

**A Survey of the Views of General Practitioners About the Quality
of Health Care Services Available to their Patients**

A report prepared for Sunderland Health District

by

**Brenda Leese
Research Fellow**

and

**Paul Kind
Senior Research Fellow**

**Centre for Health Economics
University of York
York YO1 5DD**

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This report was commissioned by Sunderland District Health Authority and Sunderland Family Health Service Authority.

The survey was facilitated in Sunderland by

Dr P Linnet, Chairman, Local Medical Committee

Dr S K Denyer, Consultant in Public Health Medicine

Dr R McNaught, Senior Registrar in Public Health Medicine

Dr P Cavanagh, Independent Medical Advisor, Sunderland FHSA.

The survey was administered by the Department of Public Health Medicine, with particular thanks to Miss A Smith.

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A Survey of the Views of General Practitioners in Sunderland Health
Authority About the Quality of Health Care Services Available
to Their Patients

1. Introduction

Health Authorities are responsible for commissioning health care for their residents. In doing so, Health Authorities must identify with local general practitioners what referral patterns are anticipated for secondary care, and what quality, style and quantity of health care is needed. Quality of health care, including the effectiveness of its outcome, is high on the agenda for commissioning Health Authorities.

Provider services also have quality of care high on the agenda in order to be sure of continuing to attract patients and giving them the best health outcomes. Providers will need to plan and deliver health care to meet identified needs.

This study is therefore of interest to both commissioners and providers in Sunderland Health District as they consider their separate, but closely related, agendas for 1992 and beyond.

Quality ratings will differ between services and specialties but it is important to be aware of what lies behind these differences. This report simply sets out the results of the study undertaken in Sunderland and should be regarded as a starting point for all those concerned with health in Sunderland to begin a cooperative

effort to understand and improve the services for patients.

It is very important that individual ratings or comments are not taken out of context, and that the limitations of any survey are acknowledged.

The survey was commissioned by Sunderland Health Authority and Sunderland Family Health Services Authority, and was facilitated by the Department of Public Health Medicine in conjunction with representatives from the Local Medical Committee and the FHSA. Researchers at the Centre for Health Economics, University of York developed the survey methods and carried out the analysis.

The study arose out of a similar successful exercise carried out jointly by the Department of Public Health Medicine in York, and the Centre for Health Economics, for York District Health Authority in 1991/2.

2. Aims

The aims were as follows:

1. To obtain, in a systematic way, the views of general practitioners about the quality of the range of health care services available to their patients.
2. To obtain general practitioners' views on the services to which they would give the highest priority for improvement.

3. To assess the criteria for judging the quality of a service to which general practitioners attach most importance.

3. Methods

3.1 The Questionnaire

A postal questionnaire specific to Sunderland was devised, based on that developed for York (1). The questionnaire was sent to each general practitioner in Sunderland Health District, consisting of 147 possible respondents. Four weeks were allowed for the return of questionnaires, after which reminders were sent to the non-responders. Two weeks later, practice managers were telephoned to ask them to encourage the remaining non-responders to complete the questionnaire.

The covering sheet with identification details about the general practitioner completing the questionnaire was detached before the questionnaire was sent to the Centre for Health Economics for analysis. In this way, the responses and comments made by the general practitioners remained confidential.

The questionnaire is attached at Appendix 1. It contained four main sections, and an initial section (Section A) requesting some details about the respondent.

Section I is about hospital services. Section Ia listed quality criteria used in assessing the hospital services needing improvement and asked that they be

ranked in order of importance in judging the quality of a service.

Section Ib, listed hospital services, ancillary services and diagnostic services available to Sunderland area residents and asked for a general quality rating for each service on a scale of

one = excellent,

two = good,

three = adequate,

four = poor,

five = very poor,

six = insufficient evidence to judge the quality.

Quantity was regarded as an integral part of the overall quality rating. Hospital and diagnostic services were rated separately for those provided in Sunderland and outside Sunderland. This distinction did not apply to ancillary services. Section Ic asked general practitioners to record their opinions of up to three hospital services that they most wanted to see improved. They were asked to rank them as their first, second and third choices and to rate each service chosen on 12 quality criteria using the same ranking system as in the broad assessment. Space was provided for additional criteria that they wished to add and for further comments. The twelve quality criteria were the same as these used, and found to be appropriate, in the York study (1).

Section II consisted of the same subsections as Section I, but related to community based services in Sunderland as a whole. Section III asked general practitioners to list any additional services they felt should be available, and in Section IV, they were asked for any further comments that they wished to make.

3.2 Quality Ratings and the Quality Index

The data analysis was carried out at the Centre for Health Economics at the University of York. The quality ratings scale was used to develop a standardised index of quality which enables a comparison to be made between the different specialties and services, and is based on methodology developed for the survey carried out in York Health District (1).

The quality ratings were analysed using the scaling algorithm described in Appendix 2. The algorithm utilises information on the proportion of ratings in each category for individual services. Values are given as decimals but can more readily be interpreted as percentage scores with a theoretical maximum of 100% for the highest quality and 0% for the lowest quality.

A note of caution should be sounded in interpreting the reported quality index values. The maximum theoretical value of 100% could be achieved only if all general practitioners gave a service a rating of one (excellent). This is unlikely to happen in practice and a figure of 90% might be selected as representing the best quality index value which might be achieved in reality. Similar arguments

apply to the lower end of the quality index scale.

4. Results

4.1 Response Rates and General Practice Structure

The results described in this section relate to Section A in the questionnaire (Appendix 1). The response rate was 63% of all general practitioners, representing 92 out of the possible 147 GPs in Sunderland. There were 4 specific refusals. However, one GP had retired, 3 were on sick leave, 2 on maternity leave, 6 GPs were on holiday, so the response rate for those who could have replied was 67%.

52% (48) of the respondents had worked in the area for 10 years or less, and a further 25% (23) for between 10 and 20 years, whilst 21 (23%) had worked in the area for more than 20 years.

88 (96%) were employed on a full time basis, 3 on 3/4 time (19 hours) and one on 1/4 time. The average age of respondents was 44.6 years (Table 1) and 77 (84%) were male and 15 (16%) female. 16 (17%) of respondents worked in training practices.

Table 2 shows the list sizes of respondents.

Table 1: Age of Responding General Practitioners (n=92)

<u>Age (years)</u>	<u>Numbers of GPs</u>	<u>% of GPs</u>
< 30	1	1
30-39	36	39
40-49	25	27
50-59	20	22
60+	10	11
<u>Total</u>	92	100

Table 2: Practice List Size of General Practitioners Taking Part in the Survey

<u>List Size</u>	<u>No. GPs</u>	<u>% GPs</u>
<3500	10	11
3500-5499	22	24
5500-8500	37	40
>8500	23	25
<u>Total</u>	92	100

4.2 Quality Ratings

The standardised quality ratings for each service are reported in the

following section with two sets of tables for each group of services.

The first set of tables lists the number of general practitioners who rated each service in the five quality categories. The second table in each section gives the standardised quality index value for each service and ranks the services in order of this index.

It should be emphasised that quantity was regarded at this stage as an integral part of overall quality.

4.2.1 Hospital Services

These results relate to Section I (b) in the questionnaire (Appendix 1).

GPs were asked to rate a total of 40 hospital based specialties or services at two locations - in Sunderland and out of Sunderland. Table 3 shows the quality ratings for Sunderland based services and Table 4 for those services available out of Sunderland.

In Sunderland (Table 3) services standing out as receiving a high percentage of ratings of 1 or 2 (excellent/good) were chest medicine (75%), haematology (87%), oral-maxillo-surgery (81%) and obstetrics (83%). Other services highly rated were genitourinary medicine, geriatrics, gynaecology, and paediatrics. Poorly rated services included orthopaedics where only 17% of GPs had given ratings of 1 or

2, and 66% had rated the service 4 or 5 (poor or very poor). Pain clinic services were also poorly rated (69% giving a rating of 4 or 5) as was psychosexual counselling (59% rating at 4 or 5). Other services poorly rated were clinical psychology, ophthalmology, gastroenterology and younger disabled.

Out of Sunderland (Table 4), cardiac surgery received high ratings, (though rated by only 26 GPs), as did genetics, although the latter was rated by only 16 General Practitioners.

Quality Index Values for hospital services are listed in Table 5. As is to be expected, the values reflect the general pattern of ratings reported above, with haematology scoring particularly highly. Oral-maxillo-surgery, obstetrics, paediatrics and chest medicine all have Quality Index ratings of more than 60%. The poor/very poor ratings given to orthopaedics, the pain clinic and psychosexual counselling are reflected in their relatively low quality index ratings of between 35.7% and 40.1%. The pain clinic achieved a Quality Index score of just over half that of haematology, however it should be noted that 34 GPs made no specific rating of quality for this service. Of the 10 services with a Quality Index below 50% ENT, ophthalmology, gastroenterology and orthopaedics were rated by virtually all GPs who participated in this survey. The "missing" responses for other services with low Quality Index values do not influence the outcome, which is determined by the distribution of ratings received.

Table 3 **Quality Ratings Given by General Practitioners for Hospital Specialties (Sunderland)**

Specialty/Service	Frequency of rating in each quality category					% of GPs giving each rating			No of GPs giving a rating of 1-5
	1	2	3	4	5	1&2	3	4&5	1-5
General medicine	4	40	19	5	0	47.8	46.7	5.4	92
Chest medicine	14	55	20	3	0	75.0	21.7	3.3	92
Cardiology	14	42	27	7	1	61.5	29.7	8.8	91
Neurology	6	32	37	14	3	41.3	40.2	18.5	92
Gastroenterology	3	19	34	26	8	24.4	37.8	37.8	90
Diabetes	9	24	47	9	1	36.7	52.2	11.1	90
Oncology/radiotherapy	6	26	30	16	4	39.0	36.6	24.4	82
Haematology	25	52	12	0	0	86.5	13.5	0	89
Renal medicine	6	54	26	1	0	69.0	29.9	1.1	87
Genito-urinary medicine	15	49	19	1	2	74.4	22.1	3.5	86
Dermatology	2	43	33	12	2	48.9	35.9	15.2	92
Rheumatology	5	37	37	13	0	45.7	40.2	14.1	92
Younger disabled	2	9	25	21	5	17.7	40.3	41.9	62
Paediatrics	23	42	24	2	0	71.4	26.4	2.2	91
Geriatric services	19	48	21	1	2	73.6	23.1	3.3	91
General surgery	15	49	23	5	0	69.6	25.0	5.4	92
Paediatric surgery	12	39	28	1	1	63.0	34.6	2.5	81
Urology	6	33	35	15	3	42.4	38.0	19.6	92
Ophthalmology	5	22	30	20	14	29.7	33.0	37.4	91
ENT	4	21	41	19	6	27.5	45.1	27.5	91
Oral/maxillo surgery	27	41	16	0	0	81.0	19.0	0	84
Plastic surgery	8	41	33	6	0	55.7	37.5	6.8	88
Orthopaedics	3	12	16	34	25	16.7	17.8	65.6	90
A&E	6	40	32	10	2	51.1	35.6	13.3	90
Obstetrics	12	64	13	3	0	82.6	14.4	3.3	92
Gynaecology	9	56	22	4	1	70.7	23.9	5.4	92
Gynae-oncology	10	38	22	1	1	66.7	30.6	2.8	72
Infertility	7	18	40	14	5	30.9	49.4	23.5	81
Psychiatry	4	33	44	8	3	40.2	47.8	12.0	92
Child psychiatry	7	43	25	4	1	62.5	31.3	6.3	80
Psychogeriatrics	3	35	35	10	4	43.7	43.8	16.1	87
Psychosexual counselling	1	5	20	19	18	9.5	31.7	58.7	63
Drug & alcohol services	2	16	37	18	5	23.1	47.4	29.5	78
Clinical psychology	3	12	31	24	7	19.5	40.3	40.3	77
Pain clinic	1	2	15	16	24	5.2	25.9	69.0	58
HIV/AIDs	3	7	19	7	1	27.0	51.4	21.6	37
Terminal care - hospice	22	32	27	4	3	61.4	30.7	8.0	88
Terminal care - hospital	2	22	33	16	9	29.3	40.2	30.5	82

Ratings: 1 = excellent; 2 = good; 3 = adequate; 4 = poor; 5 = very poor; 6 = insufficient evidence to rate.

Table 4 Quality Ratings Given by General Practitioners for Hospital Specialties (out of Sunderland)

Specialty/Service	Frequency of rating in each quality category					% of GPs giving each rating			No of GPs giving a rating of 1-5
	1	2	3	4	5	1&2	3	4&5	
General medicine	4	3	0	1	0	87.5	0	12.5	8
Chest medicine	2	4	0	0	0	100.0	0	0	6
Cardiology	13	5	0	0	0	100.0	0	0	18
Neurology	4	5	2	1	0	75.0	16.7	8.3	12
Gastroenterology	1	4	1	0	0	83.3	16.7	0	6
Diabetes	1	4	1	0	0	83.3	16.7	0	6
Oncology/radiotherapy	3	2	7	3	0	33.3	46.7	20.0	15
Haematology	3	3	0	0	0	100.0	0	0	6
Renal medicine	2	3	2	0	0	71.4	28.6	0	7
Genito-urinary medicine	2	4	1	0	0	85.7	14.3	0	7
Dermatology	1	3	1	0	0	80.0	20.0	0	5
Rheumatology	1	1	4	0	0	33.3	66.7	0	6
Younger disabled	0	2	0	2	1	40.0	0	60.0	5
Paediatrics	4	1	2	0	0	71.4	28.6	0	7
Geriatric services	1	0	1	1	1	25.0	25.0	50.0	4
General surgery	2	4	0	0	0	100.0	0	0	6
Paediatric surgery	0	0	0	0	0	0	0	0	0
Cardiac surgery	9	12	2	2	1	80.8	7.7	11.5	26
Urology	4	2	1	0	0	85.7	14.3	0	7
Ophthalmology	1	2	1	0	1	60.0	20.0	20.0	5
ENT	1	1	2	1	0	40.0	40.0	20.0	5
Oral/maxillofacial surgery	2	3	0	0	0	100.0	0	0	5
Plastic surgery	2	4	1	0	0	85.7	14.3	0	7
Orthopaedics	1	1	4	0	1	28.4	57.1	14.3	7
A&E	1	5	0	0	0	100.0	0	0	6
Obstetrics	1	3	1	0	0	80.0	20.0	0	5
Gynaecology	1	3	0	0	1	80.0	0	20.0	5
Gynae-oncology	3	5	1	0	0	88.9	11.1	0	9
Infertility	0	6	2	0	0	75.0	25.0	0	8
Psychiatry	0	4	3	0	0	57.1	42.9	0	7
Child psychiatry	2	3	0	0	0	100.0	0	0	5
Psychogeriatrics	0	3	2	0	0	60.0	40.0	0	5
Psychosexual counselling	0	0	4	0	0	0	100	0	4
Drug & alcohol services	0	1	3	0	5	11.1	33.3	55.6	9
Clinical psychology	1	1	1	1	0	50.0	25.0	25.0	4
Pain clinic	0	8	3	2	0	61.5	23.1	15.4	13
Genetics	6	10	0	0	0	100.0	0	0	16
HIV/AIDs	0	4	0	1	0	80.0	0	20.0	5
Terminal care - hospice	1	3	2	0	0	66.7	33.3	0	6
Terminal care - hospital	0	3	0	3	0	50.0	0	50.0	6

Ratings: 1 = excellent; 2 = good; 3 = adequate; 4 = poor; 5 = very poor; 6 = insufficient evidence to rate.

Table 5 Quality Index Values for Hospital Services (Sunderland)

<u>Rank</u>	<u>Hospital Specialty/Service</u>	<u>Standardised Quality Index</u>
1	Haematology	0.658
2	Oral maxillo surgery	0.651
3	Paediatrics	0.627
4	Obstetrics	0.616
5	Chest medicine	0.609
6	Renal medicine	0.601
7	Geriatrics	0.598
8	General surgery	0.594
9	Genito-urinary medicine	0.593
9	Paediatric surgery	0.593
11	Gynaecology	0.591
12	Gynaecology	0.582
13	Cardiology	0.574
14	Terminal care/hospice	0.572
15	Child psychiatry	0.569
16	Plastic surgery	0.559
17	Diabetes	0.542
18	General medicine	0.540
19	A+E	0.535
20	Rheumatology	0.520
21	Psychiatry	0.516
22	Neurology	0.515
23	Dermatology	0.514
24	Urology	0.514
25	Infertility	0.513
26	HIV/AIDS	0.505
26	Psychogeriatrics	0.505
28	Oncology radiotherapy	0.502
29	ENT	0.477
30	Drug and alcohol	0.463
31	Terminal care/hospital	0.459
32	Ophthalmology	0.458
33	Gastroenterology	0.456
34	Clinical psychology	0.450
35	Younger Disabled	0.446
36	Orthopaedics	0.401
37	Psychosexual counselling	0.386
38	Pain clinic	0.357

Derivation of the Standardised Quality Index from the Quality Ratings is given in Appendix 2.

Note on Reading the Tables in Sections 4.2.1 to 4.2.4

Information for each group of services is presented in 2 or 3 tables depending upon whether services are available only in Sunderland (2 tables) or also available out of Sunderland (3 tables). The first one or two tables lists the number of GPs who rated each specialty in each of the five quality categories. These frequencies are also shown as percentages, with categories 1 and 2 (excellent/good) and 4 and 5 (poor/very poor) being collapsed. The total number of GPs who rated the service is given in the final column. The second or third table in each section lists the standardised quality index value for each service, together with the rank order of each service within this group. Only services available in Sunderland have been listed together for the quality index.

Comments Made by GPs About Hospital Services

These specific comments are listed in Appendix 4 and relate to the comments made in Section 1 (b). Fifty nine comments were made about 18 specialties/services, together with some comments on organisational matters.

Eight specific comments were made about orthopaedics, mainly relating to the long waiting list for this specialty. Seven specific comments about ophthalmology were also concerned with waiting lists, although one GP commented that things were "improving". Termination of pregnancy received seven comments, all related to the general quality of the service which was seen to be poor. The

five comments about the pain clinic indicated that GPs were unsure whether or not the service existed.

Clinical psychology appeared to have a problem with waiting times and with psychologists being overloaded (4 comments). Gastroenterology appeared to suffer from staffing problems (4 comments), and 2 GPs wanted open access endoscopy. Both dermatology and ENT had problems with waiting lists (2 comments each).

Services each mentioned by one GP were physiotherapy (long waiting time), paediatrics (poor service in some areas); HIV/AIDS and drug and alcohol services (confusion over whether they existed); hospital terminal care (poor access); psychogeriatrics (problem with domiciliary visits); general surgery (some consultants unhelpful), and vasectomy (poor service).

General factors mentioned were the long waiting times (11 mentions in addition to specific mentions above) and factors related to communication, organisation and lack of information were also mentioned.

4.2.2 Ancillary Services

Table 6 shows the ratings for 9 ancillary services in Sunderland.

Physiotherapy was highly rated with 40% of GPs giving ratings of 1 or 2. Dietetics also did well (44% rating 1 or 2). Services rated comparatively poorly

were speech therapy (35% rating 4 or 5) and chiropody (31% rating 4 or 5).

The quality index ratings are set out in Table 7. All of the scores fell within the narrow band between 45% and 55%, with none scoring outstandingly well, or badly.

Comments Made by GPs About Ancillary Services

The comments summarised here are listed in Appendix 4 and are taken from Section 1 (b) of the questionnaire.

Most of the comments (13) related to physiotherapy. Problems centred around long waiting lists, poor access and lack of a domicillary service. Chiropody received five comments, about the poor quality of the service, with overworked staff, long waiting times and lack of information. Other services mentioned were audiology (long waits), dietetics (improved recently), speech therapy (never needed), CPN (poor communication) and equipment store (poor service). General comments were concerned with lack of information about services, long waiting lists and lack of staff.

4.2.3 Hospital Diagnostic Services

Table 8 lists the ratings for 8 diagnostic services in and out of Sunderland. Most GPs had chosen to rate these services in Sunderland only.

All of the standard diagnostic services were very highly rated - haematology, biochemistry, microbiology and histopathology, all receiving no ratings in categories 4 and 5 (poor and very poor). A service under this heading which did less well was CT scanning (29% rating 4 or 5).

The Quality Index ratings for these services are set out in Table 9. Haematology, biochemistry, histopathology and microbiology all received high quality index ratings and, together with radiology, were all above 60%. CT scanning scored lowest of the diagnostic services but all services, including CT, attained a Quality Index of over 50%.

Comments Made by GPs About Diagnostic Services

The detailed list of comments can be found in Appendix 4. They related to responses received in Section 1(b) of the questionnaire. Services specifically mentioned were ultra sound (4 comments) and were about long waiting times and lack of access for obstetrics. The radiology service was variable and there were problems with appointments and reporting of results. Direct access was requested (4 comments).

Other comments concerned pregnancy testing, endoscopy, cervical cytology and pharmacy. General comments centred around lack of information, slow return of results, long waiting times for out-patient appointments and communication problems with GPs.

Table 6 Quality Ratings Given by General Practitioners for Hospital Ancillary Services (Sunderland)

Service	Frequency of rating in each quality category					% of GPs giving each category			No. of GPs giving a rating of 1-5
	1	2	3	4	5	1&2	3	4&5	
Physiotherapy	8	38	28	18	0	50.0	30.4	19.6	92
Occupational therapy	3	18	37	13	2	28.8	50.7	20.5	73
Dietetics	5	35	37	12	1	44.4	41.1	14.4	90
Chiropody	4	18	37	22	5	25.6	43.0	31.4	86
Speech therapy	0	16	35	19	8	20.5	44.9	34.6	78
Clinical liaison nurses	7	22	30	7	4	41.4	42.9	15.7	70
Audiology	0	27	50	7	0	32.1	59.5	8.3	84
Appliance - hospital	0	10	41	12	2	15.4	63.1	21.5	65
Appliance - joint equip	0	10	33	11	2	17.9	58.9	23.2	56

Ratings: 1 = excellent; 2 = good; 3 = adequate; 4 = poor; 5 = very poor; 6 = insufficient evidence to rate.

Table 7 Quality Index Values for Ancillary Services

Rank	Ancillary Service	Standardised Quality Index
1	Physiotherapy	0.544
2	Audiology	0.543
3	Dietetrics	0.542
4	Clinical liaison nurses	0.526
5	Occupational therapy	0.507
6	Appliances/hospital	0.485
6	Chiropody	0.485
8	Appliances/joint equipment	0.484
9	Speech Therapy	0.453

Derivation of the Standardised Quality Index from the Quality Ratings is given in Appendix 2.

Table 8 **Quality Ratings Given by General Practitioners for Hospital Diagnostic Services**

Service	Frequency of rating in each quality category					% of GPs giving each category			No. of GPs giving a rating of 1-5
	1	2	3	4	5	1&2	3	4&5	1-5
(a) <u>Sunderland</u>									
Microbiology	13	68	11	0	0	88.0	12.0	0	92
Histopathology	19	57	15	0	0	83.5	16.5	0	91
Biochemistry	24	58	10	0	0	89.1	10.9	0	92
Haematology	28	57	7	0	0	92.4	7.6	0	92
Radiology	17	50	22	2	0	73.6	24.2	2.2	91
CT scanning	7	16	19	14	3	39.0	32.2	28.8	59
Ultrasound	9	30	34	12	1	45.3	39.5	15.1	86
Medical physics	6	19	18	6	0	51.0	36.7	12.2	49
(b) <u>Out of Sunderland</u>									
Microbiology	2	2	0	0	0	100	0	0	4
Histopathology	2	3	0	0	0	100	0	0	5
Biochemistry	2	2	0	0	0	100	0	0	4
Haematology	2	2	0	0	0	100	0	0	4
Radiology	2	2	0	0	0	100	0	0	4
CT scanning	2	2	0	0	0	100	0	0	4
Ultrasound	3	1	1	0	0	80	20	0	5
Medical physics	3	1	0	0	0	100	0	0	4

Ratings: 1 = excellent; 2 = good; 3 = adequate; 4 = poor; 5 = very poor; 6 = insufficient evidence to rate.

Table 9 **Quality Index Values for Diagnostic Services (Sunderland)**

<u>Rank</u>	<u>Diagnostic Service</u>	<u>Standardised Quality Index</u>
1	Haematology	0.688
2	Biochemistry	0.669
3	Histopathology	0.644
4	Microbiology	0.640
5	Radiology	0.628
6	Medical Physics	0.560
7	Ultra sound	0.544
8	CT scanning	0.509

Derivation of the Standardised Quality Index from the Quality Ratings is given in Appendix 2.

4.2.4 Community Services

The results in this section relate to Section II (b) in the questionnaire (Appendix 1). Table 10 shows ratings for 12 community services. Services rated particularly highly by GPs were community midwifery (78% rated 1 and 2), community terminal care (69% rated 1 and 2), and district nursing (64% rated 1 and 2).

Services which were poorly rated were incontinence services (41% rated 4 and 5), disability and rehabilitation (38% rated 4 and 5) and health promotion (36% rated 4 and 5).

The Quality Index values for community services are given in Table 11. Community midwifery scored particularly well at 63.5%. Terminal care in the community and district nursing also scored well (59.8% and 59.7% respectively). The incontinence service received a score of only 43.7%.

Comments Made by GPs About Community Services

Comments were made by GPs in Section II, (b) of the questionnaire and are listed in Appendix 4. They consisted of comments about understaffing, lack of coordination and communication problems.

4.2.5 Ranked Quality Index Values

Table 12 shows all services ranked by their quality index, and divided into four quartile bands. Diagnostic haematology attracted the highest score which was significantly higher than the others. The pain clinic received the lowest score, only just over half that of diagnostic haematology. It was, however rated by only 58 general practitioners.

Table 10 Quality Ratings Given by General Practitioners for Community Services in Sunderland

Service	Frequency of rating in each quality category					% of GPs giving each category			No. of GPs giving a rating of 1-5
	1	2	3	4	5	1&2	3	4&5	
Mental handicap	3	16	35	13	4	26.8	49.3	23.9	71
Terminal care - community	19	43	20	7	1	68.9	22.2	8.9	90
Health visiting	8	39	31	11	3	51.1	33.7	15.2	92
District nursing	22	37	22	11	0	64.1	23.9	12.0	92
Community midwifery	24	46	18	1	1	78.3	19.6	2.2	92
Community child health	4	32	45	7	1	40.4	50.6	9.0	89
Family planning	3	22	43	18	1	28.7	49.4	21.8	87
Disability & rehabilitation	0	12	31	23	3	17.4	44.9	37.7	69
CPN services	13	31	32	13	2	48.4	35.2	16.5	91
Alcohol and drug abuse	5	24	35	20	2	33.7	40.7	25.6	86
Health promotion	3	12	36	25	4	18.8	45.0	36.3	80
Incontinence	1	11	31	20	10	16.4	42.5	41.1	73

Ratings: 1 = excellent; 2 = good; 3 = adequate; 4 = poor; 5 = very poor; 6 = insufficient evidence to rate.

Table 11 Quality Index Values for Community Services

<u>Rank</u>	<u>Community Service</u>	<u>Standardised Quality Index</u>
1	Community midwifery	0.635
2	Terminal care/community	0.598
3	District nursing	0.597
4	CPN services	0.553
5	Community child health	0.547
6	Health visiting	0.542
7	Family planning	0.515
7	Alcohol and drug abuse	0.515
9	Mental handicap	0.493
10	Health promotion	0.474
11	Disability and rehabilitation	0.467
12	Incontinence	0.437

Derivation of the Standardised Quality Index from the Quality Ratings is given in Appendix 2.

Table 12 All Services Ranked by Quality Index Score Divided into Four Quantiles

Rank	Service	Standardised Quality Index
1	Haematology (diagnostic)	0.687
2	Biochemistry	0.667
3	Haematology (hospital)	0.662
4	Oralmaxillo surgery	0.656
5	Histopathology	0.640
6	Microbiology	0.636
7	Paediatrics	0.632
8	Community midwifery	0.626
9	Radiology	0.625
10	Obstetrics	0.621
11	Chest medicine	0.614
12	Renal medicine	0.606
13	Geriatrics	0.600
14	General surgery	0.599
15	Genitourinary medicine	0.595
16	Paediatric Surgery	0.594
17	Gynaecology	0.593
18	Terminal care/community	0.589
19	District nursing	0.587
20	Gynaecology	0.584
21	Cardiology	0.577
22	Terminal care/hospice	0.574
23	Child psychiatry	0.571
24	Plastic surgery	0.565
25	Medical physics	0.554
26	General medicine	0.546
26	Ultrasound	0.546
28	Diabetes	0.545
29	CPN services	0.544
30	Community child health	0.538
31	A+E	0.537
32	Dietetics	0.536
33	Health visiting	0.534
34	Physiotherapy	0.532

Continued ...

Table 12 **Continued**

<u>Rank</u>	<u>Service</u>	<u>Standardised Quality Index</u>
35	Audiology	0.530
36	Rheumatology	0.526
37	Clinical liaison nurses	0.520
38	Psychiatry	0.519
39	Neurology	0.518
40	Dermatology	0.517
40	Urology	0.517
42	Infertility	0.516
43	CT scanning	0.509
44	HIV/AIDS	0.508
44	Psychogeriatrics	0.508
46	Family planning	0.507
46	Alcohol and drug abuse	0.507
48	Oncology radiotherapy	0.506
49	Occupational therapy	0.500
50	Mental handicap	0.485
51	ENT	0.480
52	Appliances/hospital	0.478
52	Chiropody	0.478
54	Appliances/joint equipment	0.477
55	Drug and alcohol/hospital	0.467
56	Health promotion	0.466
57	Terminal care/hospital	0.462
57	Ophthalmology	0.462
59	Gastroenterology	0.460
60	Disability and rehabilitation	0.456
61	Clinical psychology	0.454
62	Younger disabled	0.450
63	Speech therapy	0.446
64	Incontinence	0.429
65	Orthopaedics	0.406
66	Psychosexual counselling	0.390
67	Pain clinic	0.362

4.3 Hospital Services Chosen as Most in Need of Improvement

The results in this section relate to Section I (c) in the questionnaire. Table 13 shows these choices. Specialties most frequently chosen correlate well with these services which received the poorest quality ratings, with one or two exceptions.

Orthopaedics was the leading choice for improvement. Sixty-seven (73%) general practitioners chose this service, with 45 making it their first choice.

Ophthalmology was chosen by 42 (46%) general practitioners, with 8 making it their first choice. However 23 made it their second choice. Many of these GPs made orthopaedics their first choice, closely followed by ophthalmology.

Other services chosen by at least 10 general practitioners were:

ENT, chosen by 26 (28%) general practitioners, with 2 first choices;

Gastroenterology, chosen by 17 (19%) general practitioners, with 5 first choices.

It is interesting to note that all of these services received Quality Index values below 50%. A further area of service provision which received a similar score, but was not cited by a single GP as needing improvement was terminal care/hospital which has an identical score to ophthalmology. This finding may

need further discussion with those directly concerned with this aspect of care.

Termination of Pregnancy, chosen by 10 (11%) general practitioners, with one first choice.

Detailed quality criteria ratings for those hospital services chosen as priorities for improvement are shown in Tables 14-18 and reported below. General practitioners rated the 12 quality criteria set out in the questionnaire, and added few additional criteria. The rating scale was the same as that in the first part of the questionnaire.

4.4 Individual Hospital Services Chosen as Most in Need of Improvement

4.4.1 Orthopaedics

Orthopaedics was chosen by 67 (73%) general practitioners, with 45 making it their first choice. (Table 13).

From Table 14, it can be seen that a large number of adequate or good ratings were achieved by quality of nursing care, and care provided by individual consultants. Also highly rated were the standard of physical accommodation and travel time for patients.

Table 13 General Practitioners' Choice of Hospital Services Most in Need of Improvement

Specialty/Service	1st Choice	2nd Choice	3rd Choice	Total*	% GPs choosing** each service (n=92)
Orthopaedics	45	16	6	67	73
Ophthalmology	8	23	11	42	46
ENT	2	10	14	26	28
Gastroenterology	5	9	3	17	19
Termination of pregnancy	1	2	7	10	11
Clinical psychology	0	4	4	8	9
Psychiatry	3	1	3	7	8
General medicine	4	1	1	6	7
Oncology/radiotherapy	3	2	1	6	7
Urology	1	0	4	5	5
Rheumatology OP	0	4	1	5	5
Neurology	0	1	4	5	5
Geriatrics	1	2	0	3	3
Physiotherapy	1	2	0	3	3
Accident and emergency	1	0	2	3	3
All services	1	1	1	3	3
Switchboard	2	0	0	2	2
Cardiology	2	0	0	2	2
Psychogeriatrics	2	0	0	2	2
Paediatric in & outpatients	1	0	0	1	1
Ancillary services	1	0	0	1	1
Outpatient appointments	1	0	0	1	1
Dermatology	1	0	0	1	1
Orthopaedic outpatients	0	1	0	1	1
Paediatric neurology	0	1	0	1	1
Chiropody	0	1	0	1	1
Diabetology	0	1	0	1	1
Younger disabled	0	0	1	1	1
Open access physiotherapy	0	0	1	1	1
General surgery	0	0	1	1	1
Pharmacy	0	0	1	1	1
Ophthalmology & ENT	0	0	1	1	1
Alcohol and drug abuse	0	0	1	1	1

* Total number of 1st, 2nd and 3rd choice

** % is of total 92 GPs who responded to survey

A more mixed response was given to ease of arranging emergency admission, ease of arranging urgent out patient appointments and consultant involvement with out-patient care.

Criteria which stand out as scoring poorly were waiting time for out-patient appointments, where 61 out of 64 respondents giving a 1-5 rating, scored this factor as poor or very poor. Waiting time for in-patient elective admission was similarly poorly rated with 58 out of 62 GPs giving a score of poor or very poor.

Also scoring poorly, though slightly better than the above two, were communication with GP on discharge and organisation of outpatient and inpatient discharge arrangements.

GPs found standard of physical accommodation and quality of nursing care particularly difficult to rate. 24% and 19% gave scores of 6 (insufficient evidence) for these, respectively.

Eighteen specific comments were made about orthopaedics in this section, centering around long waiting times and communication problems. Long waiting times were specifically mentioned by five GPs. There was also evidence of lack of prioritisation of patients eg for those who could not work, those requiring emergency treatment, and it was also noted that those referred to the department were not always sent to the consultant with the shortest waiting list.

Table 14 **Quality Criteria Ratings for Orthopaedics**

Quality Criteria	Frequency of rating in each quality category						% GPs rating 1-5
	1	2	3	4	5	6	
Waiting time for 1st out-patient appointment	1	1	1	7	54	3	96
Waiting time for in-patient elective admission	0	0	4	24	34	2	93
Travel time for patient	8	19	23	0	0	7	75
Ease of arranging emergency admissions	3	11	19	18	11	1	93
Ease of arranging urgent out-patient appointments	1	4	13	31	14	0	94
Standard of physical accommodation	2	16	21	2	2	16	64
Quality of nursing care	3	25	18	0	1	13	70
Quality of care provided by individual consultants	4	25	24	6	1	2	90
Communication with GP on discharge	0	4	12	25	21	0	93
Organisation of in-patient discharge arrangements	0	3	24	19	7	7	79
Organisation of out-patient discharge arrangements	1	4	20	24	11	2	90
Consultant involvement in out-patient care	1	9	33	10	3	4	84
Total numbers of ratings in each category (all criteria)	24	120	211	165	153	54	

Ratings: 1 = excellent; 2 = good; 3 = adequate; 4 = poor; 5 = very poor; 6 = insufficient evidence.

Number of general practitioners rating service = 67.

Communication with GPs was regarded as poor by 54 GPs, both generally and by letter, although two commented that this had improved recently. Two GPs commented on the poor communication between consultants and patients. Specific comments related to the need for the trauma service to be improved, and that a specialist knee clinic was required. However, one GP said that the availability of a consultant to give advice to GPs was "adequate".

4.4.2 Ophthalmology

Ophthalmology was chosen by 42 (46%) general practitioners, of whom 8 made it their first choice (Table 13).

The service was rated good or adequate on the quality of nursing care and consultant care, on the standard of accommodation, travel time for the patient and ease of arranging emergency admissions (Table 15).

There was a more mixed response to ease of arranging urgent out-patient appointments, communication with the GP on discharge and organisation of out-patient discharges.

The worst ratings were for waiting time for first out-patient appointment and waiting time for inpatient elective admissions. No general practitioners rated these criteria as excellent or good and 86% and 76%, respectively, rated them poor or very poor.

Criteria which GPs found difficult to rate were the standard of physical accommodation and the quality of nursing care. These had, respectively, 28% and 19% of general practitioners giving a rating of 6.

Eight specific comments about ophthalmology were made in this section. Two were about lack of communication, although another GP said that this had improved recently. There was one comment about long waiting lists and one GP thought that consultants were not interested in common conditions. It was also noted that patients referred to accident and emergency for urgent treatment were followed up in casualty by different doctors who did not communicate with GPs. However, the availability of a consultant to give advice to GPs was described as "adequate". One GP commented that the glaucoma service was "poor".

4.4.3 ENT

ENT was chosen by 26 (28%) general practitioners, of whom 2 made it their first choice (Table 13).

From Table 16, it can be seen that good or adequate rates were achieved for the following criteria:- travel time for patient, standard of physical accommodation, quality of nursing care, quality of care provided by individual consultants and consultant involvement in out-patient care (Table 16).

Table 15 **Quality Criteria Ratings for Ophthalmology**

Quality Criteria	Frequency of rating in each quality category						% GPs rating 1-5
	1	2	3	4	5	6	
Waiting time for 1st out-patient appointment	0	0	2	8	28	0	91
Waiting time for in-patient elective admission	0	0	5	15	17	1	88
Travel time for patient	7	9	16	3	1	2	86
Ease of arranging emergency admissions	3	15	10	4	1	5	79
Ease of arranging urgent out-patient appointments	2	11	6	11	7	0	88
Standard of physical accommodation	0	10	13	2	1	9	62
Quality of nursing care	5	11	12	0	2	7	71
Quality of care provided by individual consultants	7	21	5	1	1	3	83
Communication with GP on discharge	2	8	16	6	5	1	88
Organisation of in-patient discharge arrangements	1	6	16	4	5	5	76
Organisation of out-patient discharge arrangements	2	6	11	8	6	4	79
Consultant involvement in out-patient care	3	11	12	6	1	4	79
Total numbers of ratings in each category (all criteria)	32	108	124	68	75	41	

Ratings: 1 = excellent; 2 = good; 3 = adequate; 4 = poor; 5 = very poor; 6 = insufficient evidence.

Number of general practitioners rating service = 42.

Table 16 **Quality Criteria Ratings for ENT**

Quality Criteria	Frequency of rating in each quality category						% GPs rating 1-5
	1	2	3	4	5	6	
Waiting time for 1st out-patient appointment	0	0	0	12	14	0	100
Waiting time for in-patient elective admission	0	1	1	16	7	1	96
Travel time for patient	2	10	12	0	0	2	92
Ease of arranging emergency admissions	0	4	16	3	0	3	89
Ease of arranging urgent out-patient appointments	0	2	12	10	2	0	92
Standard of physical accommodation	1	5	13	0	0	0	73
Quality of nursing care	1	13	7	0	0	2	81
Quality of care provided by individual consultants	4	17	3	0	0	1	92
Communication with GP on discharge	0	7	14	3	1	0	96
Organisation of in-patient discharge arrangements	1	5	13	1	1	4	81
Organisation of out-patient discharge arrangements	1	3	14	2	1	2	81
Consultant involvement in out-patient care	2	10	10	1	0	2	89
Total numbers of ratings in each category (all criteria)	12	77	119	48	26	17	

Ratings: 1 = excellent; 2 = good; 3 = adequate; 4 = poor; 5 = very poor; 6 = insufficient evidence.

Number of general practitioners rating service = 26.

More mixed responses were achieved for the ease of arranging emergency admissions and urgent out-patient appointments, communication with the general practitioner about discharge and the organisation of out-patient discharge arrangements.

Criteria which stood out as scoring poorly were waiting time for out patient appointments which was rated either poor or very poor by all respondents choosing ENT, and waiting time for inpatient elective admissions.

Only two comments were given by GPs in this section. One commented on the long waiting lists and the other that more consultants were needed.

4.4.4 Gastroenterology

Gastroenterology was chosen by 17 (19%) general practitioners as a service needing improvement; five made it their first choice.

This service was well rated for travel time for patients, standard of physical accommodation, quality of nursing care, quality of care provided by individual consultants and organisation of inpatient discharge arrangements. (Table 17).

Criteria giving most cause for concern were waiting time for first out-patient appointments, and waiting time for in-patient elective admissions. Again, standard of physical accommodation and quality of nursing care were found to be difficult to rate because of insufficient evidence.

Table 17 **Quality Criteria Ratings for Gastroenterology**

Quality Criteria	Frequency of rating in each quality category						% GPs rating
	1	2	3	4	5	6	1-5
Waiting time for 1st out-patient appointment	0	0	4	5	7	0	94
Waiting time for in-patient elective admission	0	0	7	7	2	0	94
Travel time for patient	4	5	5	0	0	0	94
Ease of arranging emergency admissions	1	7	4	4	0	0	94
Ease of arranging urgent out-patient appointments	0	4	4	7	1	0	94
Standard of physical accommodation	1	5	4	0	0	4	59
Quality of nursing care	2	8	2	1	0	3	76
Quality of care provided by individual consultants	2	4	8	0	1	1	88
Communication with GP on discharge	2	2	7	5	0	0	94
Organisation of in-patient discharge arrangements	1	3	9	1	0	2	88
Organisation of out-patient discharge arrangements	1	3	8	3	0	1	88
Consultant involvement in out-patient care	2	5	6	1	1	1	88
Total numbers of ratings in each category (all criteria)	16	46	68	34	12	12	

Ratings: 1 = excellent; 2 = good; 3 = adequate; 4 = poor; 5 = very poor; 6 = insufficient evidence.

Number of general practitioners rating service = 17

Eight comments about gastroenterology were given by GPs. These centred around the shortage of staff. One noted that there were too few consultants, continuity of care was considered to be lacking by one GP, and another commented that standards of care had deteriorated recently. Long waits for outpatient appointments were noted by two GPs and a third thought that the problem could be partly solved by discharging out-patients so that urgent appointments would be easier to fit in. The lack of open access was pointed out by two GPs and another thought that the service would need expanding to meet the increase in long term follow up for pre-malignant conditions.

4.4.5 Termination of Pregnancy

Termination of pregnancy was not a listed service on the questionnaire, but was, nevertheless, chosen by 10 (11%) general practitioners as a service needing improvement. It was first choice for one general practitioner.

In this section, the percentages are based on quite small numbers, since not all the 10 general practitioners choosing this service rated every criterion.

Most of the criteria scored fairly well and most received some excellent or good ratings, with the exception of ease of arranging emergency admissions which received no good or excellent ratings. Waiting time for first out-patient appointment also appeared to be a problem area with 5 general practitioners rating it very poor.

Table 18 Quality Criteria Ratings for Termination of Pregnancy

Quality Criteria	Frequency of rating in each quality category						% GPs rating 1-5
	1	2	3	4	5	6	
Waiting time for 1st out-patient appointment	1	0	1	2	5	0	90
Waiting time for in-patient elective admission	2	3	1	1	0	1	70
Travel time for patient	1	3	3	0	0	2	70
Ease of arranging emergency admissions	0	0	3	1	1	3	50
Ease of arranging urgent out-patient appointments	0	2	0	4	3	0	90
Standard of physical accommodation	1	2	1	0	1	4	50
Quality of nursing care	3	2	2	1	1	0	90
Quality of care provided by individual consultants	2	1	6	0	0	0	90
Communication with GP on discharge	2	1	5	1	0	0	90
Organisation of in-patient discharge arrangements	2	1	5	0	1	0	80
Organisation of out-patient discharge arrangements	2	3	3	0	0	1	80
Consultant involvement in out-patient care	2	4	1	1	0	1	
Total numbers of ratings in each category (all criteria)	18	22	31	11	12	12	

Ratings: 1 = excellent; 2 = good; 3 = adequate; 4 = poor; 5 = very poor;
6 = insufficient evidence.

Number of general practitioners rating service = 10

Ten GPs chose to make specific comments about the termination of pregnancy service. Two were concerned with the variation in quality of care by both nursing staff and consultants, and it was noted that referrals were passed from consultant to consultant, which may have contributed to the long waiting times. The appointment system was a problem and patients were being forced into the private sector. Rules for referral were claimed to have been changed without negotiation or consultation with GPs, and as a result, one GP suggested that a statement of circumstances in which termination of pregnancy would not be performed, would be useful to reduce referrals.

4.4.6 Other Hospital Services Chosen

Table 13 also shows the other hospital services chosen by general practitioners with the numbers making them their first, second or third choice. Clearly, 10 general practitioners selecting a service is an arbitrary criterion and the other services which have also been chosen need consideration as well.

For completeness the comments received about other services chosen as in need of improvement, are listed below, with the number of times the comments were made, in brackets.

1. Clinical Psychology

1. Service overrun and needs more resources (1).
2. Poor appointment system (1).

3. Lack of staff (2).
4. Not receptive to referrals (1).

2. Psychiatry

1. Zoning disliked (1).

3. Oncology/Radiotherapy

1. Service overwhelmed by number of patients (1).
2. Waiting lists too long (3).
3. Support services e.g. counselling, need improving (1).
4. OP clinic too rushed and busy (1).

4. Urology

1. Good service overwhelmed by number of patients (1).
2. Waiting lists too long (1).
3. Needs updating/new technology (1).

5. Rheumatology

1. Poor communication by consultants with patients (1).

6. Neurology

1. Poor communication with GPs (1).

7. Physiotherapy/Occupational Therapy

1. Poor domiciliary service (1).
2. Criteria for treatment very poor (1).

8. Accident and Emergency

1. Change of attitude needed by staff (1).
2. Poor communication with patients (2).
3. Casualty used for urgent cases to ease waiting lists (1).

9. Switchboard

1. In complete confusion (1).

10. Coronary Care

1. Should take all patients regardless of age (2).

11. Paediatric Neurology

1. Does it exist in Sunderland? (1).

12. Pharmacy

1. Overhaul of prescribing policies needed (2).

13. Respite Care

1. Not enough (1).

4.4.7 Summary

Most GPs in Sunderland appear to think the quality of most services is reasonable or good.

The choice of orthopaedics and ophthalmology by 73% and 46% of general practitioners, respectively, was the overwhelming response in this section. These services should continue to have a high priority for discussion between general practitioners, consultants and managers to work out ways of bringing about improvements. But other services which appear to have problems should not be forgotten.

In all five services chosen for more detailed analysis the main difficulties appeared to be associated with waiting times for first out-patient appointments and waiting time for in-patient elective admissions. Quality of nursing and consultant care was not a problem for any of these specialties, and in fact these criteria were consistently rated very highly for virtually all specialties.

4.5 Community Services Chosen as Most in Need of Improvement

This section is based on responses to Section II (c) in the questionnaire. Table 19 shows these choices. Far fewer general practitioners chose to comment on a community service than on a hospital service. This might have been because there were fewer community services causing major concerns or might possibly

have been related to the fact that community services were in the second half of a lengthy questionnaire following the section on hospital services.

Five community services were chosen by more than ten general practitioners and detailed comments follow.

Health Visiting was chosen by 22 general practitioners, representing 24% of the 92 GPs who completed the questionnaire. It was the first choice of 13 (59%) of the 22 GPs.

District Nursing was chosen by 21 GPs, 23% of the total sample, 11 (52%) of whom gave it their first choice.

Disability and Rehabilitation Services were chosen by 17 (19%) GPs, of whom 6 (35%) gave it their first choice.

Community Psychiatric Nursing was chosen by 16 (17%) GPs with 9 (56%) first choices.

Alcohol and Drug Abuse Services were chosen by 13 (14%) GPs with 4 (31%) first choices.

Detailed quality criteria ratings for these community services are set out in Tables 20-24.

Table 19 **General Practitioners' Choice of Community Services Most in Need of Improvement**

Service	1st Choice	2nd Choice	3rd Choice	Total*	% GPs** choosing each service (n=92)
Health visiting	13	4	5	22	24
District nursing	11	8	2	21	23
Disability & rehabilitation	6	7	4	17	19
Community psychiatry	9	5	2	16	17
Alcohol & drug abuse	4	3	6	13	14
Mental handicap	5	0	2	7	8
Chiropody	3	3	1	7	8
Child health	3	2	1	6	7
Terminal care	2	1	1	4	4
Social services	2	2	0	4	4
Incontinence	0	4	0	4	4
Family planning	1	1	1	3	3
All services	2	0	0	2	2
Psychology	1	1	0	2	2
Physiotherapy	1	1	0	2	2
Domiciliary chiropody	1	0	1	2	2
Domiciliary physiotherapy	1	0	1	2	2
Speech therapy	0	2	0	2	2
CAT and alcohol services	0	1	1	2	2
Clinical psychology	1	0	0	1	1
Nursing managers	1	0	0	1	1
Midwifery	1	0	0	1	1
Home helps	1	0	0	1	1
Appliances	0	1	0	1	1
Social services part. III accommodation	0	1	0	1	1
Home help, bath nurses etc	0	1	1	2	1
Younger adults with learning difficulties	0	1	0	1	1
Psychogeriatrics	0	0	1	1	1
Health promotion	0	0	1	1	1

* Total number of 1st, 2nd and 3rd choices

** % is of total 92 GPs who responded to survey

4.6 Individual Community Services Chosen as Most in Need of Improvement

4.6.1 Health Visiting

Health visiting was the choice of 22 (24%) general practitioners (Table 19). For 13, it was their first choice.

Most of the quality criteria were rated comparatively highly by general practitioners, with time spent with each patient being particularly well-rated. Quality of care provided by individual staff received mixed ratings. The biggest problem related to integration within the primary health care team.

There were 33 comments specifically about the health visiting service. The major concern was that the services was exclusively orientated to the under fives (17 comments) to the exclusion of the elderly (4 comments). Staffing was a problem. Four GPs thought that more staff were needed and another indicated that frequent staff changes lead to lack of continuity. Yet another was concerned that health visitors were only available on a part time basis. There were problems with management and health visitors were thought to be reluctant to respond to change (2 comments) and unwilling to undertake practical procedures. However, one GP emphasised that they communicated well with patients.

In summary, the main impression appeared to be of an under resourced service, not integrated into the primary health care team, with unfocused management, and with not enough time to spend on the elderly as a client group.

Table 20 **Quality Criteria Ratings for Health Visiting**

Quality Criteria	Frequency of rating in each quality category						% GPs rating
	1	2	3	4	5	6	1-5
Waiting time for initial patient contact with service	0	6	11	3	0	0	91
Ease of communication with service by GPs	0	6	10	4	0	0	91
Ease of access to service for patients	1	2	11	5	1	0	91
Ease of arranging urgent care	1	2	12	5	0	0	91
Standard of physical accommodation	1	2	5	1	0	7	41
Quality of care provided by individual staff	3	7	6	1	3	0	91
Integration with others in primary health care team	2	3	4	9	2	0	91
Appropriate feedback from service to GP	1	4	5	4	0	0	64
Coordination with social services department	1	4	5	6	0	4	73
Supply of appliances where needed	1	2	4	6	1	3	64
Time spent with each patient	1	5	8	1	0	3	68
Total number of ratings in each category (all criteria)	12	43	81	45	7	17	

Ratings: 1 = excellent; 2 = good; 3 = adequate; 4 = poor; 5 = very poor; 6 = insufficient evidence.

Number of general practitioners rating service = 22.

4.6.2 District Nursing

District nursing was chosen by 21 (23%) general practitioners, with 11 giving it their first choice. The service was rated well on most criteria. However, integration with others in the primary health care team, appropriate feedback from service to GP and coordination with social services departments were rated less well, receiving 10 (48%), 7 (33%) and 9 (43%) poor or very poor ratings respectively. (Table 21).

There were 29 comments about the district nursing service. There was concern about increasing paperwork and workload (5 comments), coupled with decreasing morale (2 comments). Frequent staff changes (1 comment), insufficient numbers (2 comments) and poor staff quality (3 comments) were seen as problems. Ten GPs felt that the number of full time nurses employed was very poor. Another GP thought that cuts would lead to a deteriorating service, and two thought that line management should be through the GP rather than through community services. Other comments were that the wait for initial contact was too long (1), and the treatment room was poor at one location (2). However, two GPs emphasised that district nurses communicated well with patients.

In summary, the main impression appeared to be of an understaffed service, which was not integrated into the primary health care team, was poorly managed, and overwhelmed by paper work.

Table 21 **Quality Criteria Ratings for District Nursing**

Quality Criteria	Frequency of rating in each quality category						% GPs rating 1-5
	1	2	3	4	5	6	
Waiting time for initial patient contact with service	6	4	6	2	0	1	86
Ease of communication with service by GPs	4	7	5	4	1	0	100
Ease of access to service for patients	3	8	5	5	0	0	100
Ease of arranging urgent care	4	7	6	4	0	0	100
Standard of physical accommodation	0	2	7	1	0	9	48
Quality of care provided by individual staff	5	5	8	2	0	1	95
Integration with others in primary health care team	3	4	4	9	1	0	100
Appropriate feedback from service to GP	3	5	6	6	1	0	100
Coordination with social services department	2	3	3	7	2	4	81
Supply of appliances where needed	1	4	9	6	1	0	100
Time spent with each patient	0	6	6	5	1	2	86
Total number of ratings in each category (all criteria)	31	56	66	51	7	17	

Ratings: 1 = excellent; 2 = good; 3 = adequate; 4 = poor; 5 = very poor;
6 = insufficient evidence.

Number of general practitioners rating service = 21.

4.6.3 Disability and Rehabilitation

Disability and rehabilitation services were chosen by 17 (19%) general practitioners as a service in need of improvement. It received 6 first choices.

Quality of care provided by individual staff was well rated, receiving 6 (35%) "good" choices, followed by time spent with each patient receiving 3 (18%) "good" ratings. Other criteria were particularly poorly rated, receiving no excellent or good ratings. These were ease of communication with service by GPs, ease of access to service for patients, ease of arranging urgent care, integration with others in the primary health care team, appropriate feedback from service to GP, and coordination with social services department. Ease of communication with service by GPs seemed to be a particular problem, receiving 15 (88%) poor or very poor ratings. (Table 22).

Only one comment was made. It concerned the poor availability of appliances in acute cases.

Table 22 **Quality Criteria Ratings for Disability and Rehabilitation Services**

Quality Criteria	Frequency of rating in each quality category						% GPs rating 1-5
	1	2	3	4	5	6	
Waiting time for initial patient contact with service	0	1	3	10	1	1	88
Ease of communication with service by GPs	0	0	1	14	1	0	94
Ease of access to service for patients	0	0	3	11	2	0	94
Ease of arranging urgent care	0	0	2	11	2	1	88
Standard of physical accommodation	0	1	6	3	0	4	59
Quality of care provided by individual staff	0	6	3	3	0	3	71
Integration with others in primary health care team	0	0	3	11	1	1	88
Appropriate feedback from service to GP	0	0	2	14	0	0	94
Coordination with social services department	0	0	6	5	4	0	88
Supply of appliances where needed	0	1	7	4	2	1	82
Time spent with each patient	0	3	6	3	0	3	71
Total number of ratings in each category (all criteria)	0	12	45	90	13	14	

Ratings: 1 = excellent; 2 = good; 3 = adequate; 4 = poor; 5 = very poor;
6 = insufficient evidence.

Number of general practitioners rating service = 17.

4.6.4 Community Psychiatry

Community psychiatry was the choice of 16 (17%) general practitioners, with 9 giving it their first choice (Table 19).

This service was rated particularly well for quality of care provided by individual staff (Table 23). However there appeared to be problems with integrating with others in the primary care team, and appropriate feedback from service to GP. Other criteria receiving no excellent or good ratings were waiting time for initial patient contact with service, ease of communication with service by GPs, ease of arranging urgent care, and coordination with social services department.

Table 23 **Quality Criteria Ratings for Community Psychiatry**

Quality Criteria	Frequency of rating in each quality category						% GPs rating 1-5
	1	2	3	4	5	6	
Waiting time for initial patient contact with service	0	0	4	10	1	0	94
Ease of communication with service by GPs	0	0	6	5	4	0	94
Ease of access to service for patients	0	1	6	6	2	0	94
Ease of arranging urgent care	0	0	2	10	3	0	94
Standard of physical accommodation	0	0	7	1	0	6	50
Quality of care provided by individual staff	0	4	9	2	0	0	94
Integration with others in primary health care team	0	0	3	9	3	0	94
Appropriate feedback from service to GP	0	1	3	7	4	0	94
Coordination with social services department	0	0	2	7	1	4	63
Supply of appliances where needed	0	0	3	2	0	9	31
Time spent with each patient	0	2	5	5	1	1	81
Total number of ratings in each category (all criteria)	0	8	50	64	19	20	

Ratings: 1 = excellent; 2 = good; 3 = adequate; 4 = poor; 5 = very poor;
 6 = insufficient evidence.

Number of general practitioners rating service = 16.

4.6.5 Alcohol and Drug Abuse

Alcohol and drug abuse was the choice of 13 (14%) general practitioners. (Table 19). For 4 it was their first choice.

This service received mixed ratings for individual criteria, with ease of access to service for patients scoring particularly poorly. However, quality of care provided by individual staff was rated highly (Table 24).

The main concerns about this service were the difficulties in arranging urgent care and in the long wait for initial patient contact (6 comments). There was also poor ease of access for patients and poor communication with GPs (2), and concern whether resources were adequate (2). The discharge of non-attenders, was seen as a problem, and one GP did not know whether a drug and alcohol service existed. Yet again, the integration of the service within the primary health care team was seen as poor.

Table 24 Quality Criteria Rations for Alcohol and Drug Abuse Services

Quality Criteria	Frequency of rating in each quality category						% GPs rating 1-5
	1	2	3	4	5	6	
Waiting time for initial patient contact with service	0	1	2	9	0	0	92
Ease of communication with service by GPs	0	2	4	5	1	0	100
Ease of access to service for patients	0	0	5	7	0	0	92
Ease of arranging urgent care	0	0	7	4	1	0	85
Standard of physical accommodation	0	0	5	2	0	3	54
Quality of care provided by individual staff	0	4	3	3	0	3	77
Integration with others in primary health care team	0	1	1	7	0	2	69
Appropriate feedback from service to GP	0	2	4	4	2	0	92
Coordination with social services department	0	0	5	2	0	3	54
Supply of appliances where needed	0	0	4	1	0	3	39
Time spent with each patient	0	3	2	3	0	3	62
Total number of ratings in each category (all criteria)	0	13	42	47	4	17	

Ratings: 1 = excellent; 2 = good; 3 = adequate; 4 = poor; 5 = very poor; 6 = insufficient evidence.

Number of general practitioners rating service = 13.

4.6.6 Other Community Services Chosen

Table 19 shows the other community services chosen by GPs as in need of improvement.

Comments made by GPs about some of these services are listed below. The numbers in brackets indicate the number of GPs making the comment.

1. Chiropody

1. Long wait for appointments (1).

2. Continence Advisor

1. Since appointment of a new adviser there were now no continence aids available from the service (15).

3. Family Planning

1. Poor service for under 16s (2).

4. Health Promotion

1. Insufficient numbers and range of literature supplied to GPs (4).
2. Travelling roadshows to health centres suggested (1).

5. Social Services

1. Very slow and too many meetings (1).

6. CPNs

1. Wait for initial contact too long (1).
2. Poor communication with GPs (1).
3. Poor access for patients and poor integration with primary health care team (1).
4. Better service if attached to practices (3).
5. Increased waiting lists and reduced staff resources are curtailing the service (1).
6. Scope for CPNs to reduce stress in patients and practice staff (1).
7. Too little time spent (1).
8. Patients discharged from caseload too soon (1).
9. Better support for elderly needed (1).
10. Wait too long for urgent cases (1).

4.7 Comparison Between Services Chosen by General Practitioners as in Need of Improvement and those Services Receiving Low Quality Index Values.

4.7.1 Hospital Services

Of the five services chosen by general practitioners as those most in need of improvement (orthopaedics, ophthalmology, ENT, gastroenterology and termination of pregnancy), four received low Quality Index scores. The exception was termination of pregnancy, which was not given a Quality Index value because it is not an individual specialty.

Other services which were low in the Quality Index ratings were the pain clinic, psychosexual counselling and younger disabled services. These did not feature highly in the list of general practitioner choices for improvement, probably because there was a limit of three choices of services, and orthopaedics, ophthalmology and ENT services featured particularly strongly, leaving little room for inclusion of services which are perhaps used to a lesser extent by general practitioners, but which, nevertheless could be improved. It is, therefore, important to include similar services when discussions about service improvements are made.

4.7.2 Community Services

Health visiting and district nursing dominated general practitioner choices for improvement in community services, probably because of their central role within community services provision, and their direct interaction with general practitioners. In terms of the Quality Index, services which had a lower impact on general practitioners because they were used less frequently were those to receive particularly low ratings, e.g. incontinence services, disability and rehabilitation health promotion and mental handicap. Such services should be included in further discussions about improvements.

4.8 Which Quality Criteria Are Most Important to General Practitioners?

General practitioners were asked to identify which of the quality criteria

used in the questionnaire to rate services were most important to them and to rank them in order of importance. The rankings are shown in Tables 25 and 26. This exercise was carried out separately for hospital and community services.

4.8.1 Quality Criteria for Hospital Services

This section is based on the responses to Section 1(a) in the questionnaire. The results are set out in Table 25.

A maximum of 77 general practitioners completed this exercise for hospital services. Some misinterpreted what they were required to do and rated the criteria on the 1 to 6 scale used elsewhere in the questionnaire, instead of ranking. These data had to be excluded from further analysis.

Table 25 shows that most importance was attached to waiting time for 1st appointment, quality of consultant care and ease of arranging emergency admissions and appointments since these criteria received the highest number of 1-3 rankings - 56, 39, 44 and 39 respectively.

Factors to which GPs attached the least importance were travel time for patient, standard of accommodation, and to a lesser extent, organisation of OP and IP discharges.

The weighted scores are given in table 26 and reflect the concern shown

Table 25 Ratings by General Practitioners of Criteria Assessed as Most Important to Them in Judging Quality of Hospital Services

	Frequency of Rating in Each Category of Importance GPs rating 1-12												No.
	1	2	3	4	5	6	7	8	9	10	11	12	
Waiting time for 1st appointment	30	10	16	8	9	1	2	1	0	0	0	0	77
Waiting time for IP elective	1	13	11	14	10	9	7	4	5	2	0	0	76
Travel time for patient	0	0	1	1	2	1	3	6	10	4	19	23	70
Ease of arranging emergency admission	17	10	17	8	3	8	5	3	2	0	2	0	75
Ease of arranging OP appointments	5	21	13	15	6	6	7	0	0	1	1	1	76
Standard of accommodation	0	0	0	0	2	1	3	5	7	13	12	28	71
Quality of nursing	0	7	3	10	16	11	8	7	4	7	1	0	74
Quality of consultant care	22	9	8	10	12	10	2	2	0	0	1	0	76
Communication with GP	1	0	5	5	12	13	21	12	4	3	0	0	76
Organisation of IP discharges	0	0	0	0	3	4	8	9	21	18	10	1	74
Organisation of OP discharges	0	0	1	0	0	1	4	10	17	14	16	11	74
Consultant involvement in OP care	2	5	4	6	2	11	5	14	7	10	6	1	73

Key: GPS were asked to score the quality criteria in order of importance to them in assessing quality of health care. 1 = most important etc.

Table 26 Weighted Scores for Quality Criteria Assessed by General Practitioners as Most Important to Them in Assessing Quality of Hospital Services

<u>Rank</u>	<u>Quality Criteria</u>	<u>Weighted Score</u>
1	Waiting time for OP appointment	0.710
2	Quality of consultant care	0.652
3	Ease of arranging urgent OP appointment	0.634
4	Ease of arranging emergency admission	0.626
5	Waiting time for IP electives	0.581
6	Quality of nursing care	0.543
7	Communication with GP	0.512
8	Consultant involvement in OP care	0.499
9	Organisation of IP discharges	0.409
10	Travel time for patient	0.352
11	Organisation of OP discharges	0.350
12	Standard of accommodation	0.321

1 = Most important criterion.

12 = Least important criterion.

Weighted score reflects the degree of importance (between first and twelfth choice) given to each criterion by general practitioners.

by general practitioners about waiting times. The weighted scores were derived using the scaling algorithm described in Appendix 2, and applied to produce the quality index values.

4.8.2 Quality Criteria for Community Services

This section is based on the responses to Section II(a) in the questionnaire. The results are set out in Table 27.

A maximum of 73 general practitioners completed this exercise for community services. As for hospital services, some GPs misinterpreted what they were required to do and rated the criteria on the 1 to 6 scale used elsewhere in the questionnaire, instead of ranking. These data had to be excluded from further analysis.

Table 27 shows that most importance was attached by GPs to wait for initial patient contact, followed by ease of arranging urgent care, quality of care, ease of access to services for patients, and ease of communication with services by general practitioners.

Factors to which GPs attached the least importance were standard of physical accommodation, coordination with social services department, supply of appliances and time spent with patient.

The weighted scores are given in Table 28. These highlight the emphasis given by general practitioners to communication and feedback.

Table 27 Ratings by general practitioners of criteria assessed as most important to them in judging quality of community services

Quality Criteria	Frequency of rating in each category of importance											No. GPs rating 1-11
	1	2	3	4	5	6	7	8	9	10	11	
Wait for initial patient contact	21	23	10	12	4	2	1	0	0	0	0	73
Ease of communication with services by GPs	6	13	11	12	11	8	4	2	2	0	0	69
Ease of access to services for patients	11	6	14	7	8	7	5	4	2	5	0	69
Ease of arranging urgent care	11	15	12	14	5	4	5	2	1	1	0	70
Standard of physical accommodation	0	0	1	0	1	3	3	5	7	9	34	63
Quality of Care	19	5	10	9	7	4	4	1	3	6	1	69
Integration with primary health care team	2	2	2	6	9	11	13	7	6	7	3	68
Appropriate feedback to GP	0	4	6	6	15	14	11	8	5	3	0	72
Coordination with SSD	0	0	1	0	4	2	4	15	15	17	6	64
Supply of appliances	0	0	0	4	2	9	6	11	13	12	10	67
Time spent with patient	0	4	4	3	2	6	12	10	12	7	6	66

Key: GPs were asked to score the quality criteria in order of importance to them in assessing quality of health care. 1 = most important, etc.

Table 28 Weighted Scores for Quality Criteria Assessed by General Practitioners as Most Important to Them in Assessing Quality of Community Services

<u>Rank</u>	<u>Quality Criteria</u>	<u>Weighted Scores</u>
1	Wait for initial patient contact	0.755
2	Ease of arranging urgent care	0.686
3	Ease of communication with services by GPs	0.670
4	Quality of care	0.647
5	Ease of access to services for patients	0.642
6	Appropriate feedback to GP	0.592
7	Integration with primary health care team	0.561
8	Time spent with patient	0.535
9	Supply of appliances	0.489
10	Coordination with SSD	0.462
11	Standard of physical accommodation	0.422

1 = most important.

11 = least important.

Weighted score reflects the degree of importance (between first and eleventh choice) given to each criterion by general practitioners.

4.9 Additional Services Mentioned and General Comments

The results described in this section are based on responses to Sections III and IV in the questionnaire.

General Practitioners were asked to indicate whether there were any services not specifically mentioned in the questionnaire which they considered should be available to their patients.

Fifty nine specific suggestions were made about 36 services and these are listed in Appendix 3. Most of these related to community services, particularly domiciliary and open access physiotherapy (15 GPs) and other domiciliary services such as incontinence services and occupational therapy (3 GPs).

Direct access to ECG services and endoscopy were also requested (10 GPs). There was some mention of alternative medicine, particularly chiropractic, homeopathy and acupuncture (8 GPs).

There was some concern that patients had to travel long distances for radiotherapy and coronary artery and thoracic surgery (3 GPs). A pain clinic was mentioned by 8 GPs.

There was also a space for general comments about hospital and community services. 51 specific comments made about 46 issues are listed in Appendix 3.

There was much concern about communication with the GP e.g. on discharge, death of patient, or referral of patients to other services, and, specifically, from orthopaedics. Other main problems related to the slowness of hospitals in answering the telephone, and to waiting times in general.

4.10 Summary of Results

4.10.1 Response rate

The response rate at 67% of those who could have responded was encouraging in view of the length of the questionnaire. In total, 39 GPs made no response at all representing 26.5% of all possible respondents.

4.10.2 Quality ratings of services

Quality ratings with quantity as an integral part of the ratings were given on a 1 to 5 scale. Orthopaedics and ophthalmology were the major hospital specialties felt to have particular problems.

4.10.3 Hospital services chosen as a priority for improvement

<u>Service</u>	<u>No. of GPs naming service as one of their 3 priorities for improvement</u>
Orthopaedics	64 (73%) - 45 first choices
Ophthalmology	42 (46%) - 8 first choices
ENT	26 (28%) - 2 first choices
Gastroenterology	17 (19%) - 5 first choices
Termination of pregnancy	10 (11%) - 1 first choice

The clinical care given by professional staff was generally rated as good or adequate in all services.

Orthopaedics was rated particularly poorly on waiting time for outpatient appointments and waiting time for inpatient elective admission. It also scored poorly on communication with GP on discharge, and organisation of discharges.

Ophthalmology was similarly poorly rated on waiting time for outpatient appointment and for inpatient elective admission. Similar results were obtained for ENT and also for gastroenterology. Termination of pregnancy was selected by GPs, but is not a hospital specialty and so did not appear on the list of hospital specialties to be rated 1 to 5 by GPs. The major problem for termination of pregnancy services appeared to be the waiting time for initial outpatient appointment.

4.10.4 Community services chosen as a priority for improvement

<u>Service</u>	<u>No. of GPs choosing as 1st, 2nd or 3rd choice for improvement</u>
Health visiting	22 (24%) - 13 first choices
District nursing	21 (23%) - 11 first choices
Disability and Rehabilitation	17 (19%) - 6 first choices
Community psychiatry	16 (17%) - 9 first choices
Alcohol & drug abuse	13 (14%) - 4 first choices

Health visiting scored well on most quality criteria, with mixed ratings for quality of care provided by individual staff and integration with others in the primary health care team.

Similarly for district nursing, most criteria were highly rated, although integration with others in the primary care team, appropriate feedback from service to GP and coordination with social services department scored less well.

Disability and rehabilitation services appeared to have a number of problems, being particularly poorly rated in factors involving communication, feedback and integration in the primary health care team.

Community psychiatric nursing had similar communication and integration problems to disability and rehabilitation, and also had problems with waiting times.

Alcohol and drug abuse services were particularly poorly rated for ease of access to the service for patients.

4.10.5 Important quality criteria for general practitioners

The five quality criteria most important to GPs when asked to place them in rank order were as follows:

For Hospital Services

1. Waiting time for first appointment.
2. Waiting time for IP elective.
2. Communication with GP.
4. { Organisation of OP discharges.
4. { Ease of arranging OP appointments.

For Community Services

1. Ease of communication with services by GPs.
2. { Appropriate feedback to GP.
2. { Coordination with Social Services Department.
4. { Ease of arranging urgent care.
4. { Integration with primary health care team.

In conclusion, the ease of access to services and communication with the GP are the most important criteria.

4.10.6 Additional Services

Those most frequently mentioned were:

- domiciliary and open access physiotherapy
- direct access to ECG and endoscopy
- alternative medicine - e.g. chiropractic, homeopathy and acupuncture.

4.10.7 General Comments

These centred around waiting times for hospital services and around staffing levels and increasing workload for community services.

5. Discussion

5.1 The quality ratings and services in need of improvement

The quality rating exercise enabled services to be rated according to a scale of 1 to 5, representing quality, which included quantity. These results are compared with the results of GP choices of services in need of improvement.

Orthopaedics stood out as the most poorly rated hospital service, and was also chosen by GPs as the service most in need of improvement.

Other services which were poorly rated and were picked out by large numbers of GPs as particularly in need of improvement were ophthalmology and gastroenterology. Some specialties which were given low quality ratings by GPs, such as the pain clinic, psychosexual counselling, clinical psychology and hospital terminal care, came lower in the list of services GPs felt needed improvement. This was probably a result of limiting GPs to three services which they felt needed improvement, and these choices were dominated by orthopaedics and ophthalmology. Services appearing lower in the list on Table 13 as in need of improvement, should, therefore, not be ignored. There was an arbitrary cut-off in this study, for detailed analysis of specialties chosen, of those chosen by 10 GPs. Those specialties chosen by fewer GPs should not be ignored.

Some hospital services received particularly good ratings. These were chest medicine, haematology, oral-maxillo surgery, obstetrics, renal medicine, paediatrics and geriatrics. However, termination of pregnancy was a service which GPs clearly felt was in need of improvement, but was not listed in the services to be ranked.

Community services poorly rated by GPs included incontinence, disability and rehabilitation, and health promotion. These were also picked out by GPs in terms of the general comments they made about community services (see p 49). With

the exception of disability and rehabilitation, these services were only chosen by a few GPs (see Table 19) as in need of improvement. This, again, is probably because of the limit of 3 choices for improvement, and these choices were dominated by health visiting and district nursing. Services appearing lower in the list of choices for improvement should not, therefore, be excluded in discussion about improving services.

In fact, district nursing was highly rated by GPs, but was the second choice for improvement. This is probably related to the dominance of health visiting and district nursing in community services and their importance within the primary health care team. The district nursing service, although valued by GPs, was perceived as suffering from a shortage of staff, an abundance of paperwork, and poor organisation.

The drug and alcohol service was poorly rated as a hospital service, and drug and alcohol abuse as a community service was chosen as one in need of improvement.

There is, therefore, considerable correlation between services poorly rated, and those chosen by GPs as in need of improvement.

It should be noted that this study has measured "quality" in terms of the "process" of care, with the implicit assumption that a highly rated service means a good outcome for patients. This is a reasonable assumption but a more direct

measure of health outcomes for the patient is a desirable aim.

This study is a useful exercise in itself in highlighting deficiencies in services as perceived by GPs, and in providing a basis for discussion between GPs, hospital doctors and managers. It would be an even more useful exercise if the findings of the study are acted upon and a new study undertaken in a year or so, to allow any effects of changes to be monitored.

5.2 The 'insufficient evidence' rating

There were some services that many general practitioners felt they had insufficient evidence to rate overall. These included rheumatology out of Sunderland which 27 GPs were unable to rate, and genetics out of Sunderland which 73 GPs were unable to rate.

In Sunderland, services which large numbers of GPs were unable to rate were gynae-oncology (19 GPs rated as 6), psychosexual (30 GPs rated as 6) and HIV/AIDS (50 GPs rated as 6).

This suggests that it would be useful to ensure that all general practitioners have some knowledge of how to access such services which are used relatively infrequently, particularly by smaller practices, so that patients receive the full range of services offered.

There is evidence that some of the quality criteria ratings used when considering services in detail were criteria for which many general practitioners felt that they had insufficient evidence to give a rating. These were specifically the standard of accommodation, quality of nursing care and travel time for the patient. For community services, coordination with social services and time spent with patients were also difficult to rate by some general practitioners.

In any case, these criteria tended to be the ones which were low on the list of GPs' criteria which they considered to be most important when assessing the quality of services. GPs were much more concerned with broader issues of waiting times and ease of arranging admissions, than with the minutiae of standard of accommodation. These findings have implications for hospitals wishing to attract patients referred by general practitioners and give an indication of where hospitals should be making improvements.

5.3 Other Studies

This study was based on a similar one carried out in York in 1991. Other surveys have put orthopaedics, ophthalmology and ENT at the top of GP lists of priorities for improvement (2,3).

6. References

1. Leese B, Kind P, Cameron I and Carpenter J (1991). Survey of the views of general practitioners in York Health District about the quality of health care services available to their patients, Unpublished Report, Department of Public Health Medicine, York District Health Authority and Centre for Health Economics, University of York.
2. Hicks N R and Baker I A (1991). General practitioners opinions of health services available to their patients, BMJ, 302, 991-993.
3. Hicks N R and Baker I A (1992). Bones of Contention, Health Service Journal, 3 Sept, pp 24-25.

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HEALTH SERVICES FOR RESIDENTS OF
SUNDERLAND HEALTH DISTRICT

A survey of all general practitioners in Sunderland Health Authority undertaken jointly by the LMC, the Department of Public Health Medicine, the FHSA and the Centre for Health Economics at the University of York.

Study Number

1. Name _____
2. Main Practice Address _____

Postcode _____

Please return completed questionnaire by
in s.a.e. provided to:

Dr. S. K. Denyer
Consultant in Public Health Medicine
Nurses' Home
Sunderland District General Hospital
Kayll Road
Sunderland SR4 7TP

This sheet will remain confidential to the
Department of Public Health Medicine, and will be
removed prior to data analysis.

Study Number

HEALTH SERVICES FOR RESIDENTS OF SUNDERLAND HEALTH DISTRICT

Section A.

We need a few general details about you and your practice.

Please answer all questions in the space provided.

1. Please state the number of years worked in general practice locally.

2. Are you full-time? YES / NO (Please circle)

If not in full-time practice, are you 1/2 time, 3/4 time or less than 1/2 time?

1/2 time 3/4 time less than 1/2 time

3. How many partners are there in your practice?

Number of full-time

Number of part-time
(any no. of sessions)

4. In which category is your practice list size?

below 3,500

3,500 - 5,499

5,500 - 8,500

over 8,500

5. Is yours a training practice? Yes / No (please circle)

6. Please state your age and sex

Age

Sex (M / F)

HOSPITAL SERVICES

Section I (a)

YOUR QUALITY CRITERIA FOR A HOSPITAL-BASED SERVICE

Listed below are various aspects of a hospital-based service which are commonly considered to contribute to the quality of that service. You may feel that this list is not complete and may add any that you feel are appropriate in the spaces provided.

Then please review this list, including any additional criteria, and rank them in order of importance, as far as you can. For example, if you think travel time is most important, rank 1, quality of nursing care second most important, then rank 2, and so on.

	RANK		RANK
Waiting time for first out-patient appointment	<input type="text"/>	Quality of nursing care	<input type="text"/>
Waiting time for in-patient elective admission	<input type="text"/>	Quality of care provided by individual consultants	<input type="text"/>
Travel time for patient	<input type="text"/>	Communication with GP on discharge	<input type="text"/>
Ease of arranging emergency admissions	<input type="text"/>	Organisation of in-patient discharge arrangements	<input type="text"/>
Ease of arranging urgent out-patient appointments	<input type="text"/>	Organisation of out-patient discharge arrangements	<input type="text"/>
Standard of physical accommodation	<input type="text"/>	Consultant involvement in out-patient care	<input type="text"/>
Additional criteria (please specify)			
.....	<input type="text"/>	<input type="text"/>

Section I (b)

This section is about your perception of the overall quality of all hospital services available to your patients.

Some of these services are provided in Sunderland - others are provided outside the District. If you refer 30% or more of your patients outside Sunderland, please give your opinion of these services in Column 2.

Quality of service can be judged in different ways, but it is your overall impression that we would like to have. The criteria used in the previous section may help you in considering each service. Please remember that the quantity of a service, as indicated by the waiting time, is an important component of the overall quality.

Space is provided towards the end of each section for any additional comments that you would like to make.

When recording your initial response, please use the following notation.

Quality

- 1 = excellent
- 2 = good
- 3 = adequate
- 4 = poor
- 5 = very poor
- 6 = insufficient evidence/
not applicable

This rating system is repeated on each page.

HOSPITAL SERVICES

Quality

- 1 = excellent
- 2 = good
- 3 = adequate
- 4 = poor
- 5 = very poor
- 6 = insufficient evidence/
not applicable

Please rate each of the following services by writing the number which best reflects your opinion in the box adjacent to the relevant service. If you refer 30% or more of your patients to a provider unit outside Sunderland, please give your impression of that service in the second column.

	Quality Rating - Sunderland Services	Quality Rating - Services Outside Sunderland
General Medicine	<input type="text"/>	<input type="text"/>
Chest Medicine	<input type="text"/>	<input type="text"/>
Cardiology	<input type="text"/>	<input type="text"/>
Neurology	<input type="text"/>	<input type="text"/>
Gastro-enterology	<input type="text"/>	<input type="text"/>
Diabetes	<input type="text"/>	<input type="text"/>
Oncology/Radiotherapy	<input type="text"/>	<input type="text"/>
Haematology	<input type="text"/>	<input type="text"/>
Renal Medicine	<input type="text"/>	<input type="text"/>
Genito-Urinary Medicine	<input type="text"/>	<input type="text"/>

HOSPITAL SERVICES

Quality

- 1 = excellent
- 2 = good
- 3 = adequate
- 4 = poor
- 5 = very poor
- 6 = insufficient evidence/
not applicable

	Quality Rating - Sunderland Services	Quality Rating - Services Outside Sunderland
Dermatology	<input type="text"/>	<input type="text"/>
Rheumatology	<input type="text"/>	<input type="text"/>
Services for the Younger Disabled	<input type="text"/>	<input type="text"/>
Paediatrics	<input type="text"/>	<input type="text"/>
Geriatric Services	<input type="text"/>	<input type="text"/>
General Surgery	<input type="text"/>	<input type="text"/>
Paediatric Surgery	<input type="text"/>	<input type="text"/>
Cardiac Surgery (Freeman)	<input type="text" value="6"/>	<input type="text"/>
Urology	<input type="text"/>	<input type="text"/>
Ophthalmology	<input type="text"/>	<input type="text"/>
Ear, Nose and Throat	<input type="text"/>	<input type="text"/>
Oral/Maxillo-Facial Surgery	<input type="text"/>	<input type="text"/>

HOSPITAL SERVICES

Quality

- 1 = excellent
- 2 = good
- 3 = adequate
- 4 = poor
- 5 = very poor
- 6 = insufficient evidence/
not applicable

	Quality Rating - Sunderland Services	Quality Rating - Services Outside Sunderland
Plastic Surgery	<input type="text"/>	<input type="text"/>
Orthopaedics	<input type="text"/>	<input type="text"/>
Accident & Emergency	<input type="text"/>	<input type="text"/>
Obstetrics	<input type="text"/>	<input type="text"/>
Gynaecology	<input type="text"/>	<input type="text"/>
Gynae-Oncology	<input type="text"/>	<input type="text"/>
Infertility	<input type="text"/>	<input type="text"/>
Psychiatry	<input type="text"/>	<input type="text"/>
Child Psychiatry	<input type="text"/>	<input type="text"/>
Psychogeriatrics	<input type="text"/>	<input type="text"/>
Psychosexual Counselling	<input type="text"/>	<input type="text"/>
Drug and Alcohol Services	<input type="text"/>	<input type="text"/>

HOSPITAL SERVICES

Quality

- 1 = excellent
- 2 = good
- 3 = adequate
- 4 = poor
- 5 = very poor
- 6 = insufficient evidence/
not applicable

	Quality Rating - Sunderland Services	Quality Rating - Services Outside Sunderland
Clinical Psychology	<input type="text"/>	<input type="text"/>
Pain Clinic Services	<input type="text"/>	<input type="text"/>
Genetics	<input type="text" value="6"/>	<input type="text"/>
Services for HIV/AIDS	<input type="text"/>	<input type="text"/>
Terminal Care - Hospice	<input type="text"/>	<input type="text"/>
Terminal Care - Hospital	<input type="text"/>	<input type="text"/>

Comments

ANCILLARY SERVICES
(including direct access and hospital access services)

Quality

- 1 = excellent
- 2 = good
- 3 = adequate
- 4 = poor
- 5 = very poor
- 6 = insufficient evidence/
not applicable

**Quality Rating -
Sunderland Services**

Physiotherapy	<input type="text"/>
Occupational Therapy	<input type="text"/>
Dietetics	<input type="text"/>
Chiropody	<input type="text"/>
Speech Therapy	<input type="text"/>
Clinical Liaison Nurses (eg Stoma Care, Diabetes)	<input type="text"/>
Audiology	<input type="text"/>
Appliances	<input type="text"/>
- Hospital	<input type="text"/>
- Joint Equipment Store	<input type="text"/>

Comments

DIAGNOSTIC SERVICES

Quality

- 1 = excellent
- 2 = good
- 3 = adequate
- 4 = poor
- 5 = very poor
- 6 = insufficient evidence/
not applicable

	Quality Rating - Sunderland Services	Quality Rating - Services Outside Sunderland
Microbiology	<input type="text"/>	<input type="text"/>
Histopathology including Cytology	<input type="text"/>	<input type="text"/>
Biochemistry	<input type="text"/>	<input type="text"/>
Haematology	<input type="text"/>	<input type="text"/>
Radiology	<input type="text"/>	<input type="text"/>
CT Scanning	<input type="text"/>	<input type="text"/>
Ultrasound	<input type="text"/>	<input type="text"/>
Medical Physics	<input type="text"/>	<input type="text"/>
OTHER SERVICES (please specify)	<input type="text"/>	<input type="text"/>
.....	<input type="text"/>	<input type="text"/>

Comments

SECTION I (c) : HOSPITAL-BASED SERVICES NEEDING IMPROVEMENT

You may feel that some hospital-based services need improvement. We would like to know which three services you would most like to see improved.

Each service will have both strengths and weaknesses. To explore your perceptions of these we would like you to rate the quality of each aspect of your chosen services. Please use the same convention as before, as shown below.

Quality

- 1 = excellent
- 2 = good
- 3 = adequate
- 4 = poor
- 5 = very poor
- 6 = insufficient evidence/
not applicable

If you have added any other quality criteria, please rate these as well, and feel free to add any further comments as you see fit.

IMPROVING HOSPITAL-BASED SERVICES - First Choice for Improvement

Hospital Service Needing Improvement _____

Location of Service _____

Please rate all criteria using the same convention as before.

Quality

- 1 = excellent
- 2 = good
- 3 = adequate
- 4 = poor
- 5 = very poor
- 6 = insufficient evidence/
not applicable

Rating

Rating

Waiting time for first
out-patient appointment

Quality of nursing care

Waiting time for in-patient
elective admission

Quality of care provided
by individual consultants

Travel time for patient

Communication with GP on
discharge

Ease of arranging
emergency admissions

Organisation of in-patient
discharge arrangements

Ease of arranging urgent
out-patient appointments

Organisation of out-patient
discharge arrangements

Standard of physical
accommodation

Consultant involvement in
out-patient care

Additional criteria (please specify)

.....

.....

Please make any further comments that you feel are appropriate overleaf.

IMPROVING HOSPITAL-BASED SERVICES - Second Choice for Improvement

Hospital Service Needing Improvement _____

Location of Service _____

Please rate all criteria using the same convention as before.

<p><u>Quality</u></p> <p>1 = excellent 2 = good 3 = adequate 4 = poor 5 = very poor 6 = insufficient evidence/ not applicable</p>

	Rating		Rating
Waiting time for first out-patient appointment	<input type="text"/>	Quality of nursing care	<input type="text"/>
Waiting time for in-patient elective admission	<input type="text"/>	Quality of care provided by individual consultants	<input type="text"/>
Travel time for patient	<input type="text"/>	Communication with GP on discharge	<input type="text"/>
Ease of arranging emergency admissions	<input type="text"/>	Organisation of in-patient discharge arrangements	<input type="text"/>
Ease of arranging urgent out-patient appointments	<input type="text"/>	Organisation of out-patient discharge arrangements	<input type="text"/>
Standard of physical accommodation	<input type="text"/>	Consultant involvement in out-patient care	<input type="text"/>
Additional criteria (please specify)			
.....	<input type="text"/>	<input type="text"/>

Please make any further comments that you feel are appropriate overleaf.

IMPROVING HOSPITAL-BASED SERVICES - Third Choice for Improvement

Hospital Service Needing Improvement _____

Location of Service _____

Please rate all criteria using the same convention as before.

Quality

- 1 = excellent
- 2 = good
- 3 = adequate
- 4 = poor
- 5 = very poor
- 6 = insufficient evidence/
not applicable

	Rating		Rating
Waiting time for first out-patient appointment	<input type="text"/>	Quality of nursing care	<input type="text"/>
Waiting time for in-patient elective admission	<input type="text"/>	Quality of care provided by individual consultants	<input type="text"/>
Travel time for patient	<input type="text"/>	Communication with GP on discharge	<input type="text"/>
Ease of arranging emergency admissions	<input type="text"/>	Organisation of in-patient discharge arrangements	<input type="text"/>
Ease of arranging urgent out-patient appointments	<input type="text"/>	Organisation of out-patient discharge arrangements	<input type="text"/>
Standard of physical accommodation	<input type="text"/>	Consultant involvement in out-patient care	<input type="text"/>

Additional criteria (please specify)

.....

Please make any further comments that you feel are appropriate overleaf.

COMMUNITY SERVICES

SECTION II (a)

YOUR QUALITY CRITERIA FOR A COMMUNITY-BASED SERVICE

Listed below are various aspects of a community-based service which are commonly considered to contribute to the quality of that service. You may feel that this list is not complete and may add any that you feel are appropriate in the spaces provided.

Then please review this list, including any additional criteria, and rank them in order of importance, as far as you can. For example, is you think quality of care provided is the most important, rank 1, time spent with each patient second most important, then rank 2, and so on.

	RANK		RANK
Waiting time for initial patient contact with service	<input style="width: 40px; height: 20px;" type="text"/>	Integration with others in primary health care team	<input style="width: 40px; height: 20px;" type="text"/>
Ease of communication with services by GPs	<input style="width: 40px; height: 20px;" type="text"/>	Appropriate feedback from service to GP	<input style="width: 40px; height: 20px;" type="text"/>
Ease of access to services for patients	<input style="width: 40px; height: 20px;" type="text"/>	Coordination with Social Services Department	<input style="width: 40px; height: 20px;" type="text"/>
Ease of arranging urgent care	<input style="width: 40px; height: 20px;" type="text"/>	Supply of appliances where needed	<input style="width: 40px; height: 20px;" type="text"/>
Standard of physical accommodation	<input style="width: 40px; height: 20px;" type="text"/>	Time spent with each patient	<input style="width: 40px; height: 20px;" type="text"/>
Quality of care provided	<input style="width: 40px; height: 20px;" type="text"/>		
Additional criteria (please specify)			
.....	<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>

SECTION II (b)

This section is about your perception of the overall quality of all community services available to your patients.

Quality of service can be judged in different ways, but it is your overall impression that we would like to have. The criteria used in the previous section may help you in considering each service. Please remember that the quantity of a service, as indicated by the waiting time, is an important component of the overall quality.

Space is provided towards the end of each section for any additional comments that you would like to make.

When recording your initial response, please use the following notation.

Quality

- 1 = excellent
- 2 = good
- 3 = adequate
- 4 = poor
- 5 = very poor
- 6 = insufficient evidence/
not applicable

This rating system is repeated on each page.

COMMUNITY SERVICES

Quality

- 1 = excellent
- 2 = good
- 3 = adequate
- 4 = poor
- 5 = very poor
- 6 = insufficient evidence/
not applicable

Quality Rating

Mental Handicap Service

Terminal Care -
Community Service

Health Visiting

District Nursing

Community Midwifery

Community Child Health
Services

Family Planning

Disability and Rehabilitation
Services

Community Psychiatric
Nursing Services

Alcohol and Drug Abuse
Services

COMMUNITY SERVICES

Quality

- 1 = excellent
- 2 = good
- 3 = adequate
- 4 = poor
- 5 = very poor
- 6 = insufficient evidence/
not applicable

Quality Rating

Health Promotion

Incontinence Service

Comments

SECTION II (c) : COMMUNITY-BASED SERVICES NEEDING IMPROVEMENT

You may feel that some community-based services need improvement. We would like to know which three services you would most like to see improved.

Each service will have both strengths and weaknesses. To explore your perceptions of these, we would like you to rate the quality of each aspect of your chosen services. Please use the same convention as before, as shown below.

Quality

- 1 = excellent
- 2 = good
- 3 = adequate
- 4 = poor
- 5 = very poor
- 6 = insufficient evidence/
not applicable

If you have added any other quality criteria, please rate these as well, and feel free to add any further comments as you see fit.

IMPROVING COMMUNITY-BASED SERVICES - First Choice for Improvement

Community Service Needing Improvement _____

Location of Service _____

Please rate all criteria using the same convention as before.

Quality

- 1 = excellent
- 2 = good
- 3 = adequate
- 4 = poor
- 5 = very poor
- 6 = insufficient evidence/
not applicable

Rating

Rating

Waiting time for initial
patient contact with service

Integration with others in
primary health care team

Ease of communication with
service by GPs

Appropriate feedback from
service to GP

Ease of access to service
for patients

Coordination with Social
Services Department

Ease of arranging urgent
care

Supply of appliances
where needed

Standard of physical
accommodation

Time spent with each
patient

Quality of care provided
by individual staff

Additional criteria (please specify)

.....

.....

Please make any further comments that you feel appropriate overleaf.

IMPROVING COMMUNITY-BASED SERVICES - Second Choice for Improvement

Community Service Needing Improvement _____

Location of Service _____

Please rate all criteria using the same convention as before.

Quality

- 1 = excellent
- 2 = good
- 3 = adequate
- 4 = poor
- 5 = very poor
- 6 = insufficient evidence/
not applicable

Rating

Rating

Waiting time for initial
patient contact with service

Integration with others in
primary health care team

Ease of communication with
service by GPs

Appropriate feedback from
service to GP

Ease of access to service
for patients

Coordination with Social
Services Department

Ease of arranging urgent
care

Supply of appliances
where needed

Standard of physical
accommodation

Time spent with each
patient

Quality of care provided
by individual staff

Additional criteria (please specify)

.....

.....

Please ~~make~~ any further comments that you feel appropriate overleaf.

IMPROVING COMMUNITY-BASED SERVICES - Third Choice for Improvement

Community Service Needing Improvement _____

Location of Service _____

Please rate all criteria using the same convention as before.

Quality

- 1 = excellent
- 2 = good
- 3 = adequate
- 4 = poor
- 5 = very poor
- 6 = insufficient evidence/
not applicable

	Rating		Rating
Waiting time for initial patient contact with service	<input type="text"/>	Integration with others in primary health care team	<input type="text"/>
Ease of communication with service by GPs	<input type="text"/>	Appropriate feedback from service to GP	<input type="text"/>
Ease of access to service for patients	<input type="text"/>	Coordination with Social Services Department	<input type="text"/>
Ease of arranging urgent care	<input type="text"/>	Supply of appliances where needed	<input type="text"/>
Standard of physical accommodation	<input type="text"/>	Time spent with each patient	<input type="text"/>
Quality of care provided by individual staff	<input type="text"/>		

Additional criteria (please specify)

.....

.....

Please make any further comments that you feel appropriate overleaf.

SECTION III : ADDITIONAL SERVICES

We would like to know if you feel that there are other services, not specifically mentioned in this questionnaire, which you consider should be available to your patients.

If there are, then please specify up to two additional services.

SECTION IV : FURTHER COMMENTS

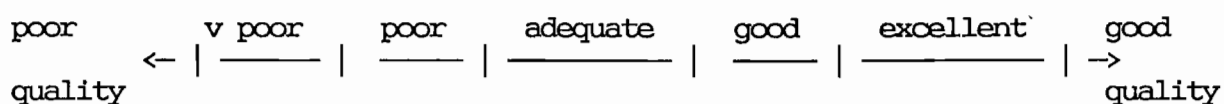
Please use the space below for any further comments.

Thank you for your help in completing this questionnaire.

APPENDIX 2

TORGERSON'S CATEGORICAL JUDGEMENT MODEL

This appendix describes the stages involved in computing values for the quality index according to a categorical scaling model described by Torgerson (1958). Assume for a moment that subjective judgements about quality of service can be represented along a line. Good quality, as a characteristic of health authority services, is located towards one end of the line. Poor quality is located towards the opposite end. At intervals along the line are a number of boundaries. These define intervals or categories.



Torgerson defines a procedure for deriving arithmetic values for the category boundaries in such a model, thereby allowing estimates to be made of the scale values of items located along the judgement domain. By utilising information about the frequency with which raters place services in each of the categories it is possible to estimate scale values for both the category boundaries, but more importantly to estimate values for the services themselves.

In summary, his model postulates that:

- (a) an individual's psychological continuum (in this case perceived quality of service)

can be divided into a finite series of ordered categories;

- (b) because of many factors, including experimental error and subject performance, the boundary between adjacent categories varies and gives rise to a normal distribution around a mean location;
- (c) different category boundaries may have different means and distributions;
- (d) a subject will place an item (hospital service) below a given category boundary when the value of that item on the quality continuum is lower than the value of that category boundary.

The computational steps are simple and are demonstrated here using the ratings for diagnostic services produced by 112 general practitioners. The basic frequency matrix, F , shows the number of times that each market state was rated one, two .. five (excellent - very poor).

Frequency Matrix F - Diagnostic Services

	1	2	3	4	5	Weighted row sum
(rank)						
Microbiology (2)	43	65	4	0	0	185
Histopathology (4.5)	36	71	4	0	0	190
Biochemistry (4.5)	40	66	6	0	0	190
Haematology (3)	43	61	8	0	0	189
Radiology (6)	14	47	38	10	3	277
Ultrasound (7)	11	35	30	25	11	326
Nuclear Medicine (1)	24	59	14	0	0	184

In this relatively simple matrix it is possible to see:

- (a) the form of the distribution of categories assigned to each state. Microbiology has a very compact distribution - with 43/112 respondents rating in category two (very good). By comparison, ultrasound ratings appear throughout the full range from excellent to very poor.
- (b) The overall rank of the states. The weighted row sum is given in the final column. This is computed by multiplying each F_{ij} element by its corresponding

category (one = excellent ... five = very poor), across each row (e.g. for microbiology = $43 \times 1 + 65 \times 2 + 4 \times 3 = 185$). From these totals it is clear that on the basis of these data, microbiology and ultrasound are placed at the top and bottom of the quality rankings.

The information in the F matrix can be interpreted as probabilities rather than frequencies. Hence in this sample of general practitioners the probability of microbiology receiving an excellent rating was 43/111. The basic frequency matrix is next converted into a cumulative probability matrix, which is shown below. Since all general practitioners had rated microbiology in the first three categories all the 'votes' had been exhausted. The probability of placing microbiology in third place or better is 1.0 and remains so across all remaining elements in that row. The last column (five in this example) will always have a probability of 1.0. This column is discarded for the remaining stages of the computation.

P-Matrix
(Cumulative Probabilities)

	Quality Rating Category				
	1	2	3	5	6
Microbiology	0.38	0.96	1.00	1.00	1.00
Histopathology	0.32	0.96	1.00	1.00	1.00
Biochemistry	0.36	0.95	1.00	1.00	1.00
Haematology	0.38	0.93	1.00	1.00	1.00
Radiology	0.13	0.54	0.88	0.97	1.00
Ultrasound	0.10	0.41	0.68	0.90	1.00
Nuclear Medicine	0.25	0.86	1.00	1.00	1.00

The probabilities in the P-matrix are converted to corresponding z-scores based

on the unit normal distribution. Where there are probabilities of 0 or 1, indicating perfect certainty in predicting categories, these elements are flagged as missing data since they strictly yield z-scores of infinity. In the transformed matrix these are shown as **.

Z-Matrix
(z-scores based on the P-Matrix)

Microbiology	-0.29	1.80	**	**
Histopathology	-0.46	1.80	**	**
Biochemistry	-0.37	1.61	**	**
Haematology	-0.29	1.47	**	**
Radiology	-1.15	0.11	1.19	1.93
Ultrasound	-1.29	-0.23	0.46	1.29
Nuclear Medicine	-0.68	1.06	**	**

Such incomplete matrices are commonplace in practical settings and a variety of algorithms have been proposed in order to overcome the problem of estimating category boundaries and scale values. Torgerson describes one such procedure based on the average difference between categories. Hence for microbiology the absolute difference between the first and second columns (in matrix notation $| Z(1,1) - Z(1,2) |$) is $-0.29 - 1.80 = 2.09$.

Absolute Differences

	i,1 1,2	i,2 1,3	i,3 1,4	i,4 1,5	
Microbiology	2.10	**	**	**	
Histopathology	2.25	**	**	**	
Biochemistry	1.98	**	**	**	
Haematology	1.76	**	**	**	
Radiology	1.26	1.08	0.74	0.93	
Ultrasound	1.07	0.69	0.83	0.29	
Nuclear Medicine	1.74	**	**	**	
mean column totals	1.74	0.89	0.79	0.61	
category boundary	0.000	1.74	2.63	3.41	4.02

(Rounding in the print routines used to display these figures means that some elements may have slight arithmetic differences)

The lowest category boundary is set to zero, and successive boundaries are generated by accumulating the average differences. The scale values are given by computing the mean difference between category boundary scores and the corresponding elements in the z-matrix.

The calculation for microbiology is $(0.0 + 0.29) + (1.74 - 1.80) = 0.23 / 2$ since all other elements are missing values, and this yields a mean of 0.115 (the raw score for microbiology).

Service	Unadjusted Score	Transformed Score
Microbiology	0.115	0.697
Histopathology	0.197	0.687
Biochemistry	0.246	0.681
Haematology	0.283	0.676
Nuclear Medicine	0.679	0.627
Radiology	1.420	0.535
Ultrasound	1.882	0.478

There exist two theoretical limits to the pattern on quality ratings. All ratings could be in category one (excellent) or in category five (very poor). By superimposing these two additional sets of quality rating it is possible to establish the proportion of the theoretical maximum quality score for each of the services. The final stage in calculating quality scores using the Torgerson algorithm is shown in the last column. In this case the raw score for microbiology of 0.115 becomes 0.697, or 69.7% of the theoretical maximum.

Reference

Torgenson, W.S. (1958) Theory of Scaling. Wiley.

APPENDIX 3

Additional Services Suggested by GPs in Section III of the Questionnaire

- 01 TOP services need improving
- 02 domicillary physiotherapy
- 03 domicillary incontinence service for elderly
- 04 young physically disabled underprovided for
- 05 CPNs practice based and offer counselling
- 06 pyschosexual counselling
- 07 adequate vasectomy service
- 08 dietician in surgery
- 09 anaesthetist pain clinic full team
- 10 chiropody for all ages
- 11 more open access physiotherapy
- 12 domicillary OT
- 13 contact number or person for patient to contact if no appointment turns up
- 14 pain clinic
- 15 open access endoscopy
- 16 community physiotherapy
- 17 direct access to ECG
- 18 social workers attached to practice
- 19 medicine/cardiology - exercise text service available for GP referrals
- 20 counselling service
- 21 chiropractor
- 22 homeopathy
- 23 coronary artery surgery and thoracic surgery in Sunderland
- 24 coronary angiography and angiotherapy
- 25 radiotherapy - too many have to travel to NGH
- 26 open access for UPR and lower GI endoscopy
- 27 counselling, particularly grief
- 28 acupuncture
- 29 day care for the elderly
- 30 low back pain problems
- 31 access to social workers
- 32 free eye testing
- 33 practice based dietetic service
- 34 mammogram should be available in doubtful cases
- 35 family planning for teenagers
- 36 community based physiotherapy service

Further Comments

- 01 ranking services very difficult
- 02 unreliability of appointment system
- 03 referral via district nurse or health visitor to CPN or clinical psychologist, no need to see GP
- 04 social services more responsive and less bureaucratic
- 05 low scores due to waiting times
- 06 care very good once contact made
- 07 need to speed up information after a hospital attendance
- 08 overall, community services better than hospital based services
- 09 wide variation in quality of service by different consultants in same department
- 10 telephone answering very poor
- 11 referrals letters getting lost or appointments not made
- 12 telephone service at SDGH poor
- 13 TOP - telephone service a particular problem when trying to arrange referral
- 14 waiting times are a main problem
- 15 regional booklet including consultants special interests and areas of expertise, waiting times for treatment
- 16 waiting times for first OP appointment need improving, generally are improving
- 17 communication with GPs on discharge need improving
- 18 GP should be informed promptly of patient's death in hospital
- 19 junior doctors take a long time answering their bleep
- 20 usually don't find out what happens following referrals to other services
- 21 would be interested in taking part in any audit projects resulting from the research
- 22 OP services - review of patients may enable some to be discharged and thus speed up OP appointments
- 23 information on hospital discharge slips is often not very complete
- 24 speed up OPD reviews after surgery, removal of lumps etc.
- 25 not enough joint hospital/GP management protocols
- 26 level/lack of communication from orthopaedics
- 27 GPs send unnecessary referrals, need mechanisms for discussing this
- 28 advantageous position of GP fundholders should not be allowed to continue
- 29 audit of orthopaedics needed
- 30 problems with casualty department
- 31 improved communication via awayday
- 32 questionnaire of quality of service offered by FHSA?
- 33 young disabled housing needs need improving
- 34 hospital services - one can get what one wants by and large if one knows the techniques
- 35 appalling standard and speed of discharge communication
- 36 variation in quality between rest/nursing homes
- 37 district nursing services do not have access to diagnostic services
- 38 abolish car parking charges for patients attending hospital
- 39 GPs need emergency telephone no. for urgent admissions
- 40 "Clinical psychology partnership" is of little use due to massive waiting time for first appointment

- 41 pre and post operation counselling for cancer patients and family
- 42 cancer patients need more explanation of nature of operation during OPD examination
- 43 paediatric casualty - should be open to worried mothers without GP referral
- 44 laboratory service - useful to have lists of where tests are performed, save unnecessary phone calls
- 45 transport should be available for patients requiring blood tests etc. to attend surgeries, diabetic clinics etc.
- 46 hospital physiotherapy services should audit their main therapeutic services and see how many people benefit.

APPENDIX 4

1. Comments made by GPs about hospital services

- 01 Clinical psychology overworked
- 02 orthopaedics, ophthalmology, physiotherapy - waiting times too long
- 03 low ratings due to long waiting lists
- 04 low ratings due to poor local available of specialists
- 05 does a pain clinic exist?
- 06 ophthalmology - consultants not interested in common conditions but see 'interesting' cases quickly
- 07 TOP - very poor service
- 08 paediatric services - casualty excellent, other aspects poor
- 09 specialties with long waiting times need to reconsider their position
- 10 TOP - most unhelpful service
- 11 TOP - need to ring all consultants to get an appointment for patient
- 12 pain clinic not available, but used to be very good
- 13 open access endoscopy would be valuable
- 14 clinical psychology - long waits and GPs have to limit referrals
- 15 psychosexual counselling - no specific service available but would be helpful
- 16 ophthalmology - long waits
- 17 long waiting times negate good quality of some services e.g. orthopaedics, psychology
- 18 useful to have more information about departments and consultants interests and specialties
- 19 long waiting times for OP appointments in dermatology, ophthalmology, ENT and orthopaedics at SRI, SDGH and SEyeI
- 20 some consultants not as good or well organised as others
- 21 psychosexual counselling - not available in Sunderland. Services from Newcastle General Hospital are not well advertised
- 22 orthopaedics - waiting times too long
- 23 lack of staff and resources lead to long waiting times, difficulty in getting patients seen and lack of service e.g. pain clinic
- 24 gastroenterology used to be excellent
- 25 no pain clinic
- 26 is open access endoscopy available?
- 27 psychology - very long OPD delay for appointments
- 28 ratings very subjective
- 29 HIV/AIDS information inadequate
- 30 terminal care hospital much easier access
- 31 low ratings due to no hospital OPD letters
- 32 orthopaedics - please do something about waiting list
- 33 orthopaedics - inability to communicate with colleagues
- 34 orthopaedics - less private work
- 35 drug and alcohol services - didn't know they existed
- 36 TOP appointments very difficult
- 37 very poor communication with some consultants
- 38 psychogeriatrics - consultant insists on domiciliary visit

- 39 dermatology, ophthalmology, ENT, orthopaedics - long waiting lists
- 40 orthopaedics - very long waiting lists
- 41 some general surgical consultants much more helpful and more approachable than others
- 42 gastroenterology - better since two locums working
- 43 ophthalmology - improving
- 44 gastroenterology - locums appointed for only three month periods - not providing a good service
- 45 TOP - better system required, gynaecologists changing system without informing GPs
- 46 TOP very bad
- 47 vasectomy - very bad
- 48 pain clinic - no information given to GPs about service
- 49 better services equate with communicable accessibility
- 50 poor services equate with prolonged delay in getting patients seen and dealt with

2. Comments Made by GPs About Ancillary Services

- 01 physiotherapy - waiting list too long
- 02 chiropody department - poor
- 03 physiotherapy - need better access
- 04 physiotherapy - service good but low rating due to long waiting times
- 05 patient/therapist ratio too high
- 06 need more information about services
- 07 domiciliary physiotherapy needed
- 08 audiology - very long waitings for first appointment, especially for elderly patients
- 09 dietetics service improved because now have resident dietician
- 10 joint equipment store - delays in supply or out of stock
- 11 physiotherapy - waiting list too long due to inadequate staffing
- 12 physiotherapy - open access helpful
- 13 chiropody - waiting list too long
- 14 chiropody - shouldn't be centralised at DGH
- 15 chiropody seems understaffed
- 16 physiotherapy - waiting list increasing
- 17 all departments hide their presence
- 18 chiropody - didn't know there was one
- 19 speech therapy - never required for last 30 years
- 20 walking sticks etc availability poor
- 21 CPN services good but availability poor and referral letter is a non-starter
- 22 long waiting lists for access to services and limited provision of services
- 23 direct access of physiotherapy - choice of referral to specific hospital, lack of ambulance support is sometimes a problem
- 24 most of these services are arranged by the specialist who sees the patient
- 25 physiotherapy - referral system ridiculous
- 26 physiotherapy - no domiciliary service to help keep MS/stroke patients at home

3. Comments Made by GPs About Diagnostic Services

- 01 CT waiting list poor
- 02 need charges to ration services
- 03 ultrasound - waiting times
- 04 urgent specimens problem because out of town and difficulty of parking
- 05 problem of time, otherwise good quality
- 06 need more information about services
- 07 pregnancy testing takes too long
- 08 ultrasound reports not received for two to three months
- 09 ultrasound in obstetrics - no GP access
- 10 radiology - very varied depends on consultant
- 11 ultrasound scans in early pregnancy - would appreciate open access by phone
- 12 speed of results returning
- 13 radiology - appointment system doesn't work
- 14 GPs need to date information about what they have access to e.g. ultrasound, IVPs etc
- 15 endoscopy improved with locum consultant, should be made permanent
- 16 radiology - quality of reporting of some radiologists inadequate and fails to answer questions posed in writing
- 17 Xrays need direct access for GPs
- 18 microbiology reports take too long to reach GP
- 19 long waiting lists for OP appointments
- 20 cervical cytology should be available every three years
- 21 pharmacy poor
- 22 GPs not consulted when forms changed
- 23 clinical details requested but not returned
- 24 persisting problems with specimen collection
- 25 unacceptable waiting times
- 26 inability to get some services at weekends or holidays
- 27 not enough referral outside the area

4. Comments Made by GPs About Community Services

- 01 health promotion not good
- 02 good/free services lead to waiting lists and reduce effectiveness
- 03 family planning and child health clinics unnecessary
- 04 health promotion ineffective
- 05 district nursing - no full-time district nurses, difficult to maintain contact with part-timers
- 06 more information about services available
- 07 most community services work well because of dedicated staff
- 08 midwifery, health visiting and district nursing seriously understaffed
- 09 long time spent on phone trying to arrange services, passed from one department to another

- 10 family planning clinics particularly poor for teenagers, particularly under 16 year olds
- 11 CPN service - image problem, rapid staff turnover, understaffing, good quality staff
- 12 alcohol and drug service - understaffing, inadequate sick leave cover
- 13 health visitors neglect elderly
- 14 practice based services would be more efficient and cost effective
- 15 health workers managers are difficult to negotiate with, obstructive and more concerned with cost effectiveness
- 16 no accountability of health workers unless practice based
- 17 CPN for elderly is excellent
- 18 CPN department - waiting times and communication appalling
- 19 incontinence service - waiting a month for a commode for terminally ill people