

Letter

Faecal Immunochemical Testing in Secondary Urgent Care Setting: A Feasibility Pilot for Patients Presenting to the Emergency Department With Lower Gastrointestinal Red-Flag Symptoms

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1. Introduction

The early-stage diagnosis of colorectal cancer (CRC) is crucial in achieving good clinical outcomes and improved patient survival. Despite this, timely diagnosis remains a challenge, mainly due to the non-specificity of the associated lower gastrointestinal (LGI) symptoms [1]. The National Health Service (NHS) has implemented several strategies to improve early detection, including the National Bowel Cancer Screening Programme (BCSP) and the Faster Diagnostic Standard (FDS) framework. While the BCSP successfully reduces CRC mortality in the asymptomatic population, its full impact is long-term and it currently accounts for around 15% of all CRC diagnoses [2].

The FDS framework is the primary route for diagnosing symptomatic patients, utilising the faecal immunochemical test (FIT) as a triage tool. Following National Institute for Health and Care Excellence (NICE) NG12 guidelines, a FIT result of 10 µg Hb/g or greater prompts an urgent specialist referral for further investigation [3]. Despite these efforts, a concerning proportion of CRC cases (approximately 20%) continue to present as an emergency across the UK. This broad route to CRC diagnosis underscores the ongoing need to optimise the diagnostic pathway for the symptomatic population [4].

Emergency presentation signals delays in diagnosis rooted in two main issues: first, poor patient recognition or awareness of CRC symptoms; and second, difficulties with access to healthcare services. This is often exacerbated by operational burden on local primary care providers. Patients frequently present directly to the emergency department (A&E) with suspected LGI red-flag symptoms after being unable to secure a General Practitioner (GP) appointment. A national analysis estimated that 5.77 million A&E

attendances (26.5% of unplanned A&E attendances in England in 2012–2013) were preceded by the patient being unable to obtain a convenient general practice appointment [5]. The A&E services at both hospitals within Barking, Havering and Redbridge University Hospitals NHS Trust (BHRUT) are among the busiest in North East London, serving a large multi-ethnic population across three London boroughs. Emergency department attendance in London has risen substantially over the past decade, with a statistically significant pre-pandemic annual growth rate and continued increases among older and multimorbid patients [6].

Crucially, a proportion of these consultations are potentially avoidable. Because FIT is not routinely offered within the urgent secondary care (SC) setting, these non-acute patients are often discharged with recommendations to arrange tests via their GP. This process often lasts weeks before tests are conducted and patients are seen by a GP.

To alleviate the burden on local primary care providers and to streamline access to diagnostics for patients presenting to A&E with suspected LGI red-flag symptoms, NHS England National Cancer Team funded the FIT in SC pilot project to be trialled within BHRUT. The pilot was designed to fast-track access to diagnosis for patients presenting to Queen's and King George Hospitals A&E with red-flag symptoms who did not require immediate acute admission. Eligible patients were discharged with arrangements for blood workup and FIT, followed by a virtual review of their results. The primary objective was to develop and evaluate a pathway that integrates FIT into the urgent care setting, aiming to enhance clinical triage. Via this letter we share our setup and the results of implementation of FIT within the secondary care setting.



2. Methods

This was a single-Trust feasibility study. Data were reviewed from October 2023 to February 2025, as a part of a clinical audit of routinely recorded parameters (registered with the Trust audit department, unique identifying number LN-291-24) and reported in line with the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) criteria [7]. There was no control group, historical comparator, or pre-implementation baseline, and no formal hypothesis testing was undertaken; the analysis therefore assesses the feasibility of the pathway rather than its comparative effectiveness.

The FIT in SC pilot was funded by the NHS England National Cancer Team and delivered by the Cancer Transformation Partners in Health and Care within the Barking, Havering and Redbridge University Hospitals NHS Trust. It was overseen by a multidisciplinary team including two senior responsible officers, five clinical leads, a clinical leadership fellow, a laboratory lead, a clinical nurse specialist, a navigator, and a project manager.

Prior to implementation, a Standard Operating Procedure (SOP) was developed, including a patient flow chart (Fig. 1) to standardise the pilot processes. Targeted teaching sessions were provided by the clinical leads for A&E staff at both Queen's and King George Hospitals to guide patient selection (Fig. 2B). Informational materials for both patients and clinicians (Fig. 2) were created and disseminated via physical displays in consultation rooms and electronic communication across the clinical teams. Senior clinicians within the A&E departments of both hospitals reviewed and recruited eligible patients (Fig. 2B).

Key steps in the patient pathway were:

(1) Eligible patients were provided with a FIT kit during their A&E visit. The kit included a detailed leaflet containing information on sample collection and submission (Fig. 2A), with a QR code linking to translated information in all locally spoken languages and video instructions.

(2) Patients without blood test results recorded in their electronic health record within the past three months underwent testing for full blood count, renal and liver function tests, and iron studies.

(3) FIT and blood test results were reviewed virtually by a navigator and clinical nurse specialist, who managed subsequent patient care as appropriate. Where escalation to the urgent suspected-cancer (2-week-wait, 2WW) pathway was required, results were discussed with a doctor.

(4) Following their outcome, patients were invited to give feedback via a brief electronic non-validated questionnaire (Supplementary File 1).

(5) Follow up of the electronic patient records for the FIT negative patients was completed for 6 months after the pilot ended.

FIT-negative patients were discharged with GP follow-up and safety-netting advice. They were monitored virtually over a six-month period for any subsequent GP

re-referral to the urgent suspected-cancer (2WW) pathway. As the trust's electronic health record is linked to the local cancer registry, any new CRC diagnosis recorded locally for these patients would have been identifiable. No FIT-negative patients were recorded as having a CRC diagnosis within this window.

FIT samples were collected by patients following instructions described in the patient information leaflet that comes with the FIT kit (Supplementary File 2). Following receipt, the samples were collected into the OC Sensor Auto sampling collection device (Eiken-Japan) and analysed on the OC Sensor IO analyser (Eiken-Japan) supplied by Mast Diagnostics, UK. Testing was performed in a UKAS 15189 accredited laboratory. The analytical reporting range was 6 µg Hb/g to 200 µg Hb/g, samples with FIT concentrations above 200 µg Hb/g were not diluted. Positive FIT results were defined as values of 10 µg Hb/g or higher in accordance with NICE NG12: Suspected cancer: recognition and referral [3].

Samples were transported to the laboratory and initially kept at room temperature, before being refrigerated until sample processing. Samples were analysed on a single analytical system and testing was not repeated unless an analytical error was identified. Results were reported within 3 days of sample receipt in the laboratory. Analysis was performed by experienced laboratory staff and quality control was performed at the beginning and end of run. The mean concentrations for the quality control samples were 14, 30 and 94 µg Hb/g and imprecision was <5% at all levels. At a FIT concentration of 10 µg Hb/g, imprecision was <4%.

The questionnaire was a brief, non-validated intended as an acceptability and experience check rather than a validated patient-reported outcome measure. Internal-consistency testing was therefore not applicable.

Anonymised data on age, gender, ethnicity, presenting symptoms, investigations performed, and their results were collected in a Microsoft Excel spreadsheet. Continuous variables were summarised as mean and range, and categorical variables as frequencies and percentages (%); no continuous variable was subjected to inferential or parametric testing. As a feasibility study, the pilot was not designed or powered as a diagnostic-accuracy study; negative predictive value was therefore not calculated.

3. Results

During the pilot, 243 patients satisfied the inclusion criteria (Table 1, Fig. 3). 198 patients completed the pathway by submitting their FIT sample and reaching a conclusion to their management plan. Of these, 38 were FIT positive, 160 were FIT negative. The remaining 45 patients did not complete the full process and their results were categorised separately.

Among the 38 FIT positive patients, 20 were found to have clinically relevant findings (Table 2). Specifically, one patient was diagnosed with CRC, 5 had suspected in-

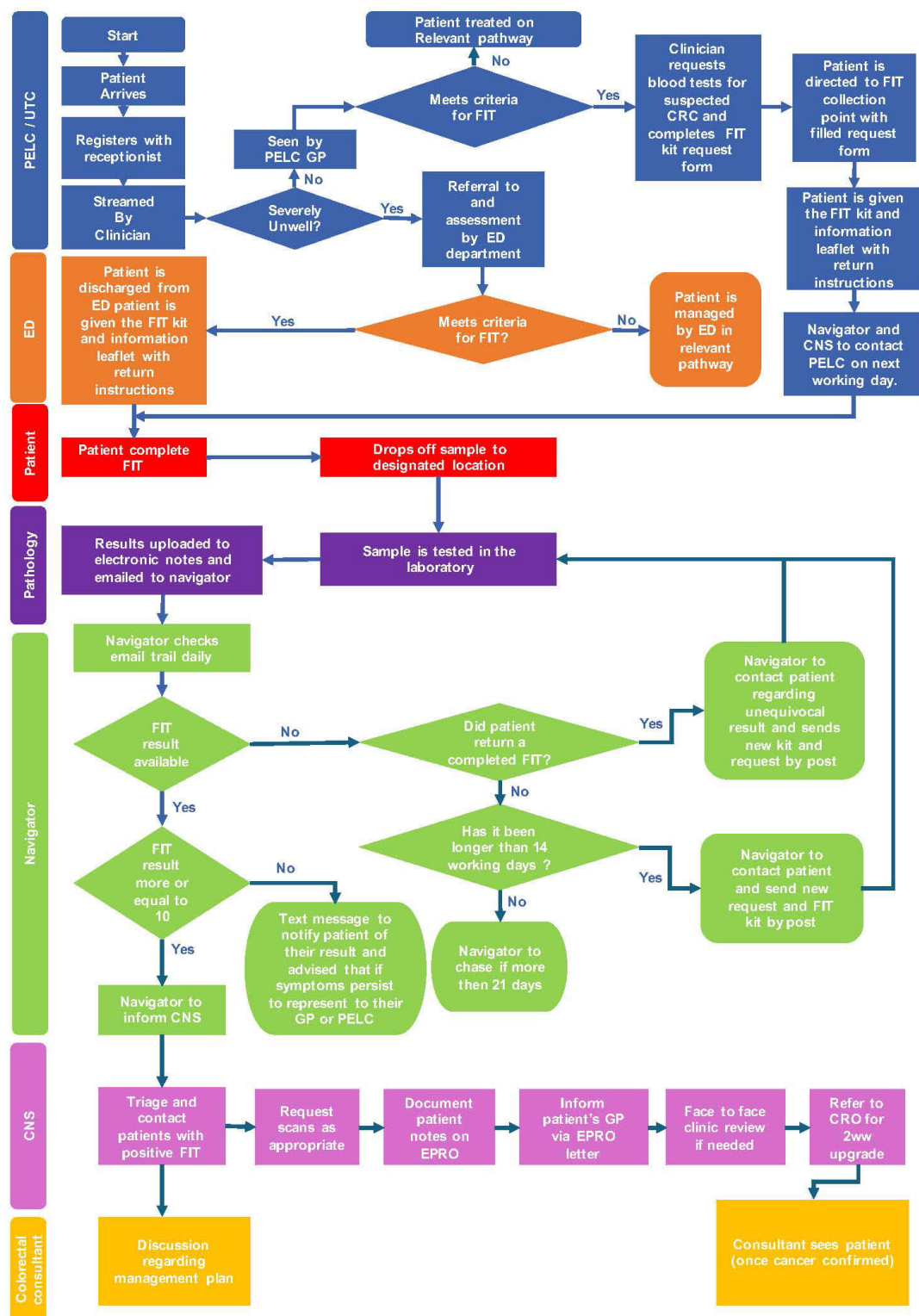


Fig. 1. Patient flowchart indicating the pathway for the FIT in SC pilot. (LEGEND) FIT, Faecal Immunochemical Testing; SC, Secondary Care; PELC, The Partnership of East London Co-operatives; ED, Emergency Department; UTC, Urgent Treatment Centre; CNS, Clinical Nurse Specialist; CRO, Cancer Referral Office; CRC, colorectal cancer; 2WW, 2-week wait; Epro, Electronic documentation software. Figure created by the authors using Microsoft Visio and PowerPoint (Version 2608, Microsoft Corporation, Redmond, WA, USA).

A

Faecal Immunochemical Test (FIT) in the Emergency Department

If you are aged 40 or over and have abnormal bowel symptoms, you may be offered a FIT (poo test).

FIT looks for tiny traces of blood in your poo that are too small to see. These traces of blood could be linked to many common bowel conditions, including bowel cancer.

Most people with bowel symptoms don't have cancer. However, it's important to get your symptoms checked out.

What will I need to do?

The test is really easy to complete.

You will be provided with a FIT testing kit and an instruction leaflet about how to complete and return the test.

Make sure that the hospital has your correct address and phone number to contact you with your test results.

Scan the QR code opposite for guidance on how to complete your FIT



B

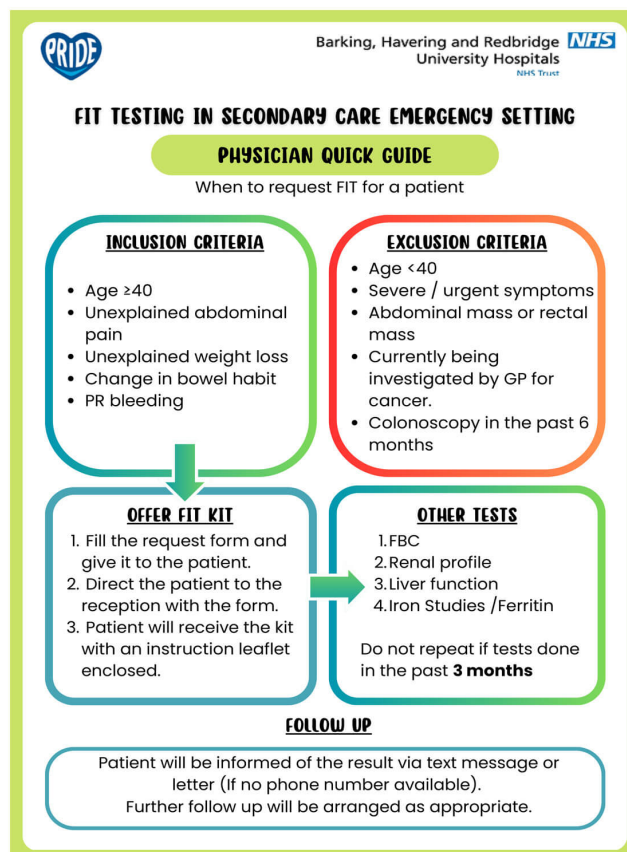


Fig. 2. Posters for the FIT in SC pilot. (A) Patient information poster, supplied by the Transforming Cancer Services Team (TCST) for the pilot and reproduced with permission obtained through the supervising author. (B) poster showing the physician quick-reference guide displayed within clinical areas, created by the authors using Canva and Microsoft PowerPoint.

Table 1. Demographic characteristics and presenting symptoms.

Characteristic	Total
Total No. of patients	243
No. of patients that completed process	198
No. of patients that didn't complete process	45
Age (yr. range)	56.7 (40–84)
Sex	
Male	132 (54.3)
Female	111 (45.6)
Ethnicity	
White British	72 (29.6)
Others	171 (70.3)
Presentation symptoms	
Unexplained abdominal pain	148 (60.9)
Change in bowel habit	113 (46.5)
Per rectal bleeding	93 (38.2)
Unexplained weight loss	32 (13.1)
Faecal Immunochemical Test [Completed pathway: n = 198]	
$< 10 \mu\text{g Hb/g}$	160 (80.8)
$\geq 10 \mu\text{g Hb/g}$	38 (19.1)

Continuous variables are presented as mean (range) and categorical variables as frequency (%).

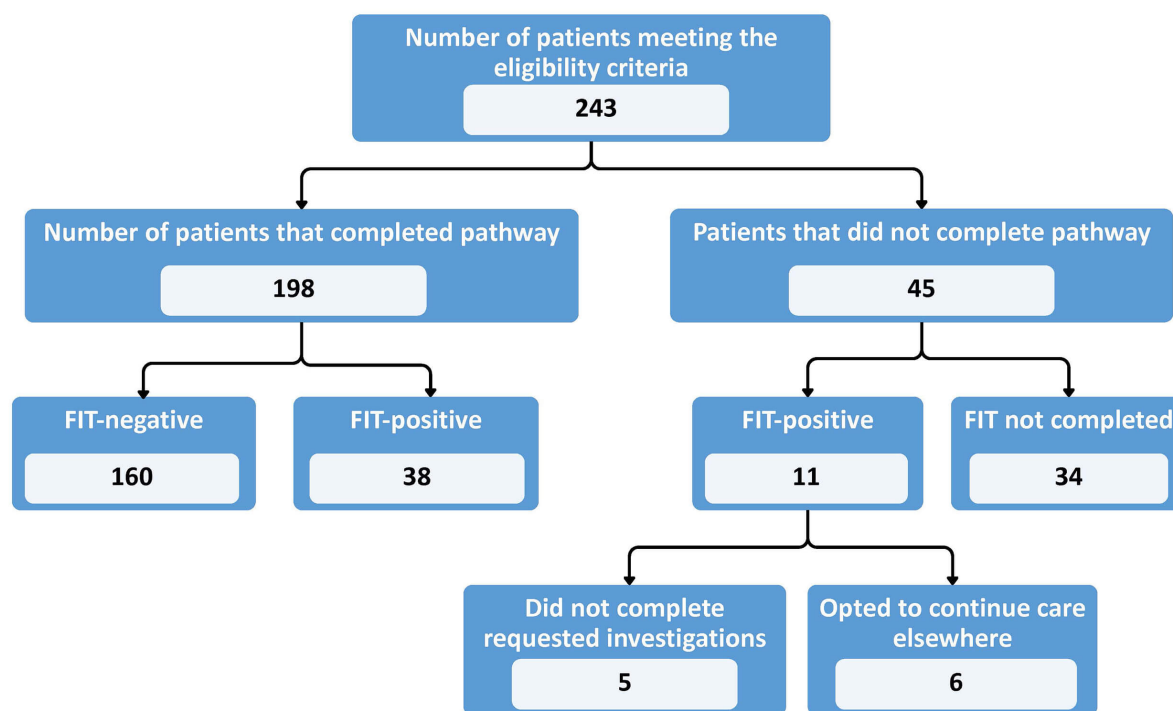


Fig. 3. Pilot patient flowchart.

Table 2. Clinically relevant findings among FIT positive patients.

Diagnosis	n	Initial diagnostic modality
Colorectal cancer	1	CT colonography
Suspected inflammatory bowel disease	5	Colonoscopy
Benign colorectal polyps (tubular adenoma, low-grade dysplasia)	11	(MRI n = 1, Colonoscopy n = 10)
Barrett's oesophagus	1	Gastroscopy
Gastrointestinal stromal tumour	1	CT chest abdomen and pelvis
Ovarian lesion (referred to Gynaecology MDT)	1	CT chest abdomen and pelvis
Total	20	

CT, computed tomography; MDT, multidisciplinary team; MRI, Magnetic resonance imaging.

inflammatory bowel disease and 11 had benign colonic or rectal polyps that were excised, revealing tubular adenoma with low grade dysplasia and no evidence of malignancy. Additionally, one patient was diagnosed with Barrett's oesophagus, one with gastrointestinal stromal tumour and one was found to have an ovarian lesion; and was therefore referred to the Gynaecology multidisciplinary team (MDT). The remaining patients either had unremarkable results and were discharged from the pathway (n = 17), or were discharged due to recent 2WW pathway workup (n = 1).

Of the 160 FIT negative patients, 22 were re-referred to the 2WW pathway and investigated within the outpatient department setting with no cases of CRC identified.

Of the 45 patients who did not complete the pathway, 11 had a FIT positive result and escalated to the 2WW pathway. Of these, 5 did not complete the recommended investigations and 6 opted to continue their care elsewhere. The remaining 34 patients did not complete the requested FIT test.

Survey feedback from 13 respondents was positive with an average to great overall experience reported, though two mentioned a poor explanation of results.

4. Discussion

This pilot demonstrates the feasibility of integrating FIT into the urgent SC setting for symptomatic patients not requiring admission. By initiating FIT directly in the A&E department, the pathway may support earlier risk stratification and facilitate timely decisions regarding FDS referral for patients presenting with LGI symptoms.

The potential clinical utility of this approach is relevant in an area such as East London, which faces particular pressures. Patients in North East London often experience prolonged delays for GP appointments, and inability to obtain a timely or convenient GP appointment is an established driver for A&E attendance [5]. These delays may lead patients to seek care elsewhere, adding to A&E pressure, an effect amplified in areas of high deprivation

where A&E attendance rates are higher [8,9]. This is particularly relevant for boroughs such as Barking and Dagenham, which are among the most deprived in the England [10]. Traditionally, A&E care for these patients involves communicating symptoms back to the GP and recommending a 2WW referral where appropriate, which can lengthen the diagnostic timeline.

Although FIT was introduced primarily as a primary-care triage tool, evidence supporting its use in secondary care is growing. The NICE FIT study demonstrated high sensitivity of FIT for CRC among symptomatic patients referred to secondary care [11], and regional data from a North East London trust have similarly supported its diagnostic value in symptomatic populations [12]. FIT-based triage has also been shown to prioritise patients for earlier investigation in secondary care [13]. However, these studies evaluated FIT in patients already referred to secondary care; the novelty of our pilot is initiating FIT at the point of urgent care presentation, in patients who had not accessed primary-care triage, a setting in which published evidence remains scarce.

Our model addresses a recognised bottleneck. Traditionally, FIT is used in primary care as a gatekeeper to SC referral; by initiating the test in A&E when it has not been requested in primary care, it can serve as a strategic tool to prioritise patients at increased risk. FIT-positive patients were triaged and escalated directly through the 2WW pathway, allowing investigations to be arranged without requiring a further GP appointment or referral. This avoided additional primary care consultations and reduced the likelihood of duplicated or inappropriate 2WW referrals.

This context can be set against the conventional pathway. Under the FDS, the operational standard is that 75% of patients are told whether they have cancer, or have it excluded, within 28 days of an urgent referral, and national performance has hovered close to this threshold, with broader treatment targets (for example the 62-day standard) frequently unmet [14]. Importantly, this clock begins only after a patient has obtained a GP appointment and been referred. By contrast, an A&E-initiated FIT pathway removes the primary-care access step that often precedes referral. We did not collect time-to-diagnosis data and therefore cannot demonstrate that our pathway is faster; this comparison is presented as context, and prospective evaluation with time-based metrics would be required to test it. Looking forward, we hope that with the development of machine learning (ML) technologies, a better strategy for triaging patients can be created. Some studies have already shown that combination of FIT with other variables from routine bloods or computational methods such as ML can support triage by providing better patient stratification, as well as improved clinical outcomes [15,16].

Several limitations should be acknowledged. As a feasibility study with no control group, historical comparator, or pre-implementation baseline, these findings demon-

strate feasibility rather than effectiveness or safety. The study was not designed to establish diagnostic accuracy. The six-month follow-up is insufficient to exclude interval CRC, and although the electronic health record is linked to the local cancer registry (capturing any CRC recorded locally), patients diagnosed at another provider who did not re-present to us could have been missed; longer-term registry linkage would be needed to confirm the safety of reassuring FIT-negative patients. Finally, patient experience was assessed using a brief, non-validated questionnaire completed by only 13 respondents, so the feedback should be regarded as indicative rather than representative.

Prospective evaluation incorporating time-to-investigation data, cost-effectiveness analysis, and validated patient-reported outcome measures will help determine the scalability and sustainability of this approach across wider urgent care settings.

5. Conclusion

Introducing FIT in the urgent care setting is feasible and provides an alternative pathway for symptomatic patients with suspected CRC. Further evaluation is needed to assess its impact, but an urgent care-initiated FIT pathway may represent a promising approach that warrants prospective evaluation, with the potential to reduce dependency on GP access and to support suspected-cancer referral.

Key Points

- Our pilot evaluated the integration of FIT into the urgent secondary care setting at BHRUT (Queen's and King George Hospitals) to fast-track symptomatic patients presenting to urgent secondary care who did not require immediate admission, aiming to bypass primary care waiting times and support earlier diagnosis.
- The pathway comprised SOPs, blood workup, and provision of FIT kits with multilingual instructions during the urgent care visit, followed by virtual results review by a navigator and a clinical nurse specialist.
- Using a FIT threshold of ≥ 10 $\mu\text{gHb/g}$ successfully triaged urgent care patients onto the 2WW pathway, identifying 20 pathologies (including one CRC and five suspected IBD cases) across 49 escalated participants (20.2%).
- The pilot suggests that initiating FIT in urgent care is a feasible strategy to enhance clinical triage for LGI disease, with the potential to reduce operational burden on local GPs and to prioritise diagnostic resources for higher-risk patients in a highly deprived area.

Abbreviations

A&E, accident and emergency (emergency department); BCSP, Bowel Cancer Screening Programme; BHRUT, Barking, Havering and Redbridge University Hospitals NHS Trust; CRC, colorectal cancer; CT, computed tomography; FDS, Faster Diagnostic Standard; FIT,

faecal immunochemical test; GP, General Practitioner; LGI, lower gastrointestinal; MDT, multidisciplinary team; NHS, National Health Service; NICE, National Institute for Health and Care Excellence; SC, secondary care; SOP, Standard Operating Procedure; 2WW, 2-week-wait.

Availability of Data and Materials

The datasets used and/or analysed during the current study are available from the corresponding authors upon reasonable request.

Author Contributions

Conceptualization: FA, LS, MM, SK, SB; Data curation: AB, VB, SRA, BS, AW, AM; Formal analysis: AB, SRA, VB; Investigation: AB, VB, SRA, BS, AW, FA, LS, AM, MM, SK, SB; Methodology: AB, VB, BS, AW, FA, LS, AM, MM, SK, SB; Visualization: AB, VB, BS, AW, FA, LS, AM, MM, SK, SB; Writing-original draft: AB, VB, AM, SK, SB; Writing-review & editing: AB, VB, BS, AW, FA, LS, MM, SK, SB. All authors contributed to important editorial changes in the manuscript. All authors read and approved the final manuscript. All authors have participated sufficiently in the work to take public responsibility for appropriate portions of the content and agreed to be accountable for all aspects of the work in ensuring that questions related to its accuracy or integrity.

Ethics Approval and Consent to Participate

The study was conducted in accordance with the Declaration of Helsinki. Approval from institutional governance at Barking, Havering and Redbridge University Hospitals NHS Trust was obtained as a component of the clinical audit process before data analysis took place (Audit unique identifying number LN-291-24). Informed consent requirements were exempted by ethics review bodies as fully anonymised data were collected.

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Conflicts of Interest

The authors declare no conflicts of interest.

Declaration of AI and AI-Assisted Technologies in the Writing Process

During the preparation of this work, the authors used the PaperPal tool in order to check spelling and grammar. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

Supplementary Material

Supplementary material associated with this article can be found, in the online version, at <https://doi.org/10.31083/BJHM50114>.

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