

**Title** Barriers and facilitators to faecal immunochemical testing (FIT) in symptomatic populations: protocol for scoping review (Version 2, 19 September 2023)

**Contact**

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**Contributions of Protocol Authors**

Matthew Kurien and Daniel Hind conceived the review. MK, DH, Sienna Hamer-Kiwacz and Hannah Berntsson designed the review. DH gave final approval for this to be published.

**Guarantor of the review**

DH.

## **Rationale**

Colorectal cancer (CRC) is the fourth most common cancer in the UK, and the second leading cause for cancer related deaths. An expedited diagnosis and early treatment of CRC improves survival and cure rates, with 95% of patients diagnosed at stage 1 surviving five years or more, compared with only 10% diagnosed at stage 4.

The faecal immunochemical test (FIT) is a non-invasive, dipstick test that detects the early degradation products of blood in the faeces. It is now widely used as a surrogate marker for bowel cancer, and used in primary care for assessment of both symptomatic and asymptomatic (bowel cancer screening) individuals.

Previous research suggests that up to 10% of FIT samples are not returned by patients after being given out by GPs. This can lead to diagnostic delays, with recent modelling research demonstrating that a 2 month diagnostic delay can lead to a >9% reduction in 10-year survival.

## **Aims and objectives**

The aim of this review is to characterise the literature on the facilitators and barriers to FIT testing in the context of the NHS in the UK and other countries with comparable healthcare systems in symptomatic populations.

The specific objectives are:

- Systematic searches and selection of studies on the facilitators and barriers to FIT testing in the context of the NHS in the UK and other countries with comparable healthcare systems in symptomatic populations.
- Charting of data from eligible studies
- Narrative, tabular and graphical syntheses
- A gaps analysis showing research priorities

## **Methods**

### **Eligibility Criteria**

*Participants/population:*

Inclusion criteria - People with symptoms suggestive of bowel cancer and health care providers of FIT testing (general practitioners, practice nurses, nurse practitioners) .

Exclusion criteria - Non-humans; People with no symptoms of bowel cancer.

*Concept:*

Inclusion criteria - Studies assessing the barriers and facilitators to the uptake of FIT testing, from both a patient and healthcare professional perspective.

Exclusion criteria - Quantitative research studies into the uptake of FIT testing, studies into FIT testing in non-symptomatic populations.

*Context:*

Inclusion criteria - Studies conducted in the UK and other countries that are members of the Organisation for Economic Co-operation and Development (OECD).

Exclusion criteria - Studies conducted in countries with private healthcare systems and low income countries as the general practice setting is not comparable.

*Study type:*

Inclusion criteria: Qualitative, mixed method studies, and surveys

Exclusion criteria: Commentary or opinion publications that do not present new data, Quantitative (i.e., cross-sectional, case-series, and case studies).

Publications in non-English languages will also be excluded.

Searches will be limited to papers published from 2013 to the present day.

**Main outcome(s)**

Symptomatic people: Facilitators, barriers and views towards the uptake of FIT testing.

Healthcare providers: Facilitators, barriers and views towards the provision of FIT testing and uptake in symptomatic patient population.

**Information Sources**

The following bibliographic databases will be searched from September, 2013 to September, 2023: MEDLINE, EMBASE (via Ovid) and PsycINFO using the search strategy below. The final search results will be exported into Rayyan, and any duplicates will be removed. The electronic database search will be supplemented by searching abstracts from meetings of the American Society of Clinical Oncology (ASCO) and the European Society for Medical Oncology. We will check the reference lists of eligible studies for additional citations. We will use the "find similar" and "related articles" features on Ovid and PubMed to identify other eligible citations.

## Search Strategy

Ovid MEDLINE(R) and Epub Ahead of Print, In-Process, In-Data-Review & Other Non-Indexed Citations and Daily 1946 to September 14, 2023

1. Exp Colorectal Neoplasms/di [Diagnosis]
2. Occult Blood/
3. Faecal immunochemical test\*.ti,ab,kw.
4. Fecal immunochemical test\*.ti,ab,kw.
5. feces/ch
6. or/1-5
7. Symptomatic.mp.
8. barrier\*.mp.
9. attitude\*.mp.
10. Feasibility.mp.
11. Usability.mp.
12. perception\*.mp.
13. experience\*.mp.
14. engage\*.mp.
15. prefer\*.mp.
16. tolera\*.mp.
17. willing\*.mp.
18. Exp Qualitative Research/
19. Qualitative.ti,ab.
20. Themes.ti,ab.
21. or/7-20
22. 6 and 7 and 21
23. Limit 22 to (English language and yr="2013-current")

## Selection of sources of evidence

At least two reviewers will evaluate the titles, abstracts and then full text of all citations identified in the searches against the eligibility criteria. Disagreements on study selection will be resolved by a third reviewer where required.

## Data charting process

Data will be extracted from all full text articles and conference abstracts that fulfil the inclusion criteria. A standardised framework will be devised and used to record the aims, methodological characteristics, main findings and relevance of each study (see data items section). All identified references will be stored in Rayyan. Data extraction will be undertaken by 3 student reviewer(s) and checked by 2 supervisory reviewers. Any

discrepancies will be resolved by discussion between the reviewers or adjudication by a third reviewer when necessary. Primary authors will not be contacted for additional data.

### **Data items**

All studies that meet the inclusion criteria will be described in terms of:

- Participants: Demographic characteristics, e.g. age, ethnicity
- Concept: Barriers and facilitators using the Theoretical Domains Framework (TDF) (Cane, O'Connor, & Michie, 2012)
- Context: Healthcare setting, country, health professionals involved, roles/responsibilities/relationships
- Research priorities

### **Synthesis of results**

Individual study characteristics and outcomes will be summarised and presented in an evidence table. The use of the qualitative data analysis software, NVivo, will be used to manage the coding of the data set, with each code representing the themes.

#### *Thematic synthesis*

Thematic analysis (Braun and Clarke, 2006) will be used to identify themes in the literature. The first step involves familiarisation with the data. Reviewers (initials) will read through the articles and begin to note down initial ideas relating to the research question. Next, the initial codes will be generated and data relevant to the codes will be collated. The third step is when codes are combined to create potential themes. These themes are then reviewed. All data that is relevant to each theme is gathered from the articles and checked to ensure it supports each theme. Any themes that are not distinct and overlap with others or do not work in the context of the entire data set, will either be merged with another theme or removed. In step five, the reviewers will then define the themes and create clear names for each. Finally, supportive examples for each theme will be selected and related back to the research question. The frequency and explanatory value of the themes will also be assessed.

A behavioural analysis of FIT testing behaviour will be then conducted. The themes identified will be classified based on the constructs of the Theoretical Domains Framework (see Table 1). Reciprocal translation will be applied to facilitate the organisation of similar concepts into the TDF framework, which may be described in different ways across studies (Melendez-Torres, Grant & Bonell, 2015; Thomas & Harden, 2008). Data classification will be conducted by 3 primary reviewer(s) in consultation with 2 supervisory reviewer(s). Any discrepancies will be resolved by consensus.

#### *Graphical synthesis*

A causal flow diagram will be used to order and demonstrate the interactions between the themes identified as barriers or facilitators to the uptake of FIT testing.

**Table 1** (derived from Cane, O'Connor & Michie, 2012):

| COM-B Component |               | TDF Domain                               |
|-----------------|---------------|--|
| Capability      | Psychological | Knowledge                                |
|                 |               | Skills                                   |
|                 |               | Memory, Attention and Decision Processes |
|                 |               | Behavioural Regulation                   |
|                 | Physical      | Skills                                   |
| Opportunity     | Social        | Social Influences                        |
|                 | Physical      | Environmental Context and Resources      |
| Motivation      | Reflective    | Social/Professional Role & Identity      |
|                 |               | Beliefs about Capabilities               |
|                 |               | Intentions                               |
|                 |               | Goals                                    |
|                 | Automatic     | Social/Professional Role & Identity      |
|                 |               | Optimism                                 |
|                 |               | Reinforcement                            |
|                 |               | Emotion                                  |