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Higher Quality Communication and Relationships are Associated with Improved Patient Engagement in HIV Care

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Abstract

Patient retention in HIV care may be influenced by patient-provider interactions. In an urban, academic HIV clinic, 1363 patients rated the quality of communication and relationships with their providers on five domains. We used linear regressions to investigate associations between these 5 domains and appointment adherence. In multivariate analysis, patients kept more appointments if providers treated them with dignity and respect, listened carefully to them, explained in ways they could understand, and knew them as persons. Being involved in decisions was not significantly associated with appointment adherence. Enhancing providers' skills in effective communication and relationship-building may improve patient retention in HIV care.

Keywords

HIV/AIDS; retention; engagement; communication; patient-provider relationship

Introduction

Improving patient retention is a key priority of HIV care.¹⁻⁹ Entry and retention in HIV care are essential to receiving antiretroviral therapy (ART), which dramatically improves morbidity and mortality for patients living with HIV and reduces HIV transmission as a key component of “test-and-treat” prevention strategies.^{10,11} After initiation of ART, poor adherence to clinic visits is an independent predictor of virologic failure and death.^{8,9,11-14} Of patients linked to HIV care, approximately 11-30% of scheduled appointments are missed^{7,15,16} and only 59% of patients are retained in care.¹⁷ Recent guidelines call for further research on engagement in care¹⁸ and retention in HIV care is a major objective of the National HIV/AIDS Strategy.¹⁹

Prior work on appointment adherence has focused on patient factors as barriers to retention in care.^{12,15,16,20-22} A growing body of evidence suggests that the quality of patients' relationships with their HIV care providers plays an important role in appointment

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Conflicts of Interest

None of the authors have any relevant financial conflicts of interest.

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adherence.²³⁻²⁵ Some aspects of patient-provider relationships have been explored, and have shown that trust in providers is associated with ART adherence²⁶ and feeling “known as a person” by providers is associated with HIV viral suppression.²⁷ Although these studies suggest that patient-provider relationships may generally be important, no prior study has examined the role of specific patient-provider communication and relationship factors in HIV patients’ engagement in care.

To address this, we analyzed patient ratings of their HIV care providers in five domains: being treated with dignity and respect, being involved in decisions about their care, feeling listened to, having information explained in a way they could understand, and feeling known as a person. We hypothesized that these communication and relationship factors with providers would be associated with higher appointment adherence for patients. Ultimately, we sought to identify potential targets for future provider-focused interventions to improve their interactions with patients, promote retention in care, and help patients achieve better clinical outcomes in HIV care.

Methods

Participants and setting

This study occurred in the context of the Johns Hopkins HIV Clinical Cohort (JHHCC),²⁸ which includes adult patients living with HIV who receive outpatient care at an urban, academic clinic in Baltimore, Maryland. Patients in the JHHCC are interviewed using an audio computer-assisted self-interviewing (ACASI) survey instrument. Each interview is conducted privately with the patient answering questions on a computer touchscreen and read aloud through a headset. Patients are interviewed while awaiting or having completed appointments with their primary HIV care providers. The study was approved by the Johns Hopkins Institutional Review Board. This current analysis included the first interview for each patient, collected from December 2004 and June 2009.

Measures

The primary outcome was patients’ appointment adherence. Data were extracted from clinic records to calculate the number of completed routinely scheduled appointments divided by the total number of scheduled appointments over a period of one year after the ACASI interview. Acute appointments, and appointments cancelled by the patient, were not included in the measure. Calculated in this way, the proportion of completed appointments has been used to measure retention in care in prior studies.^{9,29}

The independent variables were communication and relationship factors reported by the patients in rating their primary HIV care providers. Two questions regarding respect and involvement in decisions were adapted from the Commonwealth Fund survey.^{30,31} Patients were asked “Does your HIV provider treat you with (a great deal) of respect and dignity?” (A great deal, a fair amount, not too much, none at all) and “Does your HIV provider involve you in decisions about your care?” (As much as you wanted, almost as much as you wanted, less than you wanted, a lot less than you wanted). Two questions were adapted from the Consumer Assessment of Health Plans Study (CAHPS):³¹ “My HIV provider explains things in a way I can understand” (never, sometimes, usually, always) and “My HIV provider listens carefully to me” (never, sometimes, usually, always). Patients were also asked one question assessing the global quality of the patient-provider relationship: “My HIV provider really knows me as a person” (yes, no, don’t know).²⁷

Additional measures included patients’ age, sex, and self-reported racial/ethnic group, and substance use. Patients’ use of ART was assessed by self-report and confirmed by review of the medical record. CD4 counts (by flow cytometry) and HIV viral loads (by the Roche

Amplicor assay) within 4 weeks of the interview were also extracted from the medical record. Patients were considered to have suppressed viral loads if serum HIV-1 RNA was less than or equal to 75 copies/ml.

Statistical analysis

We examined the distribution of patient ratings of provider communication and relationship factors using histograms. In subsequent analyses, we dichotomized these variables as “highest rating” versus “less-than-highest rating”, because patient responses were skewed towards the highest ratings. We assessed for collinearity using variance inflation factors and correlations among the communication and relationship variables and among the substance use variables. Collinearity was low (mean vif 1.53), so we retained each of these variables as separate measures.

We used t-tests to compare appointment adherence by demographics, substance use, and clinical status. Using simple linear regression, we tested associations between appointment adherence and each independent variable. Next, we performed multiple linear regressions separately for each communication/relationship factor, adjusted for demographics and substance use. Finally, we included all communication/relationship factors in one model, adjusting for demographics and substance use. All analyses were conducted using Stata SE/11.0 (College Station, TX).

Results

In total, 1363 patients were included in the study. Mean age of the patient sample was 45.8 years; the majority of patients were male (65%) and nonwhite (85%). Most nonwhite patients were African-American (1130 patients) and were combined with the small number of other nonwhite patients (22 patients) into one category. Sixty-six percent of patients were on ART and 49% had suppressed viral loads.

Table 1 shows sample characteristics and differences in appointment adherence by patient demographics, drug use, and clinical factors, calculated using t-tests. For all patients in the study, the mean appointment adherence was 65%. Appointment adherence was significantly higher for patients who were male, white, and without substance use. In addition, appointment adherence was higher for patients on ART, with suppressed viral loads, and with higher CD4 counts. Table 1 also presents appointment adherence results for patients reporting the highest versus less-than-highest ratings of provider communication and relationship factors.

Table 2 shows the change in appointment adherence for patients reporting the highest versus less-than-highest ratings of provider communication and relationship factors in each of five domains. For example, patients whose providers always listened carefully to them kept 7% (95% confidence interval: 2-11%) more of their appointments than patients whose providers usually, sometimes, or never listened carefully to them. In unadjusted analysis, appointment adherence was significantly higher for patients feeling known as persons, listened to, and treated with respect and dignity. When adjusting for patient demographics and drug use, appointment adherence was also significantly higher for patients who felt that their providers always explained things in ways they could understand. When all communication and relationship variables were included in one model and adjusted for demographics and substance use, feeling known as a person remained significant. Being involved in decisions was not significant in any of the models analyzed. Nineteen patients (1.4%) gave less than optimal ratings to their providers on all 5 measures. Excluding these patients from our analyses did not substantively change our findings.

Discussion

This is the first study to examine associations between patients' engagement in HIV care and specific communication and relationship domains with their providers. We found that patients were more likely to keep appointments when they felt that their providers knew them as persons, always treated them with respect and dignity, always explained things in ways they could understand, and always listened carefully to them. However, being involved in decisions about their care was not associated with appointment adherence.

In our study sample, overall appointment adherence of 65% was similar to levels reported in other populations.^{15,16} The association that we found between higher appointment adherence and suppressed viral loads is consistent with prior work on the clinical implications of retention in care.¹¹⁻¹⁴ Our study contributes new findings that after adjusting for demographics and substance use, communication and relationship factors were independent predictors of appointment adherence. This approach builds on prior qualitative studies²² and work on global ratings of patient-provider relationships²³ by examining specific provider behaviors of listening, explaining, and demonstrating respect that may be helpful in promoting patients' retention in care.

We had expected that patient involvement in decision-making would also play a role in appointment adherence, but this was not seen. Prior work on decision-making preferences indicates that, compared to patients who prefer to share decisions, patients who prefer to make decisions alone are less likely to receive ART or to have suppressed viral loads, and patients who prefer that the provider make the decisions are less likely to adhere to ART.³³ Decision-making role preference may also influence appointment adherence, but our study did not stratify patients by this characteristic.

When all of the communication and relationship factors were included in one model and adjusted for demographics and substance use, patient perceptions of being known as persons by their providers was the only factor significantly associated with appointment adherence. Being known as a person may be a measure of patient-provider relationship quality that encompasses the other domains examined in this study. Although collinearity among the variables was low and they appeared to represent distinct constructs, these domains are conceptually linked. Feeling known as a person can be regarded as a measure of respect from providers, who recognize the unconditional value of patients as persons.³⁴ This respect for patients as persons may be manifested by particular provider behaviors, such as honoring patients' autonomy, listening attentively to patients' viewpoints, and explaining in ways that accurately match patients' levels of understanding.

This study has a few limitations to consider. First, the reasons why patients missed appointments were unknown. Second, this study included patients at a single urban academic clinic. The study sample was representative of the patient population cared for at the clinic across the measured socio-demographic characteristics.³⁵ However, it may not be generalizable to all HIV care settings. Third, in an observational study, we must be cautious in drawing causal inferences. It is possible that associations between patients' ratings of their providers and appointment adherence are a result of negative attitudes among some patients towards healthcare providers in general, rather than communication and relationship factors per se. We found, however, that all but 19 patients gave their providers the highest mark possible on at least one rating dimension, and excluding those 19 patients did not change our findings. Finally, it is possible that positive ratings reflected general attitudes towards one's healthcare provider rather than specific facets of communication and relationship (halo effect). However, some factors (e.g., feeling known) were persistently associated with appointment adherence, while others (e.g., being involved in decisions) were

not, which suggests that our findings were driven by specific factors rather than global perceptions.

Patient-provider communication offers potential targets to improve patient engagement in HIV care and subsequent outcomes. Our study suggests that appointment adherence could be enhanced by optimizing the quality of relationships, so that patients feel known and respected as persons by their providers. In addition, specific provider communication behaviors, such as listening and explaining, could make a difference in retaining their patients in care. Further studies are needed to examine patient-provider communication and relationship factors longitudinally and enhance our understanding of how these interactions evolve over several visits and impact appointment adherence over time. Ultimately, evidence-based interventions to improve providers' communication could be tailored to target skills with known links to patient behaviors and outcomes. This approach may help address the important need for retention in HIV care, which is necessary to achieve treatment goals for individual patients and the public health goal of reducing the transmission, morbidity, and mortality of HIV.

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Table 1

Percentage of appointments kept, by demographic and clinical factors, and by communication and relationship factors

	Percentage (%) of appointments kept	p-value ^a
Sex:		
Male (n = 880)	66	0.005
Female (n = 483)	62	
Race:		
White (n = 211)	74	<0.001
Nonwhite (n = 1152)	63	
Alcohol use in past 6 months:		
Yes (n = 561)	64	0.004
No (n = 797)	66	
Drug use in past 6 months:		
Yes (n = 293)	57	<0.001
No (n = 1070)	67	
Ever used IV drugs:		
Yes (n = 544)	59	<0.001
No (n = 819)	69	
On antiretroviral therapy:		
Yes (n = 905)	68	<0.001
No (n = 458)	58	
Viral load:		
Suppressed (VL<75 c/ml) (n = 650)	72	<0.001
Unsuppressed (VL>75 c/ml) (n = 672)	59	
CD4 count:		
High (CD4>400 cells/mm ³) (n = 596)	69	<0.001
Low (CD4<400 cells/mm ³) (n = 734)	62	
My HIV provider really knows me as a person		
Highest rating (n=956)	65	<0.001
Less-than-highest rating (n=407)	55	
Always treated with a great deal of respect and dignity		
Highest rating (n=1060)	64	0.015
Less-than-highest rating (n=323)	56	
Involved in decisions about your care as much as you wanted		
Highest rating (n=1038)	64	0.289
Less-than-highest rating (n=325)	61	
My HIV provider always explains things in a way I can understand		

	Percentage (%) of appointments kept	p-value ^a
Highest rating (n=1007)	64	0.073
Less-than-highest rating (n=356)	59	
My HIV provider always listens carefully to me		
Highest rating (n=1004)	64	0.008
Less-than-highest rating (n=359)	57	

^a Calculated using t-tests

Table 2

Higher proportion of appointments kept for patients giving highest ratings of provider communication and relationship factors

Provider factors	Percentage (%) giving highest rating	Association of highest rating of provider factor with % kept appointments (β , 95% CI)		
		Unadjusted ^a	Adjusted 1 ^b	Adjusted 2 ^c
My HIV provider really knows me as a person	84.5	0.09 (0.05-0.13)	0.06 (0.03-0.10)	0.04 (0.003-0.08)
Always treated with a great deal of respect and dignity	93.6	0.08 (0.02-0.14)	0.07 (0.01-0.13)	0.03 (-0.04-0.10)
Involved in decisions about your care as much as you wanted	91.8	0.03 (-0.03-0.09)	0.04 (-0.01-0.09)	-0.01 (-0.07-0.05)
My HIV provider always explains things in a way I can understand	89.0	0.04 (-0.00-0.09)	0.07 (0.02-0.11)	0.04 (-0.01-0.10)
My HIV provider always listens carefully to me	88.8	0.07 (0.02-0.11)	0.06 (0.01-0.11)	0.02 (-0.04-0.07)

^aSimple linear regression

^bMultiple linear regression, performed separately for each communication/relationship variable; adjusted for age, sex, race, IV drug use, alcohol use in past 6 months, drug use in past 6 months

^cMultiple linear regression with single model including all communication/variables variables; adjusted for age, sex, race, IV drug use, alcohol use in past 6 months, drug use in past 6 months