

## Bowel cancer screening cost effective, but does not reduce health inequalities

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Bowel-cancer screening in New Zealand will improve health cost effectively, according to University of Otago research just published in the journal *Cancer Epidemiology, Biomarkers and Prevention*.

However, it will not improve ethnic inequalities in [health](#).

University of Otago, Wellington, researchers used computer modelling to investigate health gains and found that the programme is very cost-effective for Māori and non-Māori, and for men and women.

"We simulated the effect of a faecal occult blood screening every two years for 50-74 year olds in New Zealand and found the health gains to be large," says senior author Professor Tony Blakely from the Department of Public Health.

"For example, a non-Māori male aged 60-64 will on average expect to gain about 51 days of healthy life over the remainder of their life – even allowing for nearly half of people not taking up the programme."

The screening costs the NZ health system about \$2,930 (2011 values) per quality-adjusted life-year gained.

"As a general rule of thumb, an intervention costing less than about \$50,000 per quality-adjusted life-year gained is considered a 'good buy' for society – so this is a 'very good buy'," Professor Blakely says.

Women gain a bit less.

The reason bowel cancer screening is so effective is that it not only detects pre-cancerous lesions (called polyps) and removes them, lowering cancer rates, but it can also detect cancer cases (if they develop) earlier.

"While it is unfortunate it has taken New Zealand some time to implement the bowel-cancer screening programme, it is also important to both congratulate the Government for now rolling it out and communicate to the public that this is a very worthwhile screening programme to take up," says Professor Blakely.

"The New Zealand programme will be for 60-74 year olds, which makes sense given limited resources like colonoscopy services and that the programme is even more cost-effective for this narrower 60-74 year age range (\$1,300 per quality-adjusted life-year gained) compared to 50-74 year olds (\$2,930 per quality adjusted life year gained).

"But our study demonstrates that at some time in the future, if and when service capacity permits, it would be sensible to consider lowering the entry age to 50 years old."

Lead author Dr Melissa McLeod says there is a potential down-side to bowel cancer screening.

Bowel cancer screening achieves less health [gain](#) for Māori than non-Māori mainly because Māori have lower rates of getting bowel cancer in the first place.

"So, although bowel-cancer screening will produce improvements in health for the entire population, it will slightly widen health inequalities for Māori," says Dr McLeod.

"It is important, therefore, to increase bowel-cancer screening rates as much as is practical for Māori to lessen the inequality impacts. However, at the same time, we also know that if we want to reduce ethnic inequalities in health, we have to implement other policies that offer bigger gains in health for Māori, such as prevention policies for tobacco control and obesity reduction.

"In addition, we need to focus on other [screening](#) programmes that address cancers that occur in high rates in Māori, such as cervical cancer and stomach [cancer](#)," says Dr McLeod.

**More information:** Melissa McLeod et al. Colorectal cancer screening: How health gains and cost-effectiveness vary by ethnic group, the impact on health inequalities, and the optimal age-range to screen., *Cancer Epidemiology Biomarkers & Prevention* (2017). [DOI: 10.1158/1055-9965.EPI-17-0150](#)

Provided by University of Otago

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