Much has been achieved in the education of the general public about AIDS and the modes of transmission of HIV. Our results show, however, that over 70% of certain groups are unaware of their infection until within nine months before AIDS is diagnosed. The reasons for the failure to reach those individuals who most need to know require investigation. Recent initiatives by the Department of Health to encourage the provision of additional and more accessible HIV testing sites may encourage testing and reduce the likelihood of infection not being recognised until AIDS is diagnosed. Identifying those at risk of HIV infection, encouraging them to be tested, and encouraging those with positive results to seek medical care are necessary steps in providing an adequate health care programme for people infected with HIV.

We thank all clinicians and microbiologists who have contributed to the voluntary confidential reporting schemes for AIDS cases and newly diagnosed HIV infection.

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Peak expiratory flow rate in schoolchildren living close to Braer oil spill

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Shortly after the grounding of the *Braer* oil tanker the previously unpolluted air of south Shetland began to smell strongly of oil, and some people experienced headaches and irritation of their eyes, throat, and skin. Adults suffering discomfort were given respirators but children were merely advised to avoid going outside. I conducted this study to ascertain whether the respiratory tracts of children were being affected.

Subjects, methods, and results

Children aged 5-12 years who were normally resident within 5 km of the *Braer* shipwreck all attended the same school. Three days after the shipwreck, I measured their peak expiratory flow at school using a mini-Wright peak flow meter (Airmed, Clement Clarke International, London). Three readings were taken, the maximum reading being recorded. I measured the children's height using a Raven mini-meter (paediatric model, Raven Equipment, Essex) and asked them if they had asthma or had had respiratory symptoms before the shipwreck. Their replies were checked with their general practitioner. Peak expiratory flow measurements were repeated nine to 12 days after the shipwreck, by which time the strong smell of oil had abated. Tests of lung function (forced expiratory volume, peak expiratory flow, and forced vital capacity) were undertaken in the second half of the study with a pocket spirometer (Micro Medical, Kent), after measuring peak flow with the mini-Wright peak flow meter.

The children's peak expiratory flow rates were within the normal range provided by the manufacturers of the mini-Wright peak flow meter¹ in both parts of the study, and no deterioration was seen over the study period (figure). Children known to have asthma had

Comparison of peak expiratory flow rate (Umin) at three and nine to 12 days after shipwreck of MV Braer

peak expiratory flow rates within the normal range (indicating excellent control of their asthma) and also showed no deterioration. Lung function tests gave normal results. Statistical analysis of the paired peak expiratory flow values (by Student's *t* test for difference of means for paired samples) showed no significant difference between the two sets of values ($r=0.870$; $t=0.684$; $df=19$; $p=0.502$).

Forty four children (79% of defined population) were studied at three days and 56 (92%) at 9-12 days, which included all of the children originally studied. Some children were initially removed from the area because of parental concern, but most had returned by the time of the second part of the study. Parents were

advised that children should attend school as normal, and no child was thought to be sufficiently unwell, as a result of oil fumes, to be unable to attend school (C M Rowlands, personal communication).

Comment

The strong odour due to the high aromatic content of the light crude oil and the obvious surface contamination made parents worried about an increase in respiratory disorders, especially asthma, in their children. These fears were exacerbated by environmental pressure groups² and lack of published information about the effect of crude oil vapour and droplet spray on an exposed population.

In the short term it seems that their fears have not been realised. Firstly, odour bears no relation to toxicity, and with certain compounds the human nose can discern an odour at concentrations below that

which can be measured. Also, the airways and lower respiratory tract may have been partly protected as most of the oil droplets would have been sufficiently large to have been filtered out by the nose and throat (P Leinster, personal communication). Since exposure to hydrocarbon vapour was relatively short and the highest concentration was equivalent to that normally found by the roadside in many cities (P Leinster, personal communication) no permanent harm may have resulted, but follow up studies are required.

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Effect of medical audit on prescription of palliative radiotherapy

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External beam radiotherapy is valuable in treating many of the symptoms of advanced cancer. Around half of the patients treated in clinical oncology departments receive palliative (as opposed to radical) radiotherapy,¹ and most of them have inoperable lung cancer or painful bone metastases. The symptomatic benefits of palliative radiotherapy for these two groups of patients have been confirmed in prospective studies, which have also shown that fewer high dose fractions of treatment are as effective as and no more toxic than more lengthy fractionated courses of treatment.^{2,3}

Shorter courses of radiotherapy have the advantage of being more convenient for the patient and more cost effective. Many clinical oncologists are, however, reluctant to change their prescribing on the basis of these studies.⁴ A recent survey showed an enormous variation in the prescription of palliative treatments.⁵ We examined the effect of medical audit on the prescription of radiotherapy by clinical oncologists in our centre for these two patient groups.

Patients, methods, and results

We reviewed the case notes of patients given radiotherapy for painful bone metastases during two weeks in November 1990 and of patients given palliative radiotherapy for inoperable lung cancer during two weeks in January 1991. Data on patients and fractionation schedules were recorded and presented at two medical audit meetings to all consultants and junior staff. After discussion of the two prospective studies^{2,3} we circulated memoranda to all medical staff suggesting that in most cases patients with painful bone metastases should be given a single fraction of radiotherapy (6-8 Gy) and those with inoperable lung cancer two fractions of treatment one week apart (total dose 17 Gy) in line with the published data.³

One year later we reviewed the case notes of all patients given radiotherapy for bone metastases in November 1991 and of those similarly treated for inoperable lung cancer in January 1992. Fractionation schedules were recorded and reasons sought if prescribing practices differed from those that had been recommended. The χ^2 test was used to compare

numbers of patients treated with the different fractionation schedules.

The four groups of patients were distinct and not significantly different for the two conditions in terms of age, stage of disease, or histological type. The same group of medical staff was responsible for the treatment of all of them.

The first survey showed that the majority (62% (95% confidence interval 50% to 74%)) of patients receiving palliative radiotherapy for painful bone metastases were treated with five or more fraction courses of treatment (table). One year later a significant change in prescribing practice was noted: 27% (18% to 38%) of the total number of treatments were given in five or more fractions (table, $p < 0.001$). The change was less pronounced for patients given radiotherapy for the palliation of advanced lung cancer, 79% (65% to 93%) of treatments being given in five or more fractions in January 1991 compared with 52% (40% to 64%) in January 1992 (table, $p < 0.05$).

The case notes gave a specific reason for choosing a multiple fraction regimen in only three cases (all of carcinoma of the bronchus): previous endobronchial radiotherapy, the use of large field sizes, and an attempt to maximise palliation in a patient with a Pancoast's tumour. The choice of fractionation regimen for both groups of patients was apparently independent of tumour type, the patient's age, or inclusion of the spinal cord within the treated area. Prescription practice, however, varied widely between doctors in this centre. A few clinicians used one or two

Palliative radiotherapy in patients with bone metastases or inoperable lung cancer. Values are numbers (percentages) of patients unless stated otherwise

	Bone metastases		Lung cancer	
	Nov 1990*	Nov 1991	Jan 1991*	Jan 1992
No of patients	68	76	33	56
No of treated sites†	72	89	33	56
No of fractions:				
1	22 (32)‡	51 (67)‡	2 (6)	8 (14)
2	2 (3)	1 (1)	4 (12)	18 (32)
3	1 (1)	1 (1)	1 (3)	1 (2)
4	1 (1)	2 (3)	—	—
5	36 (53)‡	17 (22)	23 (70)	24 (43)
6	2 (3)	1 (1)	—	2 (4)
8	—	—	1 (3)	1 (2)
10	4 (6)	3 (4)	2 (6)	2 (4)

*Two week period.

†All patients who received radiotherapy to more than one site (in Nov 1990 two patients had two sites treated, one had three sites treated; in Nov 1991 13 patients had two sites treated) received the same number of fractions to each site with the exception of one patient (marked ‡).

‡One patient received a five fraction course of radiotherapy to two sites of bone pain and a single fraction of radiotherapy to a third site. She is included in the five fraction group for statistical analysis.

§Includes five patients who received wide field hemibody radiotherapy.