

## Research paper

# Which symptomatic patients merit urgent referral for colonoscopy? A UK general practice perspective

The South Yorkshire Colorectal Research Alliance (SYCRA)

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## ABSTRACT

**Objectives** To review the assessment of patients as documented in general practitioners' (GPs') referral letters for urgent and routine referrals to colorectal surgeons.

**Method** We report data for consecutive referrals to colorectal surgeons in South Yorkshire, UK. Data were collected from hospital medical records and referral letters. A questionnaire survey of 150 GPs in the region about the reasons why they use the cancer referral route was separately administered to a wider community of GPs in the locality.

**Results** Data for 432 referrals over a six-month period were available for analysis. Seventeen percent of patients were referred contrary to national guidelines. Almost 40% of referrals were sent urgently, cancer was diagnosed in only 2.5% of these. Of those cases sent urgently, almost one-third had significant

colorectal pathologies compared to just over 11% of patients referred routinely. Of the 101 GPs responding to the survey, one in eight admitted to referring patients on the cancer fast-track referral pathway at least 'sometimes' in order to access an urgent appointment for some other reason. The clinical reasons why one in five patients was referred urgently could not be surmised from the details recorded in the letters.

**Conclusion** In most cases, GPs appear to recognise colorectal pathology that requires urgent referral. It may be better to prioritise specialist investigations according to clinical presentation of a variety of significant pathologies rather than only on the basis of the clinical features of cancer.

**Keywords:** colonoscopy, letter, referral

**How this fits in with quality in primary care****What do we know?**

Many patients are not referred on the appropriate pathway. Cancer is a rare diagnosis in the referred population.

**What does this paper add?**

One in six patients is not referred according to published guidelines. More symptomatic patients are generally referred urgently. Understanding exceptions to this rule may hold the key to successful implementation of guidelines in primary care.

## Introduction

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Referral guidelines were introduced by the UK Department of Health in April 2000 to help general practitioners (GPs) select patients with the recognised symptoms of cancer, for speedy diagnosis.<sup>1,2</sup> Such cases are prioritised and offered an appointment with a hospital specialist within two weeks. Experts in primary care argue that these guidelines benefit only patients with so-called ‘barn door’ symptoms of late cancer, and not the significant numbers of patients with lower-risk symptoms who nevertheless may prove to have cancer and now experience longer waiting times than before.<sup>3</sup> Nonetheless, the ‘two-week’ wait system has been implemented, and is now an established feature of the referral pathway in UK practice. The system requires practitioners to make a case for referral in writing and to fax the details to the relevant specialist who is then obliged to make the necessary arrangements to see the patient within two weeks of receiving the referral. Previous surveys suggest that only a minority of cancer sufferers are referred on the two-week fast-track pathway and also that cancer is a relatively uncommon diagnosis for those referred to specialists.<sup>3,4</sup> However, it is not clear what proportion of those referred to specialists satisfy the criteria for urgent referral whatever the chosen pathway or the final diagnosis. Secondly, previous surveys do not generally offer detailed information about which relevant clinical features are described in referral letters. Therefore, we have an incomplete impression of GP referral behaviour within a system that relies heavily on their ability to prioritise those cases with a defined clinical presentation. Such a perspective would offer depth to understanding the patient trajectory. In a previous Delphi study GPs and surgeons identified the clinical features that should be communicated to specialists about patients with bowel symptoms.<sup>5</sup> These features are listed in Box 1. The clinical features of bowel disease identified in national guidelines as warranting an urgent referral are listed in Box 2. In this project we aim to generate a hypothesis as to why practitioners select different referral pathways, by studying referral letters, choice of pathway and diagnosis.

### Box 1 Signs, symptoms and risk factors for colorectal pathologies

- Duration of symptoms
- History of change in bowel habit
- History of rectal bleeding
- History of tenesmus
- History of passing mucus per rectum
- History of abdominal pain
- History of weight loss or patient’s weight
- History of peri-anal symptoms, e.g. itch or pain
- Rectal mass or results of rectal examination
- Abdominal mass or results of abdominal examination
- Iron-deficiency anaemia or results of full blood count
- History of inflammatory bowel disease
- Relevant family history
- History of lower bowel investigations or existing colorectal conditions
- GP’s opinion as to likely diagnosis

### Box 2 Criteria for urgent referral of patient with possible lower gastrointestinal malignancy<sup>1</sup>

- Change in bowel habit lasting over six weeks, with no rectal bleeding, patient aged over 60 years
- Rectal bleeding and change in bowel habit, lasting over six weeks
- Rectal bleeding and no anal symptoms (itch or pain), patient aged over 60 years
- Rectal mass and/or abdominal mass
- Iron-deficiency anaemia

## Methods

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The methods consisted of two steps. Firstly, a prospective analysis of GP referral letters from hospital

records, and secondly a self-administered postal survey of GPs. One-hundred and eighty whole-time-equivalent GPs from 44 practices, serving 265 707 patients in South Yorkshire, UK participated in the study. This consisted of one in three practices in the locality. Data were collected for consecutive referrals from GPs in the Doncaster and Sheffield area for the period April–September 2004 inclusive. Data relating to the final histological diagnosis after colonoscopy and the referral pathway (urgent (i.e. possible cancer) or routine) were collected from the relevant local NHS hospital medical records. Those cases diagnosed with cancer, inflammatory bowel disease or moderate to severe diverticular disease were said to have ‘significant’ pathology. This categorisation was adopted following discussion with local specialists who identified such conditions as likely to lead to significant symptoms and require specialist diagnosis and or treatment. The number of clinical details addressed in referral letters from the list in Box 1 was dubbed the ‘assessment score’ for each letter. Referral letters were scored with one point for every feature the GP addressed in the letter. A research associate who understood the relevant medical terminology scored the letters. The ‘assessment score’ for the referrals was negatively skewed, i.e. most letters contained very few details; therefore it was necessary to carry out a square root transformation before applying parametric tests. We also identified which cases merited fast-track referral, based on their clinical details as recorded in the referral letters with reference to UK Department of Health guidelines current at the time of the study, as shown in Box 2.<sup>1</sup> A questionnaire survey of 150 GPs in the same region about the reasons why they used the fast-track referral route was separately administered to a wider community of GPs in the locality six months later. Sample sizes in the survey were based on a margin of error of 10% and 95% confidence intervals. In this report we focus on the response to the statement: ‘I would use the two-week wait referral system if the criteria were not met, the patient was unwell with a condition which I did not particularly suspect was cancer, but the patient was too unwell to wait for a routine appointment’. Responses were invited as ‘always’, ‘usually’, ‘sometimes’, ‘rarely’ or ‘never’.

## Results

A total of 716 consecutive referrals were identified. Of these, 432 referrals were available with data for at least two measures of interest, namely route of referral, referral letter and/or diagnosis. The hospitals in these localities did not require referrals to be sent in any specific format and a variety of referral document types were noted ranging from typed letters and

hand-written notes to referral proformas. Eight colorectal cancers were diagnosed. In this period one might have anticipated 45 cancers over six months in this population, i.e. one per GP per year. Of the cases where both diagnosis and route of referral were known, 168/432 (39%) referrals were made on the fast track (i.e. possible cancer), of these 2.6% had cancer. Less than 1% of the rest were diagnosed as cancer. Therefore, cancer was a relatively rare diagnosis even among the cases that were identified as possible cancer or as being of practitioner concern. However, only 50% of cases with iron-deficiency anaemia (14/28) were referred urgently despite the guideline recommendations, and the reason why one in five patients was referred on the fast track could not be surmised from the details recorded in the letters.

Letters about patients referred on the fast-track system listed more signs, symptoms and risk factors than letters describing patients referred routinely (2.7 versus 2.1, Table 1). However, letters about patients on the fast track where this was not ‘merited’ contained fewer relevant clinical details than letters about patients on the routine pathway where this was not ‘merited’ (2.2 versus 2.6, Table 1). None of the patients sent routinely, when the guidelines suggested an urgent referral was necessary, had cancer. A total of 101 GPs (67%) responded to the questionnaire survey. The median general practice list size for respondents was 7000 patients, with most practitioners working in group practice with two or three partners. Respondents included equal numbers of male and female GPs. On this basis the sample was broadly representative of GPs in England.<sup>6</sup> Twelve percent of respondents (95% confidence interval (CI) 6–18%) admitted to using the fast-track pathway at least ‘sometimes’ when the patient was not considered at risk of cancer, but for some other reason.

## Discussion

From the details recorded in referral letters, approximately one in six patients was ‘misdirected’ with reference to the national guidelines. As reported by others, some patients with ‘red flag’ symptoms are not referred urgently while one-fifth of patients enter the fast track with letters documenting symptoms that do not ‘merit’ urgent colonoscopy.<sup>7</sup> Two possibilities exist: either GPs are not aware of the guidelines or they choose to ignore them. There was evidence to generate a number of different hypotheses.

We preface the discussion by acknowledging a significant limitation of this study, namely the use of referral letter details as proxy measures of GP clinical behaviour. On the one hand referral letters with low

**Table 1** Route of referral, diagnosis and assessment score

Referral pathway	<i>n</i>	Percentage with 'significant' pathologies <sup>a</sup>	Mean 'assessment score'	Mean difference	95% CI	<i>t</i>	df	<i>P</i>
Fast track	168	28.0	2.7	0.6	0.49 to 0.73	9.9	499	<0.001
Routine	264	11.4	2.1					
Fast track merited <sup>b</sup>	130	28.5	2.8	0.8	0.7 to 0.9	12.2	418	<0.001
Routine merited	230	10.8	2.0					
Fast track not merited	37	26.5	2.2	-0.4	-0.7 to -0.1	-3	72	0.004
Routine not merited	37	17.2	2.6					

<sup>a</sup> Moderate to severe diverticular disease, inflammatory bowel disease, cancer and large adenomas.

<sup>b</sup> Based on clinical details as recorded in referral letters and with reference to the UK Department of Health referral guidelines for suspected cancer.<sup>1</sup> Not all these patients were sent on the relevant pathway.

'assessment scores' (i.e. few documented clinical details) may, as others have suggested, indicate incomplete clinical assessment prior to referral.<sup>8</sup> Equally it may be that assessments are comprehensive but that negative findings are not routinely documented in letters. On this basis one may postulate that letters about patients on the fast track have a higher 'assessment score', because those who are sent urgently are those with more symptoms. A corollary of this is that some patients, such as those with unexplained anaemia, may have very few symptoms or are not assessed in sufficient detail. However, if the number of clinical features is the trigger for choice of referral pathway, then it does not explain why 22% of patients (37/168) who were routed on the fast track outside the referral criteria seemed to have relatively few symptoms according to the letters, but more than one-quarter have significant pathology. It is not clear why these patients were sent urgently. A clue to this behaviour may be in the response to the survey in which practitioners admitted to using the fast track to access an urgent specialist opinion rather than because of a concern about cancer. Lastly the clinical details about 14% (37/264) of patients referred routinely suggest they needed urgent referral and had many symptoms. One can only speculate why practitioners did not make an urgent referral in such cases. Understanding these choices may hold the key to successful implementation of clinical guidelines.

We also noted that a substantial proportion of the expected cancer cases were not identified in the data. It

is unlikely that these cases were among those for which we could not track hospital records, as cancers were specifically logged on several hospital databases that were examined by our team. It is more likely that such cases were presenting by other routes, perhaps as medical emergencies, or via other hospital specialties, and therefore were excluded in the analysis. None of the patients referred routinely who might have been referred urgently according to the guidelines had cancer. Therefore we could not detect any 'harm' in the referral patterns observed in this study. These data support the case for further research on the perceived significance of bowel symptoms in the community, the mode of presentation in primary care and decision making in GP consultations.

Finally, these data also sound a note of caution in fast tracking only those with symptoms of 'cancer', a condition that in practice presents relatively infrequently. We also agree with those who express doubts about the wisdom of guideline-driven rationing of health care.<sup>3</sup> Our perspective as clinicians is that decision making follows negotiation between doctor and patient.<sup>9</sup> The practitioner as advocate for his or her patient may, as was demonstrated again here, choose different referral pathways notwithstanding published recommendations.

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## ETHICS COMMITTEE

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## CONFLICTS OF INTEREST

None.

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