Family Physician Management of HIV and AIDS: A Vermont Study

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Background. The purpose of this study was to survey family physicians regarding the barriers to providing primary care for persons with human immunodeficiency virus (HIV) infections and acquired immunodeficiency syndrome (AIDS) in a small, rural state with a low incidence of infection. The study focused on issues facing family physicians, such as lack of training and experience, skill in managing the complications of HIV and AIDS, fears about transmission, patients' fears about seeing a physician who treats patients with HIV or AIDS, and lack of community consultative and ancillary services.

Methods. All 132 members of the Vermont Academy of Family Physicians were mailed a 33-item survey questionnaire; 106 (80%) responded.

Results. Fifty-seven percent of family physicians currently provide medical care for HIV-positive asymptomatic patients, and 45% provide care for symptomatic patients. Seventy-three percent of family physicians either currently manage or are willing to be trained to manage HIV complications.

Conclusions. The results of this study indicate that a majority of physicians are willing to provide a wide spectrum of medical treatment and services to patients with HIV or AIDS.

Key words. Primary health care; physicians, family; HIV; acquired immunodeficiency syndrome; patient care management.
(*J Fam Pract 1994; 39:50-54*)

An increasing number of family physicians are being called upon to care for patients with human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) in their own communities. During the 1980s the majority of cases were reported in six major metropolitan areas: New York, San Francisco, Los Angeles, Miami, Newark, and Houston. By 1990, however, 60% of the national total of AIDS cases were located in nonurban areas.

Since the 1990s, AIDS and HIV-related illness have had an increasing impact on primary care physicians in communities outside major urban centers. This trend can be attributed to the growing number of persons infected with HIV, their movement around the country, and the increasing rate of heterosexual transmission. Current treatment strategies allow a greater proportion of these patients to be cared for by primary care physicians on a continuing outpatient basis.[2,3]

A report issued by the National Commission on AIDS[3] found that while many AIDS cases are still found in urban areas, the incidence of new cases is increasing faster in rural areas. The 1989 increase in urban areas was only 5%, compared with 37% in rural areas. The report stated that the epidemic had surpassed the ability of rural community resources to meet the medical, psychological, and sociocultural needs of patients with HIV and AIDS.

Thus, in the coming decade a growing share of the load of caring for patients with HIV and AIDS will fall into the hands of primary care physicians in mid-sized and smaller communities around the country. In 1990, a study by the American Academy of Family Physicians (AAFP) reported that approximately 40% of family physicians were providing care for HIV and AIDS patients.[4] In the same year, Gerbert et al[5] found that 75% of primary

Submitted, revised, January 28, 1994.

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ISSN 0094-3509

care physicians surveyed in a national study had treated one or more patients with HIV or AIDS.

Previous studies of physicians' attitudes toward and barriers to treatment of patients with HIV and AIDS have focused primarily on urban physicians. In 1985, Richardson and colleagues[6] surveyed heterosexual and homosexual physicians in Los Angeles County to determine their willingness and perceived ability to care for patients with AIDS. A 1987 study by Somagyi et al[7] focused on the attitudes of New York City internists toward treating patients with AIDS. Colombotos and co-workers[8] conducted a nationwide survey of physicians and nurses in 25 states stratified by geographic region and cumulative AIDS rates. This study examined AIDS-related knowledge, attitudes, and practices, and found few differences among health care worker responses according to AIDS prevalence rate by state or region of the country. It did not include a comparison of the responses of urban, suburban, and rural physicians within a state.

The study by Gerbert et al[5] compared primary care physicians' attitudes and the structural barriers to care according to the incidence of AIDS cases in each state. They found that physicians who had treated 10 or more patients with HIV expressed fewer negative sentiments than those who had treated a smaller number of patients with HIV. Epstein and colleagues[9] interviewed 30 community-based primary care physicians who were caring for patients with HIV and found that fear of contagion was common despite the self-assessment of relatively low risk. The physicians all continued to care for their patients with HIV even though they were afraid.

We designed this study to examine the barriers to providing primary care for persons with HIV infections and AIDS in a small, rural state with a low incidence of AIDS infection by focusing on the HIV and AIDS patient-care issues facing rural family physicians: lack of training, experience, and skill in managing the complications of HIV and AIDS, fears about infection, transmission, and loss of income, and lack of community consultative and ancillary services.

Methods

We mailed a questionnaire to all 132 current members of the Vermont Academy of Family Practice in November 1991.[2] Separate postcards were included for tracking purposes to ensure anonymity. A second mailing was sent out to nonrespondents.

The survey instrument had 33 questions. Five major areas were measured: (1) medical services and management of HIV and AIDS conditions; (2) community resources currently available, and additional information, training, and resources that would improve medical care; (3) perceived liabilities in treatment; (4) HIV testing requirements; and (5) demographics.

Respondents were asked about the range of medical services they currently provide to patients with HIV (eg, screening, managing complications, and performing procedures), services they would provide with further training, and those they would not provide. They were also asked how they manage 10 medical conditions in patients with HIV, including *Pneumocystis carinii*, lymphoma, vaginitis, pregnancy, and psychological symptoms.

Family physicians were asked if their communities had specific resources for caring for patients, and also which further information, training, and resources would better enable physicians to provide primary medical care in their own communities.

Questions regarding perceived liabilities included three major areas: excessive time consumption, inadequate training, and risks. Questionnaire items that measured perceived risks included issues such as financial risk, contaminated equipment, and the risk of losing other patients. Using a significance level of .05, the chi-square statistic was used to test for associations between professional and sociodemographic characteristics and the physician's degree of practice.

Results

Of the 132 survey questionnaires mailed, 106 were returned. Ten were ineligible because of incomplete data, yielding an adjusted response rate of 73%. There are currently 158 family physicians in Vermont; therefore, returns received in this study represented 67% of all family physicians in the state.

Table 1 includes the demographics of our respondents. Eighty-two percent were men, and 18% women. Twenty-two percent had a solo practice, 56% practiced in a group, and 23% represented a multispecialty group or health maintenance organization (HMO). Of the medical services provided, almost all family physicians offered pediatric and adult medicine (97% and 99%, respectively), 93% offered outpatient gynecology, and 31% provided obstetric care.

Twenty-eight percent of respondents worked in a metropolitan area of the state, (Chittenden County, which has a population of approximately 150,000), 31% practiced in a suburban setting, and 41% worked in a rural setting. Forty-six percent practiced in a small hospital (fewer than 100 beds), 29% in a medium-sized hospital (100 to 200 beds), and 24% in a large hospital (more than 200 beds). We anticipated that respondents' treatment of patients with HIV or AIDS would vary by demographic

Table 1. Demographic Characteristics of Physicians Responding to a Survey About Management of Patients with HIV or AIDS

Characteristic	Percentage of Respondents*
Sex (n=96)	
Male	82
Female	18
Age, y (n=94)	
<39	48
40–49	38
≥50	14
Practice type (n=93)	
Solo	22
Group	56
Other	23
Hospital Size (n=78)	
Small (<100 beds)	46
Medium (100–200 beds)	29
Large (>200 beds)	24
Community size (n=96)	
Metropolitan	28
Suburban	31
Rural	41
Services provided† (n=95)	
Pediatrics	97
Adult medicine	99
Outpatient gynecology	93
Obstetrics	31

**Not all eligible respondents (N=96) answered every question.*
†Respondents could list more than one service.

characteristics, including geographic area of practice, age, practice type, and sex. However, we did not find statistically significant associations between demographic characteristics and medical management.

The questionnaire asked respondents to indicate the services they currently provide to persons with HIV, which services they would provide with additional training, and which they would not provide. Most physicians currently screen for high-risk behaviors for HIV (98%), order blood-screening tests for patients with HIV infection (99%), and provide posttest results and counseling (88%).

Fifty-seven percent of the family physicians surveyed currently provide medical care for asymptomatic HIV-positive patients, and 45% provide care for symptomatic patients. Of those who do not provide care for either asymptomatic or symptomatic patients, 54% and 42%, respectively, expressed willingness to do so with more training (Figure). Forty percent of the physicians who provide care to HIV-positive patients monitor their CD4 counts; of the remaining physicians, 50% indicated they would do so if further trained. Seventy-three percent of family physicians either manage complications and perform procedures or are willing to be trained to do so.

Asked how they manage 10 common conditions in patients with HIV or AIDS, over one half indicated they currently manage the common early complications (eg, herpetic infections, oral candidiasis, diarrhea, psycholog-

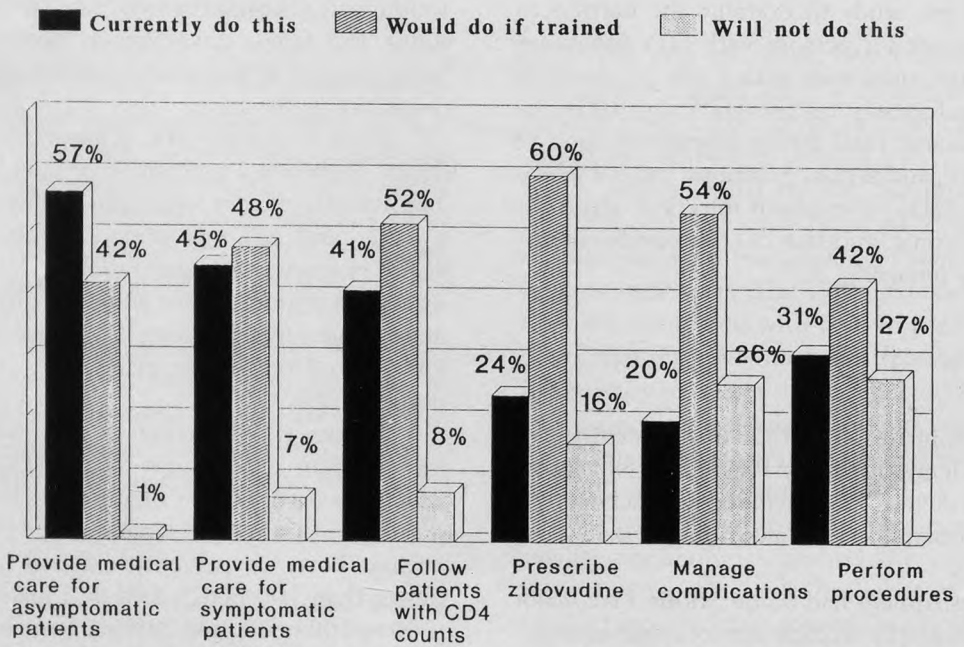

Figure. Physician responses to questions regarding what services they currently provide, would provide if trained, and are unwilling to provide to patients with HIV or AIDS.

Table 2. Status of Family Physicians Regarding Management of Medical Conditions in Patients with HIV or AIDS (N=96)*

Condition	Currently Do (With or Without Consultation), %	Would Do With More Training, %	Would Not Manage, %
Oral candidiasis	66	32	2
Diarrhea	62	32	6
Psychological symptoms	59	30	10
Vaginitis	58	37	5
Herpetic infections	51	39	10
Pneumocystis carinii	44	38	18
Lymphoma	27	26	47
Toxoplasmosis, cerebral	21	26	54
Cytomegalovirus retinitis	21	18	60
Pregnancy	17	11	72

**Ten were ineligible because of incomplete data.*

ical symptoms, vaginitis), and that with more training, they would also manage *Pneumocystis carinii* and lymphoma (Table 2). Family physicians are less willing to manage complications in patients with advanced HIV, such as cerebral toxoplasmosis (54%), cytomegalovirus retinitis (60%), pregnancy (72%), and lymphoma (47%), even with consultation or further training.

Addressing the lack of professional and physical resources available for patient care management, more than 40% said their community did not have an infectious-disease consultant willing to take referrals or nursing homes to care for AIDS patients, and over 55% did not have treatment and support services for intravenous drug abusers.

When asked for the most important sources of information, training, or resources that would assist them in providing medical care, 63% said that they would like to have consultation services of an HIV/AIDS specialist available by telephone. Fifty-five percent said they would attend local presentations on clinical aspects of HIV disease, and 48% wanted regional day-long symposia on AIDS. Other resources listed by physicians as important were videotapes of specific HIV pathology and treatment (40%), listing of available social and psychological services for patients with HIV or AIDS (33%), and periodic local specialist consultation clinic (30%).

With regard to the liabilities and risk[5] that physicians believed are associated with caring for patients with HIV (Table 3), one half of the physicians surveyed indicated that treating patients would likely make excessive demands on their time, and one fourth said there would be a financial risk and a possible risk of losing patients when they were identified as caring for patients with AIDS.

When asked how personally worried they were about acquiring AIDS from their patients, 73% said they were mildly to somewhat worried, and 25% indicated they were not worried at all. Although 90% of family physicians expressed their belief that it is unethical to refuse to care for patients with HIV or AIDS, 25% said that given a choice, they either were uncertain about what they would do, or they would rather not care for patients with HIV.

Table 3. Physician Responses to Survey About the Risks of and Barriers to Providing Primary Care for Patients with HIV or AIDS (N=96)*

Status	Response Options		
	Agree, %	Uncertain, %	Disagree, %
Do not feel adequately trained to manage pediatric patients	86	3	11
Office staff needs further training	75	7	18
Do not feel adequately trained to care for complications of HIV/AIDS	71	14	14
Do not feel adequately trained to manage female patients	65	11	24
Treating patients is likely to make excessive demands on my time	50	32	17
May run a risk of losing other patients	30	27	42
Treating patients constitutes financial risk	24	43	33
Inadequate access to community services	24	32	43

**Ten physician questionnaires were ineligible because of incomplete data.*

Discussion

Many physicians in this rural northeastern state currently provide medical services to patients with HIV infection. Of those not currently providing the services, most physicians would be willing to do so if they received further training. Eighty percent are either already managing patients with HIV and AIDS or willing to learn how to provide care for an array of HIV-related medical conditions, such as oral candidiasis, herpetic infections, and *Pneumocystis carinii.*

Although this study is based on physician recall and not on direct observation of patient care or chart audit, the results should reflect what physicians are willing to do, which is especially important in rural settings where prevalence of HIV is currently low but increasing. Rural physicians may indeed assume more advanced care of their patients as the prevalence of HIV increases among patients in their individual practices.

Concerning resources that improve physician ability to provide primary care, 63% requested that an HIV/AIDS specialist consultant be available by telephone for information or emergency situations. Rural physicians may feel a greater need for available specialist consultation on HIV than do their urban counterparts.[6] The AAFP has made available a toll-free HIV Telephone Consultation Service, or "warm line" (1-800-933-3413), which offers health care providers case consultation and general information. Rural family physicians would also benefit from having an HIV consultant available for emergency situations through a regional "hot line."

More than one half of the surveyed physicians stated that they wanted local or regional presentations on the clinical aspects of HIV. The key areas of training identified were (1) monitoring CD4 counts; (2) prescribing zidovudine; (3) managing complications; and (4) performing procedures. The demand for local and regional presentations on HIV by primary care physicians in this report is consistent with the survey of urban physicians by Richardson and colleagues.[6]

In a national survey, Gerbert et al[5] reported only mild to moderate perceived risk of contagion by physicians, which is also consistent with this report. It is encouraging that the perceived risk decreased significantly with the degree of involvement in HIV patient care. Based on in-depth telephone interviews, Epstein and coworkers[9] reported that fear of contagion is an important factor among physicians who care for HIV patients. Perhaps physicians are more willing to disclose feelings of fear when questioned in probing, personal interviews than when responding to brief written surveys.

This Vermont study includes physicians practicing largely in rural and semirural areas (based on standardized rural/urban continuum codes[10]). Chittenden County, which is the location of Burlington and the University of Vermont, is the only statistically metropolitan area in Vermont. It has the lowest urban rating and received the designation only in the last 5 years. Therefore, this report is generalizable mostly to physicians who practice in small communities that have limited access to direct specialist consultative services for HIV patients.

The results of this survey are encouraging in indicating that a significant number of family physicians are willing to provide a wide spectrum of services for and treat a broad range of medical conditions in patients with HIV and AIDS, and that they are willing to get training in many specific areas to increase their level of care.

Acknowledgment

This study was funded in part by a grant from the New England AIDS Education and Training Center at the University of Massachusetts Medical Center in Worcester.

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