

# HIV infection and Scottish general practice: workload and current practice

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**SUMMARY.** To estimate the effect of human immunodeficiency virus (HIV) infection on general practice, a postal survey was undertaken of one in three of all principals in Scotland. Of the 834 general practitioners who responded (78% response rate), 31% were working in practices with patients known to be infected with HIV. The estimated prevalence of known HIV infection in general practice was 19 per 100 000 population, and the estimated annual consultation rate for HIV related problems (including consultations by the 'worried well') was seven per 1000 population. Both statistics showed considerable variation between health boards, with peaks in Lothian and Tayside.

Few practices had drawn up policies relevant to HIV infection, and the use of procedures for controlling infection was variable. Policies about HIV and for infection control tended to be more common in areas where the prevalence of HIV infection was higher. Most respondents were offering both opportunistic health education and counselling about HIV infection, especially to patients at high risk.

Although general practitioners are responding positively to the increasing demands of HIV infection, there is an urgent need for policies, both national and local, to guide specific aspects of practice.

## Introduction

By the end of March 1988, 782 people in the United Kingdom had died from the acquired immunodeficiency syndrome (AIDS);<sup>1</sup> and 8443 people were reported to have been infected with human immunodeficiency virus (HIV), 1436 of them in Scotland.<sup>2</sup> The last two figures are likely to be underestimates; the Department of Health has suggested that the UK total might be more than 30 000. As the number of infected people grows, general practitioners will be increasingly involved in their management. Although the prevalence of HIV infection is be-

ing monitored,<sup>2</sup> less is known about the effect of this disease on general practice.

A postal survey was therefore undertaken of one in three of all principals in Scotland. At the same time, the health care research unit of Newcastle University undertook an identical survey of one in five of all principals in England and Wales.<sup>3</sup> The main aims of the Scottish study were to estimate the current workload in general practice in relation to HIV; and to assess general practitioners' knowledge, beliefs, attitudes and intentions about HIV infection and AIDS. This paper reports findings related to workload and current practice; an accompanying paper reports findings relating to general practitioners' knowledge and attitudes about HIV.<sup>4</sup>

## Method

From lists of principals in general practice supplied by all 15 health boards in Scotland, a one in three random sample was drawn up, stratified by health board and the number of principals in the practice. During May 1988, each of the 1096 practitioners sampled was sent a questionnaire, a business reply envelope, and a letter explaining the purpose of the study and guaranteeing confidentiality. The questionnaire had been developed through unstructured and semi-structured interviews with practitioners not subsequently included in the main sample. It included some 150 multiple-choice questions within sections covering practice background, current HIV-related work, effects on practice, knowledge of HIV, health education and counselling, testing and confidentiality, management of HIV infection, and personal reservations.

To estimate the number of known HIV-infected patients respondents were asked to state how many patients within their practice were known by them to be HIV positive or to have AIDS. Asking about patients within the practice avoided bias in practices where one partner was specializing in HIV infection. Where there were two or more respondents from a single practice, the mean of their estimates was taken as the practice estimate.

A second identical questionnaire was sent to non-responders three weeks after the initial questionnaire, and a third questionnaire a further three weeks later. Non-response analysis following the general principles set out by Cochran.<sup>5</sup>

Data were analysed using the statistical package SPSSX.<sup>6</sup> Differences between health boards were subjected to chi-squared tests. Data from Orkney, Shetland and the Western Isles were combined under the heading of Islands to give a sample size comparable to those of the mainland health boards.

## Results

### Response rate

Of the 1096 general practitioners originally sampled from health board lists, 21 were no longer in practice when questionnaires were sent; 834 (77.6%) of the remainder responded. The response rate varied significantly between health boards, ranging from 66% to 91% (Table 1). There was no evidence that non-responders differed from responders since there were very few significant differences in responses to the three batches of questionnaires. The proportion of respondents working in practices with patients known to be infected with HIV (30.7% overall) also varied significantly between health boards, ranging from 3% in Dumfries and Galloway to 65% in Lothian (Table 1).

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### Prevalence of HIV infection

The estimated prevalences of the three types of HIV infection within each health board are shown in Table 2. These estimates were derived by scaling up the reported numbers of infected patients in inverse proportion to the effective (that is, adjusted for non-response) sampling fraction within each board; the three

**Table 1.** Response rates and respondents in practices with known HIV-infected patients.

Health board	Number of questionnaires sent <sup>a</sup>	Response rate (%)	Number (%) of respondents in practices with known HIV-infected patients
Argyll and Clyde	99	66.3	17 (26.6)
Ayrshire and Arran	82	82.7	12 (18.2)
Borders	23	91.3	2 (10.0)
Dumfries and Galloway	38	83.8	1 (3.3)
Fife	60	78.9	16 (41.0)
Forth Valley	60	71.7	6 (14.6)
Grampian	98	86.4	22 (27.8)
Greater Glasgow	211	69.9	45 (33.3)
Highland	52	80.8	2 (5.3)
Islands	23	82.6	2 (11.1)
Lanark	101	66.3	8 (12.3)
Lothian	166	90.0	84 (65.1)
Tayside	83	78.7	23 (40.4)
Total	1096	77.6	240 (30.7)

<sup>a</sup>Of the 1096 general practitioners originally sampled from health board lists, 21 were no longer in practice when questionnaires were sent. NB: Differences between health boards in response rate, and in percentage of respondents in practices with known HIV-infected patients were both significant at 0.1% level.

**Table 2.** Estimated number of HIV-infected patients known in general practice.

Health board	Estimated number of patients <sup>a</sup> known to have:			Estimated prevalence of HIV infection per 100 000 population <sup>b</sup>
	Asymptomatic HIV infection	Symptomatic HIV infection (excluding AIDS)	AIDS	
Argyll and Clyde	34.0	5.3	3.6	9.6
Ayrshire and Arran	14.6	4.9	2.1	5.7
Borders	2.4	1.2	2.6	6.1
Dumfries and Galloway	2.8	0	0	1.9
Fife	31.2	4.2	1.4	10.7
Forth Valley	6.0	2.0	0.4	3.1
Grampian	36.7	2.7	3.3	8.6
Greater Glasgow	68.8	12.8	5.9	8.9
Highland	1.2	0	0	0.6
Islands	3.7	0	0	5.0
Lanark	10.7	6.3	0	3.0
Lothian	380.8	74.4	34.6	65.8
Tayside	180.3	16.9	1.2	50.0
Total	773.0	131.0	55.0	18.7

<sup>a</sup>Reported number of infected patients, divided by sampling fraction adjusted for non-response. <sup>b</sup>Sum of three weighted estimates, divided by population totals. NB: Differences between health boards in estimated HIV-infection rate was significant at 0.1% level.

resulting estimates were summed and divided by the appropriate population totals to estimate rates of HIV infection per 100 000 people. The estimated total number of HIV-infected people known in general practice (including those with AIDS) was 959 and the estimated number with AIDS was 55.

The estimates showed that Lothian contributed 63% of known AIDS patients, 57% of known symptomatic patients (excluding those with AIDS) and 49% of known asymptomatic patients. Tayside, where the impact of HIV infection is more recent, contributed 2% of AIDS patients, 13% of symptomatic patients and 23% of asymptomatic patients. Together Lothian and Tayside, with 22% of the population of Scotland, accounted for 72% of the patients known to have HIV infection in general practice.

During the month before the questionnaire arrived, 14 actual patients of respondents had been diagnosed as asymptomatic HIV positive, eight as symptomatic HIV positive and three as having AIDS. Although caution is needed in interpreting small numbers like these, they correspond to annual incidence rates per 100 000 population of 13 new diagnoses of asymptomatic HIV infection, seven of symptomatic HIV infection and three of AIDS. The recent impact of HIV in Tayside was evident in an annual incidence of asymptomatic infection of 49 per 100 000, although no new diagnoses of AIDS in the preceding month were reported from there.

### Consultations related to HIV infection

Table 3 shows the number of reported consultations over the previous month with known AIDS patients, HIV-positive patients, and the 'worried well' — defined in the questionnaire as 'patients whose HIV status is not known by you, with worries about HIV infection'. After adjustment for the variation in response rates between health boards, Lothian and Tayside together contributed 56% of consultations with AIDS patients, 68% of those with symptomatic patients and 66% of those with asymptomatic patients. The distribution of consultations with 'worried well' patients was more even, with Lothian and Tayside accounting for only 34%.

### Policies and procedures

Written or unwritten practice policies for specific components of the care of HIV infection in general practice were relatively rare (Table 4), with more than one third of respondents reporting having no policy for any of the components. Significantly more of those working in practices with known HIV-infected patients than of those in other practices reported policies for confidentiality (47% versus 22%,  $P<0.001$ ), referral for counselling (36% versus 25%,  $P<0.01$ ), control of cross-infection (32% versus 23%,  $P<0.01$ ), registration of patients (18% versus 9%,  $P<0.001$ ) and clinical management (19% versus 8%,  $P<0.001$ ).

The effect that HIV infection and AIDS has had upon 11 procedures for controlling any infection in general practice is shown in Table 5. Seventy per cent of practitioners currently wore gloves to take blood; only 4% had always done so, and 60% reserved this for HIV-positive and high-risk patients. The percentage wearing gloves to take blood ranged from 33% in Islands to 79% in Lothian. Significantly more respondents ( $P<0.001$ ) in practices with known HIV-infected patients wore gloves to take blood (83%) than in other practices (64%). Very few practitioners wore gloves for non-invasive examinations; those that did had introduced it only for HIV-positive and high-risk patients. Just under 50% wore latex gloves.

Sixty two per cent of respondents did not resheath needles, although only 40% had always avoided doing so; significantly more in Lothian and Tayside ( $P<0.01$ ) had decided against it (28%) than in other health boards (16%). Only 11% of practi-

**Table 3.** Reported number of HIV-related consultations.

Health board	Reported number of consultations over one month with:				Estimated total annual consultations <sup>a</sup>	Estimated annual consultation rate per 1000 population
	'Worried well' (HIV related)	Asymptomatic patients	Symptomatic patients	AIDS patients		
Argyll and Clyde	53	13	5	3	4000	8.9
Ayrshire and Arran	25	3	2	1	1400	3.7
Borders	7	0	0	3	350	3.5
Dumfries and Galloway	14	0	0	0	620	4.2
Fife	24	8	0	0	1500	4.5
Forth Valley	24	17	1	0	2100	7.8
Grampian	65	2	0	1	2900	5.9
Greater Glasgow	71	9	4	2	4500	4.6
Highland	22	0	0	0	980	4.9
Islands	6	0	0	0	260	3.5
Lanark	21	1	0	0	1200	2.1
Lothian	127	77	27	15	9900	13.3
Tayside	66	52	9	2	6200	15.7
Totals	525	182	48	27	36 000	7.1

<sup>a</sup>Reported number of HIV-related consultations, divided by sampling fraction adjusted for non-response, and multiplied by 12 (months) to yield annual estimates. NB: Differences between health boards in estimated annual HIV-related consultation rate was significant at 0.1% level.

**Table 4.** Respondents reporting practice policies relevant to HIV infection.

	Practice policy reported (% of respondents <sup>a</sup> )	
	Yes	Under discussion
Measures to preserve confidentiality	30.4	18.6
Referral for counselling	29.0	12.5
Control of cross-infection	26.5	14.0
Registration of patients	12.6	9.9
Clinical management within practice	11.6	15.3

<sup>a</sup>Number of valid responses ranged from 767 to 770. Those not tabulated were all 'No'.

tioners used protective clothing other than gloves, ranging from 6% in Islands to 35% in Borders health board. Surprisingly, those in practices with known HIV-infected patients less frequently used protective clothing than those in other practices (6% versus 12%,  $P<0.05$ ). Respondents from Lothian had more frequently decided against this than those from elsewhere (73% versus 59%,  $P<0.01$ ). Sixty nine per cent of practitioners used an autoclave or sterilizer, ranging from 44% in Borders to 83% in Islands; only 7% had introduced this recently. Seventy five per cent undertook sealed disposal of infected waste, but only 9% had designated equipment specifically for HIV infection.

There were significant differences associated with the age and sex of respondents. In comparison with the 358 general practitioners over the mean age of 43.4 years, younger general practitioners had more frequently introduced the wearing of gloves to take blood from HIV-positive and high-risk patients (63% versus 56%,  $P<0.01$ ), and less frequently used disposable speculae (52% versus 60%,  $P<0.01$ ), avoided resheathing needles (52% versus 75%,  $P<0.001$ ), and designated equipment for HIV infection (6% versus 13%,  $P<0.01$ ). The 159 women practitioners wore gloves to take blood more commonly than men (81% versus 68%,  $P<0.01$ ), and used latex gloves more frequently (60% versus 47%,  $P<0.01$ ).

Overall, 91% of respondents said they did (or would in the future if the need arose) personally take blood to test for HIV infection, the proportions ranging from 81% in Greater Glasgow to 100% in Highland. Only 28% said that practice nurses did or would take blood, ranging from 10% in Dumfries and

**Table 5.** Respondents reporting procedures for controlling infection.

	Procedures for controlling infection reported (% of respondents <sup>a</sup> )			
	Always done	Introduced in response to HIV infection for all patients	Introduced only for HIV positive or high risk	Un-decided
Wearing gloves for invasive examinations	94.7	2.3	2.5	0.3
Use of sharps box	89.0	5.3	0.9	2.0
Use of autoclave or sterilizer	62.4	5.6	1.4	18.1
Sealed disposal of infected waste	61.9	6.6	6.7	17.6
Avoidance of resheathing needles	40.2	12.2	10.0	19.0
Use of disposable speculae	36.7	4.7	14.0	17.3
Wearing latex gloves	14.3	9.3	25.7	30.1
Use of protective clothing (other than gloves)	4.4	1.2	5.6	26.7
Wearing gloves for taking blood	4.2	6.4	59.8	13.9
Designation of equipment specifically for HIV and AIDS	3.5	1.4	4.3	58.6
Wearing gloves for non-invasive examinations	0.3	0.1	5.1	16.4

<sup>a</sup>Number of valid responses ranged from 736 to 774. Those not tabulated were all 'decided against'.

Galloway to 56% in Grampian. Those in practices with known HIV-infected patients more frequently said that nurses would take blood than did the remainder (34% versus 25%,  $P<0.01$ ).

#### Health education and counselling

Most practitioners said they would, at least sometimes, provide opportunistic health education to patients within the 11 groups

shown in Table 6, the proportions ranging from 71% for women presenting for cervical smears to 97% for intravenous drug users. Many said they would always provide education for the first five groups — those generally considered most at risk — but only 35% said they would always do so for the partners of these patients. Relative to respondents from elsewhere, those from Lothian and Tayside more frequently said they would provide education for women presenting for cervical smears (79% versus 68%,  $P<0.01$ ) and for sexually active adults (89% versus 82%,  $P<0.05$ ). In comparison with those above the mean age, younger practitioners more frequently said they would always provide opportunistic health education for homosexual and bisexual men (50% versus 44%,  $P<0.05$ ), but less frequently said they would always provide education for pregnant women (11% versus 21%,  $P<0.001$ ), and for women presenting for cervical smears (7% versus 14%,  $P<0.01$ ).

Most respondents said they would always provide counselling for patients who were infected or worried about infection (Table 7). Those from Lothian and Tayside said more frequently than the rest that they would always counsel patients who

**Table 6.** Respondents who provide opportunistic health education about HIV infection.

Patient group	Provision of health education about HIV (% of respondents <sup>a</sup> )	
	Always	Sometimes
Intravenous drug users	75.4	21.8
Prostitutes	62.0	33.8
People with sexually transmitted diseases	55.5	41.9
Haemophiliacs	55.0	37.8
Homosexual or bisexual men	47.5	48.2
Partners of the five groups above	34.9	58.0
People seeking contraception	21.7	61.2
Pregnant women	15.0	56.8
Sexually active adults	11.6	71.9
Secondary school children	10.8	65.5
Women presenting for smears	10.0	60.9

<sup>a</sup>Number of valid responses ranged from 762 to 770. Those not tabulated were all 'Never'.

**Table 7.** Respondents who provide counselling about HIV infection.

Patient group	Provision of counselling about HIV (% of respondents <sup>a</sup> )	
	Always	Sometimes
Patients who are worried about HIV infection whom GP perceives to be at risk	86.9	11.1
Patients who are HIV positive	85.5	10.3
Patients from whom blood is to be taken for HIV testing	83.5	13.8
Patients who have AIDS	83.2	11.5
Patients who request an HIV blood test	82.9	15.3
Patients who are worried about HIV infection whom GP perceives not to be at risk	81.6	16.9
Partners of patients who are HIV positive or have AIDS	74.1	22.1
Other family members of patients who are HIV positive or have AIDS	65.2	30.8

<sup>a</sup>Number of valid responses ranged from 764 to 773. Those not tabulated were all 'Never'.

were worried and were perceived not to be at risk (88% versus 80%,  $P<0.05$ ). Younger practitioners said more frequently than older ones that they would always counsel patients who requested an HIV blood test (86% versus 79%,  $P<0.01$ ) and patients from whom blood was to be taken for HIV testing (87% versus 80%,  $P<0.01$ ).

## Discussion

Together with a parallel survey in England and Wales,<sup>3</sup> this postal survey of one in three of the principals in Scottish general practice has been the first to describe on a national scale the demands of HIV infection in general practice and the responses to those demands. Both the response rate of 78% and the quality of the resulting data exceeded our expectations. Nevertheless, we acknowledge the inherent limitations of multiple-choice questionnaires and the resulting need for cautious interpretation.

We have shown that, in the first half of 1988, HIV infection was already generating considerable demands in Scottish general practice. The estimate of 959 HIV-infected patients known in general practice was less than the estimate of 1413 living HIV-positive patients in Scotland in March 1988 (just before the beginning of our survey) published by the Communicable Diseases (Scotland) Unit (CD(S)U).<sup>1,2</sup> The differences between these figures suggests that substantial morbidity was hidden from general practice. This is consistent with the report by King that only half of a clinic population of HIV-positive patients had practitioners who were aware of the patient's antibody status.<sup>7</sup> Nevertheless, by May 1988, over 30% of our respondents were working in practices with patients known to be HIV infected, and nearly 30% of these patients were outside the recognized high prevalence areas of Lothian and Tayside. In contrast, the estimate of 55 AIDS patients was more than the CD(S)U estimate of 29 such patients alive in March 1988.<sup>1</sup>

Our survey yielded an estimate of 36 000 HIV-related consultations a year in Scotland — equivalent to an annual rate of seven per 1000 population. HIV-related consultations thus already make demands similar to those from a wide range of conditions from mumps and impetigo to hiatus hernia and schizophrenia.<sup>8</sup> Given that HIV infection is still spreading, and that HIV-positive and AIDS patients spend most of their time out of hospital,<sup>9</sup> these demands upon general practice can only increase in the future.

Few of the respondents in this survey had developed practice policies in anticipation of these demands; however, such policies were somewhat more likely if HIV infection had impinged upon their practices. Limiting the spread of HIV infection and managing that infection effectively require consistent practice and good liaison and this is best achieved through explicit policies. Since these policies should be responsive to local factors, we believe they should be developed at practice level. However, a national initiative may be needed to encourage the development of such practice policies.

The study has shown that most practitioners have changed to wearing gloves to take blood, and that this is even more common in practices with known HIV-infected patients. Nevertheless, the majority of practitioners do not wear gloves routinely, but reserve the procedure for HIV-positive and high-risk patients. This may not be the best policy, since the greater risk of cross-infection may come from patients whose HIV antibody status and risk category are unknown, especially in the presence of substantial hidden morbidity. In comparison, other measures to control infection have changed less. For example, nearly 40% of respondents are still resheathing needles, although a substantial proportion of needlestick injuries occur in this way.

The Royal College of General Practitioners has recommended that practitioners should adopt appropriate and consistent

infection control procedures.<sup>10</sup> We have shown considerable variability, even uncertainty, among practitioners in Scotland. Indeed, in high prevalence areas like Lothian, some procedures are less commonly adopted than in low prevalence areas. We have also shown that factors such as age and sex influence the adoption of many procedures. Consequently, efforts to increase the use of infection control procedures, particularly their routine use, may need a different emphasis for different groups of practitioners.

The lack of a vaccine or cure for HIV infection means that the main hope for containing the epidemic lies in changing peoples' behaviour. Since general practitioners have access to the entire population, they have a major role to play. Many respondents said they always provided, or would always provide, opportunistic health education for patients in the recognized high-risk groups. Most said they would sometimes provide such education for patients at less risk. The main source of variation was the age of the respondent; this may reflect different training, experience, expectations or even moral judgements. The great majority of respondents also reported providing counselling about HIV infection.

Together these findings show that general practitioners are committed to minimizing the spread of HIV infection. Nevertheless, the numbers of consultations which are directly concerned with, or potentially relevant to, HIV infection, already represent a substantial workload, and can only increase in the future. Our survey has suggested that practitioners are responding positively to this demand, but in an *ad hoc* and individualistic fashion. There is an urgent need for policies, both national and local, to guide specific aspects of practice. Whether general practice responds effectively to the challenge of HIV infection depends as much on the resources and leadership it receives as on the commitment and efforts of thousands of practitioners in the field.

### References

1. Communicable Diseases (Scotland) Unit. *Answer (AIDS News Supplement Weekly Report)* 1988; April 9:1.
2. Communicable Diseases (Scotland) Unit. *Answer (AIDS News Supplement Weekly Report)* 1988; July 2:1.
3. Gallagher M, Rhodes TJ, Foy CJW, *et al.* *A national study of AIDS, HIV infection and general practice. Report 36.* Newcastle upon Tyne: Health Care Research Unit, 1989.
4. Naji SA, Russell IT, Foy CJW, *et al.* HIV infection and Scottish general practice: knowledge and attitudes. *J R Coll Gen Pract* 1989; **39**: (in press).
5. Cochran WG. *Sampling techniques*. 3rd edition. Chichester: Wiley, 1977: 359.
6. SPSS Inc. *SPSSX user's guide*. 2nd edition. London: McGraw-Hill, 1986.
7. King MB. AIDS and the general practitioner: views of patients with HIV infection and AIDS. *Br Med J* 1988; **297**: 182-184.
8. Office of Population Censuses and Surveys. *Morbidity statistics from general practice 1981-82*. London: HMSO, 1986.
9. Adler MW. Care for patients with HIV infection and AIDS. *Br Med J* 1987; **295**: 27-30.
10. Royal College of General Practitioners. Human immunodeficiency virus infection and the acquired immune deficiency syndrome in general practice. *J R Coll Gen Pract* 1988; **38**: 219-225.

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