Bowel-Star-UK Study

Risk stratification in UK bowel screening programmes

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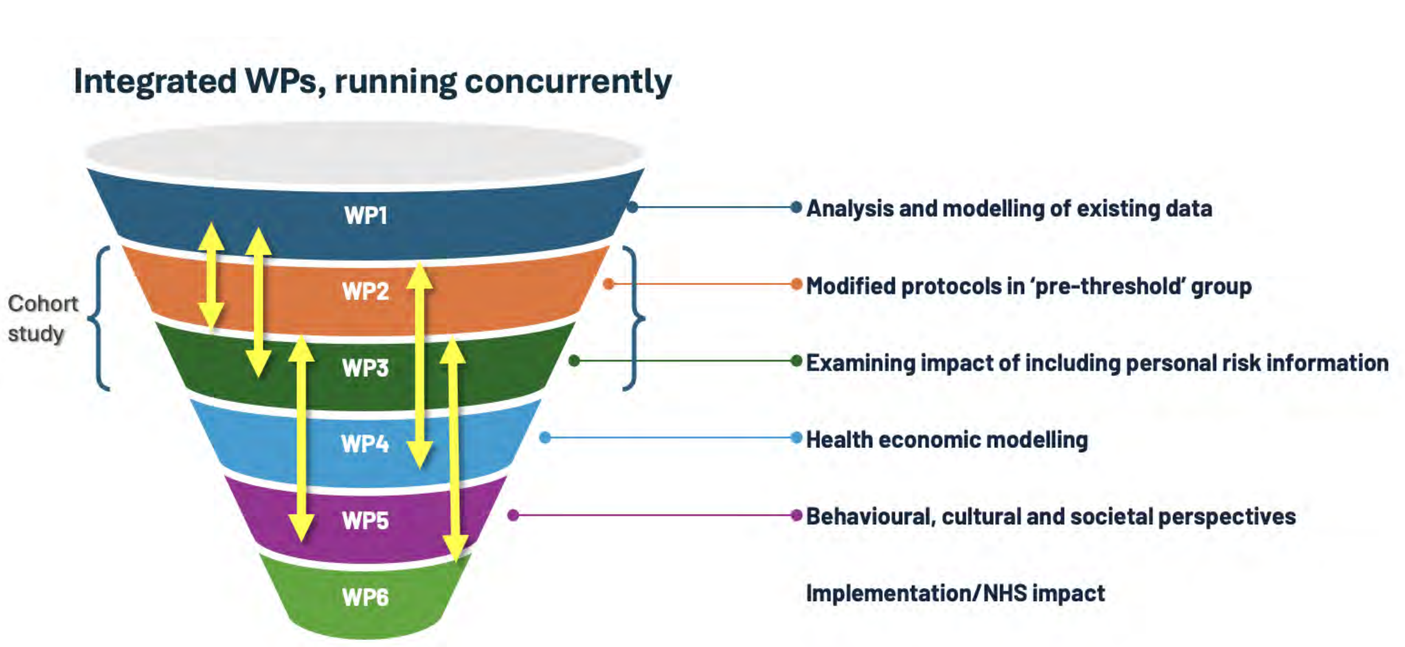
BOWEL cancer screening STrAtified by Risk

BACKGROUND

Colorectal cancer (CRC) screening is well-established in the UK, and has demonstrated improvements in outcomes [1]. FIT testing is now used widely, and there is enthusiasm, internationally, for moving towards stratified bowel cancer screening, whereby the full range of faecal haemoglobin (fHb) levels are utilised, rather than a simple 'positive' or 'negative' test result. Risk conferred by genetic and lifestyle factors may also play a role. Stratified approaches have the potential to adjust the intensity of screening interventions, based on individual risk, targeting those most likely to benefit, and reducing screening for low risk individuals [2,3,4] thereby improving the efficiency and cost-effectiveness of the programme without substantial additional resource use.

Overall Study Aims:

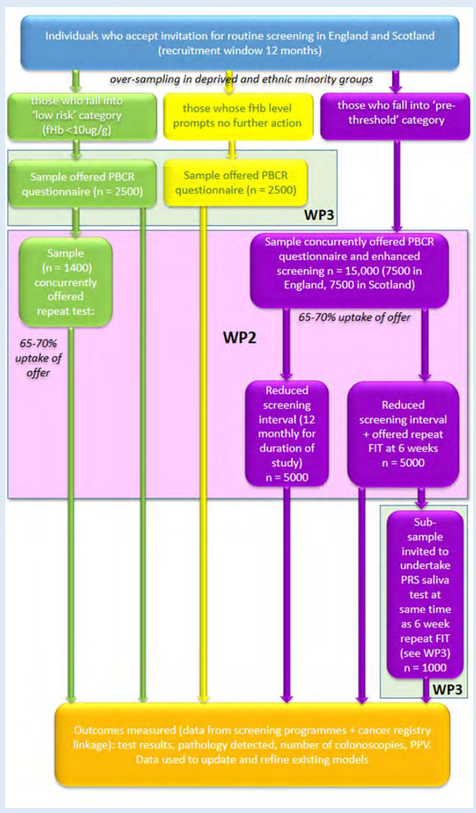
- To provide the evidence to guide bowel cancer screening programmes in potential transition to stratified screening
- To identify how stratified screening can detect more cancers within existing resource constraints through strategies which
  - are inclusive
  - don't exacerbate health inequalities
  - are widely acceptable in the UK population
- To explore acceptability of these approaches and their organisational & health economic implications
- To develop future research leaders in this field



Work Package 2 - Cohort study

Aims:

- to collect 'real world' data on stratified screening
- explore feasibility, acceptability and outcomes
- assess potential impact of incorporating lifestyle and Polygenic Risk Score (PRS)
- identify a strategy which could be readily incorporated into existing programmes – and to explore future refinements



Cost- effectiveness

Cost-effectiveness is a major driver in stratified approaches to cancer screening, enabling resources to be directed at high-benefit individuals, while reducing activity in lower-risk individuals. Resource constraints for NHS cancer screening programmes will be an ongoing feature in the years ahead. From the outset of this programme we will model impact on costs of modifications to screening, potential health benefits, and potential areas for saving (for example, through reduced screening in lower-risk individuals). In all of these areas we will examine any potential impact on health inequalities – this will be a major consideration amongst those involved in screening policy and service delivery as stratified approaches are adopted.

Acceptability

Acceptability and uptake of alternative CRC screening approaches are also key. The evidence, to date, is inconclusive; stratification may motivate high risk groups but not others [5] and its impact on uptake is variable.[3, 6] Screening participants would need to find risk-stratified screening acceptable, and be provided with sufficient information to enable informed consent. We lack UK data on how screening invitees might respond to the offer of modified screening protocols - either those just using quantitative FIT or incorporating individual level risk factors.

Conclusions

- Bowel Star will test, for the first time in the UK, the feasibility of risk-based screening within NHS bowel cancer screening programmes
- It is now drawing to the end of the end of the set-up phase, and will begin recruitment soon
- The cohort study will generate data to refine existing CRC risk models, and to inform the development of screening algorithms in future risk-stratified NHS screening programmes
- Associate descriptive studies will provide crucial information on acceptability and workload impact
- Analysis of impact on health inequalities will be central to the programme of work

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