
Patient Attitudes Toward Rooming with Persons with HIV Infection

Elyse Seltzer, MD; Kevin A. Schulman, MD; P.J. Brennan, MD; and Lorna A. Lynn, MD
Philadelphia, Pennsylvania, and Washington, DC

Background. Early in the HIV epidemic, hospitals developed strict isolation policies for patients with HIV infection, some of which have not been revised. The objectives of this study were to examine patient attitudes about rooming with persons with various medical conditions, including HIV, and to assess their knowledge about the transmission of HIV.

Methods. One hundred four inpatients at a university hospital were surveyed by means of a structured interviewer-administered questionnaire. Patients were asked about preference for a single or double room, and about their objections to rooming with patients with HIV infection and other medical conditions. The questionnaire also examined subjects' knowledge about the transmission of HIV.

Results. Of 104 inpatients surveyed, 55% objected to rooming with an HIV-seropositive patient. Patients

who objected to rooming with an HIV-seropositive patient were also more likely to object to rooming with a disfigured patient (relative risk = 1.5; 95% CI, 1.1 to 2.2), or with a demented patient (relative risk = 1.7; 95% CI, 1.0 to 2.9). Also, patients who objected to rooming with an HIV-seropositive patient had greater misconceptions about the transmissibility of HIV infection.

Conclusions. A significant proportion of patients reported an unwillingness to room with patients with HIV infection, but also had misconceptions about the transmissibility of HIV. Current rooming policies may perpetuate misconceptions about the possibility of casual transmission of HIV.

Key words. HIV; hospitals; patient isolation; hospital-patient relations. (*J Fam Pract* 1993; 37:564-568)

Early in the human immunodeficiency virus (HIV) epidemic, hospitals developed strict isolation policies for patients with HIV infection. Despite better information about the lack of casual transmission of the virus, some hospitals have not revised these policies. One reason given by hospitals for these policies is concern about patients' fear of acquiring HIV in the health care setting. Much of this fear may derive from the lack of knowledge about HIV transmission that prevailed at the beginning of the epidemic. By 1984, evidence suggested that AIDS was transmitted by blood and sexual contact, but the

"AIDS agent" was still unknown, and much concern existed about other possible modes of transmission.¹

Patient-to-patient contact is a theoretical but unlikely means of transmission of HIV. Casual transmission of HIV has been extensively studied in other groups, including household members and health care personnel. Both of these groups may have prolonged and direct casual contact with HIV-seropositive patients, more contact than would be expected between hospitalized patients. One study looked at 108 household members of 41 HIV-seropositive persons who shared household items including toothbrushes, towels, eating utensils, and bathroom facilities, and kissed on the lips and cheeks as well; no adults contracted the virus. One child whose HIV infection was diagnosed during the study was thought to have contracted the virus from her mother in utero.² Other studies investigating the potential transmission of HIV through casual contact had similar con-

Submitted, revised, July 28, 1993.

From the Department of Medicine, University of Pennsylvania, Philadelphia (E.S., P.J.B., L.A.L.) and the Division of General Internal Medicine, Georgetown University Medical Center, Washington, DC (K.A.S.). Requests for reprints should be addressed to Lorna A. Lynn, MD, Division of General Internal Medicine, 3 Silverstein, Suite D, Hospital of the University of Pennsylvania, 3400 Spruce St, Philadelphia, PA 19104.

clusions about the lack of transmission through casual contact.^{3,4}

The body of evidence against casual transmission as a mode of transmission of HIV directly calls into question the rationale behind hospital policies mandating isolation of HIV-seropositive patients. Such policies may perpetuate the misunderstanding that casual contact with HIV-seropositive individuals is a risk factor for acquiring HIV infection.

We studied the attitudes of noninfected patients about rooming with HIV-seropositive patients. To help us interpret patients' responses, we also assessed patients' knowledge about transmission of HIV disease.

Methods

The study was conducted at a university hospital from August to September 1991. The hospital has 722 beds, is located in an inner city, and draws on a large referral base from the surrounding suburbs. Patients were chosen from the hospital's daily medical and general surgical elective lists. We selected these patients because elective patients can more freely choose their health care facility than patients admitted through the emergency department. A convenience sample of 238 patients electively admitted to six preselected patient floors to medical or general surgical services were asked to participate in an interview. Approximately 90% of those excluded were unavailable for interview at the time of survey administration. Other reasons for exclusion were: patients were too ill or otherwise unable to be interviewed (usually because of dementia), 7%; patients could not speak English, 2%; and patients refused to participate in the study, 1%.

The survey was administered by one person in order to control for variability in interview style. Demographics (age, marital status, state of residence, and type of medical insurance) were obtained from the hospital admission sheet in each subject's chart.

A questionnaire was constructed to examine patient rooming preferences, followed by specific questions to assess subjects' knowledge of HIV disease. Patients were asked about preference for a single or double room, and about their attitudes toward rooming with patients who had any of five conditions: HIV disease, cancer, pneumonia, confusion or dementia, and disfiguring skin lesions.

Preexisting knowledge and misconceptions about HIV disease were assessed. Subjects were asked if they knew anyone with HIV disease. Subjective knowledge was estimated by asking participants to rate their knowledge about AIDS, using a 4-point Likert scale ranging

from "nothing" to "more than average." Objective knowledge was tested through a series of questions on potential modes of transmission of HIV disease. Subjects were asked whether they believed they had a right to know why other patients were in the hospital, and if they would change their physician or hospital rather than room with a patient afflicted with one of the above-mentioned illnesses. Finally, all participants were asked if they knew the hospital's current policy on assigning rooms to HIV-positive patients.

Data were tabulated for responses, and then disaggregated by whether patients objected to or would not mind rooming with an HIV-infected patient ("objectors" or "nonobjectors"). The responses "yes" and "unsure" were combined for data analysis; results were analyzed as dichotomous yes/no variables. Analysis of independence of responses was assessed using the chi-square and Fisher's exact tests. Further analysis was based on relative risk estimates for objectors as compared with nonobjectors on questionnaire responses. Ninety-five percent confidence intervals (95% CI) were reported for the relative risk estimates.

Results

Of 238 medical and general surgical patients admitted from August to September 1991 who met the study criteria, 104 (44%) were interviewed. Demographic data were obtained from patient charts. Of the 104 subjects, the average age was 55 years; 44% of the subjects were female. Seventy-one percent of patients were married, 12% single, 10% widows, 6% divorced, and 1% separated. Forty-seven percent of patients were Catholic, 30% Protestant, 11% Jewish, 3% Jehovah's Witness, and 10% unknown. Insurance status of patients was: 41% Medicare, 39% Blue Cross/Blue Shield, 16% commercial, 3% Medicaid, and 2% members of a health management organization (HMO). There were no significant differences in the demographic characteristics of patients who did object and those who did not object to rooming with HIV-seropositive patients.

Of the 104 subjects surveyed, 57 (55%) stated they would object to rooming with an HIV-seropositive patient (objectors). Of these 57 subjects, 46% preferred a private room while in the hospital, compared with 24% of nonobjectors ($P = .05$, relative risk [RR] = 1.5; 95% CI, 1.1 to 2.1). In general, objectors tended to object to rooming with patients with other disorders as well (Table).

A statistically significant number of objectors believed that they had the right to know why their roommate was in the hospital (58% as compared with 21% of

Table. Patient Responses to Survey on Hospital Rooming Preferences and Patient Knowledge of HIV

	Objectors* (n = 57)	Nonobjectors* (n = 47)	Relative Risk of Objectors (95% CI)
Would object to rooming with a patient with:			
Cancer	21	4 [†]	1.7 (1.3-2.3)
Pneumonia	28	6 [†]	1.7 (1.3-2.3)
Dementia	82	62 [†]	1.7 (1.0-2.9)
Disfigurement	25	9 [†]	1.5 (1.1-2.2)
Believes that HIV transmission can result from:			
Touching	20	4 [†]	1.6 (1.2-2.3)
Sharing a room	30	4 [†]	1.9 (1.4-2.5)
Sexual intercourse	100	100	1.0
Sharing utensils	84	60 [†]	2.0 (1.1-3.5)
Sharing a toothbrush	89	70 [†]	2.0 (1.0-4.0)
Sharing a razor	89	77	1.6 (0.9-3.2)
Airborne contact	53	30 [†]	1.5 (1.1-2.1)
Sharing a bathroom	67	36 [†]	1.8 (1.2-2.6)
Infected needles or blood	100	100	1.0
Would change physicians or hospitals to avoid rooming with a patient with:			
Cancer	0	0	1.0
Pneumonia	5	0	1.9 (1.6-2.2)
HIV disease	70	4 [†]	3.4 (2.3-5.2)
Dementia	44	21 [†]	1.5 (1.1-2.1)
Disfigurement	18	2 [†]	1.8 (1.4-2.4)

*"Objectors" refer to those who would object to sharing a room with an HIV-infected patient; nonobjectors are those who would not be unwilling to room with such a patient.

[†]P < .05 for these responses between the objectors and the nonobjectors.

the nonobjectors, $P < .01$). This group also had a statistically significant poorer knowledge base about the modes of HIV transmission. Although both groups knew universally that HIV could be transmitted through sexual intercourse and exposure to infected needles or blood, more objectors than nonobjectors believed that HIV could be transmitted through casual contact (Table).

Interestingly, there was no statistically significant difference between the two groups with respect to their own perceptions regarding their knowledge base about HIV infection; 4% of the population surveyed believed their fund of knowledge to be "nothing," 18% "less than average," 51% "average," and 27% "more than average." Nor was there a statistically significant difference in the likelihood of knowing someone with AIDS or HIV infection.

No patient in either group knew the hospital's policy on isolating HIV-seropositive patients, nor did they request such information during the interview.

Discussion

We found that over one half of electively admitted patients would object to rooming with patients with HIV

infection. Over one third of this group stated that they would get their health care elsewhere rather than share a room with a patient with HIV infection, although no patient knew the hospital's rooming policy at admission. Those who objected to rooming with an HIV-infected patient had a poorer understanding of the transmission of HIV, although the entire study population had significant misconceptions about HIV transmission. Patients were not aware of their own lack of knowledge, as evidenced by overall knowledge scores.

Subjects objecting to rooming with HIV-seropositive patients were found more often than others to believe that they had a right to know why their roommate was in the hospital. Of note, none of the subjects knew the hospital's HIV rooming policy, although one subject offered the assumption that patients with HIV infection were segregated from other patients.

The results of this survey can be interpreted in a number of ways. On one hand, it can be said that the results support the perspective of some hospitals that isolation of HIV-seropositive patients should continue in order not to lose patients to competing health care centers. On the other hand, because no patients knew the hospital rooming policy, it appears that concerns about HIV infection were not a factor in choosing this hospital.

and that changing the policy would not lead to a loss of patients. Furthermore, rooming preferences may be related to misconceptions about health risks faced by patients.

We believe that a policy of isolating patients with HIV perpetuates public misconceptions about the transmission of HIV. Hospitals have an opportunity to educate their patients about how HIV is and is not transmitted^{3,4} with pamphlets, TV videos, or other methods. Most patients believe that their physician is competent to answer questions about AIDS.⁵ Patients might be more willing to share a room with a patient seropositive for HIV if they were reassured by their physician and the hospital that this presented no risk to them.

Education about HIV transmission may influence people's attitudes about rooming with someone with HIV infection. Although it is unknown if those subjects who would object to rooming with HIV-seropositive patients would feel differently if they were better informed about the lack of personal risk, subjects who did not object to sharing a room with a patient with HIV had, on average, better understanding of how HIV is and is not transmitted. At the same time, we do not know whether some subjects objected to rooming with patients with HIV because of a bias against groups associated with HIV infection that have traditionally been stigmatized in our society.

An additional issue relevant to the discussion of hospital rooming policies and patients' rights is the legality of isolating a patient when it is not medically necessary. In the early 1980s, some believed that isolating HIV patients in separate wards was one way of allaying public fears about transmission.⁶ Isolation was thought to be a defensible position. This is no longer the case. Universal precautions, not isolation of HIV-seropositive patients, is recommended by the Centers for Disease Control.⁷ A recent lawsuit by an HIV-seropositive patient charged a hospital with discrimination and caused the hospital to change its policy of HIV-isolation rooms to one of universal precautions.⁸ Further, HIV patients admitted through the emergency department must sometimes wait for long periods until an isolation room becomes available. Finally, 13 (13%) of our subjects preferred double rooms; this is not currently an option offered to HIV patients.

There are several limitations to our study. First, our patient sample was from a single university hospital, and represents a small subset of the patients seen in the hospital each year. Further, because we chose to interview only patients from the medical and general surgical elective lists, our study population was nonrandom. However, the majority of the study participants were

admitted for elective procedures that are performed at most community and academic institutions, and not for specialized procedures that only a teaching institution would offer. Thus, the results of this study may be representative of attitudes of hospitalized patients in many different settings.

Hospitalized patients may not be representative of the general population. Since being hospitalized is stressful, patient responses may not reflect their usual social preferences. People may have varied or multiple reasons for objecting to rooming with patients with HIV infection, and this survey was not designed to determine what such reasons might be. Some subjects may not have answered candidly. Further, this is a cross-sectional survey performed at a specific time, and attitudes may change over time.⁹

It should be noted that this survey was administered in 1991, when concerns about such illnesses as tuberculosis, especially in the setting of HIV infection, were not as prevalent as they are today. Currently our hospital does not isolate patients solely on the basis of being HIV-seropositive. Any patient in whom tuberculosis is suspected, however, is placed in isolation, regardless of his or her HIV status. For example, HIV-infected patients who have an undiagnosed pulmonary infection are placed in respiratory isolation until tuberculosis is ruled out. Thus, the risk to the general patient population from tuberculosis is negligible. Patients' perceptions of HIV risk may again be exaggerated because of a lack of understanding of their risk of nosocomial infection with current infection control measures, and because of fears about exposure to HIV-infected patients in hospitals in specific geographic regions (seroprevalence of HIV in hospitalized patients ranged from 0.2% to 14.2% in a recent national study¹⁰).

Our study suggests that a lack of knowledge about HIV infection may be an underlying cause of many people's fear of exposure to HIV-seropositive persons. Part of our role as health care providers should be to assuage the fears of the general public through information and education. This may become easier in time as the evidence against the casual transmission of HIV mounts and our knowledge of the virus evolves.

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