 1996	No Highly Active Antiretroviral Therapy by Second Survey	No Usual Source of Dental Care	Difficulty Obtaining Needed Dental Care
Gender									
Female	0.53 (0.31, 0.90)*	0.33 (0.19, 0.60)*	0.39 (0.19, 0.80)*	2.83 (1.12, 7.15)*	1.36 (0.65, 2.86)	1.04 (0.60, 1.79)	2.20 (1.22, 3.99)*	0.69 (0.35, 1.36)	0.96 (0.53, 1.72)
Male	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Age, y									
18–30	1.67 (0.79, 3.51)	2.29 (0.92, 5.68)	0.67 (0.35, 1.32)	1.98 (0.71, 5.50)	1.24 (0.37, 4.15)	1.77 (0.83, 3.79)	1.49 (0.49, 4.49)	1.28 (0.60, 2.77)	1.23 (0.41, 3.65)
31–40	1.33 (0.72, 2.43)	1.36 (0.72, 2.56)	0.91 (0.54, 1.55)	1.15 (0.68, 1.93)	1.15 (0.58, 2.27)	1.60 (0.97, 2.64)	1.16 (0.58, 2.35)	0.93 (0.49, 1.76)	2.22 (0.72, 6.84)
≥ 41	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Education, y									
< 12	1.78 (0.92, 3.43)	1.35 (0.72, 2.54)	0.94 (0.60, 1.48)	1.83 (0.82, 4.09)	1.06 (0.66, 1.71)	1.22 (0.75, 2.00)	0.38 (0.15, 1.02)	1.37 (0.71, 2.66)	1.29 (0.78, 2.14)
≥ 12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Insurance status									
Uninsured	2.24 (1.18, 4.25)*	1.04 (0.49, 2.22)	1.60 (0.93, 2.75)	0.63 (0.38, 1.03)	1.00	1.00	1.00	1.00	1.00
Any insurance	1.00	1.00	1.00	1.00	0.76 (0.41, 1.39)	0.94 (0.44, 2.01)	0.91 (0.38, 2.18)	1.17 (0.76, 1.82)	0.92 (0.47, 1.81)
Exposure to HIV risk									
Injection drug use	0.83 (0.44, 1.58)	4.20 (1.72, 10.24)*	1.46 (0.63, 3.38)	1.04 (0.41, 2.63)	2.05 (0.76, 5.55)	1.68 (0.49, 5.84)	1.86 (0.55, 6.34)	0.99 (0.50, 1.94)	1.58 (0.77, 3.27)
Heterosexual sex	0.71 (0.29, 1.71)	2.73 (1.11, 6.68)*	2.96 (1.24, 7.09)*	0.75 (0.25, 2.27)	0.71 (0.30, 1.68)	1.18 (0.51, 2.75)	0.57 (0.23, 1.38)	1.21 (0.60, 2.44)	1.09 (0.47, 2.50)
Other	1.20 (0.39, 3.72)	1.89 (0.73, 4.92)	2.18 (0.60, 7.84)	0.59 (0.17, 2.09)	1.08 (0.33, 3.54)	2.23 (0.91, 5.43)	0.58 (0.20, 1.69)	2.59 (1.03, 6.48)*	2.65 (0.82, 8.52)
Male-to-male sex	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Region									
Northeast	1.91 (0.86, 4.21)	0.53 (0.25, 1.09)	1.38 (0.66, 2.88)	0.86 (0.42, 1.77)	0.97 (0.45, 2.12)	2.00 (0.86, 4.60)	2.33 (1.01, 5.36)*	0.89 (0.52, 1.54)	0.82 (0.45, 1.47)
Midwest
South	2.56 (1.24, 5.30)*	1.90 (0.66, 5.51)	0.94 (0.45, 1.94)	1.32 (0.58, 2.97)	0.49 (0.34, 0.72)*	1.33 (0.63, 2.83)	0.60 (0.30, 1.19)	1.27 (0.77, 2.10)	2.42 (1.02, 5.76)*
West	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Acculturation									
Less acculturated	1.35 (0.75, 2.45)	1.00 (0.43, 2.33)	1.07 (0.60, 1.92)	1.24 (0.69, 2.21)	1.35 (0.72, 2.55)	2.11 (0.90, 4.96)	1.03 (0.49, 2.17)	1.33 (0.70, 2.54)	2.01 (1.15, 3.53)*
More acculturated	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Survey language									
Spanish	1.91 (0.80, 4.54)	1.14 (0.40, 3.26)	1.42 (0.47, 4.32)	0.57 (0.15, 2.19)	1.38 (0.58, 3.27)	1.22 (0.34, 4.39)	1.71 (0.32, 9.21)	1.21 (0.48, 3.06)	0.77 (0.14, 4.07)
English	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
US citizenship									
Noncitizen	1.13 (0.63, 2.03)	2.10 (0.84, 5.26)	0.92 (0.51, 1.66)	0.89 (0.31, 2.55)	1.06 (0.58, 1.93)	1.16 (0.44, 3.09)	0.60 (0.21, 1.69)	0.46 (0.24, 0.91)*	1.42 (0.73, 2.78)
Citizen	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CD4 cell count, mm ³									
0–49	1.54 (0.45, 5.23)	1.27 (0.64, 2.56)	1.65 (0.75, 3.64)	0.89 (0.42, 1.87)	0.90 (0.29, 2.79)	0.24 (0.11, 0.53)*	0.20 (0.08, 0.51)*	1.04 (0.47, 2.34)	2.93 (0.67, 12.85)
50–199	1.66 (0.54, 5.07)	1.08 (0.57, 2.05)	2.55 (0.67, 9.68)	0.88 (0.36, 2.12)	1.28 (0.53, 3.07)	0.32 (0.14, 0.74)*	0.35 (0.12, 1.02)	1.11 (0.39, 3.19)	3.09 (0.62, 15.48)
200–499	1.68 (0.76, 3.74)	0.96 (0.41, 2.26)	3.06 (1.19, 7.88)*	0.72 (0.32, 1.63)	1.83 (0.64, 5.23)	0.85 (0.44, 1.65)	0.70 (0.34, 1.44)	1.17 (0.46, 2.96)	1.69 (0.47, 6.07)
≥ 500	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Note. CI = confidence interval.
^aPoor access to care indicated by a score ≤ 75 on 0–100 scale.
^bLow ratings of quality care indicated by a score < 5 on 1–5 scale.
^{*}P < .05.