

## **VALUING PEOPLE: EVALUATING REFERRAL SYSTEMS. A STUDY OF A MULTIDISCIPLINARY SINGLE POINT OF REFERRAL SYSTEM TO DEDICATED ADULT LEARNING DISABILITY HEALTH SERVICES IN LEICESTER, UK**

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### **Introduction**

People with intellectual disabilities often have complex needs that require a range of health and social services (NHS Executive, 1998; Department of Health, 2001). Around 50% have a major psychiatric or behaviour problem requiring specialist help (Corbett, 1979; Lund, 1985; McGrother *et al.*, 2002). 25% have epilepsy; at least 33% have a sensory impairment; and around 40% have major physical disabilities such as problems with mobility or continence (Office of Population Censuses and Surveys, 1989; NHS Executive, 1998; McGrother *et al.*, 2001;

The Foundation for People with Learning Disabilities, 2001). These substantial needs are often overlooked or unmet (Howells, 1986; Wilson and Haire, 1990; Rodgers, 1993; Department of Health, 1999b). Services tend to be inadequate, poorly coordinated, inequitable and unresponsive to individual needs (McEvoy, 2000; Department of Health, 2001). 50-90% of people with intellectual disabilities have communication difficulties; and a lack of supported communication may compound their problems in accessing the services they need (Van der Gaag, 1998).

Most people with intellectual disabilities now live and receive services in the

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community. The fifth objective of the government's white paper *Valuing People* is 'to enable people with learning disabilities to access a health service designed around their individual needs, with fast and convenient care delivered to a consistently high standard, with additional support where necessary' (Department of Health, 2001). People with mild intellectual disabilities should be enabled to access mainstream services with support from dedicated staff. Dedicated evidence-based multidisciplinary services for those with severe intellectual disabilities and/or complex needs are being developed (Royal College of Psychiatrists, 2001).

Dedicated learning disability health services for adults living within Leicestershire and Rutland are provided by Leicestershire Partnership NHS Trust. These comprise psychiatry, clinical psychology, speech and language therapy, physiotherapy, occupational therapy, an outreach team and community nursing. Historically, each profession functioned independently, using its own model of service, referral criteria and referral system. This frequently led to inefficient working and ineffective communication between referrers, service providers, and service users and carers. Common pitfalls included uncertainty about where and how to make a referral; multiple referrals to different services, simultaneously or sequentially; inappropriate referrals; duplication of professional input; confusion about roles; uncoordinated care; and long waiting times.

The concept of a single point of referral (SPR) system with joint multidisciplinary assessment became popular since the introduction of the Care Programme Approach (Department of Health, 1990; and 1999a). A few multidisciplinary community teams have been established in mental health, but little has been pub-

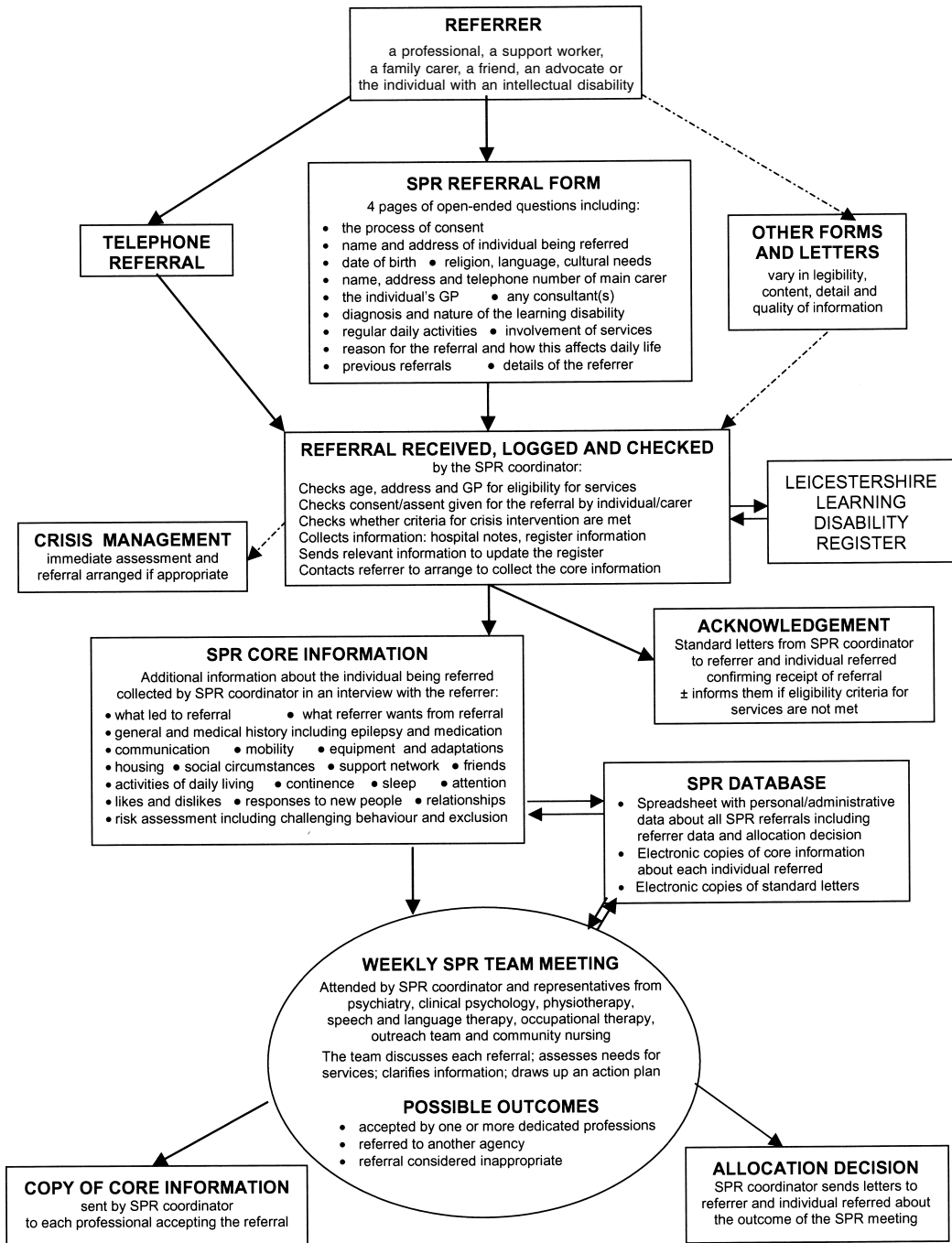
lished and there is a need for proper evaluation of different models (Gask *et al.*, 1997; McEvoy, 2000).

In October 2002, a multidisciplinary SPR pilot project for dedicated adult learning disability health services was set up in Eastern Leicester Primary Care Trust (PCT). This used common referral criteria and a streamlined information system (FIGURE 1). A new referral form and an information leaflet about the SPR system were developed and copies distributed to social workers, day centre managers, general practitioners (GPs) and colleges of further education. The SPR coordinator received, logged, checked and collated a set of core information about individuals referred. A representative from each profession attended weekly SPR team meetings, where referrals were assessed and action plans agreed. A social worker attended these meetings about once a month.

The referral criteria were an individual having an intellectual disability; being aged 19 or over at the time of the referral (historically based on the age of leaving special school) or 16 and over if not in full-time education; living in Leicestershire or Rutland for at least three months before the referral; and being registered with a GP in Eastern Leicester PCT. Intellectual disability was defined as a developmental intellectual impairment (intelligence quotient  $\leq 70$ ) with problems of adaptive social functioning (Heber, 1959) and the likely need for long-term support, in line with ICD-10 (World Health Organisation, 1992) and DSM IV (American Psychiatric Association, 1994) definitions.

Around 134,000 adults aged 20 and over were registered with GPs in Eastern Leicester PCT in 2002 (Leicestershire Health Informatics Service, 2003<sup>1</sup>). Six hundred and fifty adults aged 20 and over with an intellectual disability and resident

**FIGURE 1**  
**Outline of the single point of referral system**



in Eastern Leicester were known to services in September 2002 (Leicestershire Learning Disability Register, 2002)<sup>2</sup>.

Leicestershire Partnership NHS Trust provided funding to evaluate the SPR project. The overall aim of the study was to assess the impact of establishing the SPR system in Eastern Leicester PCT. The objectives were to make the following comparisons before and after the new system was introduced: the number and demographic characteristics of individuals referred; the sources of referrals; the reasons for referrals; the appropriateness of referrals; the average number of professions involved in the care of each patient; the mean waiting time between referral and assessment; and the perception of communication between professionals.

## Method

The study was initially designed by a multidisciplinary group within the learning disability service comprising the practice development nurse facilitating the SPR project, a consultant psychiatrist, a psychologist, a speech and language therapist, a physiotherapist and a community nurse. It was further developed and carried out by a part-time public health researcher between April and August 2003.

A literature search was done using the internet and standard medical and social sciences databases. Enquiries were made through local practitioners and managers about other SPR systems to multidisciplinary community learning disability teams.

Semi-structured individual interviews were held with the SPR project facilitator, SPR coordinator and SPR representatives. Information was obtained about how each department managed its referrals; the per-

ceived advantages and disadvantages of the old referral system (still used for patients with a GP outside Eastern Leicester PCT) and SPR system; key issues for each department; the availability of data about current and former patients; and any data already collected about referrals. The methods and information tools of the SPR system were examined. Group discussions about these issues and topics of current concern were held during the weekly SPR team meetings.

A retrospective case note review was carried out of referrals from Eastern Leicester PCT before and since the introduction of the SPR system. Patients referred during the first six months of the SPR system were identified from the SPR database. Information about each patient was collected from the case notes, referral forms or letters and the SPR core information records. The data included the patient's name; date of birth; sex; ethnicity; type of accommodation; professions already involved; date, source and method of referral; reasons for referral; appropriateness of the referral; date of assessment; and profession(s) accepting the patient. An inappropriate referral was defined as one that did not meet the referral criteria for the service or where the reason for referral was primarily for social care or acute physical health problems.

Some preliminary anonymised group data had been collected in November 2002 about referrals to each department during a three-month period in 2001, when the old system had been in place. In this present study, the individuals included in those groups were identified from departmental log books and, where possible, the same data as above were collected from departmental records and case notes.

A short postal questionnaire was designed, piloted and used to collect information about SPR service providers'

perceptions and experience of the old and SPR systems. The questionnaire was sent to all service providers whom the SPR team identified as receiving referrals from Eastern Leicester PCT. It asked about referrals of patients from Eastern Leicester PCT during the first six months of the SPR system; referrals from other PCTs over the same period; the quality of inter-professional communication; and any extra time required or saved by the SPR system.

A second short postal questionnaire was designed, piloted and used to collect similar information from referrers. Individuals who had made one or more referrals through the SPR system in its first six months were identified from the SPR database. The questions covered the referrers' awareness of the SPR system; their overall experience of using it; SPR telephone referrals; the SPR referral form; and any experience of referring individuals from other PCTs over the same period. One questionnaire was sent to each referrer irrespective of the number of referrals that the individual had made.

Analyses were done using the SPSS statistical package version 11.0. Statistical testing was done where appropriate using the chi-square ( $\chi^2$ ) test for categorical data; and the Mann-Whitney U test for comparison of medians.

## Results

The literature search did not identify any published studies or reports from other trusts operating SPR systems in learning disability. Local knowledge enabled contact to be made with a neighbouring trust that had been operating a community learning disability team with a single point of access to health and social services since 1981. However, there

were no comparable statistics about referral rates and waiting times. Therefore, the results reported here refer only to the SPR system in Eastern Leicester PCT.

### *Numbers and demographic characteristics of individuals referred*

Between 1 October 2002 and 31 March 2003, 92 individuals were referred to the SPR system with a new problem. The mean referral rate was 3.5 referrals a week.

There were 98 referrals between 1 August 2001 and 31 October 2001, giving a mean referral rate of 7.5 referrals a week. The weekly number of referrals was not available, precluding statistical testing for significance of the substantial reduction in the referral rate. Data were only available for 54 (55%) of these individual referrals: those sent to psychiatry, clinical psychology, physiotherapy, occupational therapy and community nursing. The SPR team believed that these 98 referrals related to substantially fewer *individuals*, many of whom had been referred to more than one department for the same problem. Anonymity of the data made it impossible to count the number of individuals.

From the data available, slightly more males than females were referred to both the old system (54%) and SPR system (53%), with the greatest numbers of persons in the younger age groups (TABLE 1). There was no statistical difference in the sex, ethnicity or type of accommodation in the two study periods. However, there were significantly more individuals aged <19 referred to the old system ( $\chi^2 = 18.5$ ,  $p < 0.001$ ).

**TABLE I**  
**Demographic characteristics of individuals referred during the two study periods**

Demographic characteristics		Number of referrals (valid %)			
		Old system		SPR system	
Sex	Male	29	(54%)	46	(53%)
	Female	24	(44%)	41	(47%)
	[Missing data]	[45]		[5]	
Age	< 19	21	(39%)	8	(9%)
	19 - 29	13	(24%)	29	(32%)
	30 - 39	9	(17%)	22	(24%)
	40 - 49	2	(4%)	17	(19%)
	50+	9	(17%)*	16	(18%)*
	[Missing data]	[44]		[none]	
Ethnicity	White	18	(37%)	25	(37%)
	South Asian	30	(61%)	40	(60%)
	Other	1	(2%)	2	(3%)
	[Missing data]	[49]		[25]	
Type of Accommodation	With an unpaid carer	26	(51%)	39	(61%)
	With a paid carer in a home	14	(27%)	22	(34%)
	Independent or semi-independent living	11	(22%)	3	(5%)
	[Missing data]	[57]		[28]	
<b>Total number of referrals</b>		<b>98</b>		<b>92</b>	

\* Rounding errors account for the percentages in some boxes not totalling 100%

### *Source of referrals*

The commonest sources of referrals to both systems were social workers, day centre staff, GPs and learning disability health professionals (TABLE II). With the SPR system, there were more direct referrals from carers. There appeared to be a reduction in referrals from GPs, day centre staff, learning disability community nurses and the outreach team. However, the proportion of referrals from all LD health professionals remained similar (26.5% of referrals to the old system and 24.9% to the SPR system).

### *Reasons for and appropriateness of referrals*

Of the 92 referrals to the SPR system, 44 (48%) were made on an SPR referral form (including telephone referrals, where the coordinator completed the form); 35 (38%) on a variety of old forms used by different departments; and documentation was missing in 13 (14%). In 22 referrals (24%), the reason for the referral was not clear. These 22 referrals came from a variety of referrers; no single group stood out. Only one (5%) was made on a new form, which specifically asked the

**TABLE II**  
Sources of referrals to the dedicated learning disability (LD) services

Source of referral	Number (%) of referrals			
	Old system		SPR system	
GP	22	(22.4%)	7	(7.6%)
Social worker	20	(20.4%)	22	(23.9%)
Day centre staff	18	(18.4%)	9	(9.8%)
LD community nurse	11	(11.2%)	3	(3.3%)
LD outreach team	10	(10.2%)	4	(4.3%)
Other LD health professional	5	(5.1%)	16	(17.3%)
Residential home manager	5	(5.1%)	4	(4.3%)
Carer	4	(4.1%)	7	(7.6%)
Staff from private care agencies	2	(2.0%)	-	-
Other NHS staff (hospital and community)	-	-	11	(12.0%)
LD register staff	-	-	4	(4.3%)
Staff at college of further education	-	-	3	(3.3%)
Missing data/unspecified source	1	(1.0%)	2	(2.2%)
<b>Total</b>	<b>98</b>	<b>(99.9%)*</b>	<b>92</b>	<b>(99.9%)*</b>

\* Rounding error

reason for referral; 8 (36%) were on old forms; and 13 (59%) had no documentation.

Referral to the SPR system was for a wide range of physical, mental and social problems, with a third of referrals being for challenging behaviour (21.7%) or communication problems (12.0%) (TABLE III). These were variously managed by different professions using their shared skills. Other problems such as epilepsy or feeding difficulties required the more specialist skills of one particular profession. 80% of referrals involved input from more than one profession compared with 63% in the old system (Table 4), a significant increase ( $X^2 = 6.05$ ,  $p < 0.5$ ).

With the introduction of the SPR system, the proportion of inappropriate referrals fell significantly from 26% to 13% ( $X^2 = 3.88$ ,  $p < 0.05$ ) (TABLES III and IV).

Eight of the 12 individuals inappropriately referred to the SPR system were too young and one did not have an intellectual disability. Another referral was a request for asthma management, which was not provided as a dedicated service. It is unclear why the last two referrals were not accepted. The inappropriate referrals came from a wide range of referrers.

### *Waiting times*

Waiting times from referral to assessment were available for all the SPR referrals but for only 20 referrals to the old system. The SPR system significantly reduced the median waiting time from 66 to 6 days ( $Z = -5.9$ ,  $p < 0.001$ ) and the inter-

**TABLE III**  
**Appropriate and inappropriate referrals to the SPR system**

Main reason for referral	Number of referrals		
	Appropriate	Inappropriate	All referrals (%)
Challenging behaviour	19	1	20 (21.7%)
Communication problems	11	-	11 (12.0%)
Mental health problems	10	-	10 (10.9%)
Physical health problems	7	1	8 (8.7%)
High dependency needs eg feeding difficulties	6	-	6 (6.5%)
Epilepsy	1	2	3 (3.3%)
Psychometric or cognitive assessment	1	1	2 (2.2%)
Skills training: activities of daily living	2	-	2 (2.2%)
General management problems eg review of service provision, safety concerns	5	3	8 (8.7%)
Reason not stated or unclear	18	4	22 (23.9%)
<b>Total</b>	<b>80 (87%)</b>	<b>12 (13%)</b>	<b>92 (100%)</b>

**TABLE IV**  
**Referrals to the old system**

Dedicated profession receiving referrals	Number of referrals			
	received	considered appropriate	referred on to the appropriate profession	involving > 1 dedicated profession
Psychiatry	18	13	5	10
Clinical psychology	6	4	2	3
Speech and language therapy	24	19	0	22
Physiotherapy	1	1	1	1
Occupational therapy	11	11	5	11
Outreach team	11	5	3	9
Community nursing	18	13	2	1
Day centre nurse	9	7	2	6
<b>All services: total (%)</b>	<b>98 (100%)</b>	<b>73 (74%)</b>	<b>20 (20%)</b>	<b>62 (63%)</b>

quartile range from 15-46 days to 2-9 days (FIGURE 2). 25% of patients were assessed within 2 days, 50% within 6 days and 75% within 9 days.

*Perceptions and experiences of SPR service providers*

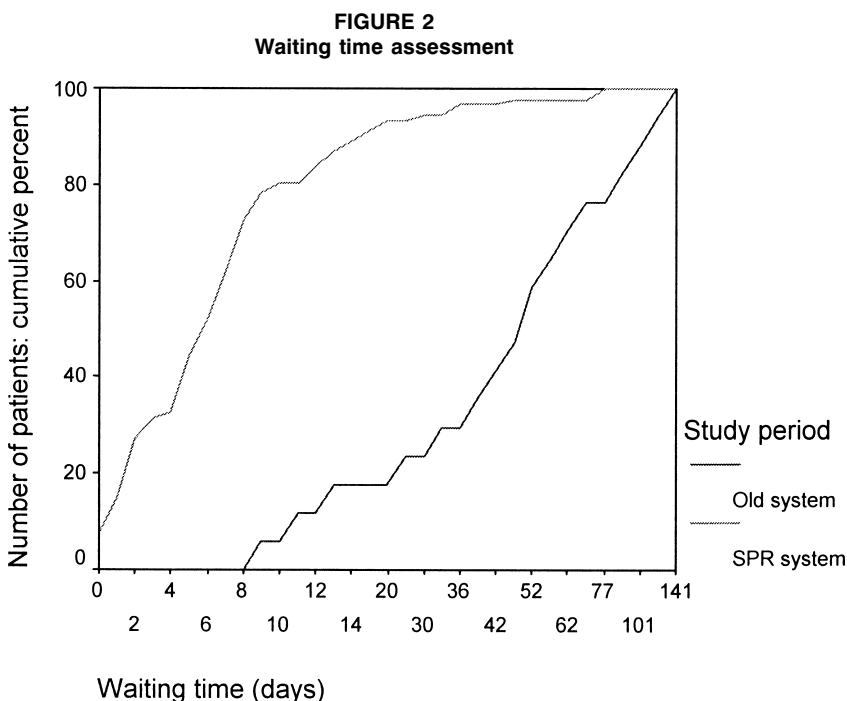
The questionnaire was sent to two psychiatrists, three clinical psychologists, nine speech and language therapists, one physiotherapist, four occupational therapists, three outreach nurses and eight community nurses. After two mailings, 27 (90%) of the service providers had responded.

The majority of responders considered that the SPR system had improved the quality of written information provided on referral (TABLE V). Comparing each respondent's sets of paired responses, 21

service providers (78%) considered that the SPR system was the better system, 5 (19%) thought there was no difference and only 1 (4%) thought that the old system was the better. The numbers in the cells were too small for valid testing of statistically significant differences.

The majority of service providers thought that the SPR system had enabled them to work more collaboratively and efficiently; and improved their professional satisfaction (TABLE VI). They thought that the SPR system had improved the quality of care and information for service users and carers.

Overall, service providers perceived that there had been a shift towards better interprofessional communication, both among the seven SPR health professions and between them and social workers (FIGURE 3). Comparing individual respondents' sets of paired responses about the quality of communication with each of



**TABLE V**  
**Service providers' perceptions of the quality of written communication on referral**

Statement	Response	Number (%) of service providers ticking each response			
		Old system		SPR system	
The reason for the referral is clear	Most of the time	9	(33%)	20	(74%)
	Sometimes	10	(37%)	6	(22%)
	Occasionally	8	(30%)	1	(4%)
	Never	0	(0%)	0	(0%)
Referral letters/forms contain sufficient information for you to judge whether the referral is appropriate	Most of the time	5	(19%)	18	(67%)
	Sometimes	12	(44%)	8	(30%)
	Occasionally	7	(26%)	1	(4%)
	Never	3	(11%)	0	(0%)
Referral letters/forms contains useful additional information	Most of the time	1	(4%)	17	(63%)
	Sometimes	7	(26%)	8	(30%)
	Occasionally	17	(63%)	2	(7%)
	Never	3	(7%)	0	(0%)

**TABLE VI**  
**Service providers' perceptions of the benefits of the SPR system**

Statement about the SPR system	Response			Missing data	Totals*
	Agree	Neutral	Disagree		
It has improved patient care	56%	33%	7%	4%	100%
It provides better information for patients/carers	67%	26%	4%	4%	101% <sup>†</sup>
It provides a more holistic approach to care	78%	15%	4	4	100%
It has achieved a coordinated team approach	74%	11%	11%	4%	100%
It provides better documentation for professionals	59%	33%	4%	4%	100%
It has improved professional satisfaction	56%	33%	7%	4%	100%
It has improved professional understanding of the roles of different professions	85%	11%	0%	4%	100%

\* 27 respondents

<sup>†</sup> Rounding error

the other professions before and since the SPR system was introduced, one respondent (4%) reported improved communication with one profession, three (12%) with two professions and six (24%) with three or more professions; 15 (60%) reported no change with any profession. No obvious patterns were identified within or between professions.

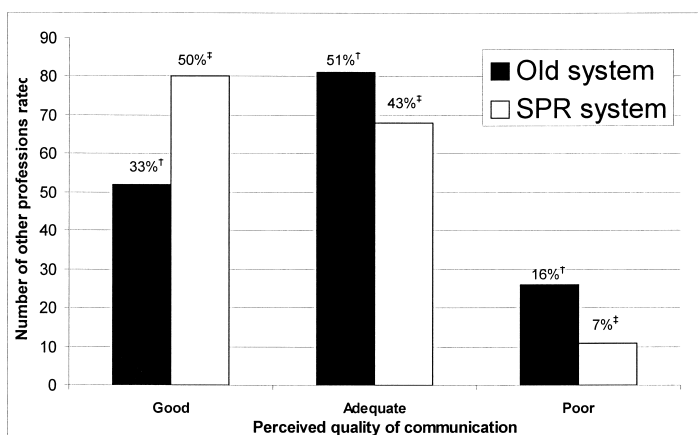
Each SPR representative spent several hours a week attending the weekly team meetings and doing related administrative tasks. The occupational therapists, outreach team and community nurses reported a net saving of time: with the SPR coordinator collecting core information, they no longer needed to make home visits to do screening assessments. With workloads varying from week to week, some responses were not precise enough to calculate the overall change in workload with the SPR system.

### Perceptions and experiences of referrers

The 92 referrals made through the SPR system had been made by 59 different individuals, 51 of whom were traced through their original contact address. Forty of these 51 referrers responded after two mailings, giving an overall response rate of 78%.

Although all 40 responders had made at least one referral through the SPR system, only 32 of them (80%) reported that they had been aware of the new system before receiving the questionnaire. Four GPs, a community paediatrician, two hospital doctors and a children's speech and language therapist had been unaware of the change. They were not asked any further questions comparing the different systems.

**FIGURE 3**  
Changes in perceived inter-professional communication\*



\* Respondents rated the quality of communication with every profession other than their own  
 † % of responses about quality of communication during the old system  
 ‡ % of responses about quality of communication during the SPR system

Of the 32 referrers who had been aware of the SPR system, 23 had used the new SPR referral form, 4 had made a telephone referral, and 5 had used a letter or form from their own department or agency. Overall, the processes of the SPR system were viewed more favourably than those of the old system (TABLE VII).

## Practical Implications and Discussion

### *Pattern and appropriateness of referrals*

With the old system, some referrals were inappropriate because they did not meet the referral criteria for any profession. Others had been inappropriately referred to the wrong profession. Significant numbers of patients were inappropriately referred and re-referred to a series of professions before finally being accepted by one. With the SPR system, the multidisciplinary team identified the most appropriate package of care in a single assessment. Although the rate of *individuals*

referred was increasing slightly (Michael *et al.*, 2004), the total rate of *referrals* (including re-referrals) decreased.

### *Source of referrals*

Since the introduction of the SPR system, referrals were received from a greater range of sources. Although both the number and proportion of direct referrals from carers almost doubled, these reflected only 7.6% of referrals, mostly for speech and language therapy. The reduction in referrals from day centre staff was due to almost half of their referrals previously having been to the day centre nurse, whose post was discontinued in April 2002. Community nurses and the outreach team needed to make fewer re-referrals to other professionals within the SPR system while other dedicated professionals made more new referrals. All referrals to a psychiatrist still need a referral letter from a GP whatever the original source of the referral. The apparent reduction in GP referrals may be explained by the SPR system recording the original source of

**TABLE VII**  
Referrers' satisfaction with the old and SPR systems

Statement about the referral process	% (number) of responding referrers who had used the system agreeing with the statement	
	Old system	SPR system
The referral process was straightforward	40% (6 of 15)	70% (19 of 27)
Completing the form/making the call was reasonably quick	47% (7 of 15)	67% (18 of 27)
It was clear whom to contact	40% (6 of 15)	78% (21 of 27)
I was kept informed about the progress of the referral	20% (3 of 15)	75% (21 of 28)
Overall, I was satisfied with the referral system	13% (2 of 15)	76% (22 of 29)

referrals while the old system recorded the intermediary GP.

The study identified a significant lack of awareness of the SPR system among some key referrers, particularly GPs. Even those familiar with the service reported that it had been poorly publicised. There needs to be improved publicity, with wider dissemination of the information leaflet and referral form. The information leaflets should include the definition of intellectual disability with the referral criteria for learning disability services.

### *Waiting times*

As anticipated, the SPR system substantially reduced waiting times from referral to assessment. With the old system, patients with non-urgent problems often experienced long delays waiting for an assessment. With all referrals now being assessed earlier by a multidisciplinary team, there is prompt allocation to the appropriate profession(s). However, there may still be long waiting times for non-urgent cases after allocation.

### *Study design*

When considering any service development, it is a good principle to plan the evaluation at the start. Data is most likely to be complete and accurate when it is collected prospectively and for relevant operational purposes (Körner Steering Group, 1984). No data had been collected about *individuals* referred during the old system before the SPR system was set up. The 54 referrals for which individual data were available were unlikely to be repre-

sentative of the total 98 referrals. No records were available for the discontinued day centre nurse service. The outreach team and speech and language therapists did not have the resources to collect extra data about individuals or to obtain the consent and assent required for the researcher to do so. The computer system for speech and language therapy was unable to retrieve details of former patients. The extent and bias of missing data about the old system limited the comparisons that could be made with the SPR data and valid testing for statistically significant differences.

Patient and carer experience is one of the key areas of the government's NHS quality reforms (Department of Health, 1998). Leicestershire Partnership NHS Trust is committed to including service users and carers in its redesign of services. However, the time scale and other resource constraints of the study precluded obtaining the views of service users and carers. The study evaluated access to services rather than the quality of those services *per se*, a concept that may be difficult to explore with people with severe intellectual disabilities.

In the questionnaires to service providers and referrers, the SPR system was compared with the old referral system being used by other PCTs (where referrals were made to individual professions), generally Leicester City West, during the same period rather than with the system that was used in Eastern Leicester PCT before October 2002. This was to minimise problems of differential recall bias that might occur if comparing different time periods.

The evaluation assessed the structures, processes and output of the two referral systems. Referral is just an early step in obtaining any health or social care. Assessing health status and quality of life

outcomes should be done, in a wider context, with a larger study, over a longer period.

### *Developing the SPR system*

The SPR information tools improved the range and quality of written information available about individuals on referral. A few referrals were made without either the individual or carer being aware of them. There is scope for refining the information tools and developing their use:

- tightening the section on consent and assent on the referral form
- making an electronic version of the referral form available to referrers
- expanding the SPR core information to cover the basic information needs of all the professions
- adding operational clinical details to the database such as whether cases are open or closed to each profession
- developing the database as a tool for audit, quality assurance and service development.

The SPR system facilitated prompt allocation of referrals to appropriate professionals, with a significant reduction in the waiting times from referral to assessment. However, the co-existence of two referral systems to the same dedicated services caused confusion for some referrers and inequity for service users. The SPR system can be rolled out in three main ways:

- as a model for referrals to each of the new locality community teams
- an integrated SPR system for joint working with Social Services
- as a useful first stage for developing integrated care pathways.

### **Footnotes**

<sup>1</sup>Leicestershire Health Informatics Service at Leicestershire, Northamptonshire and Rutland Strategic Health Authority (June 2003). Information compiled from lists of patients on the current FHSA (Exeter system).

<sup>2</sup>Leicestershire Learning Disability Register, University of Leicester (June 2002). Unpublished.

### **Summary**

**Background.** Individuals with intellectual disabilities have more physical and mental health problems than the rest of the population; and more difficulty in accessing the services they need. This study evaluated the impact of introducing a multidisciplinary single point of referral (SPR) system for dedicated adult learning disability health services in Eastern Leicestershire Primary Care Trust.

**Method.** The study included a literature search; a retrospective case note review comparing referrals to the SPR system with those to the old system; examination of the SPR information system; individual interviews and group discussions with the SPR team; and postal questionnaires to service providers and referrers about their perceptions and experiences of using both systems.

**Results.** With the introduction of the SPR system, the mean waiting time (interquartile range) from referral to assessment was reduced from 46 (15-67) to 6 (2-9) days. The proportion of inappropriate referrals halved from 26% to 13%. The proportion of appropriate referrals that involved more than one dedicated learning

disability health profession increased from 63% to 80%.

**Conclusions.** The SPR system facilitated prompt allocation of referrals to the appropriate professionals with significantly reduced waiting times from referral to assessment. It reduced the rates of inappropriate referrals and re-referrals and duplication of professional input. It provided a more efficient service for referrers; and better care and information for service users and carers. Multidisciplinary working improved interdisciplinary understanding and communication; collaborative working; and professional satisfaction. The database should be developed as a tool for audit and evidence-based service developments; and the system extended to joint working with Social Services and integrated care pathways.

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