

MAIL, GP & SCALE PhD Project Proposal

Specific Aims

This PhD project will lead the process evaluation of a 12-month hybrid effectiveness-implementation randomised controlled trial (RCT), which aims to improve participation in the National Bowel Cancer Screening Program (NBCSP) through a targeted intervention to increase engagement in general practices. The trial is being conducted within 80 general practices across two states in Australia.

The specific aims of the PhD project are to:

1. To systematically review the literature to identify and synthesize available data on implementation factors and strategies of interventions that aim to increase cancer screening in primary care.
2. To design and undertake a mixed methods process evaluation of the implementation of the intervention into general practice.
3. To consult with the existing expert reference group to guide the discussions and evaluations performed.
4. To perform in-depth qualitative interviews and/or focus groups with patients, GPs and general practice staff to identify factors related to the intervention's implementation.
5. To contribute to the design of a NBCSP Interventions Scale-Up Plan using the process evaluation results to improve equity of colorectal cancer screening.

Research Strategy

Background

Colorectal cancer (CRC) is the third most common cancer in Australia and screening is proven to decrease CRC mortality and morbidity (1,2). The National Bowel Cancer Screening Program (NBCSP) has the potential to save 84,000 lives by 2040 if participation could reach and be sustained at 60% (2). The NBCSP is based on a self-administered stool test mailed to the home of all eligible individuals, Australians aged 50 to 74. NBCSP participation is currently 43.5% and there is a growing emphasis on the implementation of evidence-based interventions to improve participation. General practitioners (GPs) play a critical role in advocating for cancer screening (3,4) and have the expertise to support screening practices in line with clinical practice guidelines (5). However, the NBCSP in its current form requires little direct involvement from GPs and more research is required in the Australian context to explore how to mobilise and engage with GPs to increase NBCSP participation.

The Mobilising the National Bowel Cancer Screening Program through combining individual, health service, and population level interventions (MAIL, GP, and SCALE) project will uncover and evaluate existing interventions that increase NBCSP participation to determine the optimal combination to improve CRC outcomes. As part of MAIL, GP and SCALE, the evaluation of a pilot general practice-led intervention to mobilise GPs in the NBCSP is needed. The general practice-led intervention will be trialled by the research team in a two-arm cluster-randomised Hybrid Type 1 effectiveness-implementation trial in 2023.

The trial evaluation will be guided by implementation science frameworks inclusive of the Consolidated Framework for Implementation Research (CFIR) (7) and Expert Recommendations for Implementing Change (ERIC) (8). A critical part of the evaluation will be the process evaluation which assesses the implementation of an intervention including appropriateness, acceptability, feasibility, adoption, fidelity, penetration, and sustainability in a particular context. The process evaluation will determine whether any limitations in the intervention's effectiveness are due to its design or factors associated with its implementation and how it was delivered.

Finally, the process evaluation results will contribute to the development of a NBCSP Interventions Scale-Up Plan. The Scale-Up Plan will integrate a process for adapting effective interventions for different contexts and populations, whilst ensuring key intervention functions and equity is

maintained. The Scale-Up Plan will recommend optimal timing of intervention roll-out, stakeholder involvement and long-term sustainability. The process evaluation will support the determination of the feasibility of what types of interventions can achieve population-wide impact. The outcomes from this project will be significant in improving participation in the NBCSP and reducing the CRC burden and health inequities in Australia.

Location and approach

The project will be run as part of the NHMRC-funded MAIL, GP & SCALE program of work. This project will be offered as a PhD project based at the Daffodil Centre under the supervision of Prof Canfell with co-supervision from Principal Investigator Dr Eleonora Feletto. There is an established wider expert research team which will be drawn upon for insights. Regular meetings will be conducted with the research team.

The process evaluation will leverage the experience of the research team in investigating primary care interventions and engaging with General Practitioners. Established and trialled implementation science techniques (Chief Investigator Natalie Taylor) will guide the process evaluation approach.

A 3 year fully funded local scholarship of approximately \$28,784 AUD per annum will be offered. The PhD position will be advertised, and we will seek a qualified candidate with skills in qualitative and quantitative research and implementation science. It is hoped that the PhD student could commence in January 2023.

Investigators/Supervisors

Supervisors: Prof Karen Canfell, Dr Eleonora Feletto

References

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