

# An evidence-based referral management system: insights from a pilot study

Ellen Wright<sup>1,2</sup>, York Hagmayer<sup>1</sup> and Irene Grayson<sup>2</sup>

<sup>1</sup>Department of Primary Care and Public Health Sciences, King's College London, London, UK

<sup>2</sup>NHS Greenwich CCG, London, UK

**Objectives:** Improving the informational quality of referrals from primary to secondary care and appropriately re-directing referrals is an important goal of clinical commissioning groups in England. Based on the available empirical evidence, a referral management and booking service that combined referral guidelines, online referral templates and administrative and clinical triage, was developed by a primary care trust in southeast London. **Methods:** A pilot study of 13 out of 46 practices in the trust was conducted using a mixed methods approach. Referral numbers were investigated by analysing changes in practices' rates of first outpatient attendances in secondary care. Informational referral quality was assessed by analysing triage outcomes. Semi-structured interviews were used to inquire about practices' evaluation of the new system. Structured telephone interviews were conducted to assess patients' satisfaction. **Results:** Overall rates of first outpatient attendances declined more strongly for pilot practices than controls. The number of referrals challenged for being incomplete or having insufficient clinical information decreased. The rate of referrals challenged by clinical triage for not conforming to referral guidelines was well below the rate of inappropriate referrals published in the literature. Interviews with practices revealed a number of themes and a broad range of attitudes. Patients were highly satisfied. **Discussion:** Findings provided favourable evidence for the effectiveness of the new referral management system. They were, however, preliminary. If referrals into secondary care continued to be reduced on a long-term basis, the system would be cost effective despite the time and effort required for clinical triage.

**Key words:** decision support systems; management; patient care management; practice guideline; referral and consultation; triage

*Received 14 November 2014; revised 5 July 2014; accepted 5 September 2014;  
first published online 17 October 2014*

## Introduction

The management of referrals from primary care into secondary care has attracted a lot of attention in the past 2 decades (Foot *et al.*, 2010). Statistical analyses have revealed an extremely high variability in referral rates between general practitioner

(GP) practices, which cannot be explained by differences in practice populations. Studies have shown that depending on the specialty 10–45% of referrals are considered inappropriate from the perspective of secondary care providers (O'Donnell, 2000). A substantial number of referred cases (20–35%) could be handled in primary care according to specialists (Jones and Stott, 1994; Foot *et al.*, 2010). Even GPs agree that some referrals (7–20%) could be avoided (Donohoe *et al.*, 1999). Clinical guidelines and the possibility of consulting with a specialist could reassure GPs and enable them to provide best care without

---

Correspondence to: Dr Ellen Wright MA, MBBS, MSc, MRCP, FRCA, Clinical Academic Fellow, Department of Primary Care and Public Health Sciences, King's College London, 9th Floor, Capital House, 42 Weston Street, London SE1 3QD, UK. Email: ellen.wright@kcl.ac.uk

© Cambridge University Press 2014

necessarily referring patients (Donohoe *et al.*, 1999). These findings point to a potential for substantial cost savings. They also indicate that more patients could be cared for in primary care. By doing so, care could be delivered faster and patients could be spared the extra effort and sometimes anxiety of going into secondary care.

Several different types of referral management schemes have been discussed in the literature (Foot *et al.*, 2010): (1) referral management centres, which control, monitor and direct referrals to appropriate care providers, (2) clinical triage and assessment of referrals by GPs or specialists, which can reject referrals as inappropriate, (3) peer review and feedback, (4) financial incentives, (5) referral guidelines. Some specific interventions were found to be effective in reducing referral numbers (Faulkner *et al.*, 2003; Akbari *et al.*, 2008; Foot *et al.*, 2010; Evans *et al.*, 2011; NHW Wales, 2006): clear guidelines for referral in combination with referral sheets or templates; consultations with a specialist (including GPs with a special interest) or in-house referrals; feedback from consultants and specialists on particular cases. These interventions could also improve the quality of the referrals. However, positive effects were not guaranteed. Sometimes referral guidelines even increased the number of referrals, as GPs had previously applied stricter criteria than the recommended ones. The dissemination of referral guidelines without any additional measures and tools turned out not to be effective. Financial incentives, which reward low referrers, have proved to be effective in the past, but may reduce the level of care delivered (Foot *et al.*, 2010).

Referral management centres have been credited with huge potential for reducing inappropriate referrals, saving money, improving the quality of referrals, providing better service for patients and giving feedback to practitioners on their referral practice (Foot *et al.*, 2010; NHW Wales, 2006). Pros and cons of referral management centres have been discussed widely in the last couple of years (Davies and Elwyn, 2006; Laird, 2006; Rosen *et al.*, 2007; Goodwin, 2008; Ellison, 2010; South *et al.*, 2010). Empirical studies on the impact of referral management centres are scarce and have yielded mixed results. While some researchers found significant savings after installation of such a system (Ellison, 2010), others did not (South *et al.*, 2010). Given that referral management centres vary

widely in their features it is not surprising there are variations in outcomes.

### **A new referral management system**

A primary care trust (PCT) in southeast London developed a new computerised referral management and booking system (RMBS). Reasons for doing this included: (1) The PCT found a significant variation in referral rates between practices, (2) it was felt that many patients attending outpatient clinics could be managed in primary care, (3) the PCT's Quality, Innovation, Productivity and Prevention (QIPP) agenda included a reduction in referrals to secondary care, (4) local GPs and specialists had already met and developed guidelines for common conditions which included evidence-based practice in primary care and criteria for referral to specialists, and (5) the available data on referral numbers was considered unreliable and difficult for practices to access. In line with these reasons the major goals of the new system were: (1) to reduce the number of referrals into secondary care, (2) to improve the informational quality of referrals, (3) to provide a better service for patients being referred and referring practices, and (4) to give practices accurate real time information on their referrals.

Based on the evidence summarised in the King's Fund Report (Foot *et al.*, 2010) commissioners decided to combine a referral management centre with referral guidelines supported by computerised referral templates and a clinical triage system.

The first component of RMBS was a set of evidence-based and consensus approved guidelines for common conditions in 10 specialties (cardiology, dermatology, gynaecology, ophthalmology, general surgery, trauma and orthopaedics, respiratory medicine, rheumatology, diabetic medicine, anti-coagulant services), which covered the vast majority of referred cases. Guidelines provided detailed recommendations for the management of patients before referral as well as clear criteria for referral. For all guidelines, computer-based templates were developed, which had to be completed to refer a patient. Deviations from the guidelines required a justification. The referral templates were able to extract required information directly from the electronic patient record (EPR) into the templates,

thereby reducing the workload of the referrer and the risk of transfer error.

The second component of RMBS was triage of submitted referrals. Administrative feedback ensured that referrals were complete and provided all necessary information. Experienced GPs (some with special interests or areas of expertise) acted as triagers and assessed all referrals. When indicated they challenged referrals and provided feedback to referring GPs on alternative options for assessment or management. The main focus of the feedback was not intended to be whether the referral was appropriate or not (ie, evaluative feedback), but whether there were alternatives (ie, constructive feedback) to referral to secondary care. Triage decisions were to be made within a short time frame (one to two working days) to allow for timely feedback. Triagers were available, by phone or email, for discussion upon request.

Once a referral was made the RMBS administrative staff would phone or write (if unavailable by phone) to the patient to arrange the appointment time and place, guiding them through the choose and book options to get the fastest and/or most convenient location of appointment according to patient preference as well as discussing the range of providers available. Any changes in appointments (either from the patient or the provider) were also handled by RMBS thus removing a significant administrative burden from practice staff. The patient-facing element of RMBS was designed to improve the user experience well as help practice staff.

The commissioners expected a positive effect of the new system on referrals and care, because (1) the guidelines reduced GPs' uncertainty in management, (2) templates, triage, and feedback enforced the consideration of all information and various options of care before referring, (3) guidelines and templates supported communication with patients and reduced patient pressure to refer, and (4) the triage provided the case-specific feedback that is often lacking in practice.

RMBS was first rolled out in the last quarter of 2011 with thirteen pilot practices. The pilot phase lasted until the end of the second quarter of 2012. The pilot phase had two major goals: (1) to investigate whether RMBS met its goals and (2) to eliminate technical problems. Since mid-2012 the remaining practices have started to implement and use the new system.

## Pilot study

### Methods

In total, 13 of the 46 practices in the trust volunteered to participate in the pilot. The remaining practices were considered as control practices and were used to investigate the effects of the new system on referral rates.

A mixed methods approach was used. To investigate the effect of the new system on referrals, data from the Secondary User Service (SUS) database were analysed using Dr Foster Intelligence tools (Foster). Numbers of first outpatient attendances resulting from GP referrals were accessed for the first and second quarter of 2010, 2011 (before RMBS) and 2012 (after the introduction of RMBS). First outpatient attendances instead of referrals were used, because only the former enabled a breakdown per speciality and practice. In addition, outpatient attendances, but not referrals reflect actual activity in secondary care generating costs. Quarterly data were used to ensure more robust numbers for individual specialties. Rates per 1000 practice population were calculated taking into account list sizes at the particular point in time. Changes in rates were compared statistically for pilot and control practices. If RMBS had the desired effect, rates of first outpatient attendances should decline more for pilot than control practices. We were aware that first outpatient attendance rates might decline for all practices due to the new referral guidelines and the QIPP framework.

To investigate the effect of triage on referral informational quality, triage records were accessed and the reasons for challenging a referral were analysed. If the triage improved referral informational quality, the number of referrals requiring administrative feedback should decline.

To investigate the implications of the new system for practices and GPs in more detail, semi-structured interviews with practices willing to be interviewed were conducted. Interviewers inquired about (1) the goals and the implementation of the new system, (2) aspects being appreciated and disliked, (3) perceived outcomes of the new system for referrers and patients, and (4) evaluation of guidelines, referral templates, and triage. Participants were encouraged to mention any other aspect they considered relevant. Notes taken were fully transcribed, entered into a

spreadsheet and analysed for emerging themes. All interviews were re-assessed based on the final set of themes to ensure that no important aspect was missed.

Finally, to investigate the views of patients, randomly selected patients were phoned and asked to rate various aspects of the new service as well as their overall satisfaction. A structured, 12-item questionnaire was used.

## Results

### Referral rates

Pilot and control practices were compared with respect to practice population (list sizes), Quality and Outcome Framework (QOF) achievement, and rates of first outpatient attendances in quarters 1 (January–March) and 2 (April–June) in 2010 and 2011. It turned out that six of the control practices had list sizes of less than 2000 patients, which resulted in very low referral numbers (<5 patients per quarter) for more than half of the specialities. As these low numbers would result in unreliable estimates, these practices were excluded from further analyses. The 13 pilot practices had larger practice populations ( $M = 8746$ ,  $SD = 6369$ ) than the remaining 27 control practices ( $M = 5449$ ,  $SD = 2593$ ) and had marginally better QOF

achievement ( $M_{\text{Pilot}} = 95.5$ ,  $SD_{\text{Pilot}} = 1.89$ ,  $M_{\text{Control}} = 93.4$ ,  $SD_{\text{Control}} = 5.02$ ). There were no statistically significant differences with respect to rates of first outpatient attendances in quarters 1 and 2 of 2010/2011 (Q1:  $M_{\text{Pilot}} = 43.5$ ,  $SD_{\text{Pilot}} = 8.9$ ,  $M_{\text{Control}} = 41.9$ ,  $SD_{\text{Control}} = 9.9$ ,  $P = 0.62$ ; Q2:  $M_{\text{Pilot}} = 46.0$ ,  $SD_{\text{Pilot}} = 9.6$ ,  $M_{\text{Control}} = 42.3$ ,  $SD_{\text{Control}} = 10.5$ ,  $P = 0.28$ ).

An analysis of the number of patients being referred through RMBS indicated that the uptake of RMBS was rather slow. In the last quarter of 2011 only 16% of referrals were made through the new system. The percentage rose to 85% in the first and 94% in the second quarter of 2012. Owing to the time lag between referral and actual outpatient attendance, a majority of first outpatient attendances in the first quarter of 2012 did not go through RMBS. Therefore, effects of the new system should only occur for the second quarter. Respective results are depicted in Table 1. Changes in attendance rates were compared using repeated measure *t*-tests; differences in changes between pilot and control practices were compared using an independent sample *t*-test.

As the results show, overall attendance rates declined for both pilot and control practices from 2010/2011 to 2012, but the reduction was significantly stronger in the pilot practices. This finding supports the hypothesis that RMBS helps

**Table 1** Rates of first outpatient attendances per 1000 practice population for pilot and control practices: means and (SD)

	Pilot practices ( $n = 13$ )			Control practices ( $n = 27$ )			Differences between pilot and control practices
	Rate 2010/2011	Rate 2012	<i>t</i> -test <i>P</i> -value	Rate 2010/2011	Rate 2012	<i>t</i> -test <i>P</i> -value	<i>t</i> -test <i>P</i> -value
Overall	46.0 (9.7)	39.4 (8.3)	0.002	42.3 (10.5)	39.7 (7.6)	0.050	0.047
Trauma and orthopaedics	10.7 (3.0)	7.7 (1.7)	0.002	9.5 (2.6)	7.6 (1.9)	0.000	0.136
Ophthalmology	7.6 (1.9)	7.9 (2.3)	0.274	6.6 (2.0)	8.7 (3.2)	0.001	0.009
Gynaecology	7.4 (1.3)	6.6 (1.4)	0.029	7.2 (1.8)	6.6 (1.6)	0.080	0.350
Cardiology	5.7 (4.0)	5.7 (4.2)	0.452	4.8 (3.3)	5.0 (3.1)	0.165	0.281
General Surgery	4.1 (1.0)	3.6 (0.9)	0.129	3.9 (1.6)	3.5 (1.5)	0.059	0.485
Dermatology	3.3 (0.9)	2.9 (1.3)	0.089	3.1 (1.3)	3.4 (1.2)	0.140	0.041
Rheumatology	2.6 (0.9)	1.9 (0.7)	0.015	2.9 (1.8)	2.1 (1.3)	0.043	0.370
Respiratory medicine	2.4 (0.8)	2.0 (0.7)	0.121	2.2 (1.0)	2.1 (1.1)	0.342	0.264

Overall referral rates did not differ statistically between pilot and control practices for Q2 2010/2011 despite descriptive differences.

*Primary Health Care Research & Development* 2015; **16**: 407–414

**Table 2** Outcomes of triage: percentage of referrals challenged for administrative or clinical reasons

	Q4 2011	Q1 2012	Q2 2012
Total number of referrals through RMBS	801	3618	4241
Challenged by administrative triage (%)	2.1	1.4	0.9
Challenged by clinical triage (%)	5.9	7.6	6.7

RMBS = referral management and booking system.

to reduce referral rates. More specific analyses per speciality indicate that attendances for trauma and orthopaedics declined for all practices. For ophthalmology, attendance rates did not increase significantly for pilot practices but increased significantly for control practices. For gynaecology there was a slight reduction for both pilot and control practices. With respect to dermatology there was a non-significant reduction in pilot practices and a non-significant increase for control practices, which resulted in a significant difference. Attendances with respect to rheumatology declined slightly for both pilot and control practices. Referral rates of other specialities did not change.

### Quality of referrals

The next set of results concerns triage decisions. Table 2 summarises the findings for the three quarters in which RMBS was used.

As expected, the number of referrals challenged for administrative reasons declined over the course of the pilot. Administratively challenged referrals were mainly due to incomplete information. The percentage of referrals challenged by clinical triage remained stable at about 6.5%. The two major reasons were (i) not conforming to referral guidelines and (ii) missing recommended pre-referral diagnostics. Taking into account that practices started at different dates, the improvement in referrals due to RMBS becomes more visible. While on average 12.8% (SD = 0.056) of referrals were challenged and advised on in the first month, 9.2% (SD = 0.059) and 5.6% (SD = 0.050) were challenged in the second and third month, respectively. A more detailed follow-up analysis on the 276 referrals challenged in the first quarter of 2012 showed that virtually all of these patients were then subsequently managed in primary care. Only three (1.2%) were referred into secondary care again.

### Interviews with practices

Of the 13 pilot practices, six agreed to be interviewed. A total of eight GPs, four practice managers and one nurse practitioner gave their views on RMBS. The overall attitude varied widely between practices and participants, including outright rejection and enthusiastic endorsement. Four major themes emerged from a thematic analysis of the responses and comments: (i) goals of the new system, (ii) technical issues, (iii) triage, and (iv) alternative community-based services.

There was some uncertainty about the goals to be achieved. One GP even claimed, 'there are no clear goals; it is because everybody has a referral management system these days'. The majority of interviewees identified the reduction of referrals and cost savings as major goals. Other objectives mentioned were monitoring of referrals, checking for appropriateness, better quality of referrals, redirection of patients into community services, improvement of service for patients relative to choose and book, and reduction of workload for practice managers.

Technical issues concerned the functionality and usability of the new system as well user training. While practice managers received intensive training, GPs were often just briefed by their practice manager. Persons who had received specific training considered the usability to be higher than those who had not. Several technical problems, particularly with the functionality of the templates and the automated transfer of data from the EPR were resolved during the pilot. The functionality of the final version was considered good, especially by practice managers and experienced users. One on-going issue mentioned was the difficulty in finding alternative community services (to secondary care) and having to use their individual referral forms as only certain community services could be referred to through RMBS. This was confusing to users.

*Primary Health Care Research & Development* 2015; **16**: 407–414

Triage received the most comments by GPs. Many said that triage caused them to consider referral guidelines and other options of care before referring and to fill in templates more carefully. The qualification of the GP triagers and the cost-effectiveness of the whole triage process were questioned. One GP called it a 'complete waste of money'. Administrative triage to check for completeness of referral information and to advise on alternative services was seen as useful whereas clinical triage generally was not. Deviations from guidelines were considered necessary for some patients. Clinical feedback was often not perceived as helpful, but as 'annoying and irritating'. More options to directly discuss the feedback and challenge the decision were desired. The additional workload caused by a challenged referral was a concern for all practices as the whole referral process had to be re-started.

Alternative, community-based services were commented on by many practices. There was a lack of knowledge about the available options and the quality of the services offered. It was suggested that these services should be included in RMBS so that RMBS would act as a single entry point for all referrals.

### **Patient survey results**

In total, 50 randomly selected patients, who were referred through RMBS, were contacted and 41 agreed to participate in the survey. The results showed that participants appreciated the new service. The option to be contacted by phone regarding an appointment was considered useful by all respondents. More than 90% rated the service as excellent and all considered the new service as better than the previous choose and book system.

### **Discussion**

The new evidence-based referral management and booking service combined a referral management centre with clinical guidelines, online referral templates and clinical as well as administrative triage. The aim of the service was to reduce the number of referrals into secondary care and to improve the informational quality of referrals. The results of the pilot study provide positive evidence of this.

*Primary Health Care Research & Development* 2015; **16**: 407–414

Overall rates of first outpatient attendances due to GP referrals declined more strongly for pilot than control practices. Referrals with respect to ophthalmology and dermatology were affected the most. Informational referral quality improved as well. The very low percentage of incomplete referrals at the end of the pilot phase (0.9%) indicates that the templates and the triage resulted in referrals that contained all necessary information. The appropriateness of referrals also seems to have been positively influenced. The percentage of referrals challenged through clinical triage (6.5%) was much lower than the percentages of inappropriate referrals mentioned in the literature (Donohoe *et al.*, 1999; Foot *et al.*, 2010). There are several factors that probably contributed to this finding. These include (i) clear and agreed upon referral guidelines, including recommendations for pre-referral management and diagnostics, and (ii) referral templates, which required a justification for referring the patient. Both of these measures have been found to improve the quality of referrals before (Jones and Stott, 1994; Donohoe *et al.*, 1999; Foot *et al.*, 2010).

RMBS was also meant to provide a better service to practices and patients. Practice managers claimed that the new system substantially reduced their workload. Many GPs made their own referrals directly using the templates (without the need to dictate letters to a secretary) and RMBS took care of the appointments (via the choose and book system) and contacted patients. In addition practices using RMBS received monthly reports on individual clinician referral numbers, which allowed them to review and monitor their referrals. Patients were generally very satisfied and appreciated the contact with the booking service.

However, some components of the new system were heavily criticised. Despite recognising a positive impact on their referral behaviour, some GPs were unhappy with the clinical triage and the fact that referrals not conforming to guidelines were challenged.

Despite the criticisms, since the pilot study was done more practices have adopted RMBS and the majority of practices in Greenwich now use it. The benefit of the administrative time saving and help with navigation to suitable providers seems to have outweighed the negative perception of clinical triage. The Clinical Commissioning Group (CCG) has since held several round table discussions with

GPs and triagers and these have generally been positive and constructive events. Local knowledge of and respect for the triagers is likely to be a key factor for success of a referral management system.

## Limitations

This was only a pilot study, not a full evaluation, and there are, therefore, methodological limitations. Practices participating in the pilot were not selected randomly, but volunteered. The pilot practices tended to be the larger practices and had slightly higher QOF achievements.

Nevertheless the results are informative. Pilot and control practices did not differ with respect to first outpatient attendance rates in 2010/2011, that is before the introduction of RMBS. The stronger improvements on behalf of the pilot practices cannot be attributed to worse initial performance. However, of course more data will be required to see whether the referral rates of practices using RMBS continue to be reduced on a long-term basis.

Interviews were conducted with only half of the pilot practices, which again volunteered to participate. Hence, the results do not reflect the opinion of all practices. However, both very positive and very negative attitudes were represented in the sample. In addition, both GPs and practice managers participated and gave their sometimes conflicting views.

## Implications

Referral management through referral management centres is a potential option for all CCGs. The approach taken here was to establish a referral management and booking service that makes use of referral guidelines and templates and crosschecks referrals by means of both administrative and clinical triage. This is a rather cost-intensive approach, which needs to prove that it is cost-effective. The first results are encouraging. The 7859 referrals managed through RMBS in the first half of 2012 resulted in an overall cost of £48 882.98 given a contract cost of £6.22 for each case referred via RMBS. A total of 558 referrals were averted through clinical triage. Based on the finding that <2% of challenged cases were re-referred into secondary care, cost savings of at least £229 700 resulted using the methodology of QIPP

Programmes, which assumes savings of £420 per case (average total cost per outpatient episode of care) ( $558 - 2\% = 547 \times £420 = £229\,740$ ). Hence, net cost savings ( $£229\,700 - £48\,882 = £180\,818$ ) were substantial, about £180 000 in the first half of 2012. Thus the investment in the system would seem worthwhile. Nevertheless more research will be needed to see whether RMBS, in conjunction with increased community services, is cost-effective in the long term.

## Acknowledgements

The authors are grateful for the support of the RMBS Steering Group who gave us access to SUS data and helped us in accessing relevant Dr Foster data and also provided us with results of the patients' and consultants' surveys. They also thank the practices and their staff who participated in the interviews.

## Ethical Standards

According to the policy activities that constitute research at King's College London, this work met criteria for a service evaluation study, which is exempt from ethics review.

## References

- Akbari, A., Mayhew, A., AL-Alawi, M.A., Grimshaw, J., Winkens, R., Glidewell, E., Pritchard, C., Thomas, R. and Fraser, C.** 2008: Interventions to improve outpatient referrals from primary care to secondary care. *Cochrane Database of Systemic Reviews*, 8.
- Davies, M. and Elwyn, G.** 2006: Referral management centres: promising innovations or Trojan horses? *British Medical Journal* 332, 844–46.
- Donohoe, M.T., Kravitz, R., Wheeler, D.B., Chandra, R., Chen, A. and Humphries, N.** 1999: Reasons for outpatient referrals from generalists to specialists. *Journal of General Internal Medicine* 14, 5.
- Ellison, P.** 2010: Referral management success: A PBC consortium in Plymouth freed up to £150,000 in a year by peer review evaluation [online]. GP online. Retrieved 2012 from <http://m.gponline.com/article/988636/Referrals-management-success>
- Evans, E., Aiking, H. and Edwards, A.** 2011: Reducing variation in general practitioner referral rates through clinical engagement and peer review of referrals: a service improvement project. *Quality in Primary Care* 19, 263–72.

*Primary Health Care Research & Development* 2015; **16**: 407–414

- Faulkner, A., Mills, N., Bainton, D., Baxter, K., Kinnersley, P., Peters, T.J. and Sharp, D.** 2003: A systematic review of the effect of primary care-based service innovations on quality and patterns of referral to specialist secondary care. *British Journal of General Practice* 53, 878–84.
- Foot, C., Naylor, C. and Imison, C.** 2010: *The quality of GP diagnosis and referral*. London: The King's Fund.
- Foster, D.** 2012: Dr Foster intelligence [online]. Dr Foster. Retrieved 2012 from <http://drfosterintelligence.co.uk/>
- Goodwin, N.** 2008: Diagnostic delays and referral management schemes: how integrated primary care might damage your health. *International Journal of Integrated Care* 8, 1–2.
- Jones, E. and Stott, N.C.** 1994: Avoidable referrals? Analysis of 170 consecutive referrals to secondary care. *British Medical Journal* 309, 5.
- Laird, S.** 2006: Referral management centres lack evidence [online]. GP online. Retrieved 2012 from <http://m.gponline.com/article/20941025/referral-management-centres-lack-evidence>.
- NHW WALES.** 2006: Evaluation of referral management pilots in Wales [online]. Retrieved 2012 from <http://www.wales.nhs.uk/sitesplus/documents/829/evaluationofreferralmanagementpilotsinWales.pdf>
- O'Donnell, C.A.** 2000: Variation in GP referral rates: what can we learn from the literature? *Family Practice* 17, 462–71.
- Rosen, R., Florin, D. and Hutt, R.** 2007: An anatomy of GP referral decisions: A qualitative study of GPs' views on their role in supporting patient choice [online]. King's Fund. Retrieved 2012 from [http://www.kingsfund.org.uk/sites/files/kf/field/field\\_publication\\_file/anatomy-gp-referral-decisions-qualitative-study-patient-choice-rebecca-rosen-dominique-florin-ruth-hutt-kings-fund-29-january-2007.pdf](http://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/anatomy-gp-referral-decisions-qualitative-study-patient-choice-rebecca-rosen-dominique-florin-ruth-hutt-kings-fund-29-january-2007.pdf)
- South, P., Kendall, S., Webster, D. and Newman, L.** 2010: Referral management centres fail to deliver savings according to new research from the King's Fund [online]. King's Fund. Retrieved 2012 from <http://www.kingsfund.org.uk/press/press-releases/referral-management-centres-fail-deliver-savings-according-new-research-kings>