

Physician and Infection Control Practitioner HIV/AIDS Reporting Characteristics

ABSTRACT

We surveyed a random sample of South Carolina physicians and infection control practitioners about the reporting of human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) cases. Of physicians surveyed, 79% indicated that HIV infection as well as AIDS should be reported by name. The following characteristics were associated with those physicians who do not report AIDS cases: not feeling responsible for reporting, not reporting a case perceived to have been reported in another state, believing that information required for reporting is not on the chart, and residing in an urban setting. Targeted education can address these underreporting factors. (*Am J Public Health.* 1992; 82:889-891)

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Introduction

Reporting of acquired immunodeficiency syndrome (AIDS) is essential to understand disease transmission patterns and target preventive programs.¹⁻⁴ Reporting also affects state funding because disbursement of federal funds for several human immunodeficiency virus (HIV)/AIDS prevention and treatment programs is based on the annual number of cases reported.⁵ To inquire about AIDS reporting practices, the South Carolina Department of Health and Environmental Control (DHEC) conducted a statewide survey of physicians and infection control practitioners (ICPs). Topics covered in the survey included the number of AIDS cases cared for, reporting attitudes and practices, and services DHEC could provide to facilitate reporting.

In South Carolina, AIDS has been reportable since 1982. HIV infection without AIDS has been reportable from physicians, hospitals, and laboratories since 1986. As of June 30, 1991, there were 1396 cases of AIDS and 5150 cases of HIV infection reported in South Carolina. Of the 1396 AIDS cases, 24 (1.7%) were in children younger than 13 years of age. With an annual AIDS incidence rate of 9.4 per 100 000 (June 1990 through May 1991), South Carolina ranked 23rd in the nation.⁶

Methods

In spring 1989, after implementation of active AIDS surveillance, the DHEC survey was mailed to (1) all physician specialists in the fields of infectious diseases, pediatric allergy/infectious diseases, hematology/oncology, and pulmonary medicine listed in the South Carolina Medical Association Directory; (2) an 18% random sample of the states' 1712 primary care internists, and family and general practitioners; and (3) ICPs from all inpatient facilities licensed by DHEC, military, and Veterans Administration hospitals. Physicians who identified themselves as ICPs were analyzed with ICPs (most of

whom, in South Carolina, are nurses). Due to the small number (24) of reported pediatric AIDS cases, primary care pediatricians were not surveyed.

Three mailings of the questionnaire were made under different cover letters to enhance the response rate. There were 32 (11%) substitutions on the random sample for physicians who had retired or moved to another state since the list was compiled in the previous year. Chi-square for trend and prevalence ratios were calculated using Epi Info⁷ software. SAS⁸ software was used for backward stepwise logistic regression.

Results

Of the 542 questionnaires mailed, 439 (81%) were completed. The group response rates were physician specialists, 81% (114 of 140); primary care physicians, 78% (234 of 301); and ICPs, 90% (91 of 101). Of the 91 responding ICPs, 85 were nurses and 6 were physicians. There were no significant differences between responding and nonresponding physicians in years of experience, location of practice (rural or urban), or type of practice (specialist or primary care).

Physicians in larger hospitals were more likely than others to have cared for at least one person with AIDS (those in hospitals with more than 300 beds, 62%; with 101 to 300 beds, 51%; with 100 beds or fewer, 25%; $P < .001$ chi-square for linear trend). Forty-three percent of the surveyed primary care physicians, 72% of the physician specialists, and 64% of the ICPs

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TABLE 1—Percent of Surveyed Physicians, by Specialty, Reporting Having Cared for Specified Numbers of AIDS Patients

No. AIDS patients care for	Physician Specialty (n = 348)									
	Family Practice (126)	General Practice (32)	Internal Medicine (76)	Allergy & Immunology (5)	Pediatric Allergy (3)	Hematology (8)	Hematology/Oncology (19)	Oncology (20)	Infectious Disease (22)	Pulmonary Disease (37)
0	63	69	43	100	34	50	21	40	9	22
1-4	34	22	34	0	66	25	32	30	18	19
5-9	2	3	13	0	0	13	37	25	14	13
10-14	1	3	6	0	0	0	5	5	18	22
15-19	0	0	1	0	0	12	5	0	0	0
20+	0	3	3	0	0	0	0	0	41	24

TABLE 2—Comparison of Physician Reporting Practices by Characteristics of Non-reporters^a

Characteristics of Nonreporters	Report AIDS Cases Rarely or Never ^b		Report AIDS Cases Usually or Always ^c		PR ^d	95% CI
	No.	(%)	No.	(%)		
Do not report if think case has been reported in another state	27	(78)	264	(29)	2.7	2.0-3.5
Do not feel responsible for reporting	27	(63)	282	(23)	2.7	1.9-3.9
Do not think required medical information is on chart	27	(37)	282	(17)	2.2	1.3-3.8
Practice in the three largest urban counties	29	(79)	280	(48)	1.6	1.3-2.1
Do not report if think case has already been reported	27	(85)	260	(54)	1.6	1.3-1.9
Think case report forms too long	27	(26)	267	(18)	1.5	0.7-2.9
Have discrimination concerns	28	(46)	286	(39)	1.2	0.8-1.8
Have confidentiality concerns	28	(61)	286	(54)	1.1	0.8-1.6
Have liability concerns	28	(32)	284	(34)	1.0	0.6-1.7
Work in hospitals with						
>300 beds	14	(48)	149	(53)		
101-300 beds	11	(38)	84	(30)	0.7	0.4-1.6
≤100 beds	4	(14)	46	(17)	1.1	0.4-3.1

^aSeventeen physicians did not respond to these questions; 9 indicated they report AIDS cases sometimes (25% to 75% of the time).

^b"Rarely or never" means they report AIDS cases less than 25% of the time.

^c"Usually or always" means they report AIDS cases 76% to 100% of the time.

^dPR = Prevalence ratio of physicians who rarely or never report AIDS cases vs those who usually or always report.

had participated in the care of at least one person with AIDS. The numbers of AIDS patients cared for by physician specialty are listed in Table 1.

Seventy-nine percent of the physicians and 80% of the ICPs indicated that HIV infection as well as AIDS should be reportable by name to the health department. Only 28 physicians (8%) indicated that HIV infection should not be reportable by name.

Fifty-nine percent of the physicians and 63% of the ICPs indicated that pri-

mary care physicians have the principal responsibility for reporting AIDS cases. There was no significant difference in responses to this question from physician specialists and primary care physicians. Only 7% of the physicians and 17% of the ICPs indicated that ICPs have the primary responsibility for reporting AIDS cases; 9% of the physicians and 10% of the ICPs indicated that the laboratory has the primary responsibility.

Eighty-eight percent of the physicians surveyed and 83% of the ICPs indi-

cated that they report AIDS cases most of the time or always. However, only 44% of the physicians and 64% of the ICPs report AIDS cases they think may have been reported in other states.

Physicians who replied that they rarely or never report AIDS cases were more likely than physicians who replied that they usually or always do so to indicate confusion about both the need to report cases that may have been previously reported and responsibility for reporting, a belief that information required for reporting is often not on the chart, and urban residence (Table 2). However, physicians who reported that they rarely or never report AIDS cases were not more likely to report concerns about confidentiality, legal liability associated with reporting, potential discrimination, length of the AIDS case report form, and hospital bed size (Table 2).

We used a backward stepwise logistic model to present the characteristics that are the best predictors of physicians who would rarely or never report AIDS cases (see Table 3).

Discussion

It is evident from this survey that a substantial percentage of physicians and ICPs in South Carolina have cared for AIDS patients. Similar trends may be observed in other states with low to moderate AIDS prevalence as the highest annual percent increases in AIDS cases continue to be seen in the smaller communities away from urban centers.⁹ Therefore, AIDS surveillance in the less urban states is becoming increasingly important.

According to most physicians and ICPs surveyed, physicians have the principal responsibility for reporting. In South Carolina, at the time of this study, 55% of

AIDS cases were reported by physicians, 14% by ICPs, 11% by death certificate review, 6% by health department medical record review, and 14% by other means. Other authors have also indicated that practicing physicians are the key to effective surveillance of infectious diseases.¹⁰

Surveillance has focused on AIDS, but HIV reporting is becoming more important as preventive therapies are developed for infected patients and as health departments are becoming more involved in the clinical follow-up, case management, and funding of HIV-related disease. Health planners need to know the number and characteristics of individuals infected with HIV to plan for the cost and distribution of these services. In addition, HIV reporting has helped the development of quality partner notification and CD4 lymphocyte staging services for patients in South Carolina.¹¹⁻¹³

The findings of the present study have helped DHEC surveillance personnel educate physicians and ICPs about AIDS reporting and further improve gains in active AIDS surveillance.¹⁴ □

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TABLE 3—Characteristics That Are the Best Predictors of Physicians Who Would Rarely or Never^a Report AIDS Cases (n = 254)

Characteristics of Nonreporters	Estimate of PR ^c	95% CI
Do not report if think case has been reported in another state	16.9	2.1-134.7
Practice in the three largest urban counties	4.4	1.3-15.2
Do not think required medical information is on chart	3.8	1.4-10.7
Do not feel responsible for reporting	3.8	1.3-10.9
Have discrimination concerns	3.0	1.1-8.5

^a"Rarely or never" means they would report AIDS cases less than 25% of the time.
^bRespondents who did not answer all the questions included in the model (n = 94) were excluded from this analysis.
^cEstimate of prevalence ratio (PR) of physicians who rarely or never report AIDS cases vs those who usually or always report, based on odds ratio calculated with logistic regression.

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