The New Zealand Bowel Screening Pilot

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In 2010 the Ministry of Health invited proposals to run a pilot bowel screening program over a 4-year period. The pilot will inform the Ministry of the feasibility, resource implications, and costs of a national bowel screening programme in New Zealand. Significant background work has been done over the last 15 years leading up to the development of this programme. While international studies provide useful information about the feasibility of bowel screening ultimately only a pilot study will look specifically at the New Zealand situation.

Colorectal cancer (CRC) is a leading cause of cancer death and morbidity in New Zealand. Ministry of Health statistics show new CRC registrations in 2010 were the highest for any cancer affecting both men and women. That year, 2966 new cases were registered, just over half of which were men. In 2008, CRC was the second most common cause of cancer death after lung cancer overall. By 2016, the number of new cases of bowel cancer diagnosed each year is projected to increase by 15% for men and 19% for women to 3302 (for all ages).

New Zealand thus has one of the highest incidence of colorectal cancer in the world (44.4/100,000) and unfortunately one of the highest death rates from CRC in the OECD.

Internationally much research has been done on the various possible colorectal cancer screening modalities. Well-regarded papers have confirmed the validity of screening techniques such as faecal occult blood testing (FOBT) and flexible sigmoidoscopy.

In response to the CRC statistics in New Zealand and the emerging evidence for CRC screening in international literature, a working party was established in 1997 by the National Health Committee. Their brief was to make recommendations on the advisability of introducing a publicly funded screening programme based on FOBT screening. They published their findings in 1998 and the first of 5 recommendations was:

“Given the modest potential benefit, the considerable commitment of health sector resources and the small but real potential for harm, population-based screening for colorectal cancer with faecal occult blood tests is not recommended in New Zealand”.

In April 2005 the National Screening Unit (NSU) established the Colorectal Cancer Screening Advisory Group to provide the NSU with strategic advice and recommendations on the appropriateness and feasibility of a population colorectal cancer screening programme in New Zealand. This Group made the following recommendation:

“A feasibility study of CRC screening using FOBTi (or FOBTg and FOBTi) should be considered and planning initiated. This would inform a decision on whether the New Zealand health system could support a FOBTi-based CRC screening program that achieves high participation rates and that is acceptable, effective and economically efficient.”
As a direct result of this recommendation, the Ministry of Health National Bowel Cancer Taskforce was formed. The MOH went on to develop and release a competitive RFP (request for proposal) to run a pilot bowel screening programme (BSP) in New Zealand.

A number of important criteria needed to be met in order to submit the RFP. This included adequate numbers of eligible population including appropriate ethnic diversity, (minimum of 6000 eligible Māori), and a mix of urban and rural dwellers. The programme would need to address current inequalities in CRC outcomes experienced by some population groups in New Zealand, for example Māori.11,12 There had to be a suitable location for colonoscopy and the facility to cope with ensuing increased surveillance and cancer treatment.

The Northern Regional Cancer Network, a Ministry of Health (the Ministry) initiative which includes members from the four northern District Health Boards (DHBs), discussed the RFP with a view to submitting a regional bid. A number of options were examined by the group but in the end the proposal, based on utilisation of the Waitemata DHB (WDHB) catchment was submitted to the Ministry. An important component of this submission was high level regional support from the three Auckland DHBs, the wider Auckland gastroenterology and surgical community, and the WDHB primary health organisations. Our RFP was successful and the pilot awarded to WDHB in late 2010.

The BSP is a 4-year invitation-based programme using biennial iFOBT (immunochemical faecal occult blood test). It will be offered to all eligible WDHB residents aged between 50 and 74 years (approximately 137,000). Exclusion criteria include previous colonoscopy within five years and a past history of bowel cancer.

A registry of eligible participants has been created using NHI (national health index) data from the Ministry and local PHO (primary health organisation). This is updated on a regular basis. From this, invitations are generated by the bowel screening coordination centre so as to offer screening to all eligible people once every 2 years. The data is also being used to monitor the programme to ensure that it meets a number of strict quality standards and to record screening outcomes.

Eligible patients are mailed an introductory letter, followed by an invitation and test kit 1 month later. The test is done at home and the specimen sent in a sealed prepaid envelope via a private bag to LabPLUS for processing. Patients and their General Practitioners (GPs) are notified of a negative result by mail/email. Positive results are sent electronically to GPs who then contact the patients directly with the result and refer them for colonoscopy. Where there is no GP, the BSP Endoscopy Nurse Specialist contacts the patient with the results and organises the colonoscopy.

Colonoscopy is done in a new, dedicated endoscopy suite at Waitakere Hospital in West Auckland. Endoscopists from around the wider Auckland region provide specialist colonoscopy services. Laboratory services are provided at ADHB (Auckland DHB) by LabPLUS. Patients receive a colonoscopy report on the day of the procedure and a follow up letter outlining any histology results and a future management plan. Stringent colonoscopy standards based on the United Kingdom screening programme are being applied and audited as part of the BSP.
Continuous and stringent audit at all levels is a vital component of the programme. The DHB is contracted to provide the Ministry with regular feedback on a number of quality indicators. Two commercial research companies, Litmus and Sapere Research Group have been contracted to carry out in depth evaluation of the programme and to perform a cost utility analysis.

After a huge amount of work at the Ministry, DHB and inter-DHB level, the pilot officially commenced in October 2011. Full roll-out started in late January 2012. The BSP is run from the same physical location as BreastScreen Waitemata Northland in Takapuna where we share many resources including management. This is the first invitation based screening programme ever carried out in this country and the first to involve general practitioners in screening process. It is also the first programme to target men. The BSP team has a number of specific programmes to raise community awareness and to target those population groups who are typically under screened. Resources have been developed for patients and their doctors both in hardcopy form and on the Internet. These are available in all the major languages encountered in WDHB.

At this early stage some preliminary data is available but it is too early to make useful comment on many of the important parameters to be measured. Since January 2012, over 1300 invitations have been sent out per week. As of 4 May 2012 there have been 7612 returned kits but this includes people who have spoilt their first kit and have been re-issued with a new kit. Of these, 489 were positive and were offered colonoscopy. So far 248 colonoscopies have been performed from which nine cancers have been identified. Five of these were malignant polyps i.e. diagnosis made only at histology and the other four were clearly malignant at the time of colonoscopy. Data is not yet available on the stage of these cancers, the pickup rate of advanced polyps or the uptake of screening in the target population.

In summary, WDHB is running a pilot BSP based on biennial iFOBT with a view to informing the country on the feasibility of a national bowel screening programme. We hope to fully clarify any unanticipated process and service issues during the course of the pilot study.

Competing interests: None declared.

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Acknowledgements: I acknowledge and thank Gaye Tozer (Programme Manager) and Dr Susan Parry (Clinical Director, Ministry of Health Bowel Cancer Programme).

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References:


