

## DEPUTISING SERVICES

# The impact of general-practitioner deputising services on accident and emergency departments in the Sheffield hospital region

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**A**CCIDENT and emergency departments in England and Wales deal with increasing numbers of new outpatients each year<sup>1</sup>. The rate of first attendance in 1971 (170 per 1,000 population) was 35 per cent higher than ten years earlier (mean rate 1960–62=126 per 1,000)<sup>1,2</sup>.

Over the same period, and especially since 1965, the number of general-practitioner deputising services, operating mainly in the larger towns, has also increased<sup>3\*</sup>. It was estimated that in 1970 one third of all general practitioners used them.<sup>4</sup> Are these two developments connected?

In this paper we examine the size of the contributions made to the caseloads of accident and emergency departments by referrals from a deputising service, in two centres in the Sheffield hospital region, Sheffield and Nottingham, where British Medical Association deputising services were established in February 1964 and October 1965, respectively.

We then examine the trends in first attendance rates at accident and emergency departments in these centres, and in Leicester, where the BMA deputising service was established in September 1966, comparing them with national trends and with those in other centres in the same hospital region where deputising services were not operating.

### Method

The records of consultations with the BMA deputising services in Sheffield and Nottingham in 1970 were scrutinised. Those leading to referral to an accident and emergency department were identified.

The numbers of first attendances at accident and emergency departments in the Sheffield hospital region and in England and Wales, with their catchment area populations were obtained from published sources<sup>1,2,5</sup>.

### Results

In 1970, 441 (three per cent) of the 16,327 consultations with the deputising service in Sheffield, and 839 (five per cent) of the 17,215 consultations with the deputising service in Nottingham resulted in referral of the patient to an accident and emergency department. These referrals amounted to less than one per cent of all first attendances at these departments in the respective areas during the year (table 1).

The deputising services operated from 18.00 to 07.00 hours each night, and from noon on Saturdays to 07.00 hours on Mondays. Within these periods, referrals from the

\* See appendix.

TABLE 1  
FIRST ATTENDANCES AT ACCIDENT AND EMERGENCY  
DEPARTMENTS BY SOURCE OF REFERRAL, 1970

<i>Source of referral</i>	<i>Nottingham</i>		<i>Sheffield</i>	
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>
Deputising service	839	0.8	441	0.4
Other sources	98229	99.2	112760	99.6
All sources	99068	100.0	113201	100.0

deputising service would represent larger proportions of the total numbers of new attendances at accident and emergency departments. The exact proportions are not known, but an analysis of the times of day at which the consultations occurred with the Sheffield deputising service allows an estimate to be made of the average frequency with which these departments received cases from the deputising service during the periods of the day when it was operating (table 2). The deputising service was responsible for less than one new case per day in each time period.

TABLE 2  
AVERAGE FREQUENCY OF RECEIPT OF REFERRALS FROM THE DEPUTISING SERVICE  
BY TIME OF DAY, SHEFFIELD, 1970

<i>Time* (hrs.)</i>	<i>Number referred to accident dept.</i>	<i>Number of days deputy service operating</i>	<i>Average number referrals per time period per day</i>
00-	79	365	0.2
07-	32	58	0.6
12-	71	110	0.7
18-	254	365	0.7
Not known	5	—	—
All times	441	—	—

\* Deputising service operated:

00-: each night

07-: each Sunday and Bank holiday

12-: each Saturday, Sunday and Bank holiday

18-: each evening

First attendance rates in the country as a whole were rising at a faster rate in the early 1960s than in later years when deputising services were more widely established (figure 1). In the three areas in the Sheffield hospital region in which deputising services were established the rates did not rise any faster after the deputising services came into being. The rate of increase in first attendance rates during the period 1960-71 was no greater in these three areas than in the country as a whole; in Nottingham the rate of increase was about equal to the national rate; in Sheffield it was slightly smaller; and in Leicester the rate of increase was much smaller.

First attendance:  
Log. Rate per  
1,000 pop.

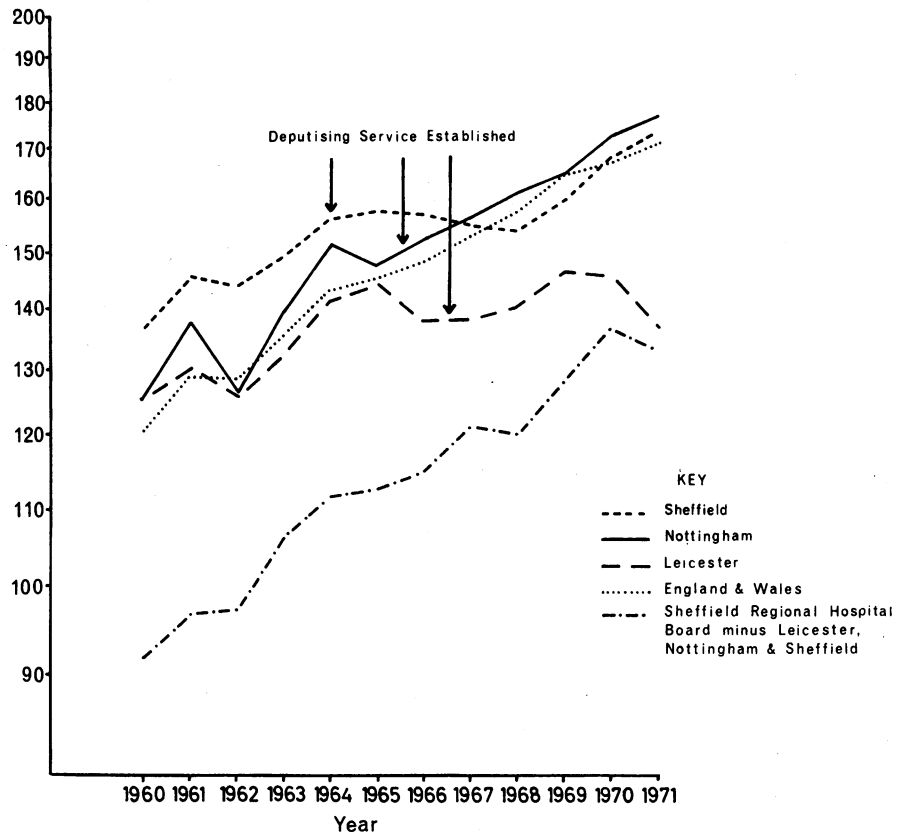


Figure 1

#### FIRST ATTENDANCE AT ACCIDENT AND EMERGENCY DEPARTMENTS

The remaining areas of the Sheffield hospital region, whose catchment area populations amounted to 53 per cent of that of the whole region, did not have deputising services operating in them. The attendance rates at accident and emergency departments in these combined areas were lower than the rates for England and Wales, Sheffield, Nottingham or Leicester throughout the decade. The rate of increase, however, was greater than those in the three cities or in the country as a whole.

#### Discussion

The extent to which a deputising service might influence the workload of an accident and emergency department depends, in part, on the proportion of the general practitioners subscribing to the service, and the use they make of it. In 1970, 74 per cent of the Sheffield general practitioners and 79 per cent of those in Nottingham subscribed<sup>6</sup>.

In Sheffield, about five per cent of all the subscribers' home visits were undertaken for them by the deputising service. Since many of the general practitioners' visits are made on their daily rounds the proportion undertaken by the deputising service outside general practitioners' routine visiting periods would, naturally, be greater, and it was estimated that approximately half the subscribers' night calls after midnight were handled

by the deputising service. Thus the deputising service was sufficiently involved to be in a position to make an impact on accident and emergency departments.

The *direct* impact was very small. No more than one in 20 of the consultations led to referral to an accident and emergency department even though the deputising service provided an *emergency* treatment service. Not one in 100 of the accident and emergency departments' new cases came via the deputising service.

What of the *indirect* impact? Do patients who find their own doctors replaced by unknown deputies take themselves to accident and emergency departments? The fact that attendance rates did not increase relatively more in areas with established deputising services suggests that they do not. Indeed, the faster rate of increase in areas without deputising services suggests that the deputising services may be supplying a demand previously coped with by the hospitals. If this is so, it may be borne out in future years by a levelling-off of the national rate of first attendance as deputising services spread further and are used more intensively by the subscribers. The findings in the Sheffield hospital region suggest that accident and emergency departments need not view such an increase in activity with any apprehension.

### Summary

General-practitioner deputising services were established in Sheffield (1964), in Nottingham (1965) and in Leicester (1966).

In 1970, 441 referrals were made to accident and emergency departments by the BMA deputising service in Sheffield, and 839 by the BMA deputising service in Nottingham. These referrals represented less than one per cent of first attendances at accident and emergency departments in each city during the year.

The rate of growth in first attendances rates at accident and emergency departments in Sheffield, Nottingham and Leicester was no greater after deputising services were established. During the period 1960-71 the first attendance rates in these three cities did not increase any faster than in England and Wales as a whole; the rates of increase were slower than in accident and emergency departments in the remainder of the Sheffield hospital region.

Deputising service referrals did not add significantly to the workloads of accident and emergency departments nor did it appear that many patients referred themselves to these departments in preference to consulting doctors from the deputising services.

### Acknowledgements

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### REFERENCES

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4. Department of Health and Social Security (1972). On the State of the Public Health. *Annual Report of the Chief Medical Officer, 1971*. London: H.M.S.O.
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## APPENDIX

## LARGE TOWNS WITH DEPUTISING SERVICES

Accrington	Glasgow	Sheffield
Belfast	Huddersfield	Solihull
Birkenhead	Kingston-upon-Hull	Southend
Birmingham	Leeds	Southampton
Blackburn	Leicester	South Shields
Bolton	Liverpool	Stockport
Bootle	London	Stoke-on-Trent
Bradford	Manchester	Sunderland
Bristol	Newcastle	Teesside
Bury	Nottingham	Tynemouth
Burnley	Oldham	Wallasey
Cardiff	Paisley	Walsall
Coventry	Preston	Warley
Dewsbury	Rochdale	Warrington
Dudley	Rotherham	West Bromwich
Edinburgh	St Helens	Wigan
Gateshead	Salford	Wolverhampton

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## EPIDEMIC OF ROAD ACCIDENTS

The increase in road accidents in Europe in the past decade has been such that in most technically developed countries they now account for a third to a half of all male deaths in the age group 15-24. The number of drivers under 25 injured in road accidents in the United Kingdom between 1960 and 1970 increased more than three-fold. If this situation had been caused by poliomyelitis or some other disease traditionally associated in the popular imagination with public health, the term 'epidemic' would be freely used and the alarm bells would be ringing. But they are not.

## REFERENCE

*British Medical Journal* (1973). Editorial, 1, 370-371.