Seasonal Variation in Undiagnosed HIV Infection on the General Medicine and Trauma Services of Two Urban Hospitals

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OBJECTIVE: To examine the seroprevalence of undiagnosed HIV and variation by season among patients admitted to the general internal medicine (GIM) and trauma services of two urban hospitals.

DESIGN: A cross-sectional blinded HIV-1 seroprevalence survey.

SETTING: A 725-bed academic medical center's hospital and an affiliated 324-bed tertiary care hospital.

PARTICIPANTS: Residual serological specimens were obtained for unique patients aged 17 to 65 to study services in summer (June 16 to September 4, 2001) and fall to winter (November 1, 2001 to January 8, 2002).

METHODS: Hospital files provided data on demographics, service type, and discharge clinical categories (fall-winter group only). HIV ELISA (enzyme-linked immunosorbent assay) tests with confirmatory Western blot were linked to subjects' de-identified files. We excluded 34 subjects with known HIV. Of the remaining unique admissions in summer ($n=604$) and fall-winter ($n=978$), 60% and 55% were tested, respectively. Predictors of undiagnosed HIV infection were examined using multivariate analysis.

RESULTS: The summer cohort ($n=362$) had significantly lower unadjusted seroprevalence of undiagnosed HIV infection (1.4%; 95% confidence interval [CI], 0.4% to 3.2%) than the fall-winter cohort ($n=539$; 3.7%; 95% CI, 2.3% to 5.7%; $P=.04$). Overall, undiagnosed HIV was somewhat less likely in women (adjusted odds ratio [AOR], 0.45; 95% CI, 0.19 to 1.07) but more likely in black patients (AOR, 3.46; 95% CI, 0.70 to 17.06). In the fall-winter cohort, undiagnosed HIV was more likely for discharges with the following clinical categories versus those with a cardiac condition: dermatologic/breast (AOR, 14.90; 95% CI, 1.20 to 184.77), renal/urological (AOR, 22.43; 95% CI, 2.12 to 236.75), or infectious (AOR, 31.08; 95% CI, 2.40 to 402.98).

CONCLUSIONS: The higher seroprevalence of undiagnosed HIV in the fall-winter admissions to GIM and trauma services supports especially targeting HIV testing in these months.

KEY WORDS: seroprevalence; epidemiology; HIV infections; inpatients; wounds and injuries.

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Officials at the Centers for Disease Control and Prevention (CDC) have estimated that several hundred thousand persons have undiagnosed HIV infection in the United States.¹ With the advent of highly effective antiretroviral regimens, the benefit of timely diagnosis of HIV infection has gained even greater importance because treatment can stem the decline in immune function and avert advanced complications of the disease.² In addition to personal health benefits, early diagnosis and education about reducing risky behaviors can reduce transmission of HIV infection to others.³

Before an HIV diagnosis is finally made, many HIV-infected patients have often had numerous recent contacts with the health care system.⁴ In 2003, the CDC launched an initiative called "Advancing HIV Prevention: New Strategies for a Changing Epidemic" that is aimed at reducing barriers to early diagnosis of HIV infection and increasing access to quality medical care, treatment, and ongoing prevention services. This initiative builds on 1993 CDC recommendations to offer HIV testing to all patients in higher HIV prevalence clinical settings and those with risks for HIV in low HIV prevalence clinical settings. Hospitals in higher prevalence areas have been the focus of intensive efforts to promote HIV testing and linkage to care.⁵

However, it is unclear whether HIV testing and counseling of inpatients in higher prevalence hospitals will have the same yield at various times of the year. Several studies have found that HIV-infected persons may have a higher risk of some opportunistic infections during winter months.^{6,7} Because hospitalizations for pulmonary disease are more prevalent in the general population during fall and winter months,⁸⁻¹¹ these infections may also prompt more admissions for persons with undiagnosed HIV infection during these months.

To explore seasonal variations in the prevalence of undiagnosed HIV infection, we conducted an anonymous HIV seroprevalence study of patients who were admitted during summer and late fall-winter months to the general medicine and trauma services of two urban hospitals. These hospitals are located in a Metropolitan Statistical Area that has a high HIV seroprevalence according to the CDC.¹² If substantial seasonal variation appears in the prevalence of undiagnosed HIV infection in inpatients, systematic HIV testing and counseling services may be particularly important to offer during selected months of the year.

METHODS

This prospective, cross-sectional study was conducted in a 725-bed academic medical center's hospital and an affiliated 324-bed tertiary care hospital that serve a nearby indigent urban population. Both hospitals have general medicine services but only the academic center's hospital has a trauma service. These services were selected because they treat diverse types

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of patients including those at increased risk of HIV infection such as drug users and persons with hepatitis C infection. However, these services do not routinely test patients for HIV infection. Persons with known HIV infection are largely admitted to dedicated HIV services at these hospitals that are staffed by infectious disease specialists.

This study was approved by the Institutional Review Board of the University of Pennsylvania, Philadelphia. During the summer, patients' serological samples were obtained first at the academic center (June 16 to July 19, 2001) and then at the affiliated tertiary care hospital (July 7 to September 3, 2001) because of logistical barriers to collecting samples simultaneously at both sites. We were able to address these difficulties during the fall-winter months (November 1, 2001 to January 8, 2002) and collected samples at both hospitals in the same time frame. From daily admission lists, a research assistant identified all patients aged 17 to 65 years who were admitted to the study services and looked for their residual serological specimens drawn the day of admission in the pathology laboratory. When at least 1 cubic centimeter of sera remained after the ordered tests were performed, the research assistant transferred the specimen to a study tube marked only by a unique study identifier.

To identify patients with known HIV infection, longitudinal electronic records of all inpatient and outpatient services rendered in the University of Pennsylvania Health System for 1 year prior to admission were examined for any prior diagnosis of HIV infection based on International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM)-coded diagnoses for HIV infection or AIDS (i.e., V08, 042.x). Before HIV testing was performed, we excluded 15 persons with known HIV from the summer cohort and 19 HIV-infected patients from the fall-winter cohort. Hospital electronic files offered data on patient demographics and service of admission. Clinical information was obtained from diagnosis-related groups (DRGs) only for the fall-winter group. DRGs have been developed for hospital reimbursement purposes and are used in the United States as well as other countries such as Germany and Australia.

Our approach followed guidelines for anonymous unlinked seroprevalence research promulgated by the CDC.¹³ Serological specimens were sent to an outside laboratory for HIV-1 ELISA (enzyme-linked immunosorbent assay) testing with subsequent Western blot confirmation of positive or indeterminate tests. To insure patient anonymity, the link between patient medical record identifiers and study identifiers was destroyed before HIV testing. Demographic and administrative data were modified so that individuals could not be indirectly identified. For example, age was categorized into 10-year groups and uncommon race/ethnicities (<10% of subjects) were grouped as "other." We also grouped DRGs for analysis by major diagnostic categories (MDCs) because MDCs classify multiple DRGs by organ system or disease (see Appendix 1, available online at <http://www.blackwellpublishing.com/products/journals/suppmat/jgi/jgi40300/jgi40300sm.htm>). MDCs with small numbers of patients were placed in an "other" category. Because the "infection" MDC (i.e., DRGs 415–423) includes only a limited subset of infections (i.e., septicemia, parasitic infections, postoperative infections, and fever of unknown origin), we created a second composite "infectious diagnoses" category that also included the DRGs for pneumonia.

Statistical Analysis

Our dependent variable was defined as undiagnosed HIV infection based on a positive ELISA with confirmation for a patient without record of an HIV diagnosis during the hospitalization or up to 1 year before in either inpatient or outpatient files. Differences in demographic and health care characteristics between study patients and patients without available sera were compared using χ^2 test or the Fisher exact test for small samples. Among study patients, we also used these statistical tests to compare summer cohort to the fall-winter cohort and persons with undiagnosed HIV infection to those without HIV. Bonferroni corrections for multiple comparisons were applied for these comparisons. HIV seroprevalence rates for the two seasons were compared using a two-sample test of proportions.

Because the samples at the two study hospitals were collected during different time periods, we compared demographic data for all patients admitted to the general medicine services at each of the study hospitals separately during the 2 summer time periods (i.e., June 16 to July 19, 2001 vs July 7 to September 3, 2001). These results showed no differences ($P > .1$) in gender, age distribution, race, and area of residence for the patients on the general medicine services at each of the study hospitals.

To examine predictors of undiagnosed HIV infection, we estimated a logistic regression model that included all variables associated with the outcome in the univariate analysis at $P < .20$. We examined the possibility of effect modification by the use of multiplicative interaction terms and likelihood ratio testing. In addition, we evaluated admission service as a potential confounder of the association between season of admission and undiagnosed HIV infection. All tests were interpreted using a two-tailed significance level of less than .05. Goodness of fit of the logistic model was evaluated by the Hosmer-Lemeshow test. Statistical analyses were performed using the licensed software Stata (version 7.0; Stata Corporation, College Station, TX). Prevalence rates were adjusted using a direct standardization method.

RESULTS

We had 362 patients in the summer cohort and 539 patients in the fall-winter cohort, representing 60% and 55%, respectively, of all unique admissions in these 2 time frames (Table 1). Compared with persons for whom sera was not obtained, study subjects (in the fall-winter cohort) were more likely to have been admitted to the general medicine service of the academic center hospital (51.4% vs 71.6%, respectively;

Table 1. Derivation of Study Cohorts

	Summer Cohort	Fall-Winter Cohort
	N	N
Admissions	648	1,069
Duplicates	29	59
Duplicates from summer	NA	13
Known HIV infection	15	19
No sera collected	242	439
Sera collected	362	539

NA, not applicable.

Table 2. Comparison of Summer and Fall-Winter Study Cohorts

Characteristic	Summer Cohort N=362	Fall-Winter Cohort N=539	P Value*
	%		
Women	45.6	46.6	.75
Age, y			
17–25	8.6	7.7	.69
26–35	16.6	16.5	
36–45	25.1	22.6	
46–55	30.4	30.1	
56–65	19.3	23.1	
Race			
White	21.3	24.1	.03
Black	76.0	69.8	
Other	2.7	6.1	
Service			
General medicine, academic center's hospital	63.5	71.6	.002
General medicine, affiliated tertiary care hospital	19.9	19.5	
Trauma, academic center's hospital	16.6	8.9	
Region			
West Philadelphia	39.0	35.0	.61
Other Philadelphia regions	42.5	43.6	
Suburbs	11.9	13.6	
Outside Pennsylvania	6.6	7.8	

*P values were calculated from χ^2 tests.

$P < .001$), and less likely to have been admitted to the trauma service (21.2% vs 8.9%, respectively; $P < .001$). Study patients were older, with 23.1% in the 55 to 65 age group, compared with 16.3% of untested patients ($P = .006$). Comparison of the summer study cohort to the fall-winter study cohort revealed that the former group was more likely to have been black and admitted to the trauma service (Table 2).

The overall unadjusted undiagnosed HIV seroprevalence rate for the entire study cohort was 2.8% (95% confidence interval [CI], 1.8% to 4.1%). Women were less likely to have undiagnosed HIV infection and black race was associated with over 3-fold higher odds of undiagnosed HIV infection, but neither association achieved statistical significance (Table 3). Patients admitted in the fall-winter were over 2 times more likely to have undiagnosed HIV infection than those in the summer. The seroprevalence of undiagnosed HIV infection was only 1.4% (95% CI, 0.4% to 3.2%) in the summer cohort versus 3.7% (95% CI, 2.3% to 5.7%) in the fall-winter time frame ($P = .04$). The seroprevalence of undiagnosed HIV was higher in the fall-winter for the general medicine services but this difference achieved statistical significance for only one service. For the academic center's general medicine service, the prevalence of undiagnosed HIV seroprevalence was 1.7% (95% CI, 0.5% to 4.4%) in the summer and 3.4% (95% CI, 1.8% to 5.7%) in the fall-winter ($P = .20$) while, for the affiliated tertiary care hospital's general medicine services, the corresponding prevalences were 0.0% (95% CI, 0.0% to 5.0%) and 5.7% (95% CI, 2.1% to 12.0%) ($P = .04$). On the other hand, the seroprevalence rate of undiagnosed HIV on the trauma service differed little by season, with 1.7% (95% CI, 0.1% to 8.9%) in the summer and 2.1% (95% CI, 0.1% to 11.1%) in the fall-winter ($P = .87$).

In a multivariate analysis including all study subjects, season of admission was significantly associated with undiagnosed HIV infection with fall-winter subjects having 3-fold higher adjusted odds of HIV (Table 4). Goodness of fit of the logistic model was evaluated by the Hosmer-Lemeshow test ($P = .97$). For the fall-winter group only, we compared the MDCs for patients with and without undiagnosed HIV infection (Table 5). The MDC clinical categories for the patients with undiagnosed HIV were broadly distributed but the highest rates appeared for dermatologic/breast, gastroenterology, infectious, pulmonary, and renal/urological conditions. Patients admitted to the trauma service had more homogeneous MDCs than patients admitted to the medicine services ($P < .001$). The trauma patients had MDCs in 10 of our 16 categories, whereas medicine patients had MDCs in all 16 categories. The most common MDCs for the trauma patients were trauma, gastroenterology, and orthopedic. Among medicine patients, the most common MDCs were cardiac, gastroenterology, and pulmonary. In a multivariate model of the fall-winter cohort, subjects in the dermatologic/breast MDC (adjusted odds ratio [AOR], 14.9; 95% CI, 1.2 to 148.8; $P = .04$), genitourinary/renal MDC (AOR, 22.4; 95% CI, 2.1 to 236.7; $P = .01$), or infection MDC (AOR, 31.1; 95% CI, 2.4 to 403.0; $P = .01$) were significantly more likely to have undiagnosed HIV infection than subjects with a cardiac MDC. In addition, the ear/nose/throat MDC (AOR, 13.8; 95% CI, 0.74 to 256.6) and vascular MDC (AOR, 13.0; 95% CI, 0.72 to 233.9) approached statistical significance (Table 5). The composite "infectious diagnoses" MDC that included pneumonia with other infections was not associated with undiagnosed HIV infection (not shown; risk ratio, 1.67; 95% CI, 0.66 to 4.25; $P = .28$).

DISCUSSION

Patients admitted to the general medicine and trauma services of two urban hospitals during the fall-winter had 3 times greater odds of having undiagnosed HIV infection than those admitted during the summer. The proportion of patients with undiagnosed HIV was 3.7% in the fall-winter versus only 1.4% in the summer. Seasonal variation in admissions and mortality has also been observed for patients who are hospitalized with other diseases including myocardial infarction, congestive heart failure, asthma, and peptic ulcer disease.^{9,10,14–19} In regard to HIV-related diseases, *Pneumocystis carinii* pneumonia (PCP) has been reported to be more likely during winter months.⁶ Even in the post-HAART (highly active antiretroviral therapy) era, PCP is still among the most common AIDS-defining conditions at first diagnosis of HIV.²⁰ Yet PCP is unlikely to account for the excess of undiagnosed HIV infection in the fall-winter months in this study because clinicians readily associate this condition with AIDS and would have performed inpatient HIV testing.

Our analysis of the clinical conditions of persons with undiagnosed HIV was limited by the need to ensure the anonymity of our study subjects. Although DRGs and MDCs were developed for billing purposes, we used these data for analysis of clinical conditions because they offered sufficiently large categories that individuals could not be identified. In addition, several studies have evaluated the validity of diagnostic and procedural codes and found that they are a reasonably accurate source of data for clinical analyses.^{21–23} Although pulmonary infections are more common in winter,²⁴ a composite

Table 3. Comparison of HIV-negative and Undiagnosed HIV-positive Patients in Entire Sample

Characteristic	HIV-negative N=873	HIV-positive N=25	P Value*	Unadjusted Odds Ratio (95% CI)
	N (%)			
Gender				
Men	466 (53.4)	17 (68.0)	.15	1
Women	407 (46.6)	8 (32.0)		0.55 (0.24 to 1.26)
Age, y				
17–25	71 (8.2)	1 (4.0)	1.0	1
26–35	144 (16.6)	4 (16.0)	1.0	1.95 (0.22 to 17.09)
36–45	203 (23.4)	8 (32.0)	1.0	2.73 (0.35 to 21.45)
46–55	260 (29.9)	10 (40.0)	1.0	2.67 (0.35 to 20.49)
56–65	191 (21.9)	2 (8.0)		0.75 (0.07 to 8.10)
Race				
White	204 (23.4)	2 (8.0)		1
Black	626 (71.7)	23 (92.0)	.15	3.65 (0.87 to 15.35)
Other	43 (4.9)	(0.0)	†	†
Service				
General medicine, academic center's hospital	599 (68.4)	17 (68.0)	1.0	1
General medicine, affiliated tertiary care hospital	171 (19.5)	6 (24.0)	1.0	1.23 (0.49 to 3.07)
Trauma, academic center's hospital	106 (12.1)	2 (8.0)		0.67 (0.16 to 2.86)
Region				
West Philadelphia	319 (36.4)	11 (44.0)	.85	1
Other Philadelphia regions	377 (43.0)	12 (48.0)	.20	0.92 (0.41 to 2.07)
Suburbs	115 (13.1)	1 (4.0)	.70	0.26 (0.03 to 1.98)
Outside Pennsylvania	65 (7.4)	1 (4.0)		0.45 (0.06 to 3.46)
Study cohort				
Summer	357 (40.8)	5 (20.0)	.04	1
Fall–winter	519 (59.2)	20 (80.0)		2.69 (1.02 to 7.09)

*P values were calculated from χ^2 tests.

†No events; P value cannot be calculated.

CI, confidence interval.

“infectious diagnoses” MDC including pneumonia among other infectious diagnoses was not associated with undiagnosed HIV infection in the fall–winter cohort. However, undiagnosed HIV infection was significantly more likely in the subset of persons with an “infection” DRG including septicemia, para-

sitic infections, postoperative infections, and fever of unknown origin. Certainly, HIV-infected persons are predisposed to these infectious conditions.²⁵ However, HIV-infected patients are subject to a wide variety of other infectious and noninfectious complications that may not trigger clinicians to consider the diagnosis of HIV infection.^{26,27} In our fall–winter cohort, persons with undiagnosed HIV were more likely to be discharged with a renal/genitourinary MDC that includes conditions such as renal failure and genitourinary infections. These are relatively common complications of HIV^{28–32} but are also highly prevalent in uninfected persons. Persons with undiagnosed HIV were also more likely to be discharged with a dermatologic/breast MDC which includes cellulitis and skin ulcerations that are also more frequently encountered in patients with HIV.^{33,34} We speculate that the higher prevalence of these conditions among persons with HIV accounts for the differences in HIV prevalence among these MDCs. Because more than two thirds of the patients with undiagnosed HIV infection in our fall–winter cohort were discharged with MDCs other than infection, renal/genitourinary, or dermatologic/breast conditions, targeting persons with only these conditions for HIV testing and counseling would likely have poor sensitivity.

The seroprevalence of undiagnosed HIV infection for trauma patients was lower than that for general medicine patients but this difference did not achieve statistical significance. The seroprevalence in our trauma cohort is on the low end of the range (from 2% to 17%) seen in anonymous seroprevalence studies in emergency departments, with the highest rates for

Table 4. Adjusted Associations with Undiagnosed HIV Infection in the Entire Cohort

Characteristic	Adjusted Odds Ratio (95% CI)	P Value	Adjusted Prevalence (95% CI)
Gender			
Men	1	.07	3.75 (2.02 to 5.49)
Women	0.45 (0.19 to 1.07)		1.71 (0.55 to 2.87)
Race			
White	1		0.64 (0.00 to 1.62)
Black	3.46 (0.70 to 17.06)	.13	3.47 (2.02 to 4.90)
Other	—	—	—
Region			
West Philadelphia	1	.99	2.7 (1.14 to 4.27)
Other Philadelphia regions	1.00 (0.43 to 2.33)	.43	2.99 (1.35 to 4.63)
Suburbs	0.42 (0.05 to 3.66)	.94	2.56 (0.00 to 0.75)
Outside Pennsylvania	0.92 (0.10 to 8.21)		3.07 (0.00 to 8.64)
Study cohort			
Summer	1	.03	1.29 (0.18 to 2.40)
Fall–winter	3.08 (1.14 to 8.33)		3.82 (2.20 to 5.43)

CI, confidence interval.

Table 5. Discharge Major Diagnostic Categories of Patients in the Fall–Winter Cohort With and Without Undiagnosed HIV Infection*

MDC	HIV-negative N=519	HIV-positive N=20	P Value [‡]	Adjusted Odds Ratio [†] (95% CI)
	%			
Cardiac (reference)	108 (21.9)	1 (5.9)		1
Dermatologic	20 (4.1)	2 (11.7)	.04	14.90 (1.20 to 184.77)
Drug toxicity	7 (1.4)	0 (0.0)	§	—
Ear, nose, throat	8 (1.6)	1 (5.9)	.08	13.8 (0.74 to 256.56)
Endocrine	26 (5.3)	1 (5.9)	.31	4.25 (0.26 to 71.75)
Gastroenterology	99 (20.1)	2 (11.7)	.41	4.28 (0.24 to 31.39)
Gynecology	6 (1.2)	0 (0.0)	§	—
Hematology/oncology	16 (3.3)	0 (0.0)	§	—
Infectious	7 (1.4)	2 (11.7)	.01	31.08 (2.40 to 402.98)
Neurologic	29 (5.9)	0 (0.0)	§	10.89 (0.60 to 196.80)
Orthopedic	26 (5.3)	0 (0.0)	§	—
Other	21 (4.3)	1 (5.9)	.11	—
Pulmonary	78 (15.8)	2 (11.7)	.34	3.27 (0.28 to 37.69)
Renal/urological	16 (3.3)	3 (17.7)	.01	22.43 (2.12 to 236.75)
Trauma (other)	16 (3.3)	1 (5.9)	.11	10.83 (0.59 to 198.51)
Vascular	9 (1.8)	1 (5.9)	.08	13.00 (0.72 to 233.89)

*Information available for 94.4% (509) subjects tested.

[†]Adjusted for gender, race, and area of residence.

[‡]P values calculated from χ^2 test.

[§]No events; P value cannot be calculated.

MDC, major diagnostic categories; CI, confidence interval.

patients with behavioral risks such as male homosexual activity and intravenous drug use.³⁵ In New York City, the seroprevalence of HIV in trauma patients was 7.2% but that study did not exclude known HIV-infected persons and was significantly higher for persons testing positive for cocaine use.³⁶ A limitation of our study is the lack of data on HIV risk behaviors such as injection drug use or male-to-male sex.

Women tended to be less likely to have undiagnosed HIV infection than men, and black persons tended toward being more likely to have HIV undiagnosed infection, although neither association reached statistical significance in the unadjusted or adjusted analysis. Interestingly, black patients constituted a significantly higher proportion of admissions to the study services during the summer months when HIV seroprevalence was lower. Research conducted by the CDC in the early 1990s suggested that routine HIV testing should be conducted in acute care hospitals with an HIV prevalence of at least 1%.³⁷ Our finding of a greater than 1% HIV seroprevalence rate suggests that testing throughout the year is warranted in our setting. However, in many settings where resources are scarce, rather than trying to target specific types of patients for HIV testing, directing testing to the season when undiagnosed HIV is more prevalent among admissions may produce a greater number of newly identified HIV infections. Although screening of inpatients only during the fall–winter months may reduce costs, this strategy poses different logistical and administrative challenges (e.g., hiring and training staff) and may be difficult to orchestrate. Asking about HIV risk behaviors can further increase the yield of testing. However, presenting HIV counseling and testing as routine activity instead of selectively targeting by risk assessment has been associated with higher acceptance rates in a number of diverse settings.^{38–40}

Our conclusions are subject to several additional caveats. Some patients who were classified as having undiagnosed HIV

infection could have known their HIV status but not disclosed it to their physician during the hospitalization. Alternatively, the patient might have divulged to the physicians that she or he had HIV but, because it was not considered germane to the reason for admission, HIV was not recorded among any of the maximum of 10 discharge diagnoses. In support of the validity of our results, the seroprevalence of undiagnosed HIV in this study is similar to that observed in another urban hospital in our region.⁵ Our results are also consistent with findings of previous unlinked serosurveys performed in the past decade.^{37,41–44,45} In addition, we obtained serum for only slightly more than half of the admissions during the 2 study periods. Sera were less likely to have been tested for admitted patients who were younger or on the trauma service. We can only speculate as to how these differences affect our finding of seasonal differences in the prevalence of undiagnosed HIV infection. Because age was not associated with undiagnosed HIV infection, it is unlikely that this difference at only one hospital could explain the observed seasonal differences. We observed a seasonal difference in HIV seroprevalence in the medicine services of both hospitals, so selection effects due to one service are also unlikely to be responsible for our findings. Regardless, our conclusions regarding these groups should be viewed with circumspection as the seasonal difference could still only reflect random variation.

The results of this study are most likely to be generalizable to larger tertiary care hospitals in areas with higher HIV seroprevalence. In the United States, these regions are the South, Far West, and Northeast.¹³ These data should increase awareness that HIV among hospitalized patients can remain undiagnosed. A hospital-based counseling and testing program has been shown to increase identification of undiagnosed HIV infection.^{5,46} The medical benefit of making a new HIV diagnosis is clear for the individual but there is also potential for significant public health benefit.

As stated previously, the CDC has suggested that routine testing should be conducted in acute care hospitals with an HIV prevalence of at least 1%.³⁷ More recent CDC recommendations state that the threshold for routine testing could vary across settings and should consider available resources.⁴⁷ If other anonymous unlinked seroprevalence studies confirm seasonal variation in undiagnosed HIV infection in inpatients, routine HIV testing of admissions to similar hospitals in regions of higher HIV seroprevalence may be particularly important to conduct during the fall–winter months.

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SGIM 28th Annual Meeting

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May 11-14, 2005

New Orleans, Louisiana

Out of Chaos: The Critical Role of Generalists

Register Online at <http://www.sgim.org/am>

Special Symposia

Thursday, 1:30-3:00 pm

Globalization of General Internal Medicine

Faculty: William A. Ghali, MD, MPH; Peter B. Greenberg, MD, PhD; Raul Mejia, MD; Junji Otaki, MD, DmedSc; Jacques Cornuz, MD, MPH

Thursday, 3:30 - 5:00 pm

Special Symposium: External Threats to Professionalism in a Chaotic Health Care Environment

Organizers: Roy M. Poses MD, Wally R. Smith MD

Friday: 10:30 am - 12:00 pm

BIDIL[®] and Its Consequences: A Special Symposium on the Implications of the First Ethnically Branded Drug in the U.S.

Co-Sponsor: SGIM Diversity Task Force

Organizers: Alicia Fernandez, MD, Kirsten Bibbins-Domingo, MD, PhD, Arleen Brown, MD, PhD, Olveen Carrasquillo, MD, MPH, Carol Horowitz, MD, Judith Long, MD, Eliseo Perez Stable, MD, Valerie Stone, MD, MPH, Donna Washington, MD, MPH

Friday, 3:30-5:00 pm

An Appreciation of the Lifeworld of General Internal Medicine

Faculty: Thomas Inui, ScM, MD, Richard Frankel, PhD, Paul Haidet, MD, Debra Litzelman, MD, David Mossbarger, MBA, Anthony Suchman, MD, MA, Penny Williamson, ScD.

Saturday, 10:30 am-12:00 noon

The Research Agenda for General Internal Medicine: A Preliminary Report from the SGIM Task Force on the Research Agenda for General Internal Medicine

Faculty: Gerald Smetana, MD; Andrew Bindman, MD; Helen Burstin, MD, MPH; Bruce Landon, MD, MBA; Eugene Rich, MD