

# TALKING POINT

## Gastroenterology services: a regional review

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Gastroenterology has developed on a national scale as a medical specialty only within the past 20 years. The main reason has been the increasing sophistication of diagnostic and therapeutic methods, which has led to a demand for clinicians to provide these skills—in particular a fiberoptic endoscopy service.

Recommendations on the manpower, space, and equipment needed to provide an adequate service were published in 1979 in a report of the Gastroenterology Liaison Committee, on which the British Society of Gastroenterology, the Royal College of Physicians, and the Department of Health and Social Security were represented.<sup>1</sup> Since then, though a report has been published on the work carried out by an individual unit,<sup>2</sup> there has been no attempt to assess the impact of the 1979 report or the adequacy of present services over a wider area. This paper represents the results of a survey of gastroenterology services of one regional health authority in England.

### Survey

The Trent Regional Health Authority has 12 districts, of which three (Nottingham, Sheffield, and Leicestershire) are teaching districts, and it has three medical schools. The population of the region is 4 341 000, and the figure shows the distribution in each district.

In mid-1982 all physicians in the region with an interest in gastroenterology were circulated with a questionnaire, to which all replied. The results were summarised and recirculated for corrections to be made. Manpower inquiries were restricted to staffing by physicians, nurses, and endoscopy assistants, and not to general surgeons. Because it is a service easily identified and for which

all units have data, the workload inquiry was limited to fiberoptic endoscopy. All units provided a much more general service for their own patients and those of colleagues: this always included jejunal and liver biopsy, and the larger units, mainly in teaching hospitals, usually provided facilities for manometric investigations, other motility procedures, and studies of gastric secretory and pancreatic function.

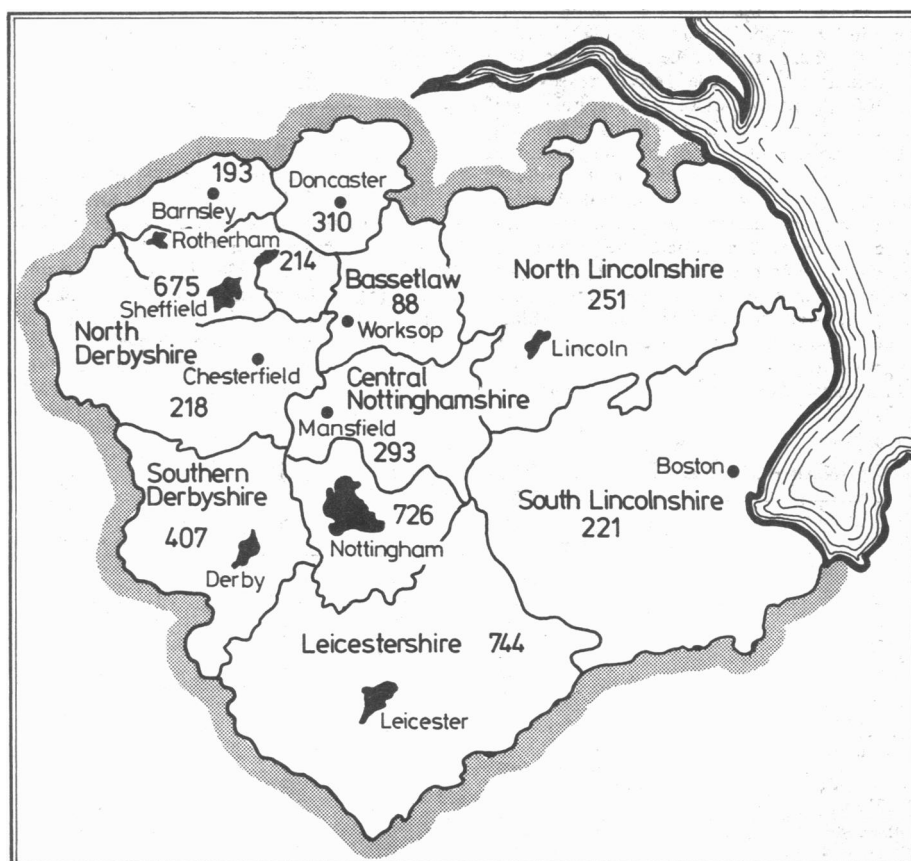
### Manpower

The consultant physicians providing the gastroenterological service in Trent all practised general medicine (table I). No non-teaching district had more than one gastroenterologist, but in the teaching districts the university staff provided additional service commitment. Allowing for some endoscopy being done by non-physicians, it is clear that one physician is providing a gastroenterological service for an average population of 217 000 in the Trent region compared with the national average of 182 000.<sup>3</sup>

A more realistic assessment of manpower in gastroenterology is obtained from the

sessional time devoted to the specialty. This varied from one to eight sessions per consultant. Mean sessional time in gastroenterology per district was greater in the teaching districts (11.8) than in the non-teaching districts (4.6), but although the teaching hospitals had larger numbers of consultants and sessions, they served considerably larger populations: the mean sessional time per 100 000 was similar, being 2.08 for non-teaching and 1.67 for teaching districts.

The number of permanent non-consultant staff employed for endoscopy varied considerably. For example, of the nursing staff, there was one third of a state registered nurse in Lincoln, two part time nurses at Sheffield Northern General, three nursing sessions at Derby, and three nurses at the City Hospital, Nottingham. Six units had no nursing staff specifically employed for endoscopy. These figures may be misleading because in some centres endoscopy is done in operating theatres, using theatre staff, and in others in day wards, using shared staff. Even so, many clinicians thought that the service would be improved by having separately identified nursing or technical staff for these procedures



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Geographical distribution and populations served (thousands) in the Trent region in 1981. Provided by the Statistical Information and Records Unit, Trent Regional Health Authority.

TABLE I—Physicians with an interest in gastroenterology in Trent, July 1982

District	Hospital	No of physicians with an interest in gastroenterology	No of sessions in gastroenterology	Outpatient	Inpatient	Endoscopy	Consultant sessions per 100 000 population served
Barnsley	Barnsley	1	5	1½	1½	2	2.59
South Lincolnshire	Boston	1	4½	1	1	2½	2.04
North Derbyshire	Chesterfield	1	4	1	1	2	1.83
Southern Derbyshire	Derby	1	7	2	2	3	1.71
Doncaster	Doncaster	1	5	3	2	2	1.61
Leicestershire	Leicester General	2	4½	1	1	3½	1.14
			2	1	1	1	
	Leicester Royal	1	2	1	1	1	
North Lincolnshire	Lincoln	1	6	2	2	2	2.39
Central Nottinghamshire	Mansfield	1	1	½	2	½	0.34
Nottingham	City Hospital	2	3	1	2	2	1.65
			3	2	1	1	
Rotherham	University Hospital	2	4	1	1	2	2.80
			2	½	3	½	
	Rotherham	1	6	2	1	3	
	Northern General	1	5	1	1	3	
Sheffield	Royal Hallamshire	3	4	2	1	1	2.22
			4	2	2	0	
Bassetlaw	Worksop	1	2	1	0	1	3.41
			3	1	1	1	

as recommended in 1979.<sup>1</sup> In nearly all units all secretarial work was being carried out by hospital secretaries, who had no allocation of time for this. Only one district (Derby) had secretarial staff specifically employed for endoscopy. Only one unit (Chesterfield) had sessions for a general practitioner clinical assistant to carry out endoscopies. Four districts had outstanding requests for such posts that could not be filled for financial reasons.

### Endoscopy workload

*Upper gastrointestinal tract*—The most striking feature is the enormous increase in workload over only a six year period: 3.41 times more examinations were done in the region in 1981 than in 1975 (table II). Even in districts where the procedures were well established in 1975 there were increases of at least 100%. In seven of the 15 hospitals few if any of these procedures were being carried out in 1975 and in each of these the large number being done in 1981 was made possible only by the replacement of a retiring general physician by one with an interest in gastroenterology. These figures underestimate the increase in total work, since there has been a disproportionate increase in time consuming therapeutic endoscopic procedures including dilatation of oesophageal strictures, placement of prosthetic tubes through neoplastic strictures, and injection of oesophageal varices. Table III

shows the number of upper gastrointestinal endoscopies related to served populations of the districts. In some districts this is an underestimate, as a few endoscopies done in operating theatres by general surgeons are not included.

TABLE III—Numbers of upper gastrointestinal fibroscopies carried out per head of population served, 1981

District	Endoscopies per 1000 population served
Barnsley	1.97
South Lincolnshire	2.89
North Derbyshire	3.04
Southern Derbyshire	1.35
Doncaster	1.47
Leicestershire	5.20
North Lincolnshire	2.39
Central Nottinghamshire	0.17
Nottingham	3.80
Rotherham	14.01
Sheffield	5.18
Bassetlaw	3.41

*Lower gastrointestinal tract*—Colonoscopy, seldom performed in 1975, is now an integral part of a district general hospital service, and 15 times more examinations were done in 1981 than in 1975 (table II). It is more time consuming than gastroscopy but probably even more cost effective, because many of these procedures are for the removal of colonic polyps by diathermy, certainly a cheaper and safer method than by laparotomy. Shortage

of endoscopy time and facilities is limiting the number of procedures that can be performed. With the varying facilities available it is remarkable that the number of colonoscopies per head of population varied so little—from around 30 to 50/100 000 a year. One hospital with a lower rate (Worksop) had appointed a gastroenterologist only in the year of the survey.

*Endoscopic retrograde cholangio pancreatography* is a relatively recent endoscopic technique and is concentrated in certain centres. It is being used increasingly as a therapeutic measure to remove gall stones from common bile ducts by endoscopic sphincterotomy, so saving many laparotomies. All those centres that are able to carry out this procedure are finding it costly in time and other facilities, and the fact that funds can come only from the already stretched district budgets is limiting its development in the region.

### Endoscopic equipment and facilities

Of the 60 upper alimentary endoscopes in use in 1982 in the region, eight had been acquired from charitable sources and the remainder from NHS funds; 34 were more than three years old. In general, the colonoscopes currently in use had been acquired more recently, and only nine of 26 were more than three years old. This reflects the change in recent years whereby colonoscopy has developed from a procedure confined to a few centres to one carried out in every district hospital in the region.

Financial provision varied widely, and comparisons between districts are difficult because their method of allocating resources varies. But in some districts, which formerly allocated specific sums, this has lapsed in recent years of financial stringency. Purchases often depend on the availability of spare money at the end of the financial year so it is not surprising that in nine of the 15 hospitals there were outstanding requests for instruments awaiting finance.

The 1979 recommendation that a separate investigation unit be available for a gastroenterology department had been met in only five of the 15 hospitals. In some hospitals day accommodation shared with other specialties proved adequate, but some units doing up to 2000 outpatient examinations each year had the use of only a side room on an inpatient

TABLE II—Numbers of fiberoptic endoscopies carried out in Trent (by hospital)

	Upper gastrointestinal tract		Lower gastrointestinal tract		Endoscopic retrograde cholangiopancreatography	
	1975	1981	1975	1981	1975	1981
Barnsley	175	381	30	218	0	0
Boston	0	640	0	87	0	0
Chesterfield	0	663	0	74	0	15
Derby	—	550	0	135	0	20
Doncaster	332	456	24	16	50	0
Leicester General	973	1826	0	125	0	134
Leicester Royal	0	2046	0	250	0	417
Lincoln	10	600	0	80	0	0
Mansfield	100	50	0	0	0	0
Nottingham City	400	1200	0	200	0	100
Nottingham University Hospital	873	1563	31	142	15	35
Rotherham	1500	3000	30	70	15	100
Sheffield Northern General	50	1000	0	100	0	50
Sheffield Royal Hallamshire	500	2500	0	200	0	150
Worksop	0	300	0	30	0	0
Total	4913	16775	115	1707	80	1028

ward, with no space for recovery of patients apart from corridors, or inpatient beds vacated temporarily by their occupants. In Chesterfield the endoscopy unit was at a hospital with no acute or surgical service, so in emergencies endoscopy had to be done at the bedside or the patient had to be transferred to the endoscopy unit, a move that incurs an obvious risk. Even more worrying—despite repeated requests—there is no provision for endoscopy at the new Chesterfield General Hospital due to open in April this year.

The following specific comments came from several units:

(i) Lack of a specific annual budget for new instruments and for the rapid repair of instruments that break down during use.

(ii) Inadequate accommodation, particularly waiting and recovery areas.

(iii) Need for more nursing assistance.

(iv) Lack of a clinical assistant who would maintain the routine endoscopy lists and allow the consultant more time for new developments, emergency work, and his duties as a general physician. This complaint was made particularly by consultants in non-teaching districts, where there were no senior registrars and lecturers.

(v) The need for more sessions in gastroenterology. In view of the considerable general medical workload that most consultants also carried (and most were reluctant to relinquish) this would mean the appointment of a second gastroenterologist in some districts to cope with the rising gastroenterological commitment.

## Discussion

A report on the working of a well staffed gastroenterology day case unit showed what can be achieved.<sup>2</sup> The increasing number of upper gastrointestinal endoscopies was matched by a halving of barium meal examinations, and the authors commented that this had given radiologists more time for ultrasound and other techniques without an increase in staff. This is certainly not the case in this region as radiology statistics from the Trent Regional Health Authority show increasing numbers of barium meals being performed between 1975 and 1981 with the exception of Sheffield and Leicester. Perhaps this is because no district of the Trent Regional Health Authority has anything approaching the space and staffing in the unit described. This is perhaps not surprising, as the region's financial position in 1981-2 was the lowest in England. In 1981-2 NHS revenue allocation to the region was still only 93.71% of the national average, and the four Thames regions remained the best financially provided with between 106% and 114% of the national average financial allocation. Although the Resource Allocation Working Party formula is slowly correcting the imbalance, in 1982-3 the Trent region remained £38 million below national average and £140 million below the best provided region.<sup>4</sup> Consultant staffing in gastroenterology is also well below the national average, and in a survey done in 1982 only one region had a larger ratio of population to consultant gastroenterologists than Trent.<sup>3</sup>

The scope for further expansion of upper

gastrointestinal endoscopy is shown by studies from general practice. In one urban practice of 7800 patients studied over five and a half years in which this examination was offered to all patients with dyspepsia lasting for more than two weeks the annual incidence of endoscopy was 1%.<sup>5</sup> As a specific lesion causing the dyspepsia was identified in 40% of those who underwent endoscopy the study advocated an "open access" endoscopy service to general practitioners. In Trent in 1981 this would have required 45 000 endoscopies rather than the 16 775 that were carried out. If even half this number is judged to be really necessary this figure is apparently being achieved or approached in only the three teaching districts and two other districts in the region, but in seven of the districts the number is much less even than this.

Perhaps fortunately, critical scrutiny has cast doubt on the desirability of even attempting open access endoscopy. Holdstock and his colleagues showed that increasing the number of endoscopic examinations did not result in either a greater diagnostic yield of gastric carcinomas and peptic ulcers or a fall in the number of admissions to hospital for complications of ulcers such as bleeding and perforation.<sup>7</sup> In the absence of easily available endoscopy there can be no doubt, however, that many patients without an ulcer are receiving unnecessary and expensive ulcer healing drugs. We would suggest, therefore, that as a minimum at least five endoscopies/1000 population a year should be a reasonable immediate objective for the service. Doubling of this rate will probably be necessary if the number of barium meals being done where endoscopy would be preferable is to be significantly reduced.

There is no doubt about the practical value of endoscopy, at least in selected patients. A recent study from the region showed that among 95 patients, who had had a recent barium meal examination that had left some doubt about the diagnosis, endoscopy led to alteration of management in 46 and in 12 of these this entailed a change to or from laparotomy.<sup>8</sup> Although there are no comparable objective studies of other endoscopic procedures, many laparotomies may be avoided by endoscopic procedures, particularly colonoscopic polypectomy, intubation of oesophageal strictures, and endoscopic retrograde cholangiopancreatography, with large savings in patient costs and in morbidity and mortality. Such "savings" never materialise in practice because the operating theatre time vacated by these procedures is immediately occupied by patients undergoing other types of surgery.

The development of gastrointestinal endoscopy reflects a general problem of health service economics: any financial savings are either not identifiable or are mopped up by other specialties and procedures. As a result, particularly in an underprovided region such as Trent, development of a necessary service is retarded, and clinicians spend an inordinate amount of time making cases for their needs against the competing demands of other specialties. In this respect, gastroenterology suffers specific problems. Unlike neurology and cardiology, it is not a regional specialty and there is no access to regionally earmarked

funds, in particular for capital equipment. Unlike radiology, for which expensive replacement diagnostic equipment is considered at regional level, the only source of finance for endoscopy is often non-existent district or, under the latest reorganisation, unit funds. In most regions gastroenterologists have no regional medical advisory structure, as it is argued that as they are general physicians (or surgeons) the advisory committees for general medicine and general surgery should suffice. This means that in contrast to specialties with separate regional advisory subcommittees (and in Trent these are many, including neurology, cardiology, thoracic medicine, surgery, and radiology) they have neither direct access to the regional medical committee to press their case nor any means of communication among themselves to establish a case.

The only conclusions possible from this inquiry are liable to be regarded as special pleading for gastroenterology as a specialty. Unfortunately, this is necessary, particularly in some districts that have been slow to provide the facilities needed. The demand for gastrointestinal endoscopy has increased rapidly in recent years and this trend will continue into the foreseeable future. Therefore satisfactory accommodation, equipment, and staff need to be provided in every district general hospital. It is incredible that hospital planning is so inflexible that a district general hospital in the region due to open later this year will not have space for this facility.

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