a good listener and effective in consultation and interpersonal skills. (*b*) Abilities in diagnosis, in early detection of illness, and in dealing with undifferentiated symptoms. (*c*) A capacity to see the patient's problems holistically. (*d*) Logical decision making and clinical management skills—especially sound economic treatments and sensible referrals for specialist or "community" help. (*e*) The ability to use preventive medicine. (*f*) Effective practice management and team work.

Attitudes—The good GP's approach should embrace: (*a*) Commitment to personal and continuing care. (*b*) Thoughtfulness about and understanding of patients and their problems. (*c*) Desire to develop professionally through continuing medical education and performance review. (*d*) Belief in the value of the primary care team and a willingness to exercise leadership. (*e*) Willingness to observe ethical principles. (*f*) Concern for patients at special risk—the chronically sick and disabled, the elderly, the mentally ill, children, patients with dependency problems, socially deprived people, and the ethnic minorities.

Measurement

Although there is now general agreement on what constitutes good general practice, it is difficult to evaluate the above criteria. Some would be difficult to measure by acceptable scientific methods, even if the appalling lack of resources for research in general practice were remedied tomorrow.

Attempts are being made to measure knowledge by assessing end points, such as the membership examination of the college. These tests offer the opportunity to set standards and provide consistency. Some GPs think that the tests should become an integral part of the certification of the Joint Committee for Postgraduate Training in General Practice.

On the other hand, certain skills and attitudes can be assessed only qualitatively by continuing assessment—for example, the Manchester rating scales for trainees and the "What sort of doctor?" reviews that were recently introduced for principals. We still have no acceptable proof, however, that high scores indicate "a good GP." As Stevens suggested, we can only continue to test such ideas as a prelude to action and pursue a better understanding of general practice by auditing its structure, process, and outcome.[6] More research is needed before pay can be related to hospital referral rates, let alone to Sanazaro and Williamson's five "d's": death, disease, disability, discomfort, and dissatisfaction.[7]

Meanwhile, good GPs should adopt peer review and send signals to the government on how to achieve high quality care and on possible pilot studies in this field.

Politics and the good GP

If the government genuinely wants good general practice it will commit substantial new funds to develop services and education. Management and resources for primary care teams should be concentrated in general practice under the leadership of GPs and under the direct responsibility of the independent family practitioner committees. The present system is divisive, and the recent Cumberlege proposals would compound the problems. A small share of the National Health Service budget is a poor incentive to the good general practitioner who cannot provide services simply for the "honour."

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Practice Research

Evaluation of the efficacy and acceptability to patients of a physiotherapist working in a health centre

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Abstract

The records of the first 805 patients who had been referred by general practitioners at this health centre to the attached physiotherapist were examined in November 1985, three years after the physiotherapy department was opened. Seventy per cent (549) of the patients had been treated within one week, treatment having started on the same day for 8·5% (67) of the patients. This compares with a mean of six weeks for direct access to a district general hospital that is eight miles away and between six and 13 months for the three nearest orthopaedic consultants who are 13 miles away.

The most common conditions treated were knee injuries (16·5%), followed by cervical (15·5%) and shoulder (13·8%) injuries. Surprisingly, only 9% were back injuries. The non-attendance rate was 2·2%, and only 7% of patients failed to complete treatment. Nearly all the patients were able to attend the clinic, only 4% requiring home treatment. By March 1986, 90 treatments a week were being carried out at a cost of £6·11 per patient. Compared with official hospital figures, this represents a savings of £21 500 a year for a practice of 12 000 patients.

Introduction

Physiotherapy is commonly used for a variety of acute and chronic conditions that are encountered in general practice. These range from acute injuries and postoperative rehabilitation to chest and

acute sinus infections. Treatment is safe, cheap, and largely free from side effects.

As general practitioners we were constantly frustrated by the need to refer our patients to orthopaedic consultants with waiting lists of nine to 12 months merely to gain access to physiotherapists. Ross showed that 40% of these referrals were considered inappropriate by orthopaedic specialists.[1] The patient's opinion of the system is usually much more expressive. Ellman *et al* showed that general practitioners were at least as selective as hospital doctors in choosing treatment and determining its duration.[2]

Open access to physiotherapy exists in some areas but often for a few well defined conditions only, such as stroke and Bell's palsy, and then waiting times rapidly increase to six to eight weeks. In a randomised study in west Cornwall Gentle *et al* showed that open access for general practitioners reduced referral rates to consultant orthopaedic surgeons by 39% and that patients treated by open access recovered more rapidly.[3] Hunt and O'Ryan showed in their study that 40% of patients remained at work throughout treatment and that only 2% of 1021 patients eventually needed a consultant opinion because of failure to respond to treatment.[4] In neither study could firm conclusions be drawn about cost effectiveness and loss of time from work, mainly because of small numbers and poor information from comparative trials in hospital clinics. It is reasonable to assume that prompt treatment and less travelling must result in less time lost from work. Furthermore, well motivated efforts to provide clinics for recent injuries at district general hospitals are also hampered by rapidly accumulating waiting lists of two to three months with further delays before physiotherapy is started.

We are 12 miles from the district general hospital, and the public transport links are poor and expensive. Direct access to another hospital 10 miles away nominally exists, but it soon became clear that only a few patients could be coped with. Thus, noting that the statement of fees and allowances on ancillary staff scheme states that two full time staff per doctor are allowed for nursing and treatment, we approached Cheshire Family Practitioner Committee for the appointment of a part time physiotherapist in 1982; 70% would be reimbursed under the scheme, and the remaining 30% would be paid by the doctors in the practice.

Our determination was such that we started employing a senior 1 grade physiotherapist for six hours a week in 1982 while still awaiting approval for reimbursement. Initially treatment was carried out in the side examination room. The equipment consisted of only a heat lamp and, after a few months, an ultrasound machine purchased out of the practice donation fund.

By 1984 the number of hours had increased to 14 a week, and the equipment included an interferential machine, pulsed short wave, and a new ultrasound apparatus, which was purchased by the voluntary efforts of Rotary, Round Table, and local pubs. The result has been an enormous public relations exercise, greatly appreciated by the local community, who have responded in a way that we would not have envisaged at the outset. Though it is easier for a village community to identify with their "own" health centre than urban communities, it was undoubtedly the initial step of employing a physiotherapist and the precedent taken by an informed family practitioner committee that have led to a well established service.

The enormous increase in workload had by 1984 created the need for further space, and a new extension was built in the winter of 1984-5 at a cost of £15 000, of which £10 000 was provided by Crewe District Health Authority. The remaining £5000 was raised by donation and public appeal, the only problem being a temporary delay in planning permission. Official recognition of our project was manifested in a visit by the Social Services Secretary, Norman Fowler, on 22 November 1985.

Method and results

Accurate assessment depends on an efficient system of record keeping. We asked a pharmaceutical company to help us design and print a referral form that conveyed adequate information without being too complicated for the general practitioner to complete during a busy surgery (figure). Referral cards were passed by the receptionist to the physiotherapist, who was responsible for her own appointments and made them either by telephone or by post. The space available in the new department allows for three patients to be treated simultaneously. The dates and the number of treatments were kept in a log diary. A research physiologist who was employed by the practice also examined the referral cards and log diary. This decision was taken because of the complexity of diagnoses and treatments, and we estimated that it would have taken many hours to train clerical staff to the level of knowledge of anatomy and physiology required.

HOLMES CHAPEL HEALTH CENTRE—PHYSIOTHERAPY REQUEST CARD

Name D.O.B.

Address Tel:
No:

Referred by: Date of referral:

Diagnosis

Treatment suggested:

Any other relevant details (inc. medication)

Date on	Date off

Physiotherapy request card used at health centre.

TABLE I—*Number of patients treated by age group*

Age (years)	Female (n=461)	Male (n=328)	Total (%) (n=789)
<10	7	9	16 (2)
11-20	49	53	102 (12·9)
21-30	24	49	73 (9·3)
31-40	67	59	126 (16)
41-50	70	51	121 (15·3)
51-60	102	51	153 (19·4)
61-70	70	31	101 (12·8)
>70	72	25	97 (12·3)

TABLE II—*Time from referral to first treatment*

Days	No (%) of patients (n=789)
Same day	67 (8·5)
Next day	41 (5·2)
2-3	131 (16·6)
4-5	136 (17·2)
6-7	174 (22)
>1 week	240 (30·5)

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Between 1982 and 1985, 805 patients were referred and 789 patients were treated: 58% were female, and the most common age group was age 50 to 60 (tables I and II). Seventy per cent (549) of the patients were seen within one week, and 71% (560) of the courses of treatment were completed within four weeks. Only 9% (73) of treatments went on beyond eight weeks (tables III and IV).

TABLE III—*Duration of treatment*

Weeks	No (%) of patients (n=789)
One treatment	51 (6·5)
≤1	94 (11·9)
1-2	224 (28·3)
2-4	191 (24·2)
4-8	156 (19·8)
>8	73 (9·3)

TABLE IV—*Number of treatments per patient*

Treatments	No (%) of patients (n=789)
1	69 (8·7)
2-3	186 (23·6)
4-5	172 (21·8)
6-10	228 (28·9)
11-20	108 (13·7)
>20	26 (3·3)

TABLE V—*Cost of physiotherapy in primary care*

The following is a guesstimate of the costs of physiotherapy in primary care compared with the costs of referring a patient to hospital:

General practice costs		*Hospital costs (obtained from hospital treasurer)*
900 patients a year (average five treatments per patient)		£13 outpatient referral
Salary of part time physiotherapist per year	£4500	£10 x ray examination
Service charge for use of room, say 50% for charge for consulting suite	£1000	£10 per patient physiotherapy treatment
X ray: nil		Additional £5 ambulance costs
Transport costs: nil		
70% reimbursement of salary of physiotherapist	(£3150)	
Salary costs to general practitioner	(£1350)	
30% tax deductible	(£405)	
Net cost to general practitioner	(£945)	
Total cost	£5500	
Divided by 900 patients	£6·11	Total costs to hospital: £33
Net saving to the National Health Service	£26·89	

The most common conditions to be treated were knees 16·5% (133), neck 15·0% (121), and shoulder 13·8% (111). Back problems accounted for only 9% (73), but during the study 40 patients had been recruited to a trial that was being carried out independently by one of the doctors in the practice. Only 21 conditions affecting the elbow were treated, probably reflecting the large number of tennis and golfers elbows treated by injection.

Discussion

Musculoskeletal conditions account for 12-15% of all time lost owing to illness in the United Kingdom each year. Excessive waiting times for outpatient treatment and consultant referral exaggerate these figures. In our study the overall referral rate was 28 per 1000 patients per year, greater than the 7 per 1000 patients found by Ellman *et al* for open access[2] and nearer the 22 per 1000 patients for consultants referring to physiotherapists. Our attendance rate of 2·8% was similar to that found by Hunt and O'Ryan (2·2%) for direct access.[4]

In our study 70% (549) of patients were seen within one week, with 8·5% (67) starting treatment the same day. The delays of over one week to the start of treatment were due almost exclusively to physiotherapists' holidays or the patients' work schedule. The figures for direct access are also good: Ellman reporting 3·8 days and Gentle five days as a mean waiting time for first treatment.[2 3] Both reported delays of approximately 50 days when a hospital consultant was concerned but in our experience delays to clinic appointments are more like six to 12 months in the Crewe Health District. It is not unheard of for patients to turn up in error one year early for their appointment.

The results of other trials have shown that general practitioners can accurately diagnose and refer for treatment as efficiently as hospital doctors,[5] and yet hospital clinics remain full of patients attending to receive a consultant's sanction before attending physiotherapy. With an attached physiotherapy department our patients were able to attend the health centre with minimal disruption of work routine, less time spent travelling, and reduced costs for both the health authority and the patient.

Analysis of workloads shows that cervical, shoulder, and knee ailments accounted for most of the treatments. These figures are largely in line with those reported for direct access. The only prominent difference is our low incidence of back conditions. This reflects the fact that 40 patients were recruited to a trial of electroacupuncture and that one partner is an enthusiastic manipulator.

Table V shows that the costs per patient for treatment at this health centre are roughly one fifth of equivalent figures at our local district general hospital. It might be argued that the threshold for referral to our own physiotherapist may be lower, but Ross showed that nearly 40% of consultations at a local hospital were considered inappropriate.[1]

The gratitude of patients has been shown by the donations by local organisations for the purchase of ultrasound, interferential, and pulsed short wave/diathermy equipment. Charitable donations from the local community have totalled £4000 for equipment in addition to the £5000 donation towards the initial cost of the building. We acknowledge that inner city practices could not expect a similar response, but clearly patients support efforts by general practitioners to improve the standards of care. It seems anomalous that simple items such as cervical collars, lumbar supports, and shaped tubigrip, which are available in hospital, are denied to our physiotherapist by the incomprehensible regulations of the drug tariff authorities. We have had to purchase such items for our patients in addition to paying 30% of the physiotherapist's salary. It is incongruous that general practitioners should lose out financially by providing a better service for their patients.

Although difficult to quantify, early access to physiotherapy is likely to reduce the costs of drug prescribing, particularly of analgesics and non-steroidal anti-inflammatory drugs. Given the increasing reluctance of patients to take potentially avoidable medication and the government restricting the range available, this must be to the advantage of all concerned.

We thank Pfizer Pharmaceuticals for help with record cards and physiotherapy advice packages for patients. Special mention must be made of the tireless effort and determination shown by Dr M F Hudson during negotiations concerning the physiotherapy extension.

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