

Are patients who refer themselves to physiotherapy different from those referred by GPs? Results of a national trial

Lesley K. Holdsworth*, Valerie S. Webster, Angus K. McFadyen,
The Scottish Physiotherapy Self Referral Study Group¹

NHS Forth Valley, Royal Scottish National Hospital, Old Denny Road, Larbert FK5 4SD, UK

Abstract

Objectives To establish if there are differences in the profile of patients who refer themselves to physiotherapy compared with patients referred by or at the suggestion of their general practitioner (GP) in a range of primary care settings.

Design of study Quasi-experimental.

Setting Twenty-nine general practices throughout Scotland.

Participants Three thousand and ten patients (>16 years of age) and 100 physiotherapists.

Method Self-referral was introduced in each site. The demographic and clinical data relating to all referrals collated over a full year were compared by referral group (self-referrals, GP-suggested referrals and GP referrals).

Results There was no relationship between gender or age group and referral group, but other differences in the profile were found. The groups differed in terms of their presenting condition and its severity ($P=0.027$). Greater proportions of patients who referred at the suggestion of their GP and patients who self-referred presented with low back and neck conditions (54% versus 43%, $P<0.001$). Self-referrers reported having their symptoms for less than 14 days to a greater extent than the other groups (14% versus 9% and 10%, $P=0.011$). Non-preferential treatment waiting time to physiotherapy also differed, with 44% of patients who self-referred being seen within 2 weeks of referral compared with 36% of patients who referred at the suggestion of their GP ($P<0.001$). Self-referrers were absent from work in lower proportions (20% versus 28% and 28%, $P=0.048$) and were absent for half the mean time (2.5 days versus 6 days). They also completed their treatment in greater proportions (76% versus 69% and 72%, $P=0.002$). Although all groups experienced the same mean number of physiotherapy contacts ($n=4$), patients who referred at the suggestion of their GP had a proportionally lower contact rate with 65% having four or less contacts compared with 55% of patients who self-referred and 51% of patients referred by their GP ($P<0.001$). There was no difference in the outcome determined by physiotherapists or patients.

Conclusions Patients who refer to physiotherapy at the suggestion of their GP and patients who self-refer appear to have a different profile from patients who are referred by their GP.

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Keywords: Self-referral; Patient profile; Physiotherapy; National trial

Background and purpose

The impact of introducing self-referral in a range of geographical and socio-economic settings was described in an accompanying paper [1]. This established that self-referral did not appear to result in an increase in the overall referral

rate to physiotherapy, except in settings where there was a history of underprovision, and identified a national mean referral rate of 53.5 per 1000 population. These findings supported the results of an earlier pilot study, which suggested that self-referral was feasible and acceptable [2]. It was suggested that people who chose to refer themselves were not a 'new' group, and that they would eventually have been referred by their general practitioner (GP) had they not accessed physiotherapy directly themselves.

However, the pilot work found that there appeared to be differences in the profile of self-referring patients compared

* Corresponding author. Tel.: +44 1324 404232; fax: +44 1324 404059.
E-mail address: lesley.holdsworth@fvpc.scot.nhs.uk

(L.K. Holdsworth).

¹ For members, please see [1].

with patients referred by their GP. The authors were concerned that the results related to a single general practice location that could not be described as representative of, and therefore relevant to, all primary care settings. How sure could we be that the ‘self-referring’ profile was reliably accurate? It was felt important to establish the validity of these findings across a range of settings encountered in primary care. This paper presents the findings of a 24-month national trial of patient self-referral involving over 3000 patients from 29 separate sites throughout Scotland.

Aims

The aims of the overall study have been stated previously [1]. This paper will report the results of the comparison between self- and GP-referred patients in terms of their demographic and clinical profiles. The results relating to the other aims of the study will be published at a later date.

Method

The original pilot methodology was replicated within the national trial [1,2]. Twenty-nine sites throughout Scotland were recruited to the study. The methodology relating to on-site preparation, timescales, participants and study design has been reported previously [1].

Referral type categories

Demographic and clinical data relating to all consenting patients from participating practices were collated over a full year after the introduction of self-referral (Box 1). An

category of ‘GP-suggested referral’ was introduced. This was to ensure that the ‘true’ self-referral rate could be identified. It had been noted after the pilot work that, in some circumstances, patients did visit their GP who, rather than eliciting a written referral, would just suggest to the patient that they should refer themselves. The authors were keen to capture the extent of this understandable practice within the national trial.

Diagnosis and presenting severity

Well-accepted diagnostic categories commonly used within physiotherapy services were used [2,3–6]. These related to the joint or body part affected with musculoskeletal symptoms (low back, neck, shoulder, knee, lower limb, upper limb, multiple). Categories for patients suffering from neurological, urological or ‘other’ conditions were also included. Each condition was also classified by its presenting severity (mild, moderate or severe) by the assessing physiotherapist. Although the severity definitions are a subjective measure, all participating physiotherapists were trained and assessed in their use through inter-rater reliability testing verifying the reliability of this approach. Duration of symptoms together with the date of referral and assessment were also recorded.

Patient employment

Employment status using nationally defined categories [7] and the level of related absence from work (days) was recorded.

Outcome measures

Outcome measures were determined by the patients and the physiotherapists. Patients were asked to record how severely their problem was affecting them by completing a 10 cm visual analogue scale (VAS) at their initial and final contact. This approach is recognised for measuring semantics and for its ease of use and reliability [8]. The choice of outcome tool had been carefully considered as described previously [2,3]. The tool had to be reliable, valid and sensitive enough to reflect the impact of physiotherapy intervention for the range of conditions encountered in these settings. Patients are commonly discharged from care before their condition has fully resolved if it is felt that they can fully manage the final stage themselves. Patients also seek advice from physiotherapists in relation to self-management strategies, particularly for chronic or recurring problems. It was therefore felt inappropriate to use a measure that focused primarily on the physical status of patients. The tool used was developed and validated during a national initiative in 1995, and has been used successfully within many physiotherapy services in Scotland since that time [9]. It is particularly pertinent to physiotherapy in these settings as it focuses on the extent to which patients achieve the goals set for treatment in

Box 1: Information collected relating to the physiotherapy episode of care

At initial contact	At final contact
Referral date	Discharge date
Assessment date	Reason for discharge
Patient unique identifier (number)	Outcome of physiotherapy
Date of birth	Final patient perception of severity of condition
Sex	Total number of contacts
Condition category	
Severity of presenting condition	
Duration of presenting symptoms	
Initial patient perception of severity of condition	
Employment status, absence and number of days absent from paid employment	

additional category was introduced to describe the mode of access based on the experience of the pilot work. As well as categorising patients as either GP or self-referrals, a further

the timescale predicted. This approach is advocated by other authors [9,10]. The approach involves documenting the treatment goals and the timescale anticipated at initial assessment. On patient discharge, the extent to which these goals have been achieved are determined and categorised as described in Box 2.

Box 2: Goal attainment definition and rating scale	
Rating	Definition
1	Goals not achieved
2	Goals partially achieved
3	Goals achieved, longer than anticipated
4	Goals achieved in time anticipated
5	Goals achieved, quicker than anticipated
Scottish Executive, 1995.	

Discharge data

On discharge, the date of and reason for discharge, attendance rates, number of physiotherapy contacts and final outcomes were collated.

Means of data collection

A specifically designed data collection sheet was devised to record all the required information on one side of an A4 sheet. As far as possible, completion of the sheet was by means of ticking the relevant choice box associated with each data item. Carbonised pads of the data sheets were provided so that the physiotherapists only had to record the required assessment and discharge information once, as the data sheets were used as part of the integral physiotherapy record. After discharge, one copy was retained within the patient physiotherapy notes and the carbon duplicate was returned to the study centre for entering into an Access database. This approach was adopted to avoid duplication and to minimise any additional workload for clinical staff involved in the study. Data validation checks were built into the database design where possible, in addition to regular validation checks of the actual data sheets on a random sample basis by site.

Each participating physiotherapist was provided with a marker pen and a laminated A5 (pocket sized) print of a 10 cm VAS. At assessment and discharge, each patient was asked, 'please indicate on the scale how severely you feel your symptoms are affecting you' (0, not at all; 10, in the worst way imaginable). This facilitated and standardised the process and was 'wipeable' for successive usage. The recorded VAS score was then measured to the nearest millimetre and the figure was transferred to the data collection sheet.

As described previously [1], training in the overall methodology, including the data required, definitions and means of recording, was provided at each site prior to the introduction of self-referral.

A resource folder was also provided, the contents of which were available on the Internet (<http://www.fv.scot.nhs.uk/nhsfv/clineff/Physiotherapy/physiotherapyselfreferral.htm>).

Statistical analyses

A statistician was consulted at all stages throughout the project. Demographic and clinical data were entered into an Access database before being analysed using SPSS. The data were subjected to non-parametric testing with the level of significance set at 5%. The specific tests used were the Chi-squared test for nominal and categorical data, and the Kruskal–Wallis test for continuous data.

Results

Three of the original 29 practices had to withdraw from the study due to unforeseen staffing problems during the early stages of data collection; their data were not included in the analyses. After exclusions, the demographic and clinical data of 3010 patients (Fig. 1) were collated and are presented in Table 1. Patients referring themselves accounted for 22% (648) of all referrals, those referred at the suggestion of their GP accounted for 18% (542) of all referrals, and the remaining 62% (1795) of patients were referred by GPs via the traditional mode. There was no significant association between referral type and gender ($P=0.246$) or age ($P=0.203$). There were, however, significant differences in the overall waiting time for physiotherapy ($P<0.001$) and the duration of presenting symptoms reported by the referral groups ($P=0.011$).

Analysis of the patients' employment status identified similar proportions in each category ($P=0.485$). Of those in paid employment, the proportions absent from work did differ between the groups, with lower levels reported by self-referrers ($P<0.048$). An examination of the actual number of days absent also differed, with self-referrers reporting nearly half the level of absence of GP or GP-suggested referrals (2.5 days versus 6 and 6 days).

In terms of their presenting condition, there were differences between the groups ($P<0.001$). Over half of all patients referred at the suggestion of their GP presented with back and neck conditions (54%), which was considerably more than experienced by the other groups (48% and 43%). Proportionally, the least number of patients with low back pain conditions were referred by their GP (25% versus 30% and 33%). The severity of the presenting condition as determined by the physiotherapist also differed ($P=0.027$). Lower proportions of those referred at the suggestion of their GP presented with the most severe symptoms (15%) compared with 21% of those referred by their GP.

Self-referring patients completed their course of physiotherapy in greater proportions than either of the other groups (76% versus 69% and 72%) ($P=0.002$). Although the median numbers of physiotherapy contacts were the same [4], there

Table 1
Demographic, employment and clinical data relating to self-, general practitioner (GP)-suggested and GP referrals

	Self-referral group, 22% (<i>n</i> = 648)	GP-suggested referral group, 18% (<i>n</i> = 542)	GP-referral group, 61% (<i>n</i> = 1795)	<i>P</i> value
Male:female (missing data, 25)	38% (245):62% (403)	40% (214):61% (328)	42% (744):59% (1051)	0.246 (NS)
Age group (missing data, 6)				0.203 (NS)
16 to 20 years	3% (15)	1% (6)	3% (47)	
21 to 30 years	9% (57)	10% (53)	9% (148)	
31 to 40 years	15% (93)	17% (88)	14% (250)	
41 to 50 years	20% (125)	22% (115)	19% (334)	
51 to 64 years	30% (189)	31% (165)	31% (551)	
65 to 74 years	15% (94)	14% (73)	15% (269)	
>75 years	11% (67)	7% (34)	10% (173)	
Mean, S.D., range (years)	53.0, ±16.6, 16 to 94	51.0, ±15.5, 17 to 87	53.0, ±16.7, 16 to 101	
Waiting time (missing data, 309)				<0.001
<2 weeks	44% (246)	35% (164)	36% (594)	
2 to 4 weeks	15% (80)	16% (75)	22% (357)	
1 to 3 months	37% (204)	46% (219)	38% (622)	
>3 months	5% (27)	4% (19)	6% (94)	
Median, S.D., range (days)	19.0, ±31.4, 0 to 146	32.0, ±29.5, 0 to 153	23.0, ±33.2, 0 to 235	
Condition category (missing data, 43)				<0.001
Low back	30% (191)	33% (175)	25% (438)	
Neck	19% (118)	22% (116)	18% (318)	
Lower limb	16% (99)	11% (55)	14% (241)	
Shoulder	12% (74)	12% (64)	15% (269)	
Knee	13% (85)	13% (67)	13% (231)	
Upper limb	8% (48)	8% (40)	10% (174)	
Multiple	2% (10)	1% (4)	2% (25)	
Other (neurological, urological)	3% (18)	3% (15)	5% (92)	
Condition severity (missing data, 141)				0.027
Mild	28% (176)	30% (153)	27% (454)	
Moderate	54% (334)	56% (288)	53% (907)	
Severe	19% (115)	15% (77)	21% (365)	
Duration of symptoms (missing data, 72)				0.011
<14 days	14% (91)	9% (333)	10% (173)	
15 to 42 days	15% (96)	15% (87)	15% (257)	
7 to 12 weeks	17% (106)	19% (100)	16% (273)	
>3 months	55% (350)	58% (302)	61% (1066)	
Employment status (missing data, 56)				0.485 (NS)
Paid employment	56% (362)	62% (333)	57% (1008)	
Retired	30% (195)	24% (131)	30% (518)	
Homemaker	6% (40)	6% (33)	3% (46)	
Unemployed	5% (29)	6% (30)	5% (87)	
Student	3% (20)	3% (92)	3% (46)	
Work absence	20% (70)	28% (92)	28% (276)	0.048
≤1 week	55% (38)	43% (39)	40% (110)	
1 to 2 weeks	19% (13)	20% (18)	18% (48)	
2 weeks to 1 month	18% (12)	21% (19)	26% (70)	
>1 month	10% (7)	18% (16)	18% (48)	
Mean, S.D., range (days)	2.5, ±10.6, 0 to 120	6.0, ±22.3, 0 to 320	6.0, ±19.6, 0 to 300	
Reason for discharge				0.002
Treatment completed	76% (487)	69% (365)	72% (1268)	
Failed to complete	16% (104)	22% (120)	18% (308)	
Referred to GP	2% (9)	3% (17)	5% (81)	
Other (appointment declined, condition resolved at first contact)	7% (41)	6% (32)	7% (120)	
Treatment completed	76% (487)	69% (365)	72% (1268)	
% Completing course (missing data, 17)				
<2 contacts	20% (96)	23% (84)	20% (242)	
3 to 4 contacts	35% (167)	42% (151)	32% (399)	

Table 1 (Continued)

	Self-referral group, 22% (<i>n</i> = 648)	GP-suggested referral group, 18% (<i>n</i> = 542)	GP-referral group, 61% (<i>n</i> = 1795)	<i>P</i> value
5 to 8 contacts	43% (154)	27% (97)	37% (456)	<0.001
>8 contacts	14% (65)	9% (32)	13% (160)	
Median, range	4, 1 to 22	4, 1 to 20	4, 1 to 22	
Outcome				
Not recorded	8% (39)	4% (15)	8% (92)	0.82 (NS)
Goals not achieved	3% (14)	5% (16)	6% (69)	
Goals partially achieved	22% (106)	20% (69)	21% (264)	
Goals achieved (longer time)	8% (38)	6% (19)	7% (86)	
Goals achieved (in time)	50% (241)	57% (204)	49% (613)	
Goals achieved (quicker time)	10% (49)	11% (38)	11% (137)	
Visual analogue scale (missing data, 166)				
Initial mean, S.D., range	56.8, ±23.2, 1 to 100	56.5, ±23.0, 1 to 100	55.0, ±23.6, 1 to 100	0.186 (NS)
Final mean, S.D., range	18.5, 21.7, 0 to 100	20.0, 23.5, 0 to 90	18.5, 22.0, 0 to 100	0.314

NS, not significant; S.D., standard deviation; GP, general practitioner. Actual numbers of patients in parentheses.

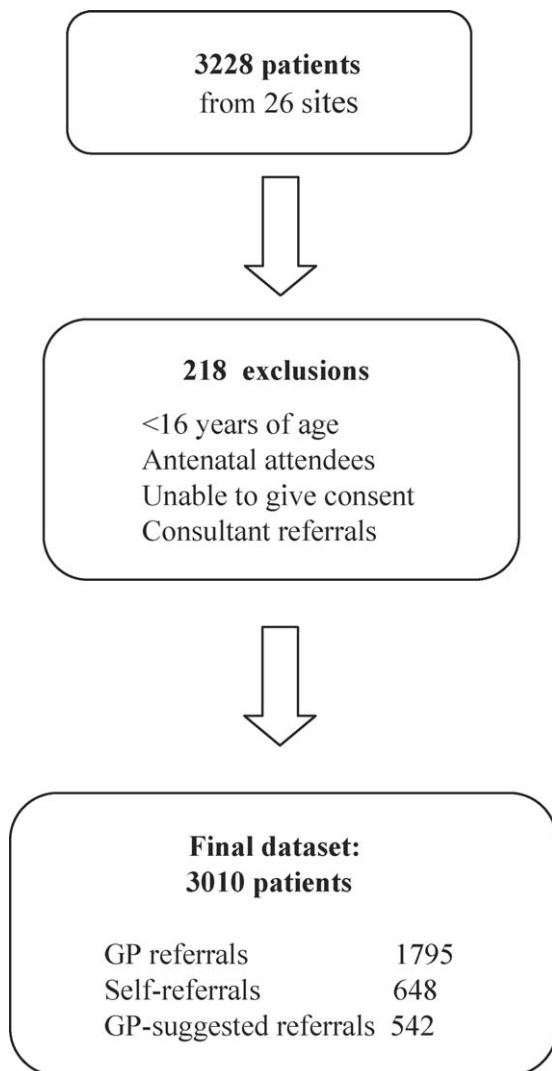


Fig. 1. Study participants.

were differences between the groups ($P < 0.001$). Sixty-four percent of patients referred at the suggestion of their GP completed their course of treatment in four or less contacts compared with 55% of self-referrals and 51% of GP referrals.

In all referral groups, the majority of patients (66–73%) achieved the goals set for their intervention ($P = 0.82$). Analysis of the initial and final VAS scores revealed that the perceived symptom severity of all groups had considerably ‘improved’ with no differences between the groups ($P = 0.26$).

Discussion

The findings of the pilot work identified that patients who refer themselves to physiotherapy have a different profile compared to those referred by their GP [2]. This study set out to test the reliability of these findings when self-referral was introduced within a number of practices throughout Scotland.

The results of this national trial have identified both similar and differing traits to those reported previously. However, the potential influence of introducing an additional group on this issue needs to be considered. In the pilot work, all self-referring patients were classified together regardless of whether they were true self-referrals or referred at the suggestion of their GP. Within the first paper in this series, a ‘true’ self-referral rate of 22% and a GP-‘suggested’ referral rate of 18% were reported [1]. Identifying those referred at the suggestion of their GP may have, in effect, removed them from the self-referral group, resulting in an altered profile to that reported previously. GP-suggested referrals may also have a distinct profile. Although they did not directly initiate the referral themselves, they did exhibit a level of autonomous behaviour in gaining access to physiotherapy. Why they did not refer themselves directly may be due to a

number of reasons, including a lack of awareness of the self-referral facility, knowledge of physiotherapy or preferring to consult their GP. Irrespective of the reason, they did act on their GP's advice. However, there is no way of knowing how many patients chose not to act on this advice.

One of the concerns voiced in relation to self-referral has been that certain sectors of society may be excluded as they may not engage as readily with such a system. This is a concern that has been levelled particularly at older patients, who were thought to have a greater reliance on their GP than younger patients, primarily due to tradition. This was not the case for age. It would appear that proportionally as many, if not slightly more, people over the age of 75 years referred themselves than were referred in the other groups (11% versus 10% and 7%). One of the major differences, however, related to gender. The pilot work identified that significantly more men than women accessed physiotherapy themselves (56:44 male:female). This finding was not replicated in this trial, where a similar presentation rate of approximately 40:60 (male:female) was experienced consistently within each of the groups. This rate is known to be representative of normal physiotherapy outpatient populations [5,6].

The waiting time for physiotherapy varied considerably across all participating sites (2–33 weeks), and this factor may have influenced the differences encountered in the length of time that patients had to wait for their initial appointment. Greater proportions of self-referring patients were seen within 2 weeks of referral compared with the other groups (44% compared with 36% of GP referrals). As all patients were placed on the same waiting list regardless of mode of access, the same explanation is offered as suggested in the pilot work. Self-referral can be associated with decreased administration as patients often present in person or telephone the physiotherapy service directly, which means that mutually convenient appointments can be offered at the time of referral rather than relying on the time that written referrals take to move through the system and actually reach patients.

The effect of waiting time generally should be considered further. It is known that longer waiting times are associated with an increased rate of non-attendance [6]. This effect is supported by the present results, as a considerable variation was observed across the sites (3–26%). Those sites with the longest waiting lists experienced the highest initial rates of non-attendance. When patients have to wait for extended periods before gaining access to services, some may find that their condition has resolved naturally, some may seek alternative treatment and some may find their symptoms increasing [6,11]. In some sites, systems of triage were in place that aimed to identify the more urgent cases. Triage practices were not consistent in their approach or application across all sites. Gratifyingly, however, over 50% of all patients in all groups were seen within 4 weeks of referral, with less than 6% waiting for over 3 months. Self-referring patients as well as waiting for their appointment for a shorter period of time reported symptoms of a lesser duration [11].

Previously, the authors reported that self-referred patients were more likely to be in paid employment than GP-referred patients and that they had significantly less absence from work. These results were not fully replicated within this trial. A similar proportion of patients were in paid employment ($P=0.485$), and the level of absence from work was similar ($P=0.048$). Self-referrers were absent from work for half the time of the other groups. This may be indicative of the fact that although this group presented with conditions of a similar severity to the other groups, they had experienced them for a lesser duration ($P=0.011$) and were seen earlier ($P=0.001$), which may have impacted on their work absence. It should also be considered, however, that they may be more autonomous in their health-seeking behaviour, as suggested previously.

In terms of the presenting condition, there was a significant difference between the referral groups. Patients suffering from low back pain complaints comprised the largest referral condition category within all groups. Interestingly, proportionally more patients referred at the suggestion of their GP were suffering from low back and neck conditions than the other groups ($P<0.001$). The reason for this is unknown; but as a greater proportion of this group was also in paid employment (62% versus 56%), it could be suggested that GPs may have been encouraging patients to adopt autonomous behaviours. Although this group of patients would appear to be different from the other groups, it is impossible to provide a rational explanation from the available data. Within this study, it is not known whether some individual GPs took the opportunity to stop issuing written referrals altogether whilst others continued as before, or whether they adopted a modified behaviour depending on the individual patient's circumstances. Further information may be forthcoming when the exploration of the qualitative GP data is reported.

The findings of the pilot work suggested that self-referring patients are more proactive, autonomous and compliant. Self-referring patients in the national trial also completed their full course of treatment in greater proportions than either of the other groups ($P=0.002$). Interestingly and in contrast to the previous report, there were differences in the numbers of contacts between the groups ($P<0.001$). Those referred at the suggestion of their GP had less contacts, even though the median rate was exactly the same irrespective of group. The pilot results identified that self-referrers achieved similar outcomes to the other groups, and it was suggested that self-referrers may have a greater belief in their own ability to influence their course of recovery and therefore the perceived severity of their symptoms. The results from this trial do not support that view. All groups reported a considerable decrease in the mean symptom severity on discharge but there were no differences between the groups. The possible influence of long waiting times experienced by some sites may have accounted for some of the difference in terms of patient outcome between this trial and the previous pilot work, particularly as speedier access has been associated with improved patient outcomes [4,5,6,11,12].

Limitations

This was a large multi-centred trial undertaken in 26 sites throughout Scotland and involving over 3000 patients. Although every effort was made to ensure that the data provided were complete and valid, it has to be considered that, despite validation checks, the data were supplied by numerous individuals. This, in itself, represents increased vulnerability.

The impact of waiting times should also be considered as a possible limitation. As reported previously, these varied considerably across the sites and could have influenced some aspects of the patient experience and therefore these results.

In some instances, historical data were found to be unreliable but were being used routinely by physiotherapy services for a variety of purposes. Even when considering the services that, at the outset, felt they could confidently provide reliable information, many were found to be wanting on further examination. On a positive note, however, being involved in this trial has led to many sites recognising their position and introducing strategies to improve their approach to and use of service data.

Referral rates to physiotherapy from GP practices and individual GPs vary considerably throughout Scotland [1] and the UK [11], and this phenomenon must be influenced to a degree by GP-referral behaviour. It has to be considered, therefore, that this may impact on the profile of patients referred. Although not examined within this study, the reasons for this observation warrant further exploration.

Conclusions

The aim of this study was to identify whether patients who referred themselves to physiotherapy were different from patients referred by their GP. The results of this national trial have identified both similarities and differences. It could be suggested that some of these differences may be attributable to the variation in waiting times experienced nationally and/or differences in GP-referral behaviour, and these issues warrant further investigation. This is the first time that a study has been able to reliably identify 'true' self-referrers and, it could be argued, describe a far more accurate profile of these patients. Providing patients with choice, increased access and more timely interventions that aim to prevent, manage or improve their well-being are at the heart of all current government health reforms [13–17]. The authors feel confident that the findings of this trial are wholly in keeping with these aspirations.

The fact that self-referring patients have a different but appropriate profile could be said to add weight to the argument for widening access to physiotherapy services. Further research is required to ensure that all sectors of the community have equal but not necessarily the same means of accessing services. Allowing patients to refer themselves to physiotherapy provides another access route. Despite the

many concerns that have dogged the progression to a system of self-referral, these findings suggest that many are unfounded and that the introduction of patient self-referral in primary care has real benefits for patients, healthcare providers and wider society.

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