Table 1—Association between deprivation and uptake of cardiac rehabilitation on univariate and multivariate* logistic regression analysis

Explanatory variables	Invitation to rehabilitation		Uptake of rehabilitation		Completion of rehabilitation	
	No (%) (n = 316)	Odds ratio (95% confidence interval)	No (%) (n = 188)	Odds ratio (95% confidence interval)	No (%) (n = 109)	Odds ratio (95% confidence interval)
Univariate analysis						
Deprivation score		1.00† (0.97 to 1.02)		0.93† (0.89 to 0.97)		0.95† (0.89 to 0.98)
Multivariate analysis						
Deprivation score		0.98† (0.95 to 1.08)		0.92† (0.87 to 0.97)		0.96† (0.90 to 0.99)
Age		0.95‡ (0.93 to 0.96)		0.99‡ (0.96 to 1.01)		0.99‡ (0.97 to 1.01)
Sex:						
Male§	221 (70)	1.00	129 (69)	1.00	77 (71)	1.00
Female	95 (30)	0.67 (0.57 to 0.92)	59 (31)	0.80 (0.47 to 1.38)	32 (29)	0.60 (0.29 to 1.21)
Hospital:						
A§	57 (18)	1.00	36 (19)	1.00	21 (19)	1.00
B	50 (16)	1.89 (1.16 to 3.07)	27 (14)	0.48 (0.21 to 1.11)	12 (11)	0.55 (0.20 to 1.53)
C	87 (28)	2.71 (1.74 to 4.20)	40 (21)	0.31 (0.15 to 0.67)	26 (24)	1.20 (0.50 to 2.94)
D	122 (39)	2.94 (1.93 to 4.48)	85 (45)	0.93 (0.45 to 1.92)	50 (46)	0.83 (0.34 to 2.01)
Type of consultant:						
Cardiologist§	233 (74)	1.00	146 (78)	1.00	86 (79)	1.00
General physician	83 (26)	0.63 (0.44 to 0.88)	42 (22)	0.50 (0.28 to 0.89)	23 (21)	0.82 (0.55 to 2.72)
Peripheral arterial disease:						
Not recorded	300 (95)	1.00	180 (96)	1.00	105 (96)	1.00
Recorded	16 (5)	0.39 (0.10 to 0.64)	8 (4)	0.73 (0.25 to 2.10)	4 (4)	0.38 (0.10 to 1.70)
Renal failure:						
Not recorded	303 (96)	1.00	180 (96)	1.00	106 (97)	1.00
Recorded	13 (4)	0.44 (0.17 to 1.19)	8 (4)	0.57 (0.16 to 2.04)	3 (3)	0.19 (0.02 to 1.53)
Cerebrovascular disease:						
Not recorded	303 (96)	1.00	179 (95)	1.00	104 (95)	1.00
Recorded	13 (4)	0.61 (0.30 to 1.27)	9 (5)	0.68 (0.24 to 1.96)	5 (5)	0.19 (0.02 to 1.61)
Diabetes mellitus:						
Not recorded	300 (95)	1.00	177 (94)	1.00	102 (94)	1.00
Recorded	16 (5)	1.27 (0.64 to 2.50)	11 (6)	1.19 (0.40 to 3.57)	7 (6)	1.85 (0.33 to 9.95)

*Regression analysis performed on deprivation prior to stepwise selection of other explanatory variables.

†Per unit change in deprivation score.

‡Per year.

§Reference category.

($P<0.005$), and deprivation ($P<0.001$). Patients with recorded peripheral arterial disease were less likely to be invited to rehabilitation ($P<0.05$). Otherwise comorbidity was not associated with invitation to or attendance at rehabilitation. Once rehabilitation had been started the only determinant of completion was deprivation ($P<0.05$). Both uptake and completion of rehabilitation were less likely among more deprived patients.

Comment

Deprivation was associated with an increased risk of myocardial infarction. Overall only 36% of patients discharged alive after myocardial infarction were invited to rehabilitation. Deprived patients were no less likely to be invited but they were significantly less likely to start rehabilitation. Also, deprived patients who did start the programme were less likely to complete it. A further study is required to ascertain why deprived patients are less likely to complete rehabilitation so that uptake can be improved.

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- 1 Tunstall-Pedoe H, Smith WCS. Level and trends of coronary heart disease mortality in Scotland compared to other countries. *Health Bulletin* 1986;44:153-61.
- 2 O'Connor GT, Buring JE, Yusuf S, Goldhaber SZ, Olmstead EM, Paffenbarger RS, et al. An overview of randomised trials of rehabilitation with exercise after myocardial infarction. *Circulation* 1989;82:234-44.
- 3 Oldridge N, Guyatt GH, Jones N, Crowe J, Singer J, Feeny D, et al. Effects on quality of life with comprehensive rehabilitation after acute myocardial infarction. *Am J Cardiol* 1991;67:1084-9.
- 4 Davey-Smith G, Bartley M, Blane D. The Black report on socioeconomic inequalities in health 10 years on. *BMJ* 1990;301:373-7.
- 5 McLoone P. *Carstairs scores for Scottish postcodes from the 1991 census*. Glasgow: Public Health Research Unit, University of Glasgow, 1994.

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Schistosomiasis in travellers returning from sub-Saharan Africa

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Cases of schistosomiasis seen at this hospital have increased in the past five years (fig 1). Many of these patients were travellers whose only fresh water exposure was in Lake Malawi. We therefore reviewed all cases of

proven schistosomiasis diagnosed at this hospital between 1991 and 1994.

Methods and results

We used parasitology records to identify patients with proved schistosomiasis (in whom schistosome ova were identified) attending this hospital between 1 January 1991 and 31 December 1994. Patients with an enzyme linked immunosorbent assay (ELISA) positive for schistosomes in whom ova were not found were excluded. Patients' characteristics, travel history, and laboratory data were recorded; cases in "travellers" were distinguished from "indigenous" cases.

Fig 1—*Schistosoma haematobium* and *S. mansoni* infection in travellers attending the Hospital for Tropical Diseases, London, 1967-94

A total of 344 cases of schistosomiasis was identified; 222 (65%) cases were in men. Median age was 25 (range 3-65) years; 238 (69%) cases were in travellers and 106 (31%) in "indigenous" patients.

Schistosoma haematobium was identified in 221 cases (64%), *S. mansoni* in 117 (34%), and *S. intercalatum* in six (2%). One patient had mixed infection with *S. haematobium* and *S. mansoni*; in another case it was impossible to speciate the ova. All but one of these patients had been in Africa or the Middle East.

S. haematobium ova were isolated from urine (191 patients), rectal snips (20), stool (14), semen (13), bladder biopsy (6), vulval biopsy (3), cervical smears (3), and cervical tissue after hysterectomy (1). *S. mansoni* was isolated from stool (67 patients), rectal snips (49), urine (1), and bladder biopsy (1). Ova were occasionally identified in more than one site in the same individual. An eosinophil count was performed in 316 of the 344 cases. Eosinophilia ($\geq 0.4 \times 10^9/l$) was present in 205 patients (65%). Schistosome ELISA was performed in 318 of the 344 cases; positive results were found in 258 (75%).

Among travellers, 77 (32.4%) gave Lake Malawi as their only fresh water exposure in an endemic area. Of these, 76 were infected with *S. haematobium* and one with *S. intercalatum*.

Comment

The increase in the number of travellers infected with *S. haematobium* may reflect an increase in travel to Malawi; more than twice as many British residents visited Malawi in 1993 as in 1987 (R Behrens, personal communication). Until recently, Lake Malawi was believed to be the only lake in the Rift Valley free from schistosomiasis.¹

Patients with *S. haematobium* present with haematuria, dysuria, or urinary frequency, whereas abdominal pain, diarrhoea, or rectal bleeding are associated with *S. mansoni*. Most of our patients had light infections, causing minor symptoms or none at all.² Serious complications such as neurological deficit can arise,³ so it is important that those at risk are identified by a detailed travel history and offered appropriate screening tests.

This hospital offers screening to any patient who has been exposed to fresh water in an area endemic for schistosomiasis, regardless of whether they have symptoms. This involves microscopy of stool (after formal ether concentration) and terminal urine (the last few drops of urine produced during micturition); eosinophil count; and schistosome ELISA. Snips of rectal mucosa may be examined when ova are not detected in urine or stool specimens and serology is positive for schistosomes or when the patient has unexplained eosinophilia. Screening should start a minimum of six but ideally 12 weeks after exposure, as schistosome ova begin to be laid 25-31 days after infection.⁴

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1 Whitworth JAG. Schistosomiasis. *BMJ* 1993;307:936.

2 Harries AD, Walker J, Fryatt R, Chiodini PL, Bryceson ADM. Schistosomiasis in expatriates returning to Britain from the tropics: a controlled study. *Lancet* 1986;ii:86-8.

3 Blanchard TJ, Milne LM, Pollock R, Cook GC. Early chemotherapy of imported neuroschistosomiasis. *Lancet* 1993;341:959.

4 Jordan P, Webbe G, Sturrock RF, eds. *Human schistosomiasis*. London: CAB, 1993:16.

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My first week at Guy's 40 years ago

The dean of Guy's must have had a sense of humour. He divided the clinical intake of 1956 into two. The Guy's preclinicals were put into an intensive induction class. The Cambridge and Oxford intake, who had never seen a patient, were put on clinical firms. We exchanged roles three months later.

On my first day at Guy's I was put in the surgical on take firm for a week as a junior dresser—not that I ever did or could have done a dressing. Our main duty was to wheel patients from ward to theatre and back, accompanied by a nervous nurse, sometimes a junior pro (for probationer). This entailed a descent in huge antique lifts into the vast maze of underground tunnels that underpinned the whole of Guy's extensive area.

I remember only bits of my first day but these are stamped indelibly. For all patients admitted their first contact was with a student who "clerked" them. I was told to go and clerk the next patient admitted from the casualty department. "What do I do?" "Just take a history and examine him." Scared, I entered the ward and approached the patient in my new white coat. "Good afternoon. My name is Anthony Abrahams. Can you tell me your history?" "Yes—my finger bloody hurts." "May I examine it?" I unwound the bandages, uncovering an enormous abscess. I touched minimally and pain shot through his body so I concluded my examination.

At the operation on my patient's finger a sample of pus was taken. "Abrahams, write out a request card." "What do I request?" "Culture please—always say please, politeness costs nothing." I always have.

That week our lives were dominated by lights. Bleeps had not yet come to Guy's and there was a set of four coloured lights in every ward and corridor. Every doctor and every firm had its own combination of flashing or stationary lights. When ours came up we had to rush to the ward or telephone. Subsequently each time we changed firms we had different colour combinations and it was hard to remember the current one. Certainly the house officers must have been relieved when bleeps were introduced a year or two later.

My prevailing memory of the week is obsessive worry over the firm dinner. We were given a small sum of money and told that on our last evening on take we would entertain the on take medical firm to dinner and the junior dressers were responsible for the meal. We stood and watched interminable and incomprehensible operations and agonised. Finally Patrick Strong—a sensitive man who became an archivist as soon as he qualified—marched us to Cullens in Borough High Street where we bought a ham. The hospital kitchen cooked it and the meal was a success.—ANTHONY ABRAHAMS is a general practitioner in Oxford