

Patients with HIV/AIDS: Physicians' Knowledge, Attitudes, and Referral Practices

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BACKGROUND. This study investigated Massachusetts family physicians' current care and referral practices with respect to HIV/AIDS patients and examined factors that might influence family physicians in referring these patients to specialists. Educational opportunities for physicians with regard to HIV were also examined.

METHODS. In 1994, a 2-page survey was mailed to the 468 members of the Massachusetts Academy of Family Physicians. The survey questionnaire examined such factors as whether the respondents were teaching or non-teaching, rural or urban; number of years since medical school or residency training; and knowledge and attitudes with regard to HIV/AIDS patients. The data were analyzed using Student's *t* test, chi-square, and correlation analysis.

RESULTS. Usable responses were returned by 281 (60%) of the physicians surveyed. Of these, 65% reported having HIV patients in their practice, and 46% reported having AIDS patients. Care of HIV patients was being managed alone by 53% of these physicians, and 11% managed their patients with AIDS. Physicians providing care for HIV/AIDS patients were more likely to be practicing in urban locations, have three or more HIV/AIDS patients in their practice, or recently graduated from residency. Additionally, they were more likely to be involved in residency teaching programs. Those who did not care for HIV/AIDS patients felt less knowledgeable about HIV/AIDS care, and felt that they had no time in their practice to care for this population of patients. Physicians with HIV patients learn more about HIV care from their colleagues than those without HIV patients.

CONCLUSIONS. Family physicians are increasingly seeing HIV/AIDS patients in their offices. The majority are continually caring for these patients, either by themselves or co-managing their care with a specialist. Local CME programs relying on colleagues and community resources to discuss management of these patients may be one of the best ways of ensuring that increasing numbers of family physicians obtain the appropriate knowledge to care for these patients within their own communities.

KEY WORDS. Family practice physician; HIV, referral practices; acquired immunodeficiency syndrome. (*J Fam Pract* 1997; 44:85-89)

The rate of infection with the human immunodeficiency virus (HIV) has been increasing in epidemic proportions. Although the first 100,000 cases of patients with acquired immunodeficiency syndrome (AIDS) were reported in the 8-year period from 1981 to 1989, it took only an additional 3 years to record the second 100,000 cases of AIDS.¹ At this rate, subspecialists may soon be over-

whelmed by the large number of AIDS patients and the care that will be required for them in the future.² Since tertiary care institutions and specialists will be struggling to sustain the service load for the management of so many AIDS patients, effective ambulatory care of these patients by a larger number of primary care physicians will be necessary.³

Several past studies have examined primary care physicians' involvement with HIV patients. In 1988, Kurata and co-workers⁴ showed that the percentage of California family physicians reporting one or more cases of AIDS had tripled over a 2-year period, and that the majority of physicians surveyed lacked the knowledge and competency necessary for dealing with AIDS. In 1991, a national survey of family physicians showed that approximately 47% have

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cared for HIV-infected patients, with physicians in urban settings caring for a higher percentage of these patients than their rural counterparts.⁵ In 1992, Jones and associates⁶ showed that one quarter of the surveyed primary care physicians were not comfortable with any aspects of HIV care. Approximately one third of physicians who had asymptomatic HIV patients and two fifths of physicians who had AIDS patients took no part in their ongoing care or follow-up. A lack of physician knowledge regarding HIV care translated into higher numbers of patients being referred to specialists. A more recent study, however, showed that in a rural state with a low incidence of HIV infection, the majority of family physicians cared for asymptomatic HIV patients, and almost one half cared for symptomatic patients.⁷ Most recently, Kitahata and colleagues⁸ showed increased survival rates for AIDS patients whose primary care physicians had had more AIDS management experience or more AIDS education during their training.

There is clearly a need now, which will increase in the future, to shift the burden of HIV care, especially early asymptomatic HIV care, from subspecialists to primary care physicians. Before a major change is undertaken, however, one needs to assess the readiness of these physicians to care for such patients. We undertook a cross-sectional descriptive study to investigate the current care and referral practices of family physicians practicing in Massachusetts. We specifically looked at physician demographics and practice characteristics for those physicians who were currently providing care for HIV or AIDS patients, or both, and related these factors to the way in which care was delivered to their patients.

METHODS

The survey instrument was designed to include both closed-ended questions and modified 5-point Likert-type questions. The survey was pretested with 10 local family practice physicians to determine the ease of response and clarity of the questions. The survey instrument was divided into four general categories. The first section examined physician demographics and practice characteristics. The second section inquired about the nature of these physicians' patient population with regard to HIV and AIDS. The third section involved referral patterns for HIV and AIDS patients. The last section focused on the physicians' attitudes and knowledge about HIV

and AIDS. The survey was mailed to the 468 members of the Massachusetts Academy of Family Physicians in the summer of 1994. A second mailing was sent to all nonresponders. A total of 281 surveys were used in the analysis, for a usable response rate of 60%. Nonresponders were not otherwise contacted. The data were analyzed using Students's *t* test, chi-square, and correlational analysis.

RESULTS

The majority of the 281 respondents were male, practiced in a nonurban setting, and had finished their residency before 1986. Only 182 (65%) of the respondents reported that their practice included at least one HIV patient. The Table is a summary of the basic demographics of our total sample of family physicians.

HIV CARE

The 182 family physicians who reported that they had had at least one HIV patient in their practice during the previous year were asked about their care patterns. Ten of these physicians (5.5%) referred their patients immediately for care, 76 (42%) co-managed the care of these patients, and 96 (53%) managed these patients alone. While most physicians (53%) were utilizing specialists in their own community hospital, many (28%) referred to a teaching hospital.

Given the small number of physicians who referred their HIV patients immediately for care, we focused our analysis on comparisons between those physicians who managed these patients alone and those who co-managed their care. Comparisons were made in terms of physician demographics or practice characteristics. Compared with physicians who co-managed the care of HIV patients, those who managed their asymptomatic HIV patients alone were significantly more likely to have three or more HIV patients in their practice ($P \leq .001$), to participate in residency teaching programs ($P \leq .001$), to have more recently graduated (after 1986) from their residency ($P \leq .001$), and to be practicing in an urban location ($P \leq .05$).

AIDS CARE

One hundred thirty (46%) family physicians reported having at least one patient with AIDS in their practice. Seventeen (13%) of these physicians referred

TABLE

Basic Demographics of 281 Massachusetts Family Physicians Who Responded to Survey on Patients with HIV or AIDS

Variable	No. (%)
Year of medical school graduation	
1986 or after	71 (25)
Before 1986	208 (74)
Year of residency completion	
1986 or after	117 (41)
Before 1986	146 (52)
Board-certified/board-eligible	
Yes	264 (99)
No	14 (5)
Sex	
Male	205 (73)
Female	72 (25)
Practice location	
Urban	81 (29)
Nonurban	198 (70)
Practice type	
Solo/single specialty	169 (60)
Multispecialty	90 (32)
Hospital	18 (6)
Teaching	
Teach medical students regularly	127 (45)
Teach residents regularly	72 (25)
% of high-risk patients in practice	
15	74 (26)
6-14	75 (26)
5	103 (36)
No. of HIV+ patients in practice	
None	99 (35)
1-2	97 (35)
3	85 (30)

their AIDS patients immediately for care. A similar number, 14 (11%), managed their AIDS patients alone. The overwhelming majority, 99 (76%), co-managed their AIDS patients. In comparing these three groups, significant differences were found. Urban-based physicians were significantly more likely to manage AIDS patients alone than their nonurban counterparts ($P \leq .01$). Additionally, those with three or more AIDS patients were more likely to manage these patients alone than those with one or two AIDS patients ($P \leq .001$). Physicians in solo practice were more likely to refer their AIDS patients

immediately than physicians in other types of practices ($P \leq .05$).

No HIV/AIDS PATIENTS

Compared with physicians whose practices included at least one patient with HIV or AIDS, physicians who reported not having any HIV/AIDS patients in their practices were more likely to be in a nonurban setting ($P \leq .001$), to be in solo practice ($P \leq .01$), and to report feeling less knowledgeable about HIV/AIDS care ($P \leq .001$). They were less likely to report that their patients participated in high-risk behaviors ($P \leq .01$).

PHYSICIAN KNOWLEDGE AND ATTITUDES

We compared the group of physicians who either managed alone or co-managed their HIV/AIDS patients with the group of physicians who did not manage such patients, either because they did not have any HIV/AIDS patients in their practice or because they referred them immediately for care. The physicians who did not care for HIV/AIDS patients felt less knowledgeable with regard to HIV and AIDS care ($P \leq .001$), and felt that they had no time in their practice to care for this population of patients ($P \leq .02$).

No differences were found between these two groups when asked about their concerns regarding personal safety in the office when caring for HIV/AIDS patients; access to consultants; being known in the community as an HIV/AIDS consultant; and fear of losing other patients when known to care for HIV/AIDS patients. There was a borderline statistically significant difference ($P=.05$) between the two groups of physicians when asked about concerns over their office employees' attitudes toward HIV/AIDS patients.

EDUCATIONAL OPPORTUNITIES

To assess the primary sources for obtaining knowledge about HIV infection among our full sample ($N=281$), we asked how they learned about HIV care (residency, formal CME programs, colleagues, journals). We then compared the physicians with no HIV patients with those with at least one HIV patient to

see if there were any differences in how the two groups had learned about HIV care. The only statistically significant difference was that the physicians who had HIV patients in their practices learned more about HIV care from their colleagues than those without such patients ($P \leq .02$). The majority (59%) of physicians in both groups had not learned about HIV care in their residencies, but each group diligently read journals (88% with no HIV patients, 87% with HIV patients) and attended formal CME programs (74% and 78%, respectively) about HIV/AIDS care.

We also compared physicians who co-managed their HIV/AIDS patients with those who managed these patients alone, to see how they learned about HIV care. Physicians who managed their HIV patients alone were more likely to have learned about HIV care from their colleagues ($P \leq .05$) and in their residencies ($P \leq .02$) than those who co-managed. There were no differences between these groups noted with regard to journal reading or formal CME programs. Physicians who either co-managed or managed their AIDS patients alone were more likely than physicians with no AIDS patients to have attended formal CME programs and to have learned about AIDS care during their residencies. They also revealed a trend toward learning more from formal CME programs as they managed more of these patients alone ($P \leq .02$).

DISCUSSION

With a response rate of 60% from respondents who represented a variety of locations, ages, and practice types, we feel that the answers provided by this sample are indicative of the overall practice patterns for family physicians in Massachusetts. Limiting our sample to members of the Massachusetts Academy of Family Physicians may have introduced a bias because members may not be totally representative of the population.

By 1994, family physicians were increasingly seeing patients with HIV/AIDS in their offices. The study revealed that 65% of the physicians surveyed had HIV patients in their practices, and 46% were seeing AIDS patients. Only a small minority (5.5% for HIV and 13% for AIDS) referred their patients immediately for care. The majority were either continuing to care for these patients by themselves or co-managing their care with a specialist. When obtaining spe-

cialty consultation to help with the care of these patients, the majority of our sample reported referring to specialists within their own community, a sign that this illness was being treated in a manner similar to other chronic diseases.

Certain characteristics stand out in physicians who are more involved in HIV/AIDS care: they are more likely to be in urban locations, to be recent graduates, and to have learned about HIV/AIDS during their residency training. Furthermore, the physicians with the greater numbers of HIV/AIDS patients in their practices are more likely to care for these patients on their own and to keep current with new treatment modalities in the rapidly evolving research on HIV/AIDS. All these characteristics will become increasingly important for the future care of these patients because of the recent findings by Kitahata and colleagues⁸ showing improved survival of AIDS patients among physicians with more AIDS management experience.

Physician knowledge about this illness has an impact on how they care for these patients. It remains to be determined whether the reason that some family physicians do not feel the need to obtain knowledge about HIV/AIDS is because they are not seeing these patients in their practice. Physicians without HIV/AIDS patients in their practice felt that their patients were less likely to participate in high-risk behaviors. This finding may be related to a physician knowledge issue, ie, about who is at risk, and it may also relate to a the absence of an appropriate attitude and patient communication skills that facilitate asking about high-risk behaviors. This raises a question as to why these practices are not reporting HIV patients as part of their patient panel; are they part of the practice, but not being identified?

With knowledge an apparently key factor in how comfortable family physicians feel providing HIV/AIDS care to their patients, the overwhelming majority of our respondents indicated that they are trying to learn more about this disease by reading journals and attending formal CME programs on HIV. Not surprisingly, physicians who learned about HIV/AIDS care in their residencies were more likely to provide care for these patients. Interestingly, physicians reported that their colleagues were an important source of information about HIV/AIDS. It is likely that this represents immediate consultation and feedback when dealing with a patient with an acute condition. Local CME programs relying on

community resources to discuss management of HIV/AIDS patients may be one of the best ways of ensuring that increasing numbers of primary care physicians obtain the appropriate knowledge to care for these patients within their communities.

Another way to learn about the care of the patient with HIV/AIDS is to participate in a residency teaching program. Those physicians who teach were more likely to care for these patients and to feel that they had knowledge about the illness. The increasing pressure on family physicians to participate in teaching students and residents will provide physicians with an excellent opportunity to learn about HIV/AIDS and to keep current with other medical advances.

Finally, it should be noted that concerns over office staff attitudes toward AIDS patients is mildly significant in determining whether the physician cares for HIV/AIDS patients. This is an area that traditional CME programs have not addressed and it needs to be explored more fully. Perhaps staff in-service programs can be developed and disseminated to help overcome staff concerns and attitudes about patients with HIV/AIDS.

CONCLUSIONS

The study demonstrated that family physicians in Massachusetts were caring for HIV/AIDS patients in their practices and were keeping current with this

ever-changing field of medicine. It will be important to target future CME programs to practical issues emphasizing local resources so as to involve more physicians and take advantage of their increasing interest in this disease.

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