

**National Bowel Cancer  
Screening Program  
monitoring report 2007**

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# **National Bowel Cancer Screening Program monitoring report 2007**

**Australian Institute of Health and Welfare and  
the Australian Government Department of Health and Ageing  
for the National Bowel Cancer Screening Program**

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# Abbreviations

ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
AIHW	Australian Institute of Health and Welfare
ARIA	Accessibility/Remoteness Index for Australia
ASGC	Australian Standard Geographical Classification
ASR(A)	age-standardised rate standardised to the Australian 2001 population
ATSI	Aboriginal and Torres Strait Islander
CD	census Collection District
CI	confidence interval (see Appendix C)
DoHA	Department of Health and Ageing
ERP	estimated resident population
FOBT	faecal occult blood test
GP	general practitioner
ICD-10	International Classification of Diseases 10th revision
IRSD	Index of Relative Socioeconomic Disadvantage
MA	Medicare Australia
NBCSP	National Bowel Cancer Screening Program
NHMRC	National Health and Medical Research Council
NSW	New South Wales
NT	Northern Territory
Qld	Queensland
SA	South Australia
SES	socioeconomic status
Tas	Tasmania
Vic	Victoria
WA	Western Australia

## Symbols

–	nil or rounded to zero
..	not applicable
n.a.	not available
n.p.	not publishable because of small numbers, confidentiality concerns or other concerns about the quality of the data

# Summary

## Introduction

The National Bowel Cancer Screening Program (NBCSP) was implemented in August 2006 by the Australian Government, in partnership with state and territory governments, as part of its Strengthening Cancer Care initiative following the success of the Bowel Cancer Screening Pilot Program which ran from November 2002 to June 2004.

## Program goals

The major goals of the Program are to:

- reduce the incidence and mortality of bowel cancer through screening to detect abnormalities of the colon and rectum at an early stage and
- where bowel cancer has developed, to detect cancers at an early stage in order to maximise the effectiveness of treatment.

## Program components

The NBCSP is being phased in gradually to help ensure that health services, such as colonoscopy and treatment services, are able to meet any increased demand. The current phase of the NBCSP offers immunochemical faecal occult blood tests (FOBTs) for:

- initial screening of people aged 55 or 65 years between 1 May 2006 and 30 June 2008 (referred to as the National Program)
- rescreening of those people who participated in the Bowel Cancer Screening Pilot Program (referred to as Pilot participants)
- screening of people who were invited to participate in the Bowel Cancer Screening Pilot Program but declined the invitation (referred to as Pilot invitees).

## Program outcomes

This is the first monitoring report produced by the Australian Institute of Health and Welfare on the performance of the NBCSP for the period 7 August 2006 to 31 July 2007. Data were provided by the National Bowel Cancer Screening Register maintained by Medicare Australia and are presented as indicators measuring program activity, performance, colonoscopy quality and outcome.

As the NBCSP comprises three population groups, analyses of the National Program implementation in 2006–2007 and the Pilot Program rescreening and re-invitation during the same period are presented separately.

## Key facts

- There were a total of 475,198 invitations sent between 7 August 2006 and 31 July 2007. Of these 447,114 were to people aged 55 or 65 years and 28,084 to people involved in the Pilot study.
- After adjusting for lags between invitation and response using the Kaplan-Meier method, participation for those aged 55 or 65 years was estimated at 41.0%.
- Risk of bowel cancer increases with age. The crude participation rate in the National Program was higher for people aged 65 years (38.0%) than for people aged 55 years (31.8%).
- Males aged 55–74 years had a 58% higher incidence of bowel cancer than females in 2004 yet were less likely to screen. The crude rate of participation in the National Program was 31.2% for males compared with of 37.3% for females.
- As at 31 July 2007, there were a total of 155,839 people who had completed a FOBT analysed by pathology.
- Of those FOBTs analysed, 7.0% tested positive for blood in the sample.
- Positivity rates were higher for males than females in all three target populations. Of those aged 55 or 65 years who completed a FOBT, 8.4% of males tested positive compared with 5.9% of females.
- There were a total of 2,764 visits to general or other primary health practitioners as a result of a positive FOBT recorded during the period for all three target populations. Referral for colonoscopy was made in 91.5% of these consultations.
- There were a total of 2,283 colonoscopies following a positive FOBT result recorded for all three target populations.
- Pre-cancerous polyps, adenomas or cancer were detected in 62.8% of all positive FOBT results investigated by colonoscopy.

A more detailed summary of key findings from the NBCSP for the period 7 August 2006 to 31 July 2007 follows.

## **National Program implementation in 2006–2007**

### **Overview**

Screening of people aged 55 or 65 years commenced on 7 August 2006 in Queensland and was progressively rolled out to the remaining states and territories with Tasmania commencing in early April 2007. Due to the staggered rollout of the NBCSP, indicator data for each state and territory may vary significantly as people in states commencing the Program later have had less time to respond and fewer reminders to participate.

### **Participation in the National Program**

- There were 447,114 invitations sent to people aged 55 or 65 years between 7 August 2006 and 31 July 2007. Of those invited to participate in screening, 10,780 people (2.4%) opted off or suspended participation in the National Program for various reasons including having been previously diagnosed with bowel cancer.
- As at 31 July 2007, there were 149,262 people who had agreed to participate in the Program. Crude participation rates were 37.3% for females compared with 31.2% for males.
- After adjustment for the lag between invitation and response using the Kaplan-Meier method, estimated participation at 16 weeks was 41.0% nationally, ranging among the states and territories from a high of 46.6% in Tasmania to a low of 33.0% in the Northern Territory.

### **FOBTs completion and GP consultations**

- There were 150,426 FOBT kits returned for analysis. This includes replacement kits sent to participants.
- The rate of correctly completed FOBTs was 95.9%.
- The proportion of positive FOBT results, referred to as the positivity rate, was 8.4% for males and 5.9% for females. The overall positivity rate for the National Program was 7.1%.
- GPs and other primary health care practitioners reported 2,484 consultations in relation to the National Program as a result of the participant receiving a positive FOBT result. This represented 24.6% of positive FOBT results for the period 7 August 2006 to 31 July 2007. This low reporting rate may be partially due to lags between receipt of a positive FOBT result and follow-up activity, but is also likely to be as a result of under-reporting of follow-up activity by medical practitioners.
- Rectal bleeding prior to testing was reported in 11.8% of GP and other primary health care consultations.
- Referral for colonoscopy or other examination was made in 94.6% of GP and other primary health care consultations after a positive FOBT result.

### **Colonoscopy results**

- There were 2,118 people (20.9%) recorded who had a positive FOBT investigated by colonoscopy during the period 7 August 2006 to 31 July 2007.
- From the 2,118 investigations there were 4 confirmed cancers, 105 suspected cancers and 226 confirmed adenomas reported. A further 993 people (46.9%) had polyps detected but histopathology results were not recorded in the Register at 31 July 2007.

- Of the people who had a positive FOBT investigated by colonoscopy, 790 (37.3%) were found to have no cancer or adenoma.

## **Pilot Program re-screening and re-invitations**

### **Overview**

The Bowel Cancer Screening Pilot Program ran between November 2002 and June 2004 at three sites: in parts of Melbourne and Adelaide and in Mackay, Queensland. People aged 55 to 74 years on 1 January 2003 were invited to participate. All people involved in the Pilot Program were invited to participate in the NBCSP.

The NBCSP for Pilot participants and invitees began in Mackay in August 2006 and in Adelaide in late January 2007. In Melbourne the NBCSP for Pilot participants and invitees began on 14 May 2007. Hence, respondents from Melbourne were less progressed on the screening pathway at 31 July 2007 than those from Mackay and Adelaide.

A total of 28,084 invitations to participate in the NBCSP were sent to people originally involved in the Pilot study. Of those, 701 people opted off or suspended participation in the NBCSP for various reasons including having been previously diagnosed with bowel cancer. There were 20 invitations sent to people outside the target age; these were excluded from analysis.

### **Pilot participants invited to rescreen**

- There were 14,057 invitations to rescreen sent to eligible participants from the Pilot Program between 7 August 2006 and 31 July 2007.
- The crude participation rate for Pilot participants was 70.0% for Mackay, 62.4% for Adelaide and 39.8% for Melbourne. These rates do not account for the lag between invitation and response and underestimate true participation rates. Low rates for Melbourne are due to the later invitation of Pilot participants in Melbourne compared with the other sites. There was no significant difference in participation rates for males and females.
- The rate of correctly completed FOBTs was 96.3%.
- The positivity rate was 8.8% for males and 7.8% for females; however, this difference was not statistically significant. The overall positivity rate for Pilot participants was 8.3%. This is higher than the positivity rate of 7.1% in the National Program because of the older age cohort for participants in the Pilot Program (participants were aged 55 to 74 years for the Pilot compared with 55 and 65 for the National Program).

### **Pilot non-respondents re-invited to screen**

- There were 13,306 eligible non-respondents (invitees) from the Pilot Program re-invited to screen in the NBCSP between 7 August 2006 and 31 July 2007.
- The crude participation rate for Pilot invitees was 19.2% for Mackay, 15.5% for Adelaide and 6.7% for Melbourne. These rates do not account for the lag between invitation and response and underestimate true participation rates. Low rates for Melbourne are due to the later invitation of Pilot participants in Melbourne compared with other Pilot sites.
- The rate of correctly completed FOBTs was 92.7%.
- The positivity rate for males (13.1%) was significantly higher than for females (7.0%). The overall positivity rate for Pilot invitees was 10.2%. This was not statistically different

from the positivity rate of 8.3% for Pilot participants due to the low number of FOBTs completed by Pilot invitees.

**FOBT and colonoscopy results for both Pilot participants and invitees**

- As at 31 July 2007 there were 165 people from both Pilot populations with investigated positive FOBTs recorded as part of the NBCSP.
- Of these, there were 5 patients with suspected cancer, 1 patient with confirmed cancer and 37 patients with confirmed adenomas. There were 62 people with polyps detected at colonoscopy with histopathology results not received by the Register. The remaining 60 people had no cancer or adenoma detected.