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# Do Hospitalists or Physicians with Greater Inpatient HIV Experience Improve HIV Care in the Era of Highly Active Antiretroviral Therapy? Results from a Multicenter Trial of Academic Hospitalists

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# Do Hospitalists or Physicians with Greater Inpatient HIV Experience Improve HIV Care in the Era of Highly Active Antiretroviral Therapy? Results from a Multicenter Trial of Academic Hospitalists

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***Background.*** Little is known about the effect of provider type and experience on outcomes, resource use, and processes of care of hospitalized patients with human immunodeficiency virus (HIV) infection. Hospitalists are caring for this population with increasing frequency.

***Methods.*** Data from a natural experiment in which patients were assigned to physicians on the basis of call cycle was used to study the effects of provider type—that is, hospitalist versus nonhospitalist—and HIV-specific inpatient experience on resource use, outcomes, and selected measures of processes of care at 6 academic institutions. Administrative data, inpatient interviews, 30-day follow-up interviews, and the National Death Index were used to measure outcomes.

***Results.*** A total of 1207 patients were included in the analysis. There were few differences in resource use, outcomes, and processes of care by provider type and experience with HIV-infected inpatients. Patients who received hospitalist care demonstrated a trend toward increased length of hospital stay compared with patients who did not receive hospitalist care (6.0 days vs. 5.2 days; $P = .13$). Inpatient providers with moderate experience with HIV-infected patients were more likely to coordinate care with outpatient providers (odds ratio, 2.40; $P = .05$) than were those with the least experience with HIV-infected patients, but this pattern did not extend to providers with the highest level of experience.

***Conclusion.*** Provider type and attending physician experience with HIV-infected inpatients had minimal effect on the quality of care of HIV-infected inpatients. Approaches other than provider experience, such as the use of multidisciplinary inpatient teams, may be better targets for future studies of the outcomes, processes of care, and resource use of HIV-infected inpatients.

The number of hospital admissions among HIV-infected persons decreased from 149,000 during 1995 to 70,000 during 2003 in the United States [1], and the percentage of total hospital admissions decreased from 7% to 3% during the same time period in Europe [2]. During this era of HAART, fewer patients were admitted to hospitals because of opportunistic infections (OIs), and greater numbers were admitted for other long-term conditions such as hepatitis C or conditions unrelated to HIV infection [3–5].

In part because of these changes, debate over the provider type associated with better quality of care for HIV-infected patients continues to evolve [6]. Most studies have compared providers with specialty training with generalists experienced with HIV-infected patients in the outpatient setting. These studies suggest that phy-

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sician HIV-specific experience, rather than specialty, is predictive of end points such as survival [7, 8], antiretroviral uptake [9, 10], adherence to treatment [11], and patient knowledge about HIV infection [12]. As the number of hospitalizations to treat HIV infection decreases, the experience of any individual physician with hospital care of HIV-infected patients is likely to decrease, making understanding the importance of the effects of experience more important if experience tends to demonstrate diminishing returns. More recently, quality of care of HIV-infected patients has also been examined, suggesting that a focus on primary care and general medicine may improve quality. However, that study was in an ambulatory setting and used only clinical performance measures as outcomes [13].

Hospitalists are increasingly serving as the attending persons of record for hospitalized patients in the United States [14]. With >13,000 hospitalists today, more than one-third of all general medicine inpatients are cared for by hospitalists [5]. Hospitalist care may decrease overall cost and length of hospital stay, compared with care from traditional providers [15]. However, no studies have examined the effect of hospitalist care on outcomes and quality of care among HIV-infected inpatients. In addition to these questions about whether use of hospitalists affects care of HIV-infected patients, there are questions about how any such effects might be mediated. For example, whereas HIV-specific experience may be 1 pathway through which hospitalists could improve care for HIV-infected patients, the diversity of inpatient diagnoses related to HIV infection suggests that the overall experience that a hospitalist may have in the inpatient management of a wide variety of conditions may be another pathway through which hospitalists could influence the quality, outcome, and cost of care [16, 17]. Unfortunately, no studies have examined the effect of physician experience with HIV-infected patients on resource use or outcomes among HIV-infected inpatients, although 1 study has examined the effects of provider experience with HIV-infected patients on resource use in the emergency department [18].

In the present study, we examined the effects of hospitalists and HIV-specific inpatient experience on outcomes [19–21], resource use [22–24], and the processes of care [25–27] for HIV-infected patients admitted to general medicine services at 6 academic medical centers in the United States during a 2-year period.

## METHODS

### Study Design

Data were collected for 2 years, from 1 July 2001 through 30 June 2003, for patients who were admitted to the general medicine, noncritical care inpatient services and who enrolled in the trial at 6 participating institutions: University of Chicago (Chicago, IL), University of Wisconsin Hospital (Madison), University of Iowa (Iowa City), University of California at San Francisco (San Francisco), University of New Mexico (Albuquerque), and Brigham and Women's Hospital (Boston, MA). Of a total of 31,000 persons admitted to the general medicine services, 1207 HIV-infected patients were included in our analyses. HIV status was determined by primary or secondary hospital discharge diagnoses (measured by 3-digit *International Classification of Diseases, Ninth Revision, Clinical Modification* [ICD-9-CM] code) for a given patient or by self-report during the inpatient interview (figure 1). The patient was the unit of analysis.

The study was designed as a natural experiment that was based on call cycle. The hospitalist-led team at each institution alternated in a 4- or 5-day general medicine call cycle, with teams led by traditional academic internal medicine inpatient attending physicians. All patients were assigned to teams according to their position in the call cycle, without regard to whether the attending physician was a hospitalist or a nonhospitalist. Hospitalized patients were asked to consent to a 15-min interview to collect detailed health and socioeconomic information, as well as contact information for a follow-up telephone interview 1 month after hospital discharge. A telephone survey of patients or designated proxies who agreed to be interviewed was done at least 1 month after hospital discharge. The study was approved by the institutional review boards at the 6 participating institutions.

### Analytic Variables

***Outcomes, resource use, and processes of care.*** Hospital administrative data provided information on age, ethnicity, primary and secondary diagnoses, and diagnoses that were used to calculate a Charlson Comorbidity Index score [28]. Three of the measured outcome variables—that is, readmission rates, emergency department visit rates, and self-reported health status—were assessed by respondent recall 1 month after hospital discharge [19]. Overall patient satisfaction was determined 1 month after hospital discharge by using questions from the Picker-Commonwealth patient satisfaction survey [20, 21]. Information about in-hospital mortality was obtained from hospital administrative data, and information about patient mortality within 6 months after hospital discharge was obtained from the National Death Index [22].

Data about cost and length of hospital stay were obtained from hospital administrative data. Cost was assessed by using an activity-based accounting system produced by Transitions Systems (currently owned by Eclypsis) at 5 of the 6 participating sites. Length of hospital stay was defined as the number of days from patient admittance to the general medicine service until patient discharge.

Processes-of-care measures included inpatient provider coordination with primary care provider and patient understanding of reason for hospitalization (Picker-Commonwealth pa-

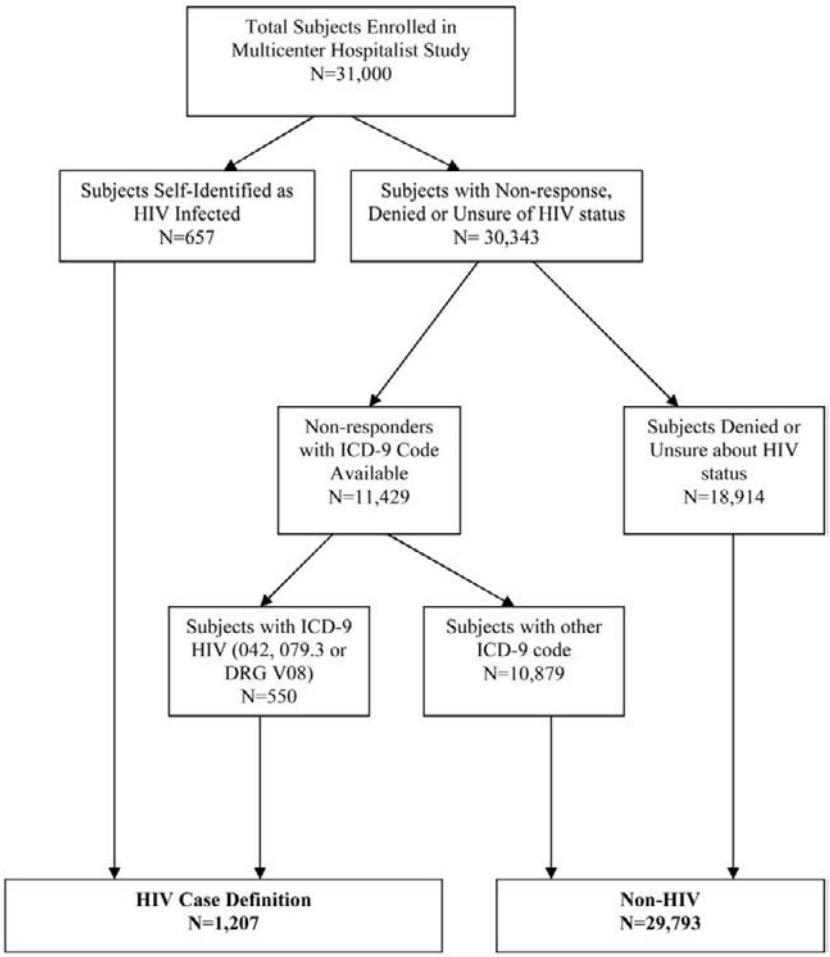


**Figure 1.** HIV case definition. Disease Related Group (DRG) V08, asymptomatic HIV infection status; *International Classification of Diseases, Ninth Revision, Clinical Modification* (ICD-9) 042, HIV; ICD-9 079.3, HIV-2.

tient satisfaction survey [20, 21]), control of pain [29], and administration or offer of pneumococcal and influenza vaccines [25, 26] during the hospitalization. Inpatient coordination with primary care provider was determined by subject response during the 1-month follow-up interview to the following question: "How would you rate overall coordination and teamwork between your regular outpatient doctor and the doctors who cared for you during your hospital stay?" Responses were rated with a 5-item Likert scale with a range of 5 ("excellent") to 1 ("poor"). The patient's understanding of the reason for hospital admission was assessed through response to the following question at inpatient interview: "Please tell me how much you agree or disagree with the following: I understand why I am in the hospital." Responses were rated with a 4-item Likert scale with a range of 4 ("definitely agree") to 1 ("definitely disagree").

***Provider specialization and experience with HIV-infected patients.*** Designation criteria of hospitalist and nonhospitalist experience with HIV-infected inpatients are shown in figure 2 and are similar to definitions used in prior studies [7, 17]. The hospital physician for a given patient was defined as the attending physician who admitted the patient.

### Statistical Analysis

We used Stata software, version 8.0 (Stata), for all statistical analyses. We examined differences in baseline health and demographic characteristics of the patients assigned to hospitalists and nonhospitalists, using Student's $t$ tests for continuous variables and $\chi^2$ tests for binary outcome variables. We also assessed, using separate regression models, the effects of hospitalists and HIV-specific experience on in-hospital mortality rate, 30-day hospital readmission, emergency department visit rate, 30-day reported health status, overall patient satisfaction, cost, length of hospital stay, inpatient coordination with the primary care physician, control of pain, patient understanding of reason for hospitalization, and pneumonia and influenza vaccination. Other explanatory variables included in this modeling included patient age, sex, ethnicity, education, income, insurance type,

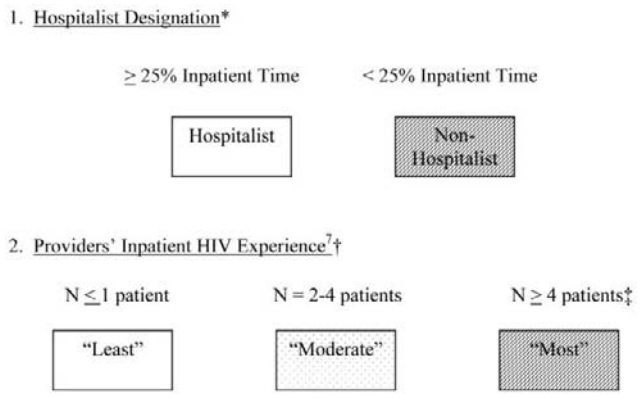


**Figure 2.** Two dimensions of providers caring for HIV-infected inpatients, 2001–2003. *Patients admitted to the hospitalist service were cared for by a hospitalist, a provider who spends at least 25% of his or her time on an academic inpatient general medicine service. †Providers' inpatient HIV experience [7] was determined by counting the total number of inpatients whom the attending physician had cared for during the study period, up to and including the patient's date of hospital admission. Providers were from the following specialties: allergy, cardiology, endocrinology, geriatrics, gastroenterology, general internal medicine, hematology, hospice, hospitalist, infectious diseases, oncology, palliative care, pediatrics, preventive medicine, psychiatry, renal, and rheumatology. ‡Mean ± SD, 11.5 ± 5.4.

Charlson Comorbidity score, OIs, study site, and month of admission, to control for both geographic and seasonal variation. For binary outcome variables, we applied logistic regression models. To account for the nonnegativity and skewed distribution of costs and length of hospital stay and to avoid heteroskedasticity in simple least-squares models, we used generalized linear models of length of hospital stay and costs, assuming that the effects of the covariates were proportional (i.e., a logarithmic link function) [30, 31], and controlled for the fixed effects of study sites.

## RESULTS

Included in the analysis were 1207 patients who met the case definition for HIV infection (figure 1). These patients were cared for by 214 physicians at the 6 study sites: 43 hospitalists and 171 nonhospitalists. Nonhospitalist providers represented 17 different specializations; 11% of the nonhospitalists were infectious diseases (ID) specialists. HIV-infected inpatients were more likely than uninfected patients to be younger, male, less educated, and black, to live alone, to have liver disease, and to experience depression ($P < .001$). There was variability in the number of HIV-infected inpatients among the 6 geographically diverse study sites. A mean of 201 HIV-infected patients (range, 85–456 patients) were recruited from each of the 6 study sites. HIV-infected patients represented 3.8% (range, 2.0%–6.4% patients) of all of the patients admitted to the general medicine services at the respective study sites, and 35% (15%–63%) of them were admitted to the hospitalist service. Ninety (7.5%) of 1207 HIV-infected inpatients were admitted to the intensive care unit at some point during their hospitalization. There was great diversity in discharge diagnoses, with the 12 most common representing only 18.2% of the total documented ICD-9-CM coded primary diagnoses for HIV-infected patients. The 3 most common discharge diagnoses among HIV-infected patients in our study were pneumonia (ICD-9-CM code 486), asthma (ICD-9-CM codes 493.20 and 493.90–493.91), and pancreatitis (ICD-9-CM code 577), accounting for 4.1%, 2.0%, and 1.8% of diagnoses, respectively. None of the 12 most common primary discharge diagnoses included an OI [32] during the 2001–2003 study period. However, HIV-infected patients with OIs had higher cost and longer length of hospital stay than did HIV-infected patients without an OI (mean cost, 51% higher; $P < .001$; length of stay difference, 0.48 days; $P = .008$), but patients without an OI were just as likely to die during hospitalization (OR, 1.6; $P = .29$).

Sociodemographic and comorbidity characteristics of HIV-infected patients treated by the hospitalist and nonhospitalist general medicine services were similar (table 1). Notably, there were no significant differences between the 2 groups with respect to comorbidities as measured by the Charlson Comorbidity Index and to percentage with a discharge diagnosis of an OI. Similarly, there were no differences between baseline sociodemographic and comorbidity characteristics among subjects who had complete administrative, inpatient interview and

**Table 1. Patient characteristics.**

| | Treatment provider | | |
|---|---|---|---|
| Variable[a] | Hospitalist | Nonhospitalist | *P* |
| Age, mean years | 43.4 | 43.0 | .50 |
| Female sex | 27 | 28 | .76 |
| Ethnicity | | | .50 |
| White | 40 | 42 | |
| Black | 41 | 37 | |
| Hispanic | 7 | 9 | |
| Asian | 5 | 3 | |
| High school graduate | 35 | 30 | .06 |
| Patient income ⩽$25,000/year | 28 | 29 | .64 |
| Insurance | | | .20 |
| Medicare | 37 | 31 | |
| Medicaid | 37 | 43 | |
| No payer | 20 | 19 | |
| Private | 6 | 7 | |
| Charlson Comorbidity Index score | 0.77 | 0.85 | .33 |
| Opportunitistic infection | 28 | 26 | .58 |

**NOTE.** Data are percentage of patients, unless otherwise indicated. Numbers are rounded to the nearest percentage. Of the 1207 total patients, 495 were in the care of hospitalists and 712 were in the care of nonhospitalists.

[a] All variables have been adjusted for study site.

30-day follow-up data and those who were otherwise lost to follow-up (data not shown).

Overall, patients admitted to the hospitalist and nonhospitalist services had similar resource use and outcomes (table 2). However, HIV-infected patients admitted to the hospitalist service demonstrated a trend toward a longer adjusted length of stay (mean duration, 6.0 days vs. 5.2 days; $P = .13$). Patients with an OI who were cared for by hospitalists had lengths of stay similar to those of patients cared for by nonhospitalists (mean duration difference, 0.61 days; $P = .41$).

Physician experience with HIV-infected inpatients was not associated with any of the measures of outcomes, resource use, or process of care, except that physicians with moderate experience were more likely to be perceived by the patient as coordinating patient care with the patient's primary care provider when compared with physicians with the least experience with HIV-infected inpatients (90.3% vs. 81.3%; $P = .05$) (table 3). However, this finding was not found to be consistent across experience categories; coordination of patient care with the patient's primary care provider was similar between the physician groups with the most experience and the physician groups with the least experience (83.6% vs. 81.3%; $P = .67$). Physicians with the most HIV-infected inpatient experience demonstrated a nonstatistically significant trend toward decreased length of stay when compared with physicians with the least experience (mean reduction of length of hospitalization, 0.47 days; $P = .45$). Similar results were evident when modeling cost and HIV-specific inpatient experience (mean medium cost, \$525; $P = .71$; mean high cost, \$706; $P = .63$). When models examining the effect of physician experience on these 2 resource-use variables were not adjusted for time of year, the inverse relationship between experience and both cost and length of stay achieved statistical significance (data not shown). Furthermore, stratification of the HIV-infected patients on the basis of diagnosis of an OI yielded similar results; with increased physician experience with HIV-infected inpatients, there was a demonstration of a dose-response trend toward cost savings (cost savings with treatment from a physician with moderate experience, −0.03%; $P = 1.0$; cost savings with treatment from a physician with the most experience, −27%; $P = .10$) and decreased length of hospital stay (duration when treated with a physician with moderate experience, −0.12 days; $P = .51$; duration when treated by a physician with the most experience, −0.33 days; $P = .10$).

## DISCUSSION

To our knowledge, this is the first study to examine the effect of hospitalists and HIV-specific inpatient experience on the overall care of hospitalized patients infected with HIV. There was little difference in patient care or outcomes between the hospitalist-led and nonhospitalist-led services. Outcome measures such as in-house mortality and processes of care measures remained similar between hospitalist and nonhospitalist groups.

**Table 2. Quality of care by hospitalists versus nonhospitalists.**

| Variable | No. of patients | Treatment provider | | Difference (95% CI) | *P* |
|---|---|---|---|---|---|
| | | Nonhospitalist[a] | Hospitalist | | |
| Outcome | | | | | |
| In-hospital mortality rate | 582 | 3.0 | 4.7 | −1.7 (−1.8 to −1.5) | .38 |
| 6-Month mortality rate | 606 | 9.7 | 11.3 | −1.6 (−1.7 to −1.5) | .57 |
| 30-Day readmission rate | 443 | 28.7 | 28.6 | 0.1 (0.1–0.2) | .99 |
| 30-Day ED visit rate | 443 | 24.5 | 22.7 | 1.8 (1.8–1.9) | .70 |
| 30-Day reported health status[b] | 424 | 55.1 | 55.3 | −0.2 (−0.2 to −0.2) | .97 |
| Overall patient satisfaction[c] | 429 | 88.7 | 88.8 | −0.1 (−0.1 to −0.1) | .98 |
| Resource use | | | | | |
| Length of hospital stay, days | 651 | 5.2 | 6.0 | −0.8 (−0.81 to −0.77) | .13 |
| Total cost, $ | 650 | 10,363 | 11,426 | −1063 (−1097 to −1029) | .40 |
| Processes of care | | | | | |
| Inpatient MD coordination with PCP | 421 | 83.9 | 84.6 | −0.7 (−0.7 to −0.7) | .87 |
| Pain controlled during hospitalization | 238 | 88.9 | 91.6 | −2.8 (−3.1 to −2.4) | .55 |
| Patient understanding of reasons for hospitalization | 409 | 97.1 | 93.8 | 3.3 (3.0–3.6) | .20 |
| Pneumococcal vaccination during hospitalization[d] | 259 | 8.9 | 8.8 | 0.1 (0.1–0.1) | .99 |

**NOTE.** Data are percentages, unless otherwise indicated. Models are adjusted for age, sex, ethnicity, education, income, insurance, Charlson Comorbidity Index score, opportunistic infections, attending physician experience with HIV-infected patients, site, and month of admission. ED, emergency department; MD, medical doctor; PCP, primary care physician.

[a] Nonhospitalist is the reference group.
[b] Percentage rated excellent, very good, or good.
[c] Percentage rated extremely or somewhat satisfied.
[d] When indicated (with consideration of immunization history and comorbidities).

**Table 3. Quality of care based on provider experience with HIV-infected inpatients.**

| Variable | No. of patients | Experience | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Least | Moderate | Most | Least versus moderate | | Least versus most | |
| | | | | | Difference (95% CI) | *P* | Difference (95% CI) | *P* |
| Outcome | | | | | | | | |
| In-hospital mortality rate | 582 | 4.9 | 3.5 | 2.6 | 1.4 (1.3–1.5) | .57 | 2.2 (2.1–2.4) | .31 |
| 6-Month mortality rate | 606 | 12.2 | 9.4 | 9.2 | 2.9 (2.7–3.0) | .42 | 3.0 (2.9–3.2) | .36 |
| 30-Day readmission rate | 443 | 25.2 | 28.0 | 33.0 | −2.8 (−2.8 to −2.7) | .62 | −7.8 (8.0 to −7.6) | .19 |
| 30-Day ED visit rate | 443 | 22.8 | 24.5 | 24.3 | −1.7 (−1.8 to −1.7) | .75 | 1.5 (1.6 to −1.5) | .78 |
| 30-Day reported health status[a] | 424 | 58.6 | 48.5 | 55.4 | 10.1 (9.9–10.2) | .12 | 3.2 (3.1–3.2) | .64 |
| Overall patient satisfaction[b] | 429 | 89.2 | 93.5 | 85.7 | −4.3 (−4.6 to −4.0) | .26 | 3.5 (3.3–3.7) | .46 |
| Resource use | | | | | | | | |
| Length of hospital stay, days | 651 | 5.8 | 5.5 | 5.4 | 0.37 (0.36–0.38) | .53 | 0.47 (0.45–0.48) | .45 |
| Total cost, $ | 650 | 11,202 | 10,677 | 10,496 | 525 (508–543) | .71 | 706 (684–729) | .63 |
| Processes of care | | | | | | | | |
| Inpatient MD coordination with PCP | 421 | 81.3 | 90.3 | 83.6 | −8.9 (−9.5 to −8.4) | .05 | −2.3 (−2.4 to −2.2) | .67 |
| Pain controlled during hospitalization | 238 | 86.7 | 94.0 | 90.7 | −7.3 (−8.3 to −6.3) | .13 | −4.1 (−4.6 to −3.6) | .48 |
| Patient understanding of reason for hospitalization | 409 | 0.95 | 0.96 | 0.96 | −0.012 (−0.013 to −0.011) | .70 | −0.015 (−0.017 to −0.014) | .59 |
| Pneumococcal vaccination during hospitalization[c] | 259 | 9.6 | 6.0 | 9.7 | 3.6 (3.2–4.0) | .44 | 0.06 (−0.06 to −0.05) | .99 |

**NOTE.** Data are percentages, unless otherwise indicated. Models are adjusted for age, sex, ethnicity, education, income, insurance, Charlson Comorbidity Index score, opportunistic infections, hospitalist, site, and month of admission. The group treated by physicians with the least experience is the reference group. The cutoff numbers of patients during the study period for treatment by physicians with the least experience were 0 or 1, for moderate experience were 2–5, and for most experience were >5. ED, emergency department; MD, medical doctor; PCP, primary care physician.

[a] Percentage rated excellent, very good, or good.

[b] Percentage rated extremely or somewhat satisfied.

[c] When indicated (with consideration of immunization history and comorbidities).

A trend toward lower resource use was observed for patients cared for by nonhospitalists. Generally, outcomes and processes of care of HIV-infected patients did not vary on the basis of physician HIV-specific inpatient experience. Similar to the nonhospitalist categorization, physicians with more experience with HIV-infected inpatients demonstrated a trend toward decreased resource use. In addition, physicians with moderate but not the most experience with HIV-infected inpatients were perceived by patients to better coordinate inpatient care with the patients' outpatient HIV care providers when compared with physicians with little or no experience with HIV-infected inpatients.

What are possible explanations for the resource-use findings in the context of experience with HIV-infection patients and hospitalist provider status? One might have expected hospitalists to be more adept at decreasing resource use, given their ability to demonstrate efficient care in the context of common diagnoses [17]. Commonly encountered inpatient diagnoses, such as liver-related complications, are becoming relatively more common among HIV-infected patients in the current era of HAART [3]. However, hospitalists are a relatively new addition to the academic setting, with the greatest increase in numbers since the late 1990s [15, 33]. Furthermore, hospitalists tend to be younger (data not shown), and their gains through an increased overall inpatient experience may be offset by fewer hospital admissions of HIV-infected patients over time and less lifetime experience with HIV infection. Academic faculty who trained during the pre-HAART era may have more lifetime experience managing HIV infection and, thus, may be able to better deal with some of the added dimensions that HIV infection may bring, including OI and medication-related toxicities.

Communication between the inpatient provider and the outpatient provider and coordination of overall care can be problematic during hospital discharge [34, 35]. Although our results did not capture significant differences between experience and provider type in this domain, coordination of care and interprovider communication is important in the context of HIV infection, in which outpatient management remains the cornerstone of effective care for these patients and is presumably one of the important factors that drives the steady decrease in inpatient admissions. Across all experience groups and provider types, the level of patient perceived interprovider communication was relatively high (81%–85%). In 1 recent meta-analysis, direct inpatient-to-outpatient provider communication was low (3%–20%), and written communication remained poor for 4 weeks after hospital discharge (51%–77%); however, this was determined mostly through objective data in the form of hospital discharge summaries [36]. These results of the subjective measures of coordination of care in the current study must be compared with caution, because patients may also not have truly understood coordination of care and how much their

inpatient physicians had or had not communicated with their outpatient physicians.

There are several limitations to our study. First, our physician HIV-experience variable included only inpatient experience during the 2-year study period. This does not account for HIV-infected inpatient experience that may have occurred before the study or for concurrent HIV-infected outpatient experience during the study period. However, we believe that this was an adequate indicator of recent HIV-infected inpatient experience and becomes important, given the rapid changes that occur within the field of HIV medicine. In addition, the threshold as to what number of HIV-infected patients is needed to be seen annually to create appropriate experience levels is not clear. We used cutoffs similar to those published elsewhere [7] during the current time, when fewer HIV-infected patients are being admitted to the hospital overall. The potential for HIV experience to be a proxy for overall inpatient experience was considered; however, to account for this, we included hospitalist status and month of admission in our physician experience models. In addition, we did not have information on the specialty type of the nonhospitalists or the potential effect of HIV-dedicated inpatient services at different sites. Certainly, at many of the sites, ID specialists were part of the nonhospitalist service and could have biased our findings favorably toward this service. However, there were also other internal medicine subspecialists who could have even less knowledge about HIV infection, which could have canceled out these effects. Moreover, there are no data to suggest that ID specialists increase the quality of care and decrease resources used in the inpatient setting, especially with the current predominance of inpatient diagnoses made by non-ID specialists. Limited comparisons of outcome measures between ID specialists and other inpatient providers demonstrated no significant differences between the 2 groups (data not shown). Lower response rates to the inpatient interview and 1-month telephone follow-up limited the sample sizes in our individual models, which decreased our ability to detect a potentially statistically significant difference. However, baseline sociodemographic characteristics, Charlson Comorbidity scores, and prevalence of OIs did not differ between subjects who were lost to follow-up and those who completed the 30-day interview (data not shown). Although it is very possible that the study was underpowered to detect a real trend, the observation that several of the parameters seemed to point in the same direction with regard to HIV inpatient experience was intriguing. This may indicate a potential mechanism worthy of future study.

This study was completed during a period in which the number of OI-related hospital admissions was decreasing, fewer patients with HIV infection were being admitted to the hospital, and an increasing hospitalist presence was felt in academic medical centers nationally [5]. These patterns continue to shift and make broad interpretation of our results challenging. Future studies should examine how ID specialists fare in inpatient care compared with hospitalists or other nonhospitalists.

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