

UPDATE:

6.3a: Organised screening for certain cancers – bowel cancer

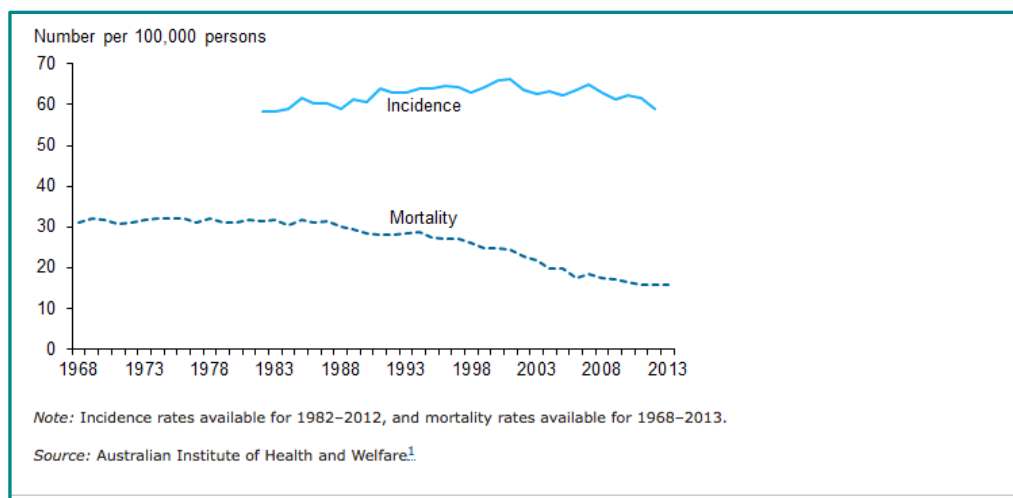
Introduction

Colorectal cancer, also known as bowel cancer causes the second highest number of cancer deaths in Australia after lung cancer.¹ However, it can be treated successfully, if detected in its early stages, and screening has been shown in randomised trials to reduce the incidence of and mortality from bowel cancer.²³ It is of note that the colorectal cancer five-year relative survival rate for people aged 15 and over improved from 48% to 68.7% between 1983–1987 and 2009–2011.⁴

Bowel cancer was the third most commonly diagnosed cancer in Australia in 2012 (14,958 cases diagnosed); the AIHW estimated that by 2016 it would be the second most commonly diagnosed cancer (with an estimated 17,520 people diagnosed).⁵

In 2013, about 80 Australians died each week from bowel cancer.³ The age-standardised mortality rate fell from 31 deaths per 100,000 persons in 1968 to 16 deaths per 100,000 in 2013; the age-standardised incidence rate increased from 58 cases per 100,000 persons in 1982 to 66 cases per 100,000 persons in 2011, before declining to 59 cases per 100,000 persons in 2012, close to the level in 1968 (Figure 6.3a). AIHW estimate this figure will be 62 cases in 2016.⁶

Figure 6.3a: Age standardised incidence rates for bowel cancer 1982-2012 and age standardised mortality rates for bowel cancer 1968-2013



Source: AIHW, *Bowel cancer (colorectal cancer)*, 2016 (<http://www.aihw.gov.au/cancer/bowel/>)

Public health practices

Bowel cancer may be present for many years, with symptoms often not showing until the cancer is at an advanced stage. However non-visible bleeding of the bowel can occur in the pre-cancerous stage, making early detection possible. The slow development of bowel cancer and the existence of a suitable testing mechanism makes it a candidate for population screening.

A bowel cancer screening pilot program, conducted in 2002 to 2004, showed screening to be feasible, acceptable and cost-effective for Australia.⁷ The National Bowel Cancer Screening Program (NBCSP) commenced in 2006 with a mail-out of Faecal Immunochemical Test (FIT – see Box 6.3a) kits to people turning 55 and 65 years. Additional age groups were progressively added, and in 2012-13 it was announced that implementation would commence in 2034. Modeling of the health benefits of a

comprehensive model, combined with advocacy from health organisations, saw the 2014-2015 funding announcement that the date of full implementation would be brought forward.⁸⁹ As a result, by 2020 all Australians aged 50 to 74 years will be invited to screen for bowel cancer every two years; up to four million Australians each year.³ Just over half (53.8%) of bowel cancer cases diagnosed in 2012 were in the NBCSP target age group of 50 to 74 years.¹⁰

Eligible people are sent a bowel cancer screening test kit by mail to complete at home and mail to a laboratory for analysis. There is no cost involved in completing the test. Test results are sent to the participant and their nominated doctor. Those with a positive screening result are advised to see their doctor to discuss the result and be referred for further diagnostic testing (e.g., a colonoscopy).¹

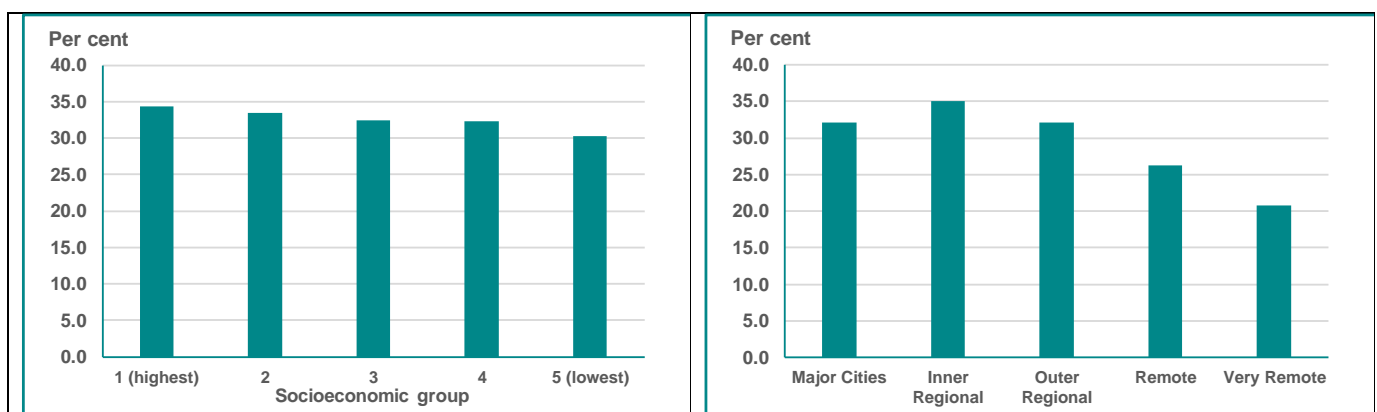
Box 6.3a Bowel tests

The NBCSP distributes the Faecal Immunochemical Test (FIT) kits through the bowel cancer screening program, although it is referred to as the Faecal Occult Blood Test (FOBT). The Guaiac-based FOBTs (gFOBT) require dietary restrictions prior to testing and are not entirely specific for colorectal bleeding. The FITs utilise antibodies to human haemoglobin and are more specific for colorectal bleeding. FIT has become the standard of care in colorectal cancer screening.¹¹

Using an indicator standardised across all program data to date, the Australian Institute of Health and Welfare report that the participation rate decreased from 44% in 2007–2008 to 36% in 2012–2013, then increased slightly to 37% in 2013–14.⁶

Female participation was higher (40%) than for males (35%), despite higher risks of bowel cancer for men. Older people had higher participation rates. The re-participation rate for those who had previously participated was 74%. Participation in 2012-13 of invitees aged 50, 55 or 65 years ranged from 30.2% for those from the lowest socioeconomic status areas to 34.3% from the highest socioeconomic status areas; and those living in Very Remote areas had a markedly lower participation rate (20.8%) compared with those in Inner Regional areas (35%) (Figure 6.3b).

Figure 6.3b: Participation in the NBCSP, by socioeconomic group and remoteness area, people aged 50, 55 or 65 years, 2012-2013



Source: PHIDU, National Bowel Cancer Screening Program 2012/13 – <http://www.phidu.torrens.edu.au/social-health-atlases/graphs>

High participation is required for the NBCSP to achieve its major objectives of reducing bowel cancer incidence, morbidity and mortality. Factors impacting on screening rates in Australia include: perceptions of the FOBT as unpleasant or embarrassing, the low public profile of bowel cancer, poor knowledge of its prevalence and treatability, minimal understanding of the often-asymptomatic

presentation of bowel cancer and the role of screening in prevention, fatalistic views about cancer and confusion over when and how to screen.^{12,13}

Test results showed 7% (34,378) of those who had a screening test analysed received a positive screening result, requiring further assessment, with higher rates for men, older people, and lower socioeconomic and first round participants. Indigenous Australians had a higher screening positivity rate than non-Indigenous Australians (11% compared with 7%); these same levels applied to people reporting a disability.⁶

To reduce morbidity and mortality from bowel cancer, it is important that participants who have a positive screening result receive timely follow up, and diagnostic assessment where indicated. Of the people who received a positive screening test in 2014, 73% had a diagnostic assessment recorded. Those in higher socioeconomic status areas had higher follow-up rates (80%) than those in more disadvantaged areas (76%), as did non-Indigenous Australians (74%) compared with Indigenous Australians (59%).⁶

Diagnostic data are not considered complete enough to allow for formal reporting on NBCSP indicators, but results from the 2014 diagnostic assessment data show that '1 in 32 were diagnosed with a confirmed or suspected cancer (181 and 638, respectively) and adenomas were diagnosed in a further 3,655 participants (1 in 7 participants assessed).'⁶

Factors critical to success

Early arguments for the importance of bowel cancer screening came largely from clinicians in the late 1980s, following evidence from randomised control trials showing potential to save lives and reduce morbidity. In 1995, a Working Party on Colorectal Cancer Screening was established to review the benefits, costs and risks of a bowel cancer screening program, following a series of cancer network meetings and advocacy. The Working Party report, released at the end of 1997, recommended establishing a pilot study using FOBT on individuals of average risk aged over 50 years. Evidence, including cost effectiveness evidence, continued to increase. Following conduct of the pilot study, the Australian Government initiated a screening program which, with additional funding and enhancements over subsequent years to extend the program and the age of those to be invited to participate, in 2014 covered the population aged 50 to 69 years.

Cost effectiveness research was critical and, combined with research evidence, cancer data, leadership and advocacy, underpinned the successful establishment of the NBCSP. The commitment to rolling out an evidence-based, comprehensive bowel cancer screening program by 2020 adds to this public health success.

Future challenges

Risk factors for bowel cancer include physical activity, obesity rates, high intakes of red and processed meats, high alcohol consumption and smoking. Reducing population rates of these risk factors will reduce the risks of many cancers and chronic diseases but this is a major challenge especially with rising rates of obesity.¹⁴

For the NBCSP, increasing screening rates is the major challenge.¹⁵ This will require a consistent awareness-raising approach, targeted to those with low participation rates, including men, those living in more remote locations, Indigenous Australians and disadvantaged populations. General practitioners' endorsement of screening is important and has been shown to increase uptake by around 6% in the English bowel cancer screening program, with screening rates at around 60%.^{16,17} Improving patient navigation support is also recommended to maximise follow up for positive screening results.¹⁶

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