

Quality improvement in action

The Torfaen referral evaluation project

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ABSTRACT

Background This paper provides an overview of the Referral Evaluation Project, which took place in South East Wales, UK during 2007–2008.

Aim To engage general practitioners (GPs) and consultants in the local hospitals of Gwent Healthcare Trust in discussions as to the validity, quality and appropriateness of GPs' referrals and to increase the quality of those referrals. To discuss with other healthcare professionals the use of community-based services, which could be used instead of referral to hospital.

Method A year-long scheme whereby GPs were funded for weekly protected time to discuss their referrals retrospectively by peer review, and to attend six-weekly cluster meetings where representatives from the practices met with consultants to discuss the appropriateness of those referrals and the use of alternative community-based services. Referral data were fed back to the practices by personnel from the local health board (LHB). The evaluation involved three practices in Torfaen, South East Wales; Torfaen LHB staff, consultants in Gwent

Healthcare Trust, and other health professionals. The main outcomes used were indicators of referral quality as judged by the GPs, referral rates to hospital orthopaedics and emergency admissions, and evidence of increased use of community-based services.

Results The quality of referrals as judged by doctors' peers improved. Referral rates in orthopaedics and emergency admissions showed a striking reduction by up to 50%, variability between practices decreased, and referrals to local services increased. Alternative community-based services were explored and an understanding of the best local pathways for some common conditions was reached.

Conclusion This approach was felt to be a more sustainable and more intuitive method of improving the quality of referrals and reducing inappropriate demand compared to other approaches, for example, conventional referral management centres.

Keywords: clinical engagement, clinical pathways, peer assessment, primary care, referral

Introduction

General practitioner (GP) referrals have not historically been routinely discussed with colleagues in Torfaen, and the quality and appropriateness of referrals has been difficult to measure. Demand for hospital services is rising everywhere in the UK and referrals need to be cost-effective.¹

The National Health Service (NHS) in Wales has parted company from its English counterpart since 'Health and Social Care' was devolved to The Welsh Assembly Government (WAG). Wales does not have the well-developed internal market with separation of purchaser and provider and strong commissioning that has been developed in England. In 2007, commissioning was very weak and ineffective and there seemed to be no method of containing the inexorable upward increase in referrals and increase in workload for the hospital sector.²

Seven referral management centres (RMCs), with active management of referrals by local health boards (LHBs), were piloted in Wales up to 2006 with funding from the National Leadership and Innovation Agency for Healthcare (NLIAH). The lessons learnt from these were discussed in a paper from NLIAH, which highlighted what worked and what did not.^{3,4} The current paper describes a pilot project designed to evaluate improvements to the referrals process.

Torfaen is a small borough with a population of 91 000, situated in SE Wales with its own LHB (unit of administration for health). It is a mixed area with some pockets of deprivation and high rates of long-term ill-health in the old mining valleys; luckily it has excellent GPs.

In December 2006, NLIAH agreed to sponsor a project, which aimed to improve referral decision

making by GPs, based on peer review of referrals by clinicians. This approach had been found to be successful in Saltaire, Yorkshire (personal communication, 2004). GPs would then be well placed to make an informed decision about referral when the patient was first seen. GPs were not necessarily aware of the range of local options for patient management, and it was thought to be helpful to share knowledge of local pathways with colleagues in a learning environment.

The project also capitalised on the support of consultants from Gwent Health Care Trust, the main provider for the area (over 97% of referrals from local GPs go there). The WAG directive aims to achieve a reduction in waiting times of 26 weeks from GP referral to end of treatment, and some consultants saw influencing demand from primary care as a method of helping to achieve that goal. Consultants were also keen to discuss with GPs how to make improvements to the quality and appropriateness of referrals to their service.

The project focused on the clinical engagement and clinical governance aspects of the referrals process and aimed to develop local guidelines and pathways. The use of Map of Medicine, a visual web-based representation of evidence-based patient care journeys, which has been adopted in Wales in order to develop local pathways of care, was also evaluated.

Method

Three practices were chosen by a process akin to competitive tender, from the nine out of 13 practices in the area that had expressed an interest. The practices were paid a fixed sum of money to cover the administration costs and the doctors' time, under a local enhanced service (LES) directive, a recent addition designed to pay GPs for additional local services.

The three practices have similar list sizes, varying between 5764 and 6510, and similar proportions of patients aged over 65 years. One practice, in a small town in an old mining area, had higher levels of long-term morbidity but a similar socio-economic deprivation index. The specialties chosen were emergency admissions and orthopaedics, which all practices looked at, and paediatrics, gastroenterology and cardiology, each one being considered by a different practice.

An hour a week was set aside to discuss the referrals made the previous week in selected specialties, and to complete a spreadsheet, capturing demographic details, the place and reason for the referral and some indications of quality. These were:

- *Consensus 1*: agreement by the GPs on standards of information in the letter

- *Consensus 2*: agreement on work-up beforehand
- *Consensus 3*: agreement on use of guidelines.

The reasons for referral were classed as: for advice on management or for further investigation, or for consideration of a surgical operation. Referrals categorised by 'patient demand' were referrals that would not have taken place had there not been direct pressure for referral from patients. In addition, alternative pathways were discussed, such as community-based services already in existence, or that could be developed, to which the referral could be made, thus saving a referral to hospital. Private referrals were included in order to keep practice referral rates comparable.

Data were collected on a specially designed (Excel) spreadsheet template and analysed by the LHB medical advisor who was a GP by background (the author). The results were fed back to the GPs at six-weekly lunchtime cluster meetings. The cluster groups concentrated on one specialty each time and a consultant in the specialty was present. The ensuing discussion allowed a consensus to be developed between the GPs and the consultants on the appropriateness of referrals. Representatives from local existing community-based services were also invited.

We did not correct for list size. The largest practice in our study referred fewer patients, but it had a lower proportion of patients aged over 65 years (orthopaedic problems and problems needing emergency admission are highly correlated with age of the patient), slightly lower deprivation scores, and a lower rate of long-term illness. The smallest practice was in an ex-mining area with more long-term illness, and a higher referral rate, a finding that was in contradistinction to other studies where practices in more affluent areas tend to refer more, thought to be due to greater demand amongst the better off.⁵

It was important to ensure that patients continued to receive a safe and effective service throughout. The clinical governance lead for the LHB attended the meetings and was available to discuss any issues of patient safety. There was no pressure to reduce referrals, although feedback was given to the practices on their referral rate. The LHB was not involved with any practice issues of safety or referring behaviour unless asked.

The data in Figure 1 were taken from the main hospital patient attendance statistics (PAS) system over the previous 2 years. The project started in July 2007 and the crucial first cluster meeting took place in November. The data in Figures 2 and 3 were analysed by the author and a statistician from NLIAH.

Results

The data suggest that the quality of GP referrals, as reported by the practices, improved (see Table 1). After the early weeks, the majority of referral letters were adjudged complete and of a high quality. Data on Consensus 3 and Map of Medicine showed that there was an increase in the number of times guidelines were consulted.

Referrals classified as being for operation rather than for advice on management (orthopaedics only) increased by 31% overall (see Table 1), even though they decreased from a higher baseline in Clark Avenue. GPs, when they are referring specifically for an operation, should be clear when waiting times for surgery are relatively short, and patients need to be fit for surgery, both physically and psychologically.

Overall, these referral rates appeared to be much as one would expect, but with, on average, a significant

drop between the first and the fourth quarters (Wilcoxon signed ranks test: $Z = 2.25$, $P = 0.025$). Ten doctors decreased their referral rates; three made an increase, while, for one, there was no change (see Table 2). Variation between GPs' referrals decreased as a result of the intervention.⁵

GPs reported few referrals that should not have been made. The question was to which service patients should be referred, and discussing alternative pathways was a major part of the work of the cluster group. The most important alternative pathways were a multi-disciplinary musculoskeletal team, for orthopaedics, and a hospital-at-home service in place of some emergency referrals. Referrals to these and other services increased considerably (see Table 3). GPs also learned from each other how to investigate more patients before referral, for example by more use of magnetic resonance imaging scans (MRIs), as outcome data from one practice showed that 45% of orthopaedic referrals were initially sent for MRI by the hospital.

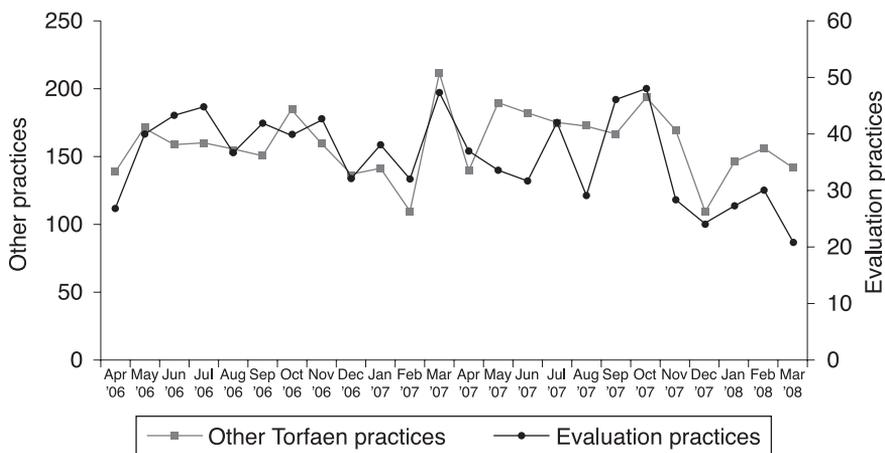


Figure 1 Orthopaedic referrals showing change in referrals to hospital in the three project (evaluation) practices compared to the ten others in Torfaen

Table 1 Percentages of referrals complying with area of consensus for each practice in the first and last quarters

Practice	Carregwen		Panteg		Clarke Avenue	
	Q1	Q4	Q1	Q4	Q1	Q4
Information in letter (%)	30.0	97.7	53.5	95.7	100.0	100.0
Adequate work up (%)	30.0	90.7	86.0	100.0	100.0	100.0
Guidelines used (%)	0.0	14.0	0.0	95.7	3.3	33.0
Map of Medicine used (%)	0.0	11.6	0.0	0.0	6.7	33.0
Patient demand (%)	4.0	11.6	14.3	17.4	13.3	0.0
Referral for orthopaedic surgery (%)	26.9	34.9	0.0	21.7	50.0	44.4
Private referral (%)	18.3	2.3	1.0	17.4	20.0	22.2

Table 2 Anonymised individual GPs referrals per quarter, adjusted for sessions worked

Individual GP (anonymised)	Number of referrals to orthopaedics adjusted for sessions worked				Referrals to emergency admissions adjusted for sessions worked			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
A	12	6	6	6	3	5	3	9
B	8	3	5	5	5	7	4	2
C	11	9	10	5	3	3	5	3
D	2	14	2	4	6	2	0	1
E	11	1	3	4	15	18	9	15
F	9	12	4	5	2	0	3	4
G	20	10	5	14	9	7	4	7
H	10.3	10.2	3.4	5.7	4.6	3.4	12.5	2.3
I	11.0	8	3	9	13	4	2	2
J	8.0	0	0	8	0	0	0	0
K	6.0	8	6	8	8	10	0	0
L	20.0	18.6	17.3	10.6	4	22.6	6.6	12
M	8.0	8	8	14	8	2	10	8
N	8.0	6.7	6.6	5.3	4	10.6	17.3	20

Table 3 Example of increase in referrals to alternative pathways

Alternative pathways	Referrals per quarter			
	Q1	Q2	Q3	Q4
Quarter				
MPT3 referrals (orthopaedics) from Carregwen	0	5	18	42
ACAT referrals (emergencies) from Panteg	39	64	92	69

Initially Torfaen had the highest referral rate for orthopaedics in Gwent – the all-Gwent rate itself being much higher than the Wales average. Referrals to hospital decreased overall by up to 30% in the three practices (see Figure 1), and referrals were directed instead to a range of alternatives such as physiotherapy, podiatry, and a local multidisciplinary team (termed MPT3), as shown in Table 3.

Figure 2 shows that there was a reduction in weekly referrals to orthopaedics from both Clark Avenue and Panteg surgeries. Panteg reduced their referrals by half, and Clark Avenue reduced theirs by one-third. Carregwen showed a change that was not significant; however, the results would be significant if ongoing data follow the pattern set by the last five data points. This was later confirmed after the study ended.

All practices also looked at emergency admissions because this was a particular problem in Torfaen. The overall reduction in emergency referrals was 17.4%. It highlighted the positive effect of the early use of a recently introduced ‘hospital-at-home’ service; the main alternative route intended to reduce admissions.

The data displayed in Figure 3 were for referrals sent by GPs to the local hospitals as an emergency between 8 am and 6.30 pm, for medical and surgical emergencies only. They exclude patients sent to Accident and Emergency unless organised by the GPs themselves. There were no comparable figures from the local hospital. However, one hospital did supply the practices with details of what the outcome was for each patient referred – whether admitted, sent home or sent on to other hospitals. These data showed a reduction

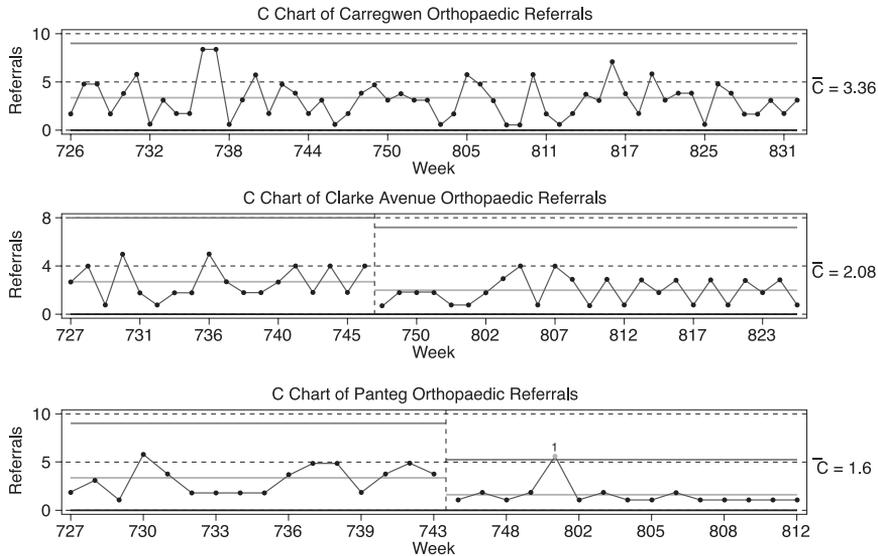


Figure 2 Orthopaedic referrals from the participating practices

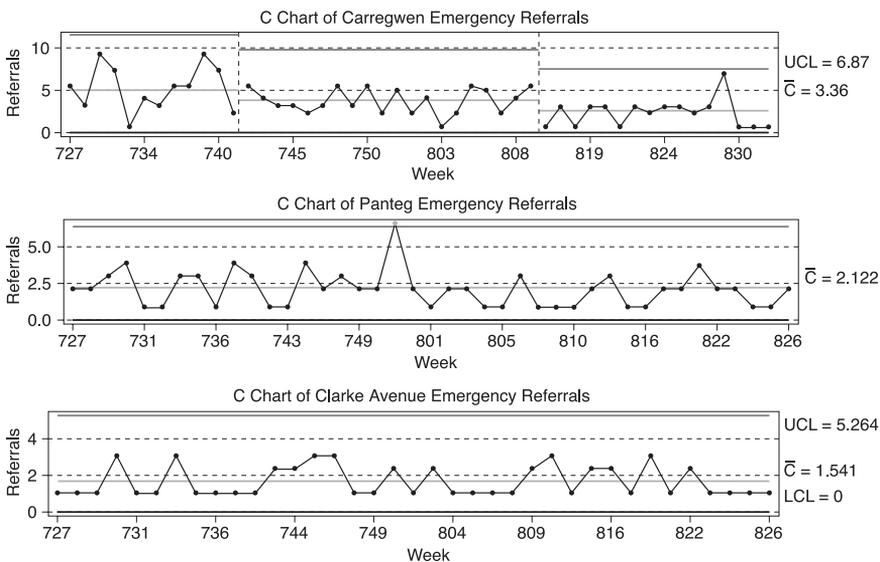


Figure 3 Emergency referrals from the participating practices

in one practice in the proportion of referrals sent home without admission, from 60% to less than 20%, compared with a usual rate of about 30% for all practices in that area. When fewer patients are sent down to emergency departments, the load on services is reduced, which would reduce waiting times in emergency departments. The scheme pointed out some areas where primary care could be better resourced to investigate the patients more, as some of these patients (but not all) might perhaps have been treated in the community.

As for the other practices, Panteg showed some indication of a very slight reduction, while Clark Avenue showed no change. Both surgeries had quite low numbers to start with.

Discussion

One striking thing was how popular the project was – the scheme was oversubscribed. The culture of doctor-to-doctor referral, with patients being referred personally to a known and trusted specialist, was being eroded by a multitude of new pathways, but waiting lists for first appointment and treatment were still very long. GPs were keen to approach the problem differently, to understand their referral patterns, and to influence future developments to make sure patients received more appropriate services.

Of course, GPs' ability and motivation to make changes varied. Practices with internal learning opportunities and contact between doctors already had

internal feedback on referral protocols, and would more easily change referral behaviour where appropriate. Practices where doctors did not meet often would benefit the most from this system but may take some time to develop the culture of learning from each other, or may face problems of collusion in inappropriate referrals rather than tackling the issue openly. In one practice, issues brought to the fore during the weekly meetings led to a re-appraisal of the way the practice worked and led to far-reaching changes to improve the practice. GPs were clear that the quality of referrals increased, and the awareness and use of guidelines increased significantly, without being the main focus of their consideration of referral changes. They were aware that guidelines could increase inappropriate referrals as well as decrease them. The use of Map of Medicine remained quite low because of its limited capability to reflect the uncertainties of primary care pathways, and because the technology is not yet able to integrate with GPs' own systems. However, documenting local pathways should prove very helpful in the future.

We know individual doctors' referral rates vary, and that feedback of these differences to the doctors may not influence them to change their behaviour.⁶ We did note early on that one doctor made very few referrals but this was found to relate to the number of patients that were seen; the doctor was not depriving patients of potentially useful treatments.⁷ Another doctor had a high referral rate and seemed not to be engaging with the project. Discussions were held, and ways to engage were explored, which proved to be a positive experience. Apart from these two experiences, GPs' referral rates were well within the expected range. Factors such as length of experience – more experienced doctors may refer less – personality factors, whether the doctor was particularly risk averse,⁸ and so on seemed to account for most of the differences.

Locums and registrars may refer more unless mentored by doctors or other staff to inform them about available local services; they may also be more risk averse as they are not able to follow up their patients over time. This project formalised their learning opportunities, as long as they were present at the meetings. This was sometimes difficult to arrange. Referrals made by retainees (GPs with limited commitment under a retainer scheme) spanned the usual range. Most of the doctors involved included their record of review of referrals into their portfolio for their appraisal.

It would seem easier to alter referral behaviour in smaller practices. Finding time to undertake peer review with many doctors present can be difficult. In our study, the two practices with just three full-time doctors found that peer review led to quite large changes quite quickly, whereas the practice with many part-timers took longer to effect a change.

Consultants were keen to support the project at first, because the increasing flow of referrals was bringing problems for them too. But if a consultant's income depends on high numbers of referrals from GPs then that would be a disincentive. However, senior and farsighted consultants supported the project from the outset, and continue to do so. The project had an impact on fostering closer collaboration with hospital colleagues and benefited GPs who now felt they were being listened to in a way they had not been previously. There was a positive impact on teamwork, interpersonal relationships, closer collaboration and fostering a culture of openness.

Patients' views on the referral choices being made are being collected in a separate study, which aims to find out from patients what their experiences are of being referred to alternative community services compared with mainstream hospital services. This is being studied by means of questionnaires, focused on whether patients feel they were given enough information about the referral from their GP, whether they think waiting times to be seen were reasonable, and their level of satisfaction overall with regard to their referral, both to mainstream hospital services and to alternative services. More detail is being obtained from detailed 'patient stories'. Findings from this study will be reported on at a later date.

The policy in Wales is of services being brought nearer to the patient and into primary care,⁹ but LHBs as commissioners have had difficulty in developing new services because of problems in transferring money from hospitals to primary care. For example, one service found there were capacity problems because of the increasing referral rate, but there was conflict over who should pay for it – the LHB or the trust. If the health system is to work well in the future, it is crucial to be able to invest in community-based services.

Strengths and limitations

This was a one-year pilot study and it was not clear whether the gains made by the GPs would continue after the study ended. Since then the scheme has been going for over two years, with 23 practices within Gwent now taking part. The gains do seem to have persisted. The project has worked well within the specific configuration of health service organisation in Wales. It should work in other parts of Wales, given adequate management support. However, it may not work so well in other health systems.

The essential prerequisites needed for this type of scheme to work are a well-developed primary care sector, with good-quality GPs having generalist skills and acting as gatekeepers for hospital care, together with alternative community-based services available and not being used to full capacity. It works well with

enthusiastic GPs and supportive consultants who will work closely with primary care and are prepared to accept that it is necessary to invest in primary care. Unless funding is redirected from hospital services, the system will not become more cost-effective. Schemes such as this could also work in areas where there are competing trusts, if independent specialist advice is obtained.

The cluster groups discussing specialties such as cardiology, paediatrics and gastroenterology were very effective, as the dialogue between consultants and GPs threw up many ideas for more efficient referrals. However, each specialism was looked at by a different practice and there was no effect on the overall referral rates. In general, we found that it was important to have more than one practice looking at referrals in a specialty in order to get cross-fertilisation of ideas.

Conclusions

In this study, GPs and consultants worked together effectively and enjoyably to improve the quality of communication between each other, and to facilitate use of more appropriate services. Patient care was improved, yet some very useful cost savings were made along the way, though this was not the main focus of the activity.¹⁰ More use was made of local community-based services utilising the growing skills of other professionals such as nurses, physiotherapists, podiatrists and others. Thus it was generally felt the project benefited the whole healthcare community, and contributed to an improvement in the functioning of the NHS locally.

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CONFLICTS OF INTEREST

None.

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