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Failure to Establish HIV Care: Characterizing the “No Show” Phenomenon

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It is estimated that up to one-third of persons with known human immunodeficiency virus (HIV) infection in the United States are not engaged in care. We evaluated factors associated with patients' failure to establish outpatient HIV care at our clinic and found that females, racial minorities, and patients lacking private health insurance were more likely to be “no shows.” At the clinic level, longer waiting time from the call to schedule a new patient visit to the appointment date was associated with failure to establish care. Because increased numbers of patients will be in need of outpatient HIV care as a result of recent Centers for Disease Control and Prevention guidelines advocating routine HIV testing, it is imperative that strategies to improve access are developed to overcome the “no show” phenomenon.

Advances in HIV care have resulted in dramatic reductions in HIV-associated morbidity and mortality. To benefit optimally from antiretroviral and prophylactic medications, HIV-infected persons must know their HIV status, access care early in the course of disease, and remain engaged in care. It is estimated that 25% of HIV-infected individuals in the United States do not know their HIV status [1], and many patients present for care with advanced disease [2]. Among persons with known HIV infection, up to one-third are not receiving care [3]. In addition to obvious detrimental effects on personal health outcomes, the high proportion of individuals with HIV infection not in care also has important public health implications. Sec-

ondary prevention programs target HIV-infected persons engaged in clinical care and are therefore unlikely to reach those not accessing outpatient treatment. To address these issues, the US Centers for Disease Control and Prevention recently published revised guidelines that now recommend routine HIV testing to identify patients earlier in the course of disease and provide them with timely access to treatment [4].

Studies of access to HIV care have evaluated factors associated with delayed presentation for treatment after diagnosis and with successful retention in outpatient care after initial presentation [5, 6]. These analyses have typically evaluated HIV-infected individuals after they have established clinical care. It is believed that a high proportion of HIV-infected patients scheduled to go to a clinic never attend an initial visit and, thus, fail to establish care. Factors associated with patients being a “no show” have not been described, probably because many clinics do not capture information about patients until after they are seen for a visit. A better understanding of the “no show” phenomenon is needed to design effective interventions to increase the proportion of persons with known HIV infection who engage in clinical care. Therefore, we evaluated characteristics of scheduled new patients at a university-based HIV clinic who failed to attend an initial visit.

Sample and procedure. The University of Alabama at Birmingham 1917 HIV Clinic provides primary care and subspecialty services to >1400 HIV-infected patients. When patients are scheduled for an initial visit, sociodemographic information is recorded using a standardized form. A new patient visit includes appointments with a medical provider and a social worker, as well as a laboratory assessment. The current study includes patients new to the 1917 Clinic with HIV primary care appointments scheduled from 1 August 2004 through 1 August 2006. Patients scheduled for subspecialty care only were excluded from analysis. The primary outcome variable was a dichotomous measure of whether a scheduled new clinic patient attended a visit within 180 days after their initial scheduled appointment.

Statistical analysis. Student's *t* tests and χ^2 tests were used for bivariate analyses of continuous and categorical variables, respectively. A multivariate logistic regression model was applied to evaluate factors associated with patients' failure to establish outpatient HIV care at our clinic. Predictor variables included age, sex, race, insurance status, location of residence (local vs. nonlocal), referral source (self referral vs. provider referral), and the number of days from the call to schedule a new patient visit to the appointment date. We examined in-

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teractions between the age, sex, and race variables. Statistical analyses were performed using SAS Software, version 9.0 (SAS Institute).

Results. During the study period, 579 appointments were scheduled for patients new to the 1917 Clinic. Five hundred twenty-two patients (90%) were scheduled for primary HIV care and are included in this analysis. The mean age (\pm SD) was 38.7 ± 9.7 years, 60% of the patients were racial minorities (94% of this group were black), 26% were female, 49% were uninsured, and the majority lived locally (71%) and were self-referred for care (80%). The mean waiting time from the call to schedule a new patient visit to the appointment date (\pm SD) was 27.0 ± 13.8 days. Overall, 160 (31%) of 522 patients failed to attend a clinic visit within 180 days after their initial scheduled appointment (table 1). Among patients who “showed,” 187 (52%) of 362 persons had received no prior outpatient HIV care. We identified a significant interaction between the race and sex variables, which was incorporated in the final logistic model. Failure to establish care was observed for over one-third of racial minorities, 39% of female patients, and 39% of patients who were uninsured.

In multivariate analysis, failure to establish outpatient HIV

care was more likely to occur among white female patients (OR, 2.72; 95% CI, 1.30–5.68), minority male patients (OR, 1.75; 95% CI, 1.05–2.91), and minority female patients (OR, 2.39; 95% CI, 1.27–4.52) than among white male patients (table 1). Being a clinic “no show” was also more common among patients with public health insurance (OR, 1.91; 95% CI, 1.03–3.54) and among uninsured patients (OR, 2.62; 95% CI, 1.56–4.39) than among those with private health insurance. Patients residing outside of the clinic catchment area were less likely to establish care (OR, 1.59; 95% CI, 1.02–2.48) than were those who lived locally. At the clinic level, longer waiting time from the call to schedule a new patient visit to the appointment date was associated with failure to establish care (OR per 10 days, 1.32; 95% CI, 1.14–1.53). Among the study sample, 70 patients (13%) were white male patients with private health insurance, and 282 patients (54%) were of minority race and/or female sex and lacked private insurance.

Discussion. Thirty-one percent of patients scheduled for primary HIV care appointments failed to attend a clinic visit and establish care at our HIV/AIDS clinic. This finding is consistent with previous reports documenting 20%–40% of recently diagnosed HIV-infected individuals failing to attend a

Table 1. Characteristics of patients and ORs for “no show” status for new outpatient clinic visits at the University of Alabama at Birmingham 1917 HIV Clinic, 2004–2006.

Characteristic	All patients (n = 522)	“Show” group (n = 362)	“No show” group (n = 160)	OR (95% CI) ^a
Age, mean no. of years \pm SD	38.7 \pm 9.7	39.3 \pm 9.6	37.1 \pm 9.5	0.84 (0.68–1.04) ^b
Sex, race				
Male patients				
White	157 (30.1)	125 (34.5)	32 (20.0)	Reference
Racial minority	230 (44.0)	154 (42.5)	76 (47.5)	1.75 (1.05–2.91)
Female patients				
White	51 (9.8)	31 (8.6)	20 (12.5)	2.72 (1.30–5.68)
Racial minority	84 (16.1)	52 (14.4)	32 (20.0)	2.39 (1.27–4.52)
Health insurance				
Private	153 (29.3)	127 (35.1)	26 (16.2)	Reference
Public	111 (21.3)	77 (21.3)	34 (21.3)	1.91 (1.03–3.54)
Uninsured	258 (49.4)	158 (43.6)	100 (62.5)	2.62 (1.56–4.39)
Residence ^c				
Local	370 (70.9)	261 (72.1)	109 (68.1)	Reference
Nonlocal	152 (29.1)	101 (27.9)	51 (31.9)	1.59 (1.02–2.48)
Referral				
Self referral	416 (79.7)	280 (77.4)	136 (85.0)	Reference
Provider referral	106 (20.3)	82 (22.6)	24 (15.0)	0.65 (0.38–1.11)
Time from call to scheduled visit, mean no. of days \pm SD	27.0 \pm 13.8	25.6 \pm 13.8	30.2 \pm 13.4	1.32 (1.14–1.53) ^d

NOTE. Data are no. (%) of patients, unless otherwise indicated. Among all of the patients included in the study, 69.4% of patients “showed” to the clinic, and 30.6% were “no shows.” A significant interaction between the race and sex variables was identified, which was incorporated in the final logistic model.

^a Multivariate logistic regression analysis model characteristics (Hosmer-Lemeshow goodness-of-fit statistic, $P = .89$ and c-statistic, 0.69).

^b Adjusted OR for age in 10-year increments.

^c Local residence was defined as the Ryan White catchment area of the University of Alabama at Birmingham 1917 HIV Clinic (Jefferson County and adjacent counties).

^d Adjusted OR for 10-day increments.

clinic visit within 3–6 months after receiving their HIV diagnosis [7, 8]. To our knowledge, however, our study is the first to characterize the “no show” phenomenon, which was more common among female patients, racial minorities, and patients lacking private health insurance. Epidemiologic trends have shown that these groups are disproportionately or increasingly impacted by the HIV epidemic in the United States, particularly in the South [9, 10].

We are unable to determine the root causes of the observed differences in the current study, but we hypothesize that distrust and stigma play a role, particularly among racial minorities [11]. In a series of studies, provision of ancillary services covered by the Ryan White CARE Act was associated with better access to HIV care [12]. These findings suggest that factors, such as lack of transportation, substance abuse, mental health, and housing needs, may be barriers to the establishment of outpatient HIV care. A recent study demonstrating the efficacy of a brief case-management intervention to link patients who recently received a diagnosis of HIV infection to care supports this notion [8]. Unfortunately, many HIV-infected patients are not linked with case-management or social service agencies that may assist in identifying a patient’s needs for ancillary services and providing resources to meet these needs. Additional studies to better understand the role of these and other factors as barriers to the establishment of HIV care will be critical to inform interventions that will improve access to care, particularly among sociodemographic populations that are disproportionately impacted by both the HIV epidemic and the “no show” phenomenon.

At the clinic level, longer waiting time from the call to schedule a new patient visit to the appointment date was associated with failure to establish care. This finding is consistent with a previous study that demonstrated the effectiveness of a model using an expedited, standardized initial clinic evaluation to successfully link patients to clinical care [13]. These findings suggest a target for intervention for HIV outpatient clinics.

Because our study includes a single center, our results may not be generalizable to other regions of the country or to non-academic-affiliated HIV clinics. We cannot determine whether patients who fail to attend an appointment at our clinic seek and establish HIV care elsewhere. Limited information is obtained from patients when a clinic appointment is scheduled, such that we are unable to evaluate the role of other factors, including substance abuse and mental illness, as barriers to accessing HIV care. We do not capture information about prior outpatient HIV treatment when appointments are scheduled; therefore, we are unable to evaluate differential “no show” rates among those who received and did not receive prior care. Of note, there were no statistically significant differences in sociodemographic characteristics between patients who attended the clinic who had received prior HIV care (48%) and who

had not received prior HIV care (52%; data not shown). In the future, it will be important to evaluate “no show” rates for scheduled patients who have not received prior HIV care. We have modified our intake procedure to obtain more detailed information when appointments are scheduled to evaluate these questions in the future.

It is estimated that one-third of individuals with known HIV infection in the United States are not receiving care [3]. Our study shows that access to HIV care by newly scheduled patients at our clinic was less common among racial minorities, female patients, and patients lacking private health insurance. A better understanding of the barriers faced by these groups with regard to establishing HIV care is essential to inform interventions to improve patients’ engagement and retention in care. At the clinic level, reducing waiting times from the call to schedule a new patient visit to the appointment date may be an important target to improve establishment of care for new patients. Because of recent calls for more-widespread HIV testing in the United States, it is anticipated that there will be increased numbers of persons receiving diagnoses of HIV infection in the coming years [4]. Because greater numbers of patients will be in need of outpatient HIV care, it is imperative that strategies to improve access are developed to overcome the “no show” phenomenon.

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