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Variability in reviewing attenders at accident and emergency departments in England

The yearly rate of new attendances at accident and emergency departments in England increased steadily between 1949 and 1984 from 89 to 218 per 1000 population, while the ratio of reattendances to new attendances (the reattendance rate) fell steadily from 1.6 to 0.3 (inter-regional range 0.2-0.4).¹ We examined the district rates of reattendance between 1974 and 1985 because an even wider range between districts would have policy implications for the delivery of primary care.

Mean yearly reattendance rate at accident and emergency departments in English health districts 1974-85

Reattendance rate per new attendance	<0.1	0.1-	0.2-	0.3-	0.4-	0.5-	0.6-	0.7-	0.8-	0.9-	1.0-1.09
No of health districts	6	9	32	35	43	35	13	10	5	2	1

Methods and results

Yearly numbers of new and total attendances at accident and emergency departments between 1974 and 1985 for each of the 191 English health districts existing in 1985 were provided by the Department of Health and Social Security. Reattendance numbers were calculated as the total attendances minus the new attendances. Where district boundaries had altered before 1985 attendances were reattributed from the original districts to the new districts, consistent with the 1985 boundaries. The socioeconomic state of health districts was classified according to the Office of Population Censuses and Surveys' cluster analysis of the 1981 census: high status, rural, town, city, local authority housing, or London.²

The means of the annual reattendance rates for 1974-85 were used to represent the average levels of reattendance. They were distributed around a median of 0.44 (interquartile range 0.25, table). There was a 26-fold difference in range (0.04-1.06). Socioeconomic classification and grouping of districts according to health region explained only 3% and 11% of this variation, respectively.

The simple linear regression coefficient of the rate against time indicated a significant ($p < 0.05$) falling trend in 133 (70%) health districts. The median rate of change was 16 fewer reattendances per 1000 new attendances per year (range -113 to +16). The Spearman rank correlation coefficient between the mean

annual reattendance rate and the time trend was -0.37 ($p < 0.01$).³ Thus the yearly reattendance rate in districts where the level of reattendance was high fell significantly more quickly than in districts where it was low.

Comment

The wide geographical variation in reviewing first attenders is surprising. Systematic undercounting is unlikely as the Department of Health and Social Security guidelines to regions define reattendance. Moreover, failure to count every visit would risk understating departmental workload and disadvantage any bid for resources. Certain accident and emergency departments may undertake specialty functions such as orthopaedics, so that their reattendances include orthopaedic outpatient visits, etc. Such departments are not performing the modern role planned for them. Differing diagnostic case mixes are another possible explanation. This would imply that certain departments were seeing patients with less severe conditions who in other areas might have been cared for by general practitioners. Accident and emergency departments are assumed to substitute for the normal delivery of primary care by general practitioners in socioeconomically deprived areas.^{4,5} Yet socioeconomic classification of the health districts failed to show that the deprived districts had higher reattendance rates. Nor were districts with extreme reattendance rates grouped in particular regions. Other demographic characteristics of first attenders, like age, may determine reattendance, but the most likely explanation is that accident and emergency departments differ widely in their medical policies for reviewing patients.

Most accident and emergency departments were reviewing patients less often. The size of the reductions, however, varied. Departments with higher reattendance rates showed greater declines. It may well be that the burgeoning demand for such services has outstripped supply and led to a reduction in the reattendance rate as full capacity is approached.

If all accident and emergency departments who reviewed patients more often than the national median reduced their follow up rate to the median the number of reattendances would decline by roughly 1 million. This might mean transferring some of the workload to general practice, however, not reducing it totally.

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