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# *System and Patient Barriers to Appropriate HIV Care for Disadvantaged Populations: The HIV Medical Care Provider Perspective*

**Eduardo E. Valverde, MPH**  
**Drenna Waldrop-Valverde, PhD**  
**Pamela Anderson-Mahoney, PhD**  
**Anita M. Loughlin, PhD**  
**Carlos Del Rio, MD**  
**Lisa Metsch, PhD**  
**Lytt I. Gardner, PhD**

*Little is known about the perception of system and patient barriers to adequate HIV care by an essential resource in the provision of HIV care, HIV medical care providers. To evaluate such perceptions, between November 2000 and June 2001 a survey was mailed to 526 HIV medical care providers who cared for HIV-infected individuals in Atlanta, Baltimore, Los Angeles, and Miami. Logistic regression analysis of survey results revealed significant differences in perceptions of system barriers between Black and Hispanic providers versus White providers and non-medical doctor providers versus medical doctor providers. Female providers differed significantly from male providers in assessing the importance of certain system and patient barriers. The authors observed that there are seeming disparities in perceptions of system and patient barriers to HIV medical care by providers of different race/ethnic groups, genders, and professions. More research needs to be conducted to determine if these disparities reflect differences in the provision of adequate HIV care for disadvantaged individuals.*

**Key words:** HIV/AIDS care, medical providers

Medical advances in the treatment of HIV/AIDS are allowing patients to live longer and healthier

lives, but barriers to receiving adequate HIV care continue to prevent many disadvantaged populations from benefiting from these medical advances. Minorities, the homeless, illegal immigrants, and chronic drug-using individuals are some disadvantaged populations that traditionally have encountered barriers in accessing adequate HIV care (Shapiro et al, 1999). The issue of accessing adequate HIV care has become so important that the Centers for Disease Control and Prevention set as a goal for 2005 that 80% of

*Eduardo E. Valverde, MPH, is in the Department of Epidemiology and Public Health, University of Miami School of Medicine. Drenna Waldrop-Valverde, PhD, is in the Department of Psychiatry and Behavioral Sciences, University of Miami School of Medicine. Pamela Anderson-Mahoney, PhD, is at Health Research Association, Los Angeles. Anita M. Loughlin, PhD, is at Boston University School of Medicine and School of Public Health; Center for Pediatric Vaccine Research. Carlos Del Rio, MD, is at Emory University School of Medicine. Lisa Metsch, PhD, is in the Department of Epidemiology and Public Health, University of Miami School of Medicine. Lytt I. Gardner, PhD, is at the Centers for Disease Control and Prevention, National Center for HIV, Sexually Transmitted Disease, and Tuberculosis Prevention—Surveillance and Epidemiology.*

HIV-infected individuals should be linked to appropriate HIV care (Centers for Disease Control and Prevention, 2003).

In an effort to identify and understand the barriers that HIV-infected individuals face in accessing adequate HIV medical care, several studies have explored the patient's perspective on this problem. Some of the barriers to HIV medical care and treatment that have been cited by HIV-positive individuals in these studies include the inconvenient location or hours of operation of HIV medical care facilities, lack of bilingual staff, inadequate services, transportation issues, addiction, lack of social support, and communication problems with providers (Huba et al., 2001; Marx, Hirozawa, Soskolne, Liu, & Katz, 2001; Murphy, Roberts, Martin, Marelich, & Hoffman, 2000; Napravnik, Royce, Walter, & Lim, 2000). Important as these results are, they only present the patient's perspective of the problem.

Among the essential resources for the provision of adequate HIV medical care are medical care providers. HIV medical providers are active participants in influencing policy and procedures within their facilities as well as active participants in the design and evaluation of the health care system in their community. Thus, HIV medical care providers become a critical link between the health care system and the patient. However, unlike the existing literature examining the perceptions of barriers to care from the patient's perspective, little is known with regard to what HIV medical care providers perceive as potential barriers that HIV-positive individuals in their communities encounter when trying to access HIV medical care.

HIV medical providers are in a unique position to observe not only the health care system barriers that disadvantaged populations face in accessing adequate HIV medical care, but because of their daily interaction with HIV-positive individuals, they also develop a perspective with regard to the individual or patient barriers that prevent their patients from benefiting from the medical resources at their disposal. Operating within the health care system to which they belong, they also encounter the patient in a one-to-one interaction, living with patients the human experience of their disease.

The aim of this study was to measure HIV medical care providers' perceptions of the barriers to HIV

care experienced by HIV-positive individuals in their community and to identify provider characteristics that may be associated with certain perceptions. Results may be used to better understand provider characteristics that may influence views of patient barriers to HIV care.

## Methods

### Participants

Between November 2000 and June 2001, the Antiretroviral Treatment and Access Research Group conducted a mailed survey of 526 HIV medical care providers in Atlanta, Baltimore, Los Angeles, and Miami. The population included physicians, nurse practitioners, and physician assistants in both office-based and hospital-based practices. Lists of HIV medical care providers were compiled for each city using a variety of sources including local Medicaid offices, county health departments, the state's Infectious Diseases Society registry, Ryan White Title I and II programs, and other local medical societies. After the preliminary lists were compiled, all clinician offices were contacted by telephone to verify correct contact information and to ensure that the listed provider had given HIV care (prescribed antiretroviral therapy) to at least one HIV-positive patient in the previous year.

The study information mailed to the previously identified HIV medical care providers included a cover letter and questionnaire. A small monetary incentive was given to HIV medical care providers for completing and returning the questionnaire. Names were not included with the questionnaires, and participants were informed that their responses would be confidential. A confidential code was assigned to identify nonresponders for follow-up. Using a modified version of Dillman's Total Design Method for mail and telephone surveys (Dillman, 1978), the authors continued to follow up with nonresponders for 3 months with postcards, in-person visits, telephone calls, faxes, and re-mailing of the questionnaire. At least five contacts were attempted before providers were listed as nonresponders. The study was reviewed and approved by institutional

review boards in the four cities surveyed and at the Centers for Disease Control and Prevention.

## Measures

The questionnaire consisted of 61 items and assessed physicians' demographic and medical practice characteristics. To examine the perception of barriers to HIV care faced by disadvantaged HIV-positive populations in their community, the authors asked providers to "Please indicate the most important barriers in obtaining appropriate HIV medical care for disadvantaged HIV-positive persons in your community." Providers rated eight barriers that had been reported in the literature (Huba et al., 2001; Marx et al., 2001; Murphy et al., 2000; Napravnik et al., 2000) to be significant barriers by HIV-positive patients accessing HIV care. Four were system barriers related to clinic characteristics or services: childcare not available at clinics, clinic hours/location/services are not convenient, cost of HIV care/no insurance coverage, and unfriendly HIV care setting or system, and four were patient-related barriers: lack of social support systems, mental health problems, substance abuse problems, and transportation problems. These items were measured on a four-point scale: 0 (*not important*), 1 (*slightly important*), 2 (*moderately important*), or 3 (*very important*). Independent variables assessed were the race/ethnicity of HIV medical care providers, the city in which the provider practices, gender of provider, provider's profession (e.g., physician, physician assistant, or nurse practitioner), age of provider, provider's years of experience, percentage of male patients, percentage of female patients, number of patients seen by provider per month, percentage of patients suffering from depression, percentage of patients suffering from mental health problems, percentage of patients having problems with noninjection drugs, and percentage of patients having problems with injection drugs.

## Data Analysis

Of the 526 surveys mailed to HIV medical care providers in the four cities, 420 (80%) were returned and were used in the analyses. The outcomes of interest were the perceptions by HIV medical care providers of system and patient barriers to care faced

by disadvantaged HIV-positive persons in their community as measured by the four system and four patient-related barriers.

For this study, each of the eight barriers mentioned above was transformed into a binary rather than a 4-point scale for purposes of data analysis. The original categories "not important" and "slightly important" were combined into one category with a value of 0. The original categories "moderately important" and "very important" were combined into one category with a value of 1. Therefore, the barriers were collapsed into dichotomous (0,1) variables with a value of 1 corresponding to a belief that a barrier was important and 0 a belief otherwise. All subsequent analyses used this binary coding for barriers.

Spearman correlation analysis was used to determine provider characteristics significantly related to each of the barriers ( $p < .075$ ). Provider and patient characteristics reported to be significant in the correlation analysis (Table 1) were used in the logistic regression analyses to assess the relative contribution of different provider characteristics to their perceptions of barriers to care for disadvantaged HIV-positive individuals in their community. Regression tables contain only variables that contributed significantly to the model.

Statistically significant provider and patient characteristics identified previously were entered simultaneously into the eight separate logistic regression models. Because of increased risk of Type I errors from multiple comparisons, the authors adjusted the alpha according to the method outlined by Sankoh, Huque, & Dubey (1997), which takes into consideration the average correlation among dependent variables. The average correlation among the barriers was  $r = .10$ , which adjusted the alpha level to  $p < .003$ . Analyses were performed using SPSS version 11 (SPSS, Inc., Chicago, IL).

## Results

Of the 420 providers, 317 (75 %) were medical doctors, 37 (9 %) were physician assistants, and 66 (16 %) were nurse practitioners. Table 2 shows a breakdown of the characteristics of the respondents from the four cities. The mean age of respondents was 44 years (range 25 to 73 years). The majority of

**Table 1. Spearman Correlation Matrix for Provider Characteristics and Barriers to Appropriate HIV Care**

Parameter	Childcare Barrier	Clinic Inconvenience Barrier	Cost Barrier	Unfriendly System Barrier	Lack of Support Barrier	Mental Health Barrier	Drug Use Barrier	Transportation Barrier
Profession	.207 <sup>a</sup>	.219 <sup>a</sup>	.092 <sup>c</sup>	.219 <sup>a</sup>	.190 <sup>a</sup>	.183 <sup>a</sup>	.201 <sup>a</sup>	.269 <sup>a</sup>
Gender	.180 <sup>a</sup>	.245 <sup>a</sup>	.024	.215 <sup>a</sup>	.199 <sup>a</sup>	.199 <sup>a</sup>	.143 <sup>a</sup>	.284 <sup>a</sup>
Race	.167 <sup>a</sup>	.124 <sup>b</sup>	.085	.222 <sup>a</sup>	.149 <sup>a</sup>	-.041	-.018	.118 <sup>b</sup>
Age (yrs)	.106 <sup>b</sup>	.069	.129 <sup>a</sup>	.060	-.072	-.102 <sup>b</sup>	-.071	-.012
Experience (yrs)	.057	.055	.090 <sup>c</sup>	.003	-.083	-.139 <sup>a</sup>	-.192 <sup>a</sup>	-.082
City	.097 <sup>b</sup>	.027	-.089 <sup>c</sup>	.096 <sup>c</sup>	.416	-.026	-.039	.036
Patients (no.)	.128 <sup>b</sup>	.063	-.074	.048	.023	.019	.023	.056
Patient gender	-.247 <sup>a</sup>	-.147 <sup>a</sup>	-.062	-.179 <sup>a</sup>	-.128 <sup>a</sup>	-.103 <sup>b</sup>	-.132 <sup>a</sup>	-.150 <sup>a</sup>
Patients with depression	.078	.092 <sup>c</sup>	-.063	.038	.094 <sup>c</sup>	.189 <sup>a</sup>	.178 <sup>a</sup>	.055
Patients with mental health problems	.077	.022	-.138 <sup>a</sup>	-.003	.074	.274 <sup>a</sup>	.276 <sup>a</sup>	.013
Patients with non-IDU problems	.012	.087	-.096 <sup>c</sup>	-.056	.136 <sup>a</sup>	.244 <sup>a</sup>	.363 <sup>a</sup>	.084
Patients with IDU problems	.004	.048	-.094 <sup>c</sup>	-.062	.167 <sup>a</sup>	.252 <sup>a</sup>	.400 <sup>a</sup>	.080
Patients in drug treatment	.059	.066	-.085	.007	.096 <sup>c</sup>	.220 <sup>a</sup>	.338 <sup>a</sup>	.002

NOTE: IDU = intravenous drug use.

a.  $p < .01$ b.  $p < .05$ c.  $p < .075$

**Table 2. Characteristics of HIV Medical Care Providers**

	Atlanta (n = 125)	Baltimore (n = 74)	Los Angeles (n = 105)	Miami (n = 116)	Total
Profession (n = 420)					
Medical doctor	99 (80%)	47 (64%)	75 (71%)	96 (82%)	317 (75%)
Physician assistant	7 (6%)	9 (12%)	11 (11%)	10 (9%)	37 (9%)
Nurse practitioner	19 (15%)	18 (24%)	19 (18%)	10 (9%)	66 (16%)
Gender (n = 420)					
Male	69 (55%)	34 (46%)	52 (50%)	73 (63%)	228 (54%)
Female	56 (45%)	40 (54%)	53 (50%)	43 (37%)	192 (46%)
Age (n = 419)					
20-40	47 (38%)	31 (43%)	47 (45%)	33 (28%)	158 (38%)
41-60	75 (60%)	40 (55%)	55 (52%)	78 (67%)	248 (59%)
61-80	3 (2%)	2 (3%)	3 (3%)	5 (4%)	13 (3%)
Race (n = 415)					
White	98 (79%)	56 (78%)	59 (57%)	45 (39%)	258 (62%)
Black	16 (13%)	14 (19%)	13 (13%)	18 (16%)	61 (15%)
Asian	4 (3%)	1 (1%)	21 (20%)	9 (8%)	35 (8%)
Hispanic	6 (5%)	1 (1%)	11 (11%)	43 (37%)	61 (15%)
Experience (n = 420)					
<1 Year	2 (2%)	3 (4%)	2 (2%)	3 (3%)	10 (2%)
1-8 Years	43 (34%)	39 (53%)	53 (51%)	37 (32%)	172 (41%)
>8 Years	80 (64%)	32 (43%)	50 (48%)	76 (65%)	238 (57%)

**Table 3. System and Patient Barriers to Obtaining Appropriate HIV Medical Care—All Cities**

System Barrier	Total	Patient Barrier	Total
Childcare not available at clinic		Lack of social support system	
Important	170 (41%)	Important	341 (82%)
Not important	246 (59%)	Not important	75 (18%)
Clinic location/services not convenient.		Mental health problems	
Important	219 (53%)	Important	351 (84%)
Not important	197 (47%)	Not important	66 (16%)
Cost of HIV care		Substance abuse problems	
Important	213 (51%)	Important	364 (88%)
Not important	201 (49%)	Not important	52 (12%)
Unfriendly HIV care system		Transportation problems	
Important	182 (44%)	Important	327 (79%)
Not important	232 (56%)	Not important	89 (21%)

the providers were White (62%), with both Black and Hispanic providers equally represented (15% in both groups). The majority of the HIV medical care providers (57%) had more than 8 years of experience treating patients, with very few (2%) reporting less than 1 year of experience treating HIV-positive patients. The overall gender distribution of HIV medical care providers was 54% male and 46% female.

Table 3 shows the distribution of ratings of the importance of system and patient barriers across all

the cities. There were differences in how providers assessed system barriers, with providers almost evenly split on all four barriers. Conversely, the majority of providers agreed on the importance of patients' barriers to accessing HIV care. The substance abuse problems barrier was seen as important by 88% of all HIV medical care providers, closely followed by mental health problems (84%).

Tables 4 and 5 show the adjusted results for patient and provider characteristics associated with the

**Table 4. Logistic Regression Results for System Barriers**

System Barriers	aOR	95% CI	
		Lower	Upper
<b>Childcare not available at clinic</b>			
Model chi-square 38.772 <i>df</i> (11), <i>p</i> < .001			
White providers	1.00	—	—
Black providers	3.430 <sup>c</sup>	1.748	6.728
Hispanic providers	3.500 <sup>c</sup>	1.712	7.157
Miami providers	1.00	—	—
Los Angeles providers	2.708 <sup>b</sup>	1.380	5.315
<b>Clinic location/services not convenient</b>			
Model chi-square 41.555 <i>df</i> (8), <i>p</i> < .001			
White providers	1.00	—	—
Black providers	2.445 <sup>a</sup>	1.195	5.003
Hispanic providers	2.237 <sup>a</sup>	1.179	4.245
Male providers	1.00	—	—
Female providers	2.055 <sup>b</sup>	1.273	3.317
Medical doctors	1.00	—	—
Nurse practitioners	2.262 <sup>a</sup>	1.116	4.587
<b>Cost of HIV care</b>			
Model chi-square 36.956 <i>df</i> (10), <i>p</i> < .001			
Miami providers	1.00	—	—
Baltimore providers	2.002 <sup>a</sup>	1.128	3.553
Medical doctors	1.00	—	—
Physician assistants	3.436 <sup>b</sup>	1.488	7.930
<b>Unfriendly HIV Care System</b>			
Model chi-square 54.214 <i>df</i> (10), <i>p</i> < .001			
White providers	1.00	—	—
Black providers	1.929 <sup>a</sup>	1.011	3.680
Hispanic providers	2.887 <sup>c</sup>	1.459	5.712
Medical doctor	1.00	—	—
Physician assistants	3.024 <sup>b</sup>	1.374	6.655
Nurse practitioner	2.266 <sup>a</sup>	1.176	4.363

NOTE: aOR = adjusted odds ratio; CI = confidence interval; *df* = degree of freedom.

a. *p* < .05

b. *p* < .01

c. *p* < .001

four system and four patient barriers. In the logistic model assessing the importance of lack of availability of child care (Table 4), Black and Hispanic providers perceived this barrier as much more important (adjusted odds ratio [aOR], 3.43; 95% confidence interval [CI], 1.74 to 6.72 and 3.50; 95% CI, 1.71 to 7.15, respectively) than White HIV medical care providers. Additionally, HIV medical providers in Los Angeles perceived this barrier as more important (aOR, 2.70; 95% CI, 1.38 to 5.31) than providers from Miami.

When the authors examined the clinic location/services not convenient barrier, they continued to find differences between providers of different racial/ethnic groups. Black and Hispanic HIV medical care providers perceived this barrier as more important (aOR, 2.44; 95% CI, 1.95 to 5.00 and 3.50; 95% CI, 1.71 to 7.15, respectively) than White HIV medical care providers.

Additionally, female providers perceived clinic services not convenient as an important barrier (aOR, 2.05; 95% CI, 1.27 to 3.31) compared with male providers. Differences also existed between types of

**Table 5. Logistic Regression Results for Patient Barriers**

Patient Barriers	aOR	95% CI	
		Lower	Upper
<b>Mental health problems</b>			
Model chi-square 42.160 <i>df</i> (11), <i>p</i> < .001			
Male providers	1.00	—	—
Female providers	2.201 <sup>a</sup>	1.127	4.300
Patients with IDU problems	1.647 <sup>b</sup>	1.132	2.396
<b>Substance abuse problems</b>			
Model chi-square 58.181 <i>df</i> (12), <i>p</i> < .001			
Patients in drug treatment	2.780 <sup>c</sup>	1.535	5.035
<b>Transportation problems</b>			
Model chi-square 29.707 <i>df</i> (12), <i>p</i> < .001			
Male providers	1.00	—	—
Female providers	2.144 <sup>b</sup>	1.216	3.781
<b>Lack of social support system</b>			
Model chi-square 20.788 <i>df</i> (10), <i>p</i> = .023			

NOTE: aOR = adjusted odds ratio; CI = confidence interval; *df* = degree of freedom; IDU = intravenous drug use.

a. *p* < .05

b. *p* < .01

c. *p* < .001

providers, with nurse practitioners perceiving this barrier as more important (aOR, 2.26; 95% CI, 1.11 to 4.58) than medical doctors.

The cost of HIV care barrier also yielded differences between provider's profession with significant odds ratios for physician assistants compared with medical doctors (aOR, 3.43; 95% CI, 1.48 to 7.93) and differences between providers from different cities, with an adjusted odds ratio of 2.00 (95% CI, 1.12 to 3.53) for Baltimore providers compared with Miami providers.

Black and Hispanic HIV medical care providers perceived unfriendly HIV care system as an important barrier (aOR, 1.92; 95% CI, 1.01 to 3.68 and aOR, 2.88; 95% CI, 1.45 to 5.71, respectively), compared with White HIV medical care providers. Physician assistants also perceived unfriendly HIV care system as a much more important barrier relative to medical doctors (aOR, 3.02; 95% CI, 1.17 to 4.36).

Table 5 shows the adjusted results for the patient barriers. Men and women providers differed with regard to how they perceived mental health problems as a barrier to appropriate HIV care. Controlling for other provider and patient population characteristics, female HIV medical providers considered this barrier more important than did male medical care providers

(aOR, 2.87; 95% CI, 1.44 to 5.69). Additionally, physicians with more patients having injection drug problems considered the mental health barrier as more important than physicians with fewer patients with injection drug problems (aOR, 1.64; 95% CI, 1.13 to 2.39).

With regard to substance abuse problems as a barrier, having more patients in substance abuse treatment increased the likelihood of perceiving substance abuse as an important barrier to HIV care (aOR 2.78; 95% CI, 1.53 to 5.03). The authors also found that women perceived transportation problems as an important barrier to HIV care more than men. The adjusted odds ratio for female providers to perceive transportation problems as an important barrier was 2.14 (95% CI, 1.26 to 3.78) compared with male providers.

Finally, the only barrier model that did not reach significance was lack of a social support system.

## Discussion

The aim of this study was to measure HIV medical care providers' perceptions of the barriers to HIV care experienced by HIV-positive individuals in their community and to identify provider characteristics

that may be associated with certain perceptions. In accomplishing this aim, the authors uncovered differences in how system and patient barriers were being perceived by different providers.

Female providers perceived two personal barriers: mental health problems and transportation problems and one system barrier: clinic location/service not convenient as more important than male providers. Some authors have noted that female medical providers spend more time with patients than male medical providers, are more patient-centered, have a more interpersonal orientation during consultation, are more concerned with the psychosocial aspects of health, and that even though trained in the same curriculum they seem to be more "humane" and possess greater communication skills compared with male medical providers (Elderkin-Thompson & Waitzkin, 1999; Roter & Hall, 1998; Zaharias, Piterman, & Liddel, 2004). These greater communication skills, possible additional time spent per patient, and interpersonal orientation might influence the female medical provider's understanding of the systemic and personal challenges HIV positive patients face in obtaining adequate HIV care.

Furthermore, the race/ethnicity of the provider as well as type of provider was also influential in determining perceptions of barriers to patient care. It seems that perceptions of system barriers reported by racial/ethnic minority providers and non-medical doctor providers in the survey are consistent with those reported by disadvantaged HIV-positive patients. In three of the four system barriers, Black and Hispanic providers and non-medical doctor providers differed with White and medical doctor providers in how important these system barriers were for patients in obtaining HIV care. Studies evaluating the patient's perspective of barriers to HIV care have also identified limited availability of child care at HIV clinics as a significant barrier to care when not provided (Conover & Whetten-Goldstein, 2002; Mundy et al., 2002). Other patient studies assessing inconvenient clinic hours, location, and services and unfriendly HIV care setting or system have noted the feelings of HIV patients that the health care system is threatening or unfriendly. Napravnik et al. (2000) observed that HIV-infected women who received inadequate prenatal care in their study perceived the health care system as threatening and discriminatory

and feared breaches in confidentiality. Similarly, in another study comparing factors that enabled HIV medication adherence, poor treatment by clinic staff was found to be associated with treatment nonadherence (van Servellen, Chang, Garcia, & Lombardi, 2002). Yet, other studies from the patient perspective have also identified issues such as inconvenient hours/location, office waiting time, waiting lists, and difficulty scheduling urgent care as barriers to HIV care (Marx, Katz, Park, & Gurley, 1997). These results and those from studies exploring the patient perspective suggest that racial/ethnic minority providers and non-medical doctor providers may be more aware of some of the system barriers to HIV care that patients face than White and medical doctor providers.

One of the implications of this study points to the need to increase the number of racial/ethnic minority HIV care providers. In the past 10 years, the demographic makeup of the HIV/AIDS patient population has changed from a predominantly White male HIV patient population to a patient population increasing in racial/ethnic minorities and females. In contrast, however, the racial/ethnic demographic of HIV care providers has changed little. In the four cities where the authors conducted this survey, HIV-infected patients were predominantly minorities (Maryland Department of Health Office of Minority Health HIV/AIDS Initiative, 2002; Georgia Department of Community Health, 2002; Los Angeles County Health Department Services, 2002; Miami-Dade County Health Department Office of HIV/AIDS Services, 2002), whereas HIV medical care providers who responded to the survey were predominantly White. Minorities continue to be underrepresented in the number of graduating physicians nationwide (Brotherton, Simon, & Etzel, 2002), so alleviating this underrepresentation should be a priority, especially in the HIV/AIDS medical care field in which the racial/ethnic/cultural difference between the majority of the patients and the majority of the medical providers is so overwhelming.

Not only is there a critical need to recruit and train substantial numbers of racial/ethnic minority HIV care providers for the future, but it is also essential to improve the ability of current providers to effectively care for their minority patients. Based on the similarity between perceptions of barriers in this study by

racial/ethnic minority providers and those of HIV patients reported in the literature, it seems that developing the cultural efficacy and communication skills of current providers may be key to addressing the disparities between perceptions of barriers to care between minority and nonminority HIV care providers. For instance, in a study investigating Black and White patients' perceptions of physician communication regarding cardiac testing, the investigators concluded that Black patients might need to build a trusting relationship with their physician as part of a longstanding fear of the health care system and a cultural belief that a doctor must know a patient to provide good medical care. For White patients, however, the relationship with their physician was one of information-giving and information-seeking without a need to know the person (Collins, Clark, Petersen, & Kreissen, 2002). Having good communication skills and being culturally efficacious does not promote one style of interaction over another, but instead recognizes that there are different cultural communication interaction styles that must be taken into consideration to make the patient-provider interaction successful. In fact, Nunez (2000) has proposed an emphasis on increasing cross-cultural efficacy defined as increasing providers' effective interactions involving individuals of different cultures from the perspective that neither the provider's nor the patient's culture is the preferred or more accurate view.

Calls by researchers have been made to understand both the patient's and the provider's culture in order to minimize poor health outcomes, especially because Schulman et al. (1999) reported that the patient-provider interaction could potentially be a source of disparity in the quality of care received by patients. In an increasingly multicultural society in which health disparities between groups are commonly reported, there is evidence that the race of a physician might influence his or her medical decision-making (McKinlay, Lin, Freund, & Moskowitz, 2002) and a greater perception among minority medical students and physicians of unfair treatment toward minority patients compared with their white counterparts (Wilson, Grumbach, Huebner, Agrawal, & Bindman, 2004). Therefore, increasing cross-cultural efficacy is paramount for the medical care profession.

Efforts are under way to evaluate programs intended to increase cultural competence or cultural efficacy among medical providers. Betancourt and others who have examined cross-cultural programs in undergraduate medical education recognize that tools such as effective evaluations to measure the success of the programs are needed (Betancourt, 2003; Crosson, Deng, Brazeau, Boyd, & Soto-Greene, 2004; Rosen et al., 2004). Even the federal government, through the Office of Minority Health (Department of Health and Human Services), the Agency for Health Care Research and Quality, and the Health Resource and Services Administration, has been involved in supporting efforts to understand the role of cultural competence in reducing health disparities among the different groups in the current society (Taylor & Lurie, 2004). However, challenges remain. As noted by Weisman et al. (2005) in their sample of 2,047 resident physicians in their final year of training in several specialties at U.S. academic health centers, half reported receiving little or no training in understanding how to address patients from different cultures (50%) or how to identify patient mistrust (56%), relevant religious beliefs, (50%), or relevant cultural customs (48%). Additionally, anywhere between 41% for family practice residents to 83% for surgery and obstetrics/gynecology residents reported not being evaluated in cultural competency during residency.

This study reports that minority and nonminority HIV care providers differ in their opinions of the possible barriers disadvantaged HIV patients may experience in obtaining HIV care. Whether these perceptual differences translate into barriers to care for disadvantaged HIV patients was not directly evaluated in this study, although several studies have linked HIV care providers' perceptions and attitudes as detrimental to minorities in the critical issues of prescription of highly active antiretroviral therapy and inclusion in AIDS clinical trials (Bogart, Kelly, Catz, & Sosman, 2000; Gifford et al., 2002; Stone, Mauch, & Steger, 1998). It is therefore urgent that there be better understanding of cross-cultural interactions between patients and providers in the HIV/AIDS care field and that providers in this field support and participate in cultural competency training.

Limitations of this analysis must be noted. First, the authors had limited information on the character-

istics of the patients of the HIV medical care providers in this survey. Although the authors evaluated the perceptions of HIV medical care providers regarding the barriers to appropriate HIV care for disadvantaged HIV-positive individuals in their community, it can be assumed that some practitioners were using their own patients as referents when answering some of the barrier questions. Second, it would have been very valuable to compare patients' reports from the same practices with the provider survey; however, the design did not permit capture of information from patients. A final limitation of this analysis is that although the results may characterize the perceptions of the HIV medical care providers that responded to this survey in these four American cities, the authors cannot generalize the results to HIV medical care providers practicing in other American cities.

Even considering these limitations, no other study known to date has evaluated the relationship between characteristics of HIV medical care providers and their perceptions of barriers to HIV care faced by HIV-positive disadvantaged patients. The study result that race, gender, and provider profession influence perceptions of system and personal barriers contributes to the understanding of one unexplored area in the study of access to appropriate HIV care. However, the reasons for these differences and their implications for the provision of HIV medical care need to be further explored. At 20 years into the HIV epidemic, medical science has come a long way in understanding the human immunodeficiency virus, but it still has a long way to go to explain the social interactions that serve to either propagate or mitigate this epidemic.

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