National Bowel Cancer Screening Program monitoring report 2007

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National Bowel Cancer Screening Program monitoring report 2007

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for the National Bowel Cancer Screening Program

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Australian Institute of Health and Welfare

Board Chair

Hon. Peter Collins, AM, QC

Director

Penny Allbon

Any enquiries about or comments on this publication should be directed to:

Ms Melissa Goodwin

Australian Institute of Health and Welfare

GPO Box 570

Canberra ACT 2601

Phone: (02) 6244 1041

Email: screening@aihw.gov.au

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Any enquiries about or comments on the data and statistical analyses in this report should be directed to:

Ms Melissa Goodwin
Health Registers and Cancer Monitoring Unit
Australian Institute of Health and Welfare
GPO Box 570
Canberra ACT 2601

Phone (02) 6244 1000

Any enquiries about or comments on the National Bowel Cancer Screening Program should be directed to:

Ms Marissa Otuszewski
Director
Bowel Cancer Screening Section
MDP 13
Australian Government Department of Health and Ageing
GPO Box 9848
Canberra ACT 2601

Ph (02) 6289 1555

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.

1 Introduction

The Australian Institute of Health and Welfare (AIHW) produces monitoring reports for the Australian Government Department of Health and Ageing on a six-monthly basis to assist in management of the National Bowel Cancer Screening Program (NBCSP). These reports analyse data extracted from the National Bowel Cancer Screening Program Register maintained by Medicare Australia and provide an overview of screening participation and outcomes. Each subsequent report builds on the previous report, covering all data collected since the commencement of the NBCSP. This report is the first annual report covering participation, FOBT results, follow-up investigations, colonoscopy quality and outcomes relating to the period 7 August 2006 to 31 July 2007.

The first section outlines the aims and broad structure of the report. Subsequent sections present analyses covering successive key points on the screening pathway. Data on incidence of bowel cancer to 2004 and mortality due to bowel cancer to 2005 are also presented.

Background

The goals of the NBCSP are to reduce the incidence of and mortality due to 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.

In Australia in 2004 the risk of being diagnosed with bowel cancer by the age of 85 years was 1 in 10 for males and 1 in 14 for females with the risk increasing sharply from the age of 45. Since 1982 incidence of bowel cancer has been increasing slightly each year with 12,973 new cases diagnosed in 2004. Bowel cancer accounts for 10.6% of all deaths from invasive cancers with 4,113 deaths in 2005, making bowel cancer the second most common cause of cancer-related death after lung cancer. Incidence and mortality data for bowel cancer in Australia are detailed in Chapter 4.

Symptoms of bowel cancer are not generally exhibited until the cancer has reached a relatively advanced stage. However, death can be prevented and survival rates can significantly improve in cases where the disease is detected and treated early. Evidence from clinical trials has shown that regular screening using faecal occult blood testing can reduce mortality from bowel cancer by 15–33% (DoHA 2005).

Screening involves testing for bowel cancer in people who do not have any obvious symptoms of the disease. People with symptoms or a significant family history are encouraged to discuss these with their primary health care practitioner. In accordance with the National Health and Medical Research Council guidelines for the prevention, early detection and management of colorectal cancer (2005), these people should be referred directly to diagnostic assessment (generally colonoscopy). However, it is recognised that some people at increased risk may not seek the assistance of a medical professional (for example, those who are symptomatic but reluctant to act on their symptoms). As a result, all people should be invited to screen regardless of evidence of previous symptoms.

The Bowel Cancer Screening Pilot Program was conducted between November 2002 and June 2004 to test the feasibility, acceptability and cost effectiveness of bowel cancer screening in the Australian community. Following the success of the Pilot Program and as part of its

Strengthening Cancer Care initiative in the 2005–2006 Budget, the Australian Government allocated $43.4 million over three years to phase in a national bowel cancer screening program. From 7 August 2006, people across Australia turning 55 or 65 years of age between 1 May 2006 and 30 June 2008, and those who were invited to participate in the Pilot Program, were invited to screen for bowel cancer.

The NBCSP commenced in Queensland on 7 August 2006 and was progressively rolled out to the remaining states and territories over the next 7 months. Invitation packs, including a faecal occult blood test (FOBT), were sent directly to participants by Medicare Australia. The method of distributing invitations and FOBT kits based on either geographic location or date of birth may vary from state to state (Table 1.1).

Table 1.1: National Bowel Cancer Screening Program rollout schedule, states and territories

State	Distribution	Commencement date
Queensland	Geographic	7 August 2006
New South Wales	Birth date	14 August 2006
Australian Capital Territory	Birth date	11 September 2006
South Australia	Geographic	22 January 2007
Victoria	Birth date	29 January 2007
Western Australia	Geographic	29 January 2007
Northern Territory	Geographic	5 March 2007
Tasmania	Birth date	2 April 2007
Australia	**. .**	**7 August 2006**

Notes

1. Birth date distribution: involves eligible participants being identified and invited to participate generally within 4 weeks of their 55th or 65th birthday, with an initial catch-up period for delayed commencement of the Program.
2. Geographic distribution: involves the full cohort of eligible people being issued invitations across the period of screening according to their postcode, so invitations will be sent to people in the eligible age groups at the same time as others living in their area.

A FOBT is a non-invasive test which detects microscopic amounts of blood in the bowel motion. The NBCSP uses an immunochemical FOBT as opposed to the traditional guaiac FOBT as it has a higher sensitivity and specificity, does not require dietary restrictions and can be easily used at home, making it suitable to use with biennial screening.

Participants are requested to post their completed FOBT to the pathology laboratory for analysis. Results of this analysis are sent to the participant, the participant's nominated general practitioner and the Register. Participants with a positive result, indicating blood in their bowel motion, are advised to consult their general practitioner to discuss further testing—in most cases this will be a colonoscopy. Refer to Appendix A for a complete representation of the screening pathway from invitation to diagnosis. Responses to invitations and the outcomes for those who complete the screening tests are monitored to the point of definite diagnosis for those who are found to have bowel cancer (DoHA 2007).

Data issues

Data are collected about participants and their screening outcomes from a variety of sources throughout the screening pathway and stored in the Register. The data are collected on questionnaires completed by participants, general practitioners, colonoscopists, pathologists and other specialists.

As completion of NBCSP forms by practitioners is not mandatory there is the possibility of inconsistent reporting. For example, GP, colonoscopy and histopathology reports are received from different sources and may be entered in any sequence; however, each must have a positive FOBT result to be included. This means that there may be data for colonoscopies without an associated GP form, and data for histopathology results without a completed colonoscopy form. When inconsistencies occur, these are included in monitoring reports to provide an indication of the reliability of the data.

The analyses presented in this report are based on data recorded in the Register for the period 7 August 2006 to 31 July 2007. Because of both time lags in reporting and under-reporting by clinicians, data on primary health care consultations, colonoscopies and colonoscopy outcomes in this report under-state the true performance of the NBCSP in this period and should be interpreted with caution.

As the NBCSP commenced at different times with differing rollout methods in each of the states and territories, care should be taken in making comparisons between states and territories or geographic locations. Where numbers of responses to invitations are small, caution should be applied in drawing inferences between groups.

Analytical methods

The NBCSP comprises three groups receiving invitations to participate in screening:

- initial screening of people aged 55 or 65 years of age 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); and
- screening of people who were invited to participate in the Bowel Cancer Screening Pilot Program but declined the invitation (referred to as Pilot invitees).

Analyses of the National and Pilot programs are presented separately. Pilot participants and invitees are excluded from the analyses of the National Program population.

The eligible population for this report excludes people who have suspended participation or elected to opt off the NBCSP because of a recent colonoscopy or previous diagnosis of bowel cancer.

The term 'participation' is used in this report to refer to participation in the screening test. Hence the participation rate is the proportion of the eligible people invited to participate in the NBCSP who agreed to participate by returning either a completed FOBT and/or Participant Details form. The proportion of people who were sent a positive FOBT result and who subsequently visited a GP is referred to as the GP attendance rate. The proportion of people with a positive FOBT who had a colonoscopy is referred to as the colonoscopy follow-up rate.

Crude rates, proportions and positivity rates are presented in this report. For participation, modelled rates based on the time it takes each individual invited for screening to respond by returning a completed FOBT are calculated by following each invited person and recording the time it takes them to respond. This allows a response rate over time from the date of invitation. The modelled response rates were calculated using the Kaplan-Meier methods.

Identification of participants as Aboriginal and Torres Strait Islander, South Sea Islander, having a disability or preferred correspondence language other than English is by self-

identification to Medicare Australia through this or other programs. The denominator for initial participation rates stratified by these characteristics is estimated from ABS population estimates from the 2006 Census and cannot be calculated until the end of the first phase of the Program when all invitations have been sent. Hence, tables reporting participation rates for these groups will display 'n.a.' in the rates columns. Calculations of rates of subsequent points on the screening pathway are not affected.

Due to the early stage and the staggered rollout of the Program confidence intervals and conclusions regarding statistical significance have not been presented in the analysis of the National Program, but are presented for the Pilot Program. Subsequent reports will include calculation of confidence intervals for the National Program. See Appendix C for further explanation of analytical methods.

2 National Program

2.1 Participation

Numbers and rates of participation

The NBCSP commenced on 7 August 2006 in Queensland, 14 August 2006 in New South Wales and 11 September 2006 in the Australian Capital Territory. South Australia, Victoria and Western Australia commenced the NBCSP in late January 2007. The Northern Territory commenced in early March 2007 and Tasmania commenced in early April. This means that people in the Northern Territory and Tasmania have had less time to respond between the start of the NBCSP and this report. Therefore analysis of participation cannot be compared between states.

The participation rates (Table 2.1.1b) also represent an under-estimate of the true screening participation rate. This is because of the lag in response time. This under-estimation does not affect comparisons between rates for different groups, but it does mean that the absolute levels of participation are likely to be understated.

An alternative approach is to follow each individual and, for those who respond, to record the time it takes them to respond. This allows the calculation of a response rate over time from the date of invitation. The response rates were calculated using the Kaplan-Meier methods. These are standard statistical methods used to model the time to an event and the changes in the rates of an event over time. In this case, the event is a person's response (either by returning a completed FOBT kit or Participant Details form) and the time to the event is measured in weeks from the date the invitation was sent. These Kaplan-Meier estimates represent valid estimates of the true participation rates. See Appendix C for a more detailed description of the statistical methods used. Figure 2.1.1 presents the proportion of individuals who respond by time (in weeks) following their invitation calculated using the Kaplan-Meier estimates. Table 2.1.1c presents the corresponding 95% confidence intervals at 16 weeks.

People who did not turn 55 or 65 between 1 May 2006 and 30 June 2008 and who were mistakenly invited are excluded from the eligible population. The excluded invitations included 176 people with age either unknown or outside the eligible ages of 55 or 65 years and 5 people with either state unknown or residence outside Australia. Of those correctly invited there were 7,272 people who opted off the National Program after receiving an invitation to screen and 3,508 who suspended participation in the National Program. These people were excluded from any analyses. Invitations sent to Pilot participants and invitees are also excluded from the National Program data (see Chapter 3 for analyses of the Pilot Program).

Table 2.1.1a: Screening invitation, by age, sex and state and territory

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Unknown/ missing	Australia
A. Invitations issued										
55 years	108,975	69,958	42,629	23,121	12,759	4,390	5,578	1,671	5	269,086
65 years	74,238	46,574	27,838	14,165	8,248	2,942	3,102	745	0	177,852
Other	60	65	28	8	6	5	1	3	0	176
Total	**183,273**	**116,597**	**70,495**	**37,294**	**21,013**	**7,337**	**8,681**	**2,419**	**5**	**447,114**
B. Eligible invitations										
Males										
55 years	53,774	34,303	21,054	11,466	6,253	2,143	2,648	884	. .	132,525
65 years	36,075	22,620	13,883	6,966	3,922	1,411	1,504	435	. .	86,816
Total	**89,849**	**56,923**	**34,937**	**18,432**	**10,175**	**3,554**	**4,152**	**1,319**	**. .**	**219,341**
Females										
55 years	53,266	34,483	20,923	11,283	6,325	2,181	2,841	768	. .	132,070
65 years	35,372	22,333	13,060	6,720	4,038	1,444	1,479	296	. .	84,742
Total	**88,638**	**56,816**	**33,983**	**18,003**	**10,363**	**3,625**	**4,320**	**1,064**	**. .**	**216,812**
Persons										
55 years	107,040	68,786	41,977	22,749	12,578	4,324	5,489	1,652	. .	264,595
65 years	71,447	44,953	26,943	13,686	7,960	2,855	2,983	731	. .	171,558
Total	**178,487**	**113,739**	**68,920**	**36,435**	**20,538**	**7,179**	**8,472**	**2,383**	**. .**	**436,153**
C. Persons suspended										
55 years	692	408	216	121	69	26	36	7	0	1,575
65 years	876	449	283	147	103	27	45	3	0	1,933
Total	**1,568**	**857**	**499**	**268**	**172**	**53**	**81**	**10**	**0**	**3,508**
D. Persons opting off										
55 years	1,243	764	436	251	112	40	53	12	0	2,911
65 years	1,915	1,172	612	332	185	60	74	11	0	4,361
Total	**3,158**	**1,936**	**1,048**	**583**	**297**	**100**	**127**	**23**	**0**	**7,272**

Note: Invitations to screen are issued to all members of the populations turning 55 or 65 between 1 May 2006 and 30 June 2008. Other eligibility criteria are not assessed until further in the screening pathway.

- There were 447,114 invitations sent out by 31 July 2007 of which 176 were mistakenly sent to people outside the target ages, 5 to people with state unknown or residence outside Australia.
- There were 3,508 respondents (0.8%) who suspended participation in the National Program. A further 7,272 respondents (1.6%) declined to participate by opting off the National Program.
- A total of 436,153 invitations were sent to people eligible to participate in screening.

Table 2.1.1b: People who agreed to participate in the NBCSP, by age, sex and state and territory

		NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Males										
55 years	Number	15,911	9,987	4,959	3,324	1,480	498	876	153	37,188
	Per cent	29.6	29.1	23.6	29.0	23.7	23.2	33.1	17.3	28.1
65 years	Number	13,978	8,217	4,171	2,460	1,249	412	614	106	31,207
	Per cent	38.7	36.3	30.0	35.3	31.8	29.2	40.8	24.4	35.9
Total	**Number**	**29,889**	**18,204**	**9,130**	**5,784**	**2,729**	**910**	**1,490**	**259**	**68,395**
	Per cent	**33.3**	**32.0**	**26.1**	**31.4**	**26.8**	**25.6**	**35.9**	**19.6**	**31.2**
Females										
55 years	Number	19,987	12,672	6,327	4,127	1,876	657	1,106	159	46,911
	Per cent	37.5	36.7	30.2	36.6	29.7	30.1	38.9	20.7	35.5
65 years	Number	15,180	8,892	4,589	2,691	1,368	479	689	68	33,956
	Per cent	42.9	39.8	35.1	40.0	33.9	33.2	46.6	23.0	40.1
Total	**Number**	**35,167**	**21,564**	**10,916**	**6,818**	**3,244**	**1,136**	**1,795**	**227**	**80,867**
	Per cent	**39.7**	**38.0**	**32.1**	**37.9**	**31.3**	**31.3**	**41.6**	**21.3**	**37.3**
Persons										
55 years	Number	35,898	22,659	11,286	7,451	3,356	1,155	1,982	312	84,099
	Per cent	33.5	32.9	26.9	32.8	26.7	26.7	36.1	18.9	31.8
65 years	Number	29,158	17,109	8,760	5,151	2,617	891	1,303	174	65,163
	Per cent	40.8	38.1	32.5	37.6	32.9	31.2	43.7	23.8	38.0
Total	**Number**	**65,056**	**39,768**	**20,046**	**12,602**	**5,973**	**2,046**	**3,285**	**486**	**149,262**
	Per cent	**36.4**	**35.0**	**29.1**	**34.6**	**29.1**	**28.5**	**38.8**	**20.4**	**34.2**

Notes

1. Participants in the Program are defined as members of the eligible population who were sent an invitation to screen and who returned a Participant Details form and/or a completed FOBT kit.
2. Percentages are people responding as a proportion of the total number of the eligible population who were sent an invitation to screen. This excludes people who suspended or opted off the National Program.

- As at 31 July 2007, there were 149,262 eligible invitees (34.2%) who responded by returning a completed Participant Details form or completed FOBT kit.
- The Northern Territory commenced the Program in March 2007 and Tasmania in April 2007. Therefore invitees have had less time to respond to the invitation than other jurisdictions and hence have lower participation rates as at 31 July 2007.
- The Australian Capital Territory had the highest crude participation rate of 38.8%, followed by New South Wales (36.4%), Victoria (35.0%) and Western Australia (34.6%).
- Participation rates were higher for females than males in all states and territories. Overall, 37.3% of females accepted the invitation to screen compared with 31.2% of males.
- For both sexes, participation rates were higher for those aged 65 years (35.9% of males, 40.1% of females) than for those aged 55 years (28.1% of males, 35.5% of females). Overall, 38.0% of people aged 65 years participated compared with 31.8% of people aged 55 years.

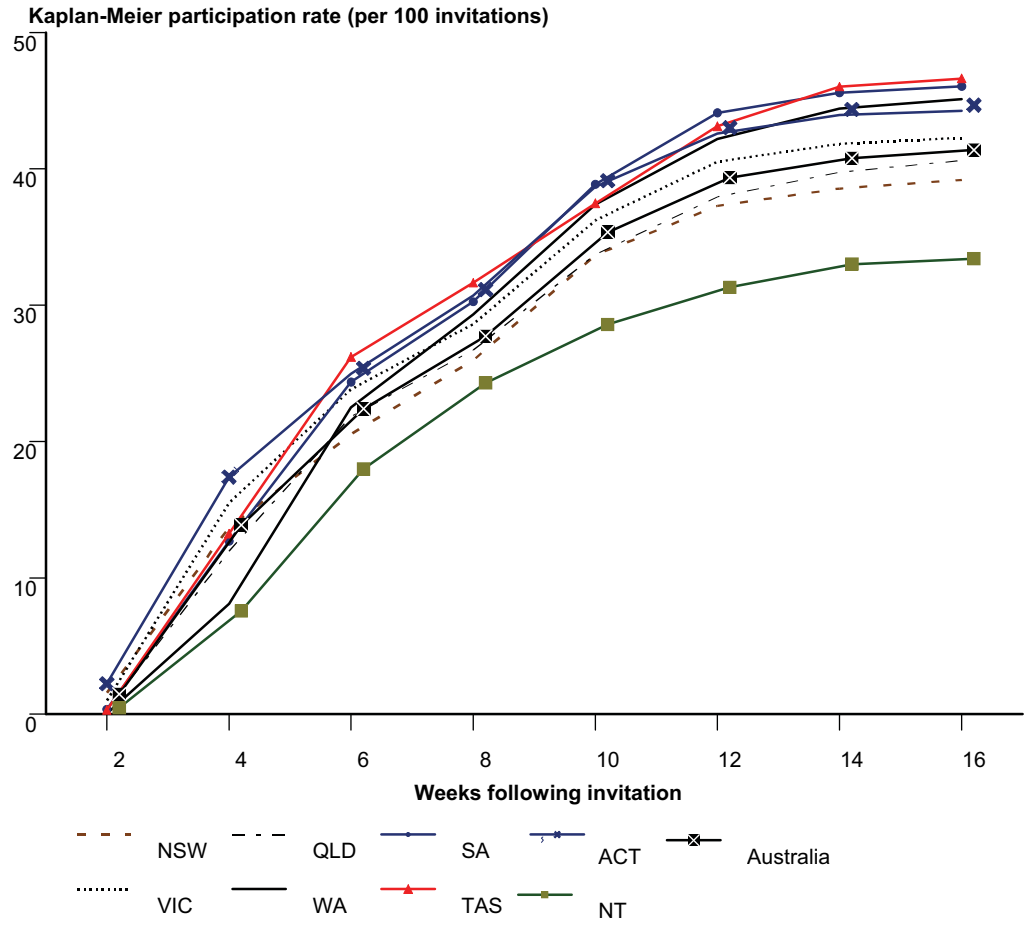


Figure 2.1.1: Participation, by weeks since invitation using Kaplan-Meier estimates, state and territory

Table 2.1.1c: Kaplan-Meier participation rates at 16 weeks since invitation, by state and territory

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Rate (per 100 invitations)	39.2	42.3	40.6	45.1	46.1	46.6	44.3	33.0	41.0
95% CI	38.9–39.4	42.0–42.6	40.1–41.1	44.5–45.7	45.1–47.0	44.9–48.3	43.1–45.4	30.3–35.7	40.8–41.1

Table 2.1.1c provides estimates of FOBT participation at 16 weeks, which is the longest period for which all states and territories have contributed data. Later reports will use a greater time frame as more weeks of data become available.

- There was a rise in participation in most states in the first 4 weeks after invitation which then tapered off. Participation rose again after 8 weeks and began to plateau at about 14 weeks from the first invitation.

- Tasmania (46.6%), South Australia (46.1%), Western Australia (45.1%) and the Australian Capital Territory (44.3%) had significantly higher participation rates at 16 weeks than the other states and territories and the national rate of 41.0%.

Participation by geographic location

Geographic location was classified according to the Australian Bureau of Statistics (ABS) Australian Standard Geographical Classification (ASGC) (see Appendix B). Residential address postcodes are mapped to Statistical Local Areas (SLAs) in 2001 and then classified to five categories ranging from major cities to very remote areas. As some postcodes can span different remoteness areas a weighting is attributed to the postcode. There were 631 invitees with postcodes which were not valid in 2001 and are excluded.

Table 2.1.2: People responding to the screening invitation, by age, sex and geographic location

		Major cities	Inner regional	Outer regional	Remote	Very remote	Total
Males							
55 years	Number	25,680	8,151	3,082	189	35	37,136
	Per cent	27.9	29.8	26.9	18.0	12.0	28.1
65 years	Number	20,341	7,731	2,893	172	28	31,165
	Per cent	35.4	38.6	35.0	24.7	13.7	36.0
Total	**Number**	**46,020**	**15,882**	**5,975**	**360**	**64**	**68,301**
	Per cent	**30.7**	**33.5**	**30.3**	**20.7**	**12.7**	**31.2**
Females							
55 years	Number	32,406	10,402	3,778	222	38	46,846
	Per cent	34.9	38.1	36.2	24.7	15.1	35.5
65 years	Number	22,155	8,449	3,094	193	28	33,918
	Per cent	39.0	43.2	40.8	31.3	18.1	40.1
Total	**Number**	**54,561**	**18,851**	**6,872**	**414**	**66**	**80,764**
	Per cent	**36.4**	**40.2**	**38.1**	**27.4**	**16.2**	**37.3**
Persons							
55 years	Number	58,086	18,552	6,860	410	74	83,982
	Per cent	31.4	33.9	31.3	21.1	13.4	31.8
65 years	Number	42,495	16,180	5,987	364	56	65,083
	Per cent	37.2	40.9	37.8	27.8	15.5	38.0
Total	**Number**	**100,581**	**34,732**	**12,847**	**775**	**130**	**149,065**
	Per cent	**33.6**	**36.9**	**34.1**	**23.8**	**14.2**	**34.2**

Notes

1. States and territories using the geographic rollout schedule may not have commenced screening in some geographic areas at 31 July 2007. Figures for geographic regions should be interpreted with caution.
2. There were 197 respondents and 631 invitations with postcodes that do not correspond with the 2001 ABS remoteness classifications by postal area. These are regarded as missing data and are excluded from this table, so the sum of the regions may be less than the national total.
3. Percentages are the number of people responding as a proportion of the total number of the eligible population who were sent an invitation to screen.
4. Respondents to the screening invitation are defined as members of the eligible population who were sent an invitation to screen and who returned a Participant Details form and/or a completed FOBT kit.

- Response rates to 31 July 2007 were lower in remote and very remote areas compared with major cities and inner regional and outer regional areas. This was due, in part, to screening having not yet commenced in a number of remote areas by those states using geographic rollout.

Participation by socioeconomic status

A participant's socioeconomic status is classified using the participant's residential postcode according to the ABS Index of Relative Socioeconomic Disadvantage (IRSD). Table 2.1.3 shows the distribution of respondents by quintile of the IRSD index where quintile 1 represents the least disadvantaged 20% of the population and quintile 5 the most disadvantaged 20%.

Table 2.1.3: People responding to the screening invitation, by age, sex and socioeconomic status

		1st quintile (least disadvantaged)	2nd quintile	3rd quintile	4th quintile	5th quintile (most disadvantaged)	Total
Males							
55 years	Number	8,919	7,719	7,189	6,857	6,094	36,778
	Per cent	29.6	28.9	28.1	27.9	25.6	28.1
65 years	Number	7,177	5,910	6,191	6,261	5,373	30,912
	Per cent	38.4	36.4	35.9	36.4	32.6	36.0
Total	**Number**	**16,096**	**13,629**	**13,380**	**13,118**	**11,467**	**67,690**
	Per cent	**33.0**	**31.7**	**31.2**	**31.4**	**28.4**	**31.2**
Females							
55 years	Number	11,362	9,580	9,347	8,570	7,594	46,453
	Per cent	37.1	36.2	35.9	35.6	32.4	35.6
65 years	Number	7,766	6,379	6,850	6,900	5,804	33,699
	Per cent	42.6	40.6	40.7	41.2	35.3	40.1
Total	**Number**	**19,128**	**15,959**	**16,197**	**15,470**	**13,398**	**80,152**
	Per cent	**39.2**	**37.8**	**37.8**	**37.9**	**33.6**	**37.4**
Persons							
55 years	Number	20,281	17,299	16,536	15,427	13,688	83,231
	Per cent	33.4	32.5	32.1	31.7	29.0	31.8
65 years	Number	14,943	12,289	13,041	13,161	11,177	64,611
	Per cent	40.5	38.4	38.3	38.8	33.9	38.0
Total	**Number**	**35,224**	**29,588**	**29,577**	**28,588**	**24,865**	**147,842**
	Per cent	**36.1**	**34.7**	**34.5**	**34.6**	**31.0**	**34.3**

Notes

1. There were 4,923 invitations with postcodes that do not correspond with the 2001 ABS IRSD classifications by postal area. These are regarded as missing data and are excluded from this table. Hence the sum of the columns may be less than the national total.
2. Percentages are the number of people responding as a proportion of the total number of the eligible population who were sent an invitation.
3. Respondents to the screening invitation are defined as members of the eligible population who were sent an invitation to screen and who returned a Participant Details form and/or a completed FOBT kit.

- Participation was highest in the least disadvantaged quintile (36.1%) and lowest in the most disadvantaged (31.0%). This was consistent for both males and females, and for those aged 55 years and 65 years.

Participation by Aboriginal and Torres Strait Islander and South Sea Islander people

Tables 2.1.4a and 2.1.4b present the number of people who returned a completed FOBT kit and have identified as either Aboriginal and Torres Strait Islander or South Sea Islander. Identification of an individual as Aboriginal and Torres Strait Islander or South Sea Islander is based on self-identification to Medicare Australia through this or other programs. The denominator for initial participation rates stratified by these characteristics is estimated from ABS population estimates from the 2006 Census for Aboriginal and Torres Strait Islander people. These data will not be available for analysis until the end of the first phase of the NBCSP.

Table 2.1.4a: People responding to the screening invitation, by age, sex and Aboriginal and Torres Strait Islander status

	Aboriginal and Torres Strait Islander		Non-Indigenous		Total	
	Number	Rate (per 100 persons invited)	Number	Rate (per 100 persons invited)	Number	Rate (per 100 persons invited)
Males						
55 years	127	n.a.	23,133	n.a.	23,260	n.a.
65 years	88	n.a.	19,814	n.a.	19,902	n.a.
Total	**215**	**n.a.**	**42,947**	**n.a.**	**43,162**	**n.a.**
Females						
55 years	176	n.a.	29,847	n.a.	30,023	n.a.
65 years	99	n.a.	21,545	n.a.	21,644	n.a.
Total	**275**	**n.a.**	**51,392**	**n.a.**	**51,667**	**n.a.**
Persons						
55 years	303	n.a.	52,980	n.a.	53,283	n.a.
65 years	187	n.a.	41,359	n.a.	41,546	n.a.
Total	**490**	**n.a.**	**94,339**	**n.a.**	**94,829**	**n.a.**

Notes

1. There were 54,433 respondents and 305,910 invitees with Aboriginal and Torres Strait Islander status not stated. These are treated as missing data and excluded from this analysis. Hence the sum of the columns may be less than the national total.
2. Rates are the number of people responding as a percentage of the total number of the eligible population who were sent an invitation. These are unable to be calculated until the end of the first phase of the NBCSP.
3. Respondents to the screening invitation are defined as members of the eligible population who were sent an invitation to screen and who returned a Participant Details form and/or a completed FOBT kit.

- There were 490 people who identified as Aboriginal and Torres Strait Islander who responded to the invitation to screen in the NBCSP between 7 August 2006 and 31 July 2007. Of these, 303 were aged 55 years and 187 were aged 65 years.

Table 2.1.4b: People responding to the screening invitation, by age, sex and South Sea Islander status

	South Sea Islander		Non-South Sea Islander		Total	
	Number	Rate (per 100 persons invited)	Number	Rate (per 100 persons invited)	Number	Rate (per 100 persons invited)
Males						
55 years	51	n.a.	23,133	n.a.	23,184	n.a.
65 years	38	n.a.	19,814	n.a.	19,852	n.a.
Total	**89**	**n.a.**	**42,947**	**n.a.**	**43,036**	**n.a.**
Females						
55 years	64	n.a.	29,847	n.a.	29,911	n.a.
65 years	25	n.a.	21,545	n.a.	21,570	n.a.
Total	**89**	**n.a.**	**51,392**	**n.a.**	**51,481**	**n.a.**
Persons						
55 years	115	n.a.	52,980	n.a.	53,095	n.a.
65 years	63	n.a.	41,359	n.a.	41,422	n.a.
Total	**178**	**n.a.**	**94,339**	**n.a.**	**94,517**	**n.a.**

Notes

1. There were 54,745 respondents and 310,399 invitees with South Sea Islander status not stated. These are treated as missing data and excluded from this analysis. Hence the sum of the columns may be less than the national total.
2. Rates are the number of people responding as a percentage of the total number of the eligible population who were sent an invitation. These are unable to be calculated until the end of the first phase of the NBCSP.
3. Respondents to the screening invitation are defined as members of the eligible population who were sent an invitation to screen and who returned a Participant Details form and/or a completed FOBT kit.

- There were 178 people who identified as South Sea Islander who responded to the invitation to screen in the NBCSP between 7 August 2006 and 31 July 2007. Of these, 115 were aged 55 years and 63 were aged 65 years.

Participation by preferred correspondence language

Table 2.1.5 presents the number of people who returned a completed FOBT kit and have identified as preferring to correspond in a language other than English to Medicare Australia through this or other programs. The denominator for initial participation rates stratified by preferred correspondence language is estimated from the 2006 Census. These data will not be available for analysis until the end of the first phase of the NBCSP.

Table 2.1.5: People responding to the screening invitation, by age, sex and preferred correspondence language

	Preferred correspondence language					
	Language other than English		English		Total	
	Number	Rate (per 100 population)	Number	Rate (per 100 population)	Number	Rate (per 100 population)
Males						
55 years	2,921	n.a.	34,267	n.a.	37,188	n.a.
65 years	2,422	n.a.	28,785	n.a.	31,207	n.a.
Total	**5,343**	**n.a.**	**63,052**	**n.a.**	**68,395**	**n.a.**
Females						
55 years	3,772	n.a.	43,139	n.a.	46,911	n.a.
65 years	2,429	n.a.	31,527	n.a.	33,956	n.a.
Total	**6,201**	**n.a.**	**74,666**	**n.a.**	**80,867**	**n.a.**
Persons						
55 years	6,693	n.a.	77,406	n.a.	84,099	n.a.
65 years	4,851	n.a.	60,312	n.a.	65,163	n.a.
Total	**11,544**	**n.a.**	**137,718**	**n.a.**	**149,262**	**n.a.**

Notes

1. Preferred correspondence language is self-reported to Medicare Australia through this or other programs. Participants are assumed to prefer to correspond in English unless otherwise indicated.
2. Rates are the number of people responding as a percentage of the total number of the eligible population who were sent an invitation. These are unable to be calculated until the end of the first phase of the NBCSP.
3. Respondents to the screening invitation are defined as members of the eligible population who were sent an invitation to screen and who returned a Participant Details form and/or a completed FOBT kit.
4. The table will be further classified by largest language groups as data allows.

- There were 11,544 people recorded in the Register preferring to correspond with Medicare Australia in a language other than English who responded to the invitation to screen in the NBCSP between 7 August 2006 and 31 July 2007. Of these, 6,693 were aged 55 years and 4,851 were aged 65 years.

Participation by disability level

Table 2.1.6 presents the number of people who returned a completed FOBT kit and identified a need for assistance due to a disability. The denominator of these rates has to be estimated from the 2006 Census and will not be available for analysis until the end of the first phase of the NBCSP.

Table 2.1.6: People responding to the screening invitation, by age, sex and disability status

	Disability status					
	Severe or profound limitation		No severe or profound limitation		Total	
	Number	Rate (per 100 population)	Number	Rate (per 100 population)	Number	Rate (per 100 population)
Males						
55 years	1,663	n.a.	32,523	n.a.	34,186	n.a.
65 years	2,042	n.a.	26,727	n.a.	28,769	n.a.
Total	**3,705**	**n.a.**	**59,250**	**n.a.**	**62,955**	**n.a.**
Females						
55 years	2,381	n.a.	40,827	n.a.	43,208	n.a.
65 years	2,068	n.a.	29,173	n.a.	31,241	n.a.
Total	**4,449**	**n.a.**	**70,000**	**n.a.**	**74,449**	**n.a.**
Persons						
55 years	4,044	n.a.	73,350	n.a.	77,394	n.a.
65 years	4,110	n.a.	55,900	n.a.	60,010	n.a.
Total	**8,154**	**n.a.**	**129,250**	**n.a.**	**137,404**	**n.a.**

Notes

1. There were 11,858 respondents and 298,749 invitees with disability status not stated. These are treated as missing data and excluded from this analysis.
2. A 'profound' disability status indicates that a person always needs assistance with self-care, movement and/or communications activities. A 'severe' disability status indicates that a person sometimes needs assistance with these activities.
3. Rates are the number of people responding as a percentage of the total number of the eligible population who were sent an invitation. These are unable to be calculated until the end of the first phase of the NBCSP.
4. Respondents to the screening invitation are defined as members of the eligible population who were sent an invitation to screen and who returned a Participant Details form and/or a completed FOBT kit.

- There were 8,154 people who responded to the invitation to screen in the NBCSP between 7 August 2006 and 31 July 2007 who indicated on the Participant Details form that they had severe or profound limitations.

2.2 FOBT outcomes

This section of the report covers all FOBT results that were returned to the Register. In this report, FOBT refers to the entire test kit, explained as follows.

Each participant in the NBCSP is initially sent one FOBT kit containing two samples to be completed and returned to the pathology laboratory for analysis. Pathologists categorise the returned FOBT into one of two groups: correctly completed and incorrectly completed. Participants with FOBTs that are not correctly completed are requested to complete a subsequent FOBT.

FOBT results are classified by pathologists as either positive (blood is detected in either sample), negative (blood is not detected in either sample) or inconclusive.

The classification of FOBT by return status and positivity is based only on returned kits. In analysing return status, the dependent variable is whether or not the test was correctly completed. In analysing positivity rates, only correctly completed FOBTs are included in the denominator and the dependent variable is whether or not the result was positive.

In some cases participants have completed more than one FOBT kit. In these cases results from each FOBT kit are included. Results were excluded where the participants were outside the ages of 55 or 65 years, or where the respondent opted off or suspended from the NBCSP.

Numbers and rates of FOBT completion

Table 2.2.1: FOBT kit completion status, Australia

	FOBT correctly completed		FOBT incorrectly completed		All FOBTs
	Number	Rate (per 100 FOBTs)	Number	Rate (per 100 FOBTs)	Number
Males					
55 years	36,096	97.0	1,121	3.0	37,217
65 years	30,334	96.6	1,074	3.4	31,408
Total	**66,430**	**96.8**	**2,195**	**3.2**	**68,625**
Females					
55 years	45,123	95.4	2,196	4.6	47,319
65 years	32,715	94.9	1,767	5.1	34,482
Total	**77,838**	**95.2**	**3,963**	**4.8**	**81,801**
Persons					
55 years	81,219	96.1	3,317	3.9	84,536
65 years	63,049	95.7	2,841	4.3	65,890
Total	**144,268**	**95.9**	**6,158**	**4.1**	**150,426**

Notes

1. FOBT refers to an entire test kit. FOBT completion status is determined by the pathologist performing the FOBT analysis. It indicates the status of the FOBT received by the laboratory.
2. A participant may complete more than one FOBT kit.
3. Rates are the number of FOBT kits received in each status category as a percentage of the total number of FOBT kits received.
4. Rates add to 100 across the row.

- There were 150,426 FOBT kits returned for the period 7 August 2006 to 31 July 2007. This includes replacement kits sent to participants.
- The majority (95.9%) of returned FOBTs were correctly completed. There were 6,158 incorrectly completed kits returned.
- The rate of correctly completed FOBT kits was higher for males (96.8%) than for females (95.2%) and higher for those aged 55 years (96.1%) than those aged 65 years (95.7%).

Table 2.2.2a: Correctly completed FOBT kits, by state and territory

		NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Males										
55 years	Number	15,452	9,659	4,833	3,235	1,430	489	852	146	36,096
	Per cent	96.9	97.0	96.8	97.4	96.9	97.6	97.9	98.0	97.0
65 years	Number	13,594	7,949	4,080	2,396	1,205	406	602	102	30,334
	Per cent	96.5	96.2	97.1	97.4	96.8	97.6	95.7	97.1	96.6
Total	**Number**	**29,046**	**17,608**	**8,913**	**5,631**	**2,635**	**895**	**1,454**	**248**	**66,430**
	Per cent	**96.7**	**96.7**	**97.0**	**97.4**	**96.8**	**97.6**	**97.0**	**97.6**	**96.8**
Females										
55 years	Number	19,283	12,128	6,109	3,971	1,786	639	1,063	144	45,123
	Per cent	95.3	95.2	95.4	95.8	96.2	95.4	95.8	88.3	95.4
65 years	Number	14,694	8,488	4,427	2,597	1,324	459	659	67	32,715
	Per cent	94.9	94.4	95.1	95.1	95.8	93.9	95.5	97.1	94.9
Total	**Number**	**33,977**	**20,616**	**10,536**	**6,568**	**3,110**	**1,098**	**1,722**	**211**	**77,838**
	Per cent	**95.1**	**94.9**	**95.3**	**95.5**	**96.0**	**94.7**	**95.7**	**90.9**	**95.2**
Persons										
55 years	Number	34,735	21,787	10,942	7,206	3,216	1,128	1,915	290	81,219
	Per cent	96.0	96.0	96.0	96.5	96.5	96.3	96.7	92.9	96.1
65 years	Number	28,288	16,437	8,507	4,993	2,529	865	1,261	169	63,049
	Per cent	95.7	95.3	96.1	96.2	96.3	95.6	95.6	97.1	95.7
Total	**Number**	**63,023**	**38,224**	**19,449**	**12,199**	**5,745**	**1,993**	**3,176**	**459**	**144,268**
	Per cent	**95.8**	**95.7**	**96.0**	**96.4**	**96.4**	**96.0**	**96.3**	**94.4**	**95.9**

Notes

1. FOBT refers to an entire test kit. FOBT completion status is determined by the pathologist performing the FOBT analysis. It indicates the status of the FOBT received by the laboratory.
2. A participant may complete more than one FOBT kit.
3. Rates are the number of correctly completed FOBT kits received in each state or territory as a percentage of the total number of completed FOBT kits received in that state or territory.

- Correct completion of FOBT kits was high for all states and territories. The lowest overall percentage (94.4%) of correctly completed kits was in the Northern Territory.
- Females aged 55 years in the Northern Territory had the lowest percentage (88.3%) of correctly completed kits.

FOBT completion by geographic location

Table 2.2.2b: Correctly completed FOBT kits, by geographic location

		Major cities	Inner regional	Outer regional	Remote	Very remote	All regions
Males							
55 years	Number	24,892	7,931	3,000	187	35	36,046
	Per cent	96.8	97.4	97.3	98.8	98.0	97.0
65 years	Number	19,694	7,562	2,842	168	27	30,294
	Per cent	96.2	97.3	97.5	93.9	91.4	96.6
Total	**Number**	**44,587**	**15,493**	**5,843**	**355**	**62**	**66,340**
	Per cent	**96.5**	**97.4**	**97.4**	**96.4**	**95.0**	**96.8**
Females							
55 years	Number	31,057	10,110	3,640	215	39	45,062
	Per cent	94.9	96.5	95.7	96.2	96.7	95.4
65 years	Number	21,256	8,226	2,983	189	26	32,680
	Per cent	94.2	96.3	95.9	96.5	93.6	94.9
Total	**Number**	**52,314**	**18,336**	**6,623**	**404**	**65**	**77,742**
	Per cent	**94.6**	**96.4**	**95.8**	**96.3**	**95.4**	**95.2**
Persons							
55 years	Number	55,950	18,041	6,640	402	74	81,108
	Per cent	95.8	96.9	96.4	97.4	97.3	96.1
65 years	Number	40,950	15,788	5,826	357	53	62,974
	Per cent	95.2	96.8	96.7	95.2	92.5	95.7
Total	**Number**	**96,900**	**33,829**	**12,466**	**759**	**127**	**144,082**
	Per cent	**95.5**	**96.9**	**96.5**	**96.3**	**95.2**	**95.9**

Notes

1. States and territories using the geographic rollout schedule may not have commenced screening in some geographic areas at 31 July 2007. Hence figures for geographic regions should be interpreted with caution.
2. There were 198 returned FOBT kits with postcodes that do not correspond with the 2001 ABS remoteness classifications by postal area. These are regarded as missing data and are excluded from this table. Hence the sum of the areas may be less than the national total.
3. FOBT refers to an entire test kit. FOBT completion status is determined by the pathologist performing the FOBT analysis. It indicates the status of the FOBT received by the laboratory.
4. A participant may complete more than one FOBT kit.
5. Rates are the number of correctly completed FOBT kits received in each geographic region as a percentage of the total number of FOBT kits received in that region.

- Correct completion of FOBT kits was high for all regions. The lowest overall percentage (95.2%) of correctly completed FOBT kits was for very remote regions.

FOBT completion by preferred correspondence language

Table 2.2.2c: Correctly completed FOBT kits, by preferred correspondence language

	Preferred correspondence language English		Preferred correspondence language other than English		All correctly completed FOBTs	
	Number	Rate (per 100 FOBTs)	Number	Rate (per 100 FOBTs)	Number	Rate (per 100 FOBTs)
Males						
55 years	33,381	97.2	2,715	94.6	36,096	97.0
65 years	28,079	96.8	2,255	93.4	30,334	96.6
Total	**61,460**	**97.0**	**4,970**	**94.0**	**66,430**	**96.8**
Females						
55 years	41,666	95.8	3,457	90.6	45,123	95.4
65 years	30,471	95.4	2,244	88.7	32,715	94.9
Total	**72,137**	**95.6**	**5,701**	**89.8**	**77,838**	**95.2**
Persons						
55 years	75,047	96.4	6,172	92.3	81,219	96.1
65 years	58,550	96.1	4,499	91.0	63,049	95.7
Total	**133,597**	**96.3**	**10,671**	**91.7**	**144,268**	**95.9**

Notes

1. Preferred correspondence language is self-reported to Medicare Australia through this or other programs. Participants are assumed to prefer to correspond in English unless otherwise indicated.
2. FOBT refers to an entire test kit. FOBT completion status is determined by the pathologist performing the FOBT analysis. It indicates the status of the FOBT received by the laboratory.
3. A participant may complete more than one FOBT kit.
4. Rates are the number of correctly completed FOBT kits received as a percentage of the total number of FOBT kits received in each category.

- The rate of correctly completed FOBTs for people who specified a language other than English as their preferred correspondence language was 91.7% compared with 96.3% for people whose preferred correspondence language was assumed to be English.
- Males aged 55 years with a preferred correspondence language of English were the most likely (97.2%) to complete the FOBT correctly. Females aged 65 years with a preferred correspondence language other than English were the least likely (88.7%) to complete the FOBT correctly.

FOBT completion by disability level

Table 2.2.2d: Correctly completed FOBT kits, by disability level

	Severe or profound activity limitation		No severe or profound activity limitation		All correctly completed FOBTs	
	Number	Rate (per 100 FOBTs)	Number	Rate (per 100 FOBTs)	Number	Rate (per 100 FOBTs)
Males						
55 years	1,557	92.8	31,635	97.3	33,192	97.0
65 years	1,904	92.7	26,101	97.0	28,005	96.7
Total	**3,461**	**92.7**	**57,736**	**97.2**	**61,197**	**96.9**
Females						
55 years	2,169	89.3	39,432	95.8	41,601	95.4
65 years	1,871	86.5	28,287	95.6	30,158	95.0
Total	**4,040**	**88.0**	**67,719**	**95.7**	**71,759**	**95.2**
Persons						
55 years	3,726	90.7	71,067	96.4	74,793	96.1
65 years	3,775	89.5	54,388	96.3	58,163	95.8
Total	**7,501**	**90.1**	**125,455**	**96.4**	**132,956**	**96.0**

Notes

1. There were 11,922 participants with returned FOBT kits with disability status missing. Missing data were excluded from this analysis.
2. FOBT refers to an entire test kit. FOBT completion status is determined by the pathologist performing the FOBT analysis. It indicates the status of the FOBT received by the laboratory.
3. A participant may complete more than one FOBT kit.
4. Rates are the number of correctly completed FOBT kits received as a percentage of the total number of FOBT kits received in each category.

- The rate of correctly completed FOBTs for people with a severe or profound activity limitation was 90.1% compared with 96.4% for people without these limitations.

FOBT positivity numbers and rates

Only correctly completed FOBT kits are analysed. If no significant blood is found in either of the samples the FOBT result is negative. People who receive a negative result are advised to repeat a FOBT every two years.

If significant levels of blood are present in at least one of two samples, the FOBT result is considered positive. People with a positive FOBT are advised to contact their doctor to discuss the result.

An inconclusive FOBT result may occur for a number of reasons including incorrect technique, a significant delay between taking the two samples or a delay in sending the test to the pathology laboratory. People with an inconclusive FOBT result are sent a replacement kit by the Register and asked to complete the FOBT kit again.

Table 2.2.3: FOBT results

	FOBT positive		FOBT negative		FOBT inconclusive		All results
	Number	Rate (per 100 results)	Number	Rate (per 100 results)	Number	Rate (per 100 results)	Number
Males							
55 years	2,542	7.0	33,289	92.2	265	0.7	36,096
65 years	3,009	9.9	27,067	89.2	258	0.9	30,334
Total	**5,551**	**8.4**	**60,356**	**90.9**	**523**	**0.8**	**66,430**
Females							
55 years	2,286	5.1	42,553	94.3	284	0.6	45,123
65 years	2,275	7.0	30,197	92.3	243	0.7	32,715
Total	**4,561**	**5.9**	**72,750**	**93.5**	**527**	**0.7**	**77,838**
Persons							
55 years	4,828	5.9	75,842	93.4	549	0.7	81,219
65 years	5,284	8.4	57,264	90.8	501	0.8	63,049
Total	**10,112**	**7.0**	**133,106**	**92.3**	**1,050**	**0.7**	**144,268**

Notes

1. Rates are the number of FOBT results in each category in terms of 'positive', 'negative' and 'inconclusive' as a percentage of the total number of results.
2. The positivity rates presented here are the proportion of positive results out of all correctly completed FOBTs.

- There were 10,112 positive tests (7.0%) and 1,050 inconclusive tests (0.7%) returned in the period 7 August 2006 to 31 July 2007.
- The overall percentage of positive results was higher for males (8.4%) than females (5.9%). The percentage of positive results was higher for males than females in both the 55 year (7.0% males, 5.1% females) and 65 year (9.9% males, 7.0% females) age groups.
- The percentage of positive results was higher for those aged 65 years (8.4%) than for those aged 55 years (5.9%).

Only valid FOBT results are included for analysing positivity rates in the NBCSP. A valid result is either positive or negative. Inconclusive results were excluded from this analysis.

Table 2.2.4a: FOBT positivity rates, Australia

	Positive results	Rate (per 100 valid results)	Valid results
Males			
55 years	2,542	7.1	35,831
65 years	3,009	10.0	30,076
Total	**5,551**	**8.4**	**65,907**
Females			
55 years	2,286	5.1	44,839
65 years	2,275	7.0	32,472
Total	**4,561**	**5.9**	**77,311**
Persons			
55 years	4,828	6.0	80,670
65 years	5,284	8.4	62,548
Total	**10,112**	**7.1**	**143,218**

Notes

1. Rates are the number of FOBT positive results as a percentage of the total number of valid results.
2. A valid result is either positive or negative. Inconclusive results are excluded.

- The FOBT positivity rate was 8.4% for males and 5.9% for females. The overall positivity rate was 7.1%.
- People aged 65 years had a higher positivity rate (8.4%) than those aged 55 years (6.0%).

Table 2.2.4b: FOBT positivity rates, by geographic location

		Major cities	Inner regional	Outer regional	Remote and very remote	All regions
Males						
55 years	Positive results	1,688	591	239	22	2,540
	Valid results	24,708	7,872	2,982	221	35,782
	Per cent	6.8	7.5	8.0	10.0	7.1
65 years	Positive results	1,869	797	317	20	3,004
	Valid results	19,533	7,499	2,813	193	30,038
	Per cent	9.6	10.6	11.3	10.6	10.0
Total	**Positive results**	**3,557**	**1,388**	**556**	**42**	**5,544**
	Valid results	**44,240**	**15,370**	**5,795**	**414**	**65,820**
	Per cent	**8.0**	**9.0**	**9.6**	**10.3**	**8.4**
Females						
55 years	Positive results	1,545	525	203	9	2,282
	Valid results	30,872	10,036	3,620	251	44,778
	Per cent	5.0	5.2	5.6	3.5	5.1
65 years	Positive results	1,416	577	261	20	2,274
	Valid results	21,098	8,163	2,964	212	32,437
	Per cent	6.7	7.1	8.8	9.3	7.0
Total	**Positive results**	**2,961**	**1,103**	**464**	**29**	**4,556**
	Valid results	**51,970**	**18,198**	**6,584**	**463**	**77,215**
	Per cent	**5.7**	**6.1**	**7.0**	**6.2**	**5.9**
Persons						
55 years	Positive results	3,233	1,117	442	31	4,822
	Valid results	55,579	17,907	6,602	472	80,560
	Per cent	5.8	6.2	6.7	6.6	6.0
65 years	Positive results	3,286	1,374	578	40	5,278
	Valid results	40,631	15,662	5,777	405	62,475
	Per cent	8.1	8.8	10.0	9.9	8.4
Total	**Positive results**	**6,518**	**2,491**	**1,020**	**71**	**10,100**
	Valid results	**96,210**	**33,569**	**12,379**	**877**	**143,035**
	Per cent	**6.8**	**7.4**	**8.2**	**8.1**	**7.1**

Notes

1. States and territories using the geographic rollout schedule may not have commenced screening in some geographic areas at 31 July 2007. Hence figures for geographic regions should be interpreted with caution.
2. Data for remote and very remote regions are combined due to small values.
3. There were 12 positive FOBT results and 183 valid FOBT results with postcodes that do not correspond with the 2001 ABS remoteness classifications by postal area. These are regarded as missing data and were excluded from this table. Hence the sum of the areas may be less than the national total.
4. Percentages are the number of FOBT positive results as a proportion of the total number of valid results.
5. A valid result is either positive or negative. Inconclusive results are excluded.

- Positivity rates were highest in outer regional areas (8.2%) and in remote and very remote areas (8.1%) while the lowest positivity rate was experienced in major cities (6.8%). However, the number of positive results in remote and very remote areas was very small compared with the other geographic regions, and care must be exercised in interpreting these results.

Table 2.2.4c: FOBT positivity rates, by Aboriginal and Torres Strait Islander status

		Aboriginal and Torres Strait Islander	Non-Indigenous	Total
Males				
55 years	Positive results	13	1,415	1,428
	Valid results	124	22,257	22,381
	Per cent	10.5	6.4	6.4
65 years	Positive results	11	1,718	1,729
	Valid results	86	19,102	19,188
	Per cent	12.8	9.0	9.0
Total	**Positive**	**24**	**3,133**	**3,157**
	Valid results	**210**	**41,359**	**41,569**
	Per cent	**11.4**	**7.6**	**7.6**
Females				
55 years	Positive results	11	1,287	1,298
	Valid results	170	28,578	28,748
	Per cent	6.5	4.5	4.5
65 years	Positive results	6	1,269	1,275
	Valid results	95	20,687	20,782
	Per cent	6.3	6.1	6.1
Total	**Positive**	**17**	**2,556**	**2,573**
	Valid results	**265**	**49,265**	**49,530**
	Per cent	**6.4**	**5.2**	**5.2**
Persons				
55 years	Positive results	24	2,702	2,726
	Valid results	294	50,835	51,129
	Per cent	8.2	5.3	5.3
65 years	Positive results	17	2,987	3,004
	Valid results	181	39,789	39,970
	Per cent	9.4	7.5	7.5
Total	**Positive**	**41**	**5,689**	**5,730**
	Valid results	**475**	**90,624**	**91,099**
	Per cent	**8.6**	**6.3**	**6.3**

Notes

1. There were 4,382 positive FOBT results and 52,119 valid FOBT results where Aboriginal and Torres Strait Islander status was not stated. These are regarded as missing data and are excluded from this table. Hence sum of the areas may be less than the national total.
2. Aboriginal and Torres Strait Islander status is defined by the participant.
3. Percentages are the number of FOBT positive results as a proportion of the total number of valid results.
4. A valid result is either positive or negative. Inconclusive results are excluded.

- Positivity rates were higher in people identified as Aboriginal and Torres Strait Islander (8.6%) than non-Indigenous (6.3%). However, the number of positive results in Aboriginal and Torres Strait Islander people was very small compared with non-Indigenous, and care must be exercised in interpreting these results.

2.3 GP and other primary health care practitioner visits

Primary health care practitioners are classified by Medicare Australia as a general practitioner or other primary health care provider. This may include remote health clinics or other specialists providing GP services.

Participants are advised to visit their general practitioner on receiving a positive FOBT result to discuss follow-up testing. Practitioners were requested to complete a GP Assessment form for these consultations. Completion of GP Assessment forms by primary health care practitioners is not mandatory. As a result, primary health care attendance rates presented in this section may be under represented.

Results for participants in the National Program who received a positive FOBT result are included in this section. Results are excluded where the participants were outside the target age group of 55 or 65 years, opted off or suspended participation in the NBCSP.

Primary health consultations

Table 2.3.1: Primary health care consultations following a positive FOBT result, by age, sex and state and territory

		NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Males										
55 years	Number	224	119	121	47	23	12	15	2	563
	Per cent	21.6	16.6	34.0	20.9	25.8	25.0	25.9	16.7	22.1
65 years	Number	292	141	155	72	31	23	12	2	728
	Per cent	23.0	17.9	36.0	26.7	25.0	34.8	23.1	16.7	24.2
Total	**Number**	**516**	**260**	**276**	**119**	**54**	**35**	**27**	**4**	**1,291**
	Per cent	**22.4**	**17.3**	**35.1**	**24.0**	**25.4**	**30.7**	**24.5**	**16.7**	**23.3**
Females										
55 years	Number	241	122	103	60	26	18	15	1	586
	Per cent	25.3	19.4	33.7	29.4	29.9	37.5	27.3	20.0	25.6
65 years	Number	246	131	122	46	28	15	18	1	607
	Per cent	25.9	20.5	40.7	24.9	29.2	31.9	38.3	11.1	26.7
Total	**Number**	**487**	**253**	**225**	**106**	**54**	**33**	**33**	**2**	**1,193**
	Per cent	**25.6**	**19.9**	**37.1**	**27.2**	**29.5**	**34.7**	**32.4**	**14.3**	**26.2**
Persons										
55 years	Number	465	241	224	107	49	30	30	3	1,149
	Per cent	23.4	17.9	33.8	24.9	27.8	31.3	26.5	17.6	23.8
65 years	Number	538	272	277	118	59	38	30	3	1,335
	Per cent	24.3	19.1	37.9	25.9	26.8	33.6	30.3	14.3	25.3
Total	**Number**	**1,003**	**513**	**501**	**225**	**108**	**68**	**60**	**6**	**2,484**
	Per cent	**23.8**	**18.5**	**36.0**	**25.5**	**27.3**	**32.5**	**28.3**	**15.8**	**24.6**

Note: Percentages are the number of primary health care consultations following a positive FOBT result as a proportion of the total number of positive FOBT results.

- The total number of visits to primary health care practitioners following a positive FOBT result recorded in the Register for the period 7 August 2006 to 31 July 2007 was low—2,484 (24.6% of positive FOBT results). However, it is possible there were people who had received positive FOBT results who intended to visit a primary health carer and had not yet done so, or there were completed GP Assessment forms not yet received by the Register.
- The highest rate of primary health care attendance recorded was in Queensland (36.0%) followed by Tasmania (32.5%) and the ACT (28.3%).
- The rate of primary health care attendance following a positive FOBT result was higher for females (26.2%) than for males (23.3%). Attendance rates were also higher for people aged 65 years (25.3%) compared with those aged 55 years (23.8%).

Primary health care consultations by geographic location

Table 2.3.2: Primary health care consultations following a positive FOBT result, by age, sex and geographic location

		Major cities	Inner regional	Outer regional	Remote and very remote	All regions
Males						
55 years	Number	364	130	63	5	562
	Per cent	21.6	22.0	26.3	22.8	22.1
65 years	Number	465	192	66	5	728
	Per cent	24.9	24.1	20.8	24.7	24.2
Total	**Number**	**829**	**322**	**129**	**10**	**1,290**
	Per cent	**23.3**	**23.2**	**23.1**	**23.7**	**23.3**
Females						
55 years	Number	386	135	62	3	586
	Per cent	25.0	25.7	30.4	34.7	25.7
65 years	Number	389	143	70	4	606
	Per cent	27.4	24.8	26.9	21.4	26.6
Total	**Number**	**775**	**278**	**132**	**7**	**1,192**
	Per cent	**26.2**	**25.2**	**28.4**	**25.5**	**26.2**
Persons						
55 years	Number	751	265	124	8	1,148
	Per cent	23.2	23.7	28.2	26.2	23.8
65 years	Number	853	335	136	9	1,334
	Per cent	26.0	24.4	23.5	23.1	25.3
Total	**Number**	**1,604**	**600**	**261**	**17**	**2,482**
	Per cent	**24.6**	**24.1**	**25.5**	**24.4**	**24.6**

Notes

1. States and territories using the geographic rollout schedule may not have commenced screening in some geographic areas at 31 July 2007. Figures for geographic regions should be interpreted with caution.
2. Data for remote and very remote regions are combined due to small numbers.
3. There were 2 GP visits and 12 positive FOBT results with postcodes that do not correspond with the 2001 ABS remoteness classifications by postal area. These are regarded as missing data and are excluded from this table. Hence the sum of the areas may be less than the national total.
4. Percentages are the number of primary health care consultations following a positive FOBT as a proportion of the total number of positive FOBT results.

- The highest rate of follow-up by primary health care consultations following a positive FOBT result was in outer regional areas (25.5%). The lowest follow-up rate (24.1%) was recorded in inner regional areas. However, the number of consultations following a positive FOBT result in remote and very remote regions was very small compared with other geographic regions, and care must be exercised in interpreting these results.

Primary health care consultations by socioeconomic status

Table 2.3.3: Primary health care consultations following a positive FOBT result, by age, sex and socioeconomic status

		1st quintile (least disadvantaged)	2nd quintile	3rd quintile	4th quintile	5th quintile (most disadvantaged)	Total
Males							
55 years	Number	97	135	110	115	99	556
	Per cent	19.2	26.4	23.6	22.1	19.4	22.1
65 years	Number	143	136	156	146	143	724
	Per cent	25.3	24.0	25.0	23.1	24.0	24.2
Total	**Number**	**240**	**271**	**266**	**261**	**242**	**1,280**
	Per cent	**22.4**	**25.2**	**24.4**	**22.6**	**21.9**	**23.3**
Females							
55 years	Number	132	101	125	121	100	579
	Per cent	26.9	23.8	26.2	26.9	23.8	25.6
65 years	Number	110	107	131	155	103	606
	Per cent	27.1	26.2	26.5	31.1	22.8	26.8
Total	**Number**	**242**	**208**	**256**	**276**	**203**	**1,185**
	Per cent	**27.0**	**25.0**	**26.3**	**29.1**	**23.3**	**26.2**
Persons							
55 years	Number	229	236	235	236	199	1,135
	Per cent	23.0	25.2	24.9	24.3	21.4	23.8
65 years	Number	253	243	287	301	246	1,330
	Per cent	26.1	24.9	25.6	26.6	23.5	25.4
Total	**Number**	**482**	**479**	**522**	**537**	**445**	**2,465**
	Per cent	**24.5**	**25.1**	**25.3**	**25.5**	**22.5**	**24.6**

Notes

1. There were 19 recorded GP visits and 90 positive FOBT results with postcodes that do not correspond with the 2001 ABS IRSD classifications by postal area. These are regarded as missing data and are excluded from this table. Hence the sum of the columns may be less than the national total.
2. Percentages are the number of primary health care consultations following a positive FOBT as a proportion of the total number of positive FOBT results.

- The lowest overall rate (22.5%) of consultations by primary health care practitioners following a positive FOBT result was in the most disadvantaged quintile.

Primary health care consultations by Aboriginal and Torres Strait Islander people

Table 2.3.4: Primary health care consultations following a positive FOBT result, by age, sex and Aboriginal and Torres Strait Islander status

	Aboriginal and Torres Strait Islander		Non-Indigenous		Total	
	Number	Rate (per 100 positive FOBTs)	Number	Rate (per 100 positive FOBTs)	Number	Rate (per 100 positive FOBTs)
Males						
55 years	n.p.	n.p.	n.p.	n.p.	421	29.5
65 years	n.p.	n.p.	n.p.	n.p.	567	32.8
Total	**6**	**25.0**	**982**	**31.3**	**988**	**31.3**
Females						
55 years	n.p.	n.p.	n.p.	n.p.	446	34.4
65 years	n.p.	n.p.	n.p.	n.p.	463	36.3
Total	**7**	**41.2**	**902**	**35.3**	**909**	**35.3**
Persons						
55 years	n.p.	n.p.	n.p.	n.p.	867	31.8
65 years	n.p.	n.p.	n.p.	n.p.	1,030	34.3
Total	**13**	**31.7**	**1,884**	**33.1**	**1,897**	**33.1**

Notes

1. There were 587 GP visits following a positive FOBT result and 4,382 valid FOBT results where Aboriginal and Torres Strait Islander status was not stated. These are regarded as missing data and are excluded from this table.
2. Aboriginal and Torres Strait Islander status is defined by the participant.
3. Rates are the number of primary health care consultations following a positive FOBT as a percentage of the total number of positive FOBT results.
4. n.p. denotes numbers and rates suppressed due to small cell values.

- Of the 1,897 primary health consultations where Aboriginal and Torres Strait Islander status was reported, 13 consultations were by people identifying as Aboriginal and Torres Strait Islander to Medicare Australia by this or other programs.

Primary health care consultation numbers and rates by preferred correspondence language

Table 2.3.5: Primary health care consultations following a positive FOBT result, by age, sex and preferred correspondence language

	Preferred correspondence language					
	Language other than English		English		Total	
	Number	Rate (per 100 positive FOBTs)	Number	Rate (per 100 positive FOBTs)	Number	Rate (per 100 positive FOBTs)
Males						
55 years	48	26.4	515	21.8	563	22.1
65 years	58	29.9	670	23.8	728	24.2
Total	**106**	**28.2**	**1,185**	**22.9**	**1,291**	**23.3**
Females						
55 years	48	27.4	538	25.5	586	25.6
65 years	35	27.6	572	26.6	607	26.7
Total	**83**	**27.5**	**1,110**	**26.1**	**1,193**	**26.2**
Persons						
55 years	96	26.9	1,053	23.6	1,149	23.8
65 years	93	29.0	1,242	25.0	1,335	25.3
Total	**189**	**27.9**	**2,295**	**24.3**	**2,484**	**24.6**

Notes

1. Preferred correspondence language is self-reported to Medicare Australia through this or other programs. Participants are assumed to prefer to correspond in English unless otherwise indicated.
2. Rates are the number of primary health care consultations following a positive FOBT as a percentage of the total number of positive FOBT results for preferred correspondence language.

- There were 189 primary health consultations where the participant indicated that they prefer to correspond in a language other than English. This represented 27.9% of positive FOBT results for this group.

Primary health care consultations by reported disability status

Table 2.3.6: Primary health care consultation following a positive result, by age, sex and reported disability status

	Disability status					
	Severe or profound limitation		No severe or profound limitation		Total	
	Number	Rate (per 100 positive FOBTs)	Number	Rate (per 100 positive FOBTs)	Number	Rate (per 100 positive FOBTs)
Males						
55 years	39	21.8	518	23.5	557	23.4
65 years	58	22.0	665	25.8	723	25.4
Total	**97**	**21.9**	**1,183**	**24.7**	**1,280**	**24.5**
Females						
55 years	34	20.5	543	27.2	577	26.7
65 years	43	23.5	557	28.3	600	27.9
Total	**77**	**22.1**	**1,100**	**27.8**	**1,177**	**27.3**
Persons						
55 years	73	21.2	1,061	25.3	1,134	25.0
65 years	101	22.6	1,222	26.9	1,323	26.5
Total	**174**	**22.0**	**2,283**	**26.1**	**2,457**	**25.8**

Notes

1. There were 27 GP visits following positive FOBT results and 571 positive FOBT results where disability status was not stated. These are regarded as missing data and are excluded from this table. Hence the sum of the areas may be less than the national total.
2. A 'profound' disability status indicates that a person always needs assistance with self-care, movement and/or communications activities. A 'severe' disability status indicates that a person sometimes needs assistance with these activities.
3. Rates are the number of primary health care consultations following a positive FOBT as a percentage of the total number of positive FOBT results for that group.

- The crude rate of primary health care follow-up recorded in the Register after a positive FOBT result for people with a severe or profound limitation was 22.0% compared with 26.1% for people without a severe or profound limitation.

Primary health care consultations by reported symptoms

Table 2.3.7: Primary health care consultations following a positive FOBT result, by age, sex and reported symptom status

		Symptom status						
		No symptoms	Recent onset rectal bleeding ≤6 months	Longer standing rectal bleeding >6 months	Significant change in bowel habits	Iron deficiency anaemia	Abdominal pain	All respondents reporting symptom status
Males								
55 years	Number	458	30	42	15	5	13	549
	Per cent	83.4	5.5	7.7	2.7	0.9	2.4	100.0
65 years	Number	614	37	37	15	7	10	707
	Per cent	86.8	5.2	5.2	2.1	1.0	1.4	100.0
Total	**Number**	**1,072**	**67**	**79**	**30**	**12**	**23**	**1,256**
	Per cent	**85.4**	**5.3**	**6.3**	**2.4**	**1.0**	**1.8**	**100.0**
Females								
55 years	Number	455	42	39	20	10	19	567
	Per cent	80.2	7.4	6.9	3.5	1.8	3.4	100.0
65 years	Number	475	25	31	20	15	25	581
	Per cent	81.8	4.3	5.3	3.4	2.6	4.3	100.0
Total	**Number**	**930**	**67**	**70**	**40**	**25**	**44**	**1,148**
	Per cent	**81.0**	**5.8**	**6.1**	**3.5**	**2.2**	**3.8**	**100.0**
Persons								
55 years	Number	913	72	81	35	15	32	1,116
	Per cent	81.8	6.5	7.3	3.1	1.3	2.9	100.0
65 years	Number	1,089	62	68	35	22	35	1,288
	Per cent	84.5	4.8	5.3	2.7	1.7	2.7	100.0
Total	**Number**	**2,002**	**134**	**149**	**70**	**37**	**67**	**2,404**
	Per cent	**83.3**	**5.6**	**6.2**	**2.9**	**1.5**	**2.8**	**100.0**

Notes

1. Only participants who have a symptom status (including 'no symptoms') recorded in the GP Assessment form Q2 are included in this analysis. There were 80 participants with missing data for this question excluded from the analysis.
2. Percentages are the number of primary health care consultations with respondents reporting specific symptom status following a positive FOBT result as a proportion of the total number of consultations in which respondents reported symptom status with a positive FOBT result.
3. Respondents to the screening invitation are defined as members of the eligible population who were sent an invitation to screen and returned a Participant Details form and/or a completed FOBT kit.
4. Excluding the last column, percentages can add to more than 100 across the row as one respondent might report more than one symptom.

- Of the 2,484 consultations following a positive FOBT result recorded in the Register, there were 80 consultations in which people did not report their symptom status and are excluded from this analysis.
- Of the remaining 2,404 consultations, 134 (5.6%) reported recent onset of rectal bleeding in the past 6 months, 149 (6.2%) reported longer standing rectal bleeding greater than 6 months, 70 (2.9%) reported a significant change in bowel habits, 37 (1.5%) reported iron deficiency anaemia and 67 (2.8%) reported abdominal pain.

Primary health care referrals

Table 2.3.8a: Referrals for colonoscopy or other examination following a positive FOBT result

	Referral for colonoscopy[a]		Referral for other examination[b]		No referral[c]		All GP visits
	Number	Rate (per 100 GP visits)	Number	Rate (per 100 GP visits)	Number	Rate (per 100 GP visits)	Number
Males							
55 years	528	93.8	13	2.3	22	3.9	563
65 years	661	90.8	20	2.7	47	6.5	728
Total	1,189	92.1	33	2.6	69	5.3	1,291
Females							
55 years	534	91.1	18	3.1	34	5.8	586
65 years	560	92.3	16	2.6	31	5.1	607
Total	1,094	91.7	34	2.8	65	5.4	1,193
Persons							
55 years	1,062	92.4	31	2.7	56	4.9	1,149
65 years	1,221	91.5	36	2.7	78	5.8	1,335
Total	2,283	91.9	67	2.7	134	5.4	2,484

(a) Patients referred for colonoscopy with/without referral for other examination.

(b) Patients not referred for colonoscopy but referred for other examination only.

(c) Patients not referred for colonoscopy or other examination.

Note: Rates are the number of consultations following a positive FOBT who received/not received referral for either colonoscopy or other examination as a percentage of the total number of consultations following a positive FOBT.

- Of the 2,484 recorded primary health care consultations following a positive FOBT result, 2,283 (91.9%) were referred for colonoscopy, 67 (2.7%) were referred for other examinations and 134 (5.4%) were not referred for further investigation. Reasons for non-referral for colonoscopy are detailed in Table 2.3.10.
- For males the rate of referral for colonoscopy was higher for those aged 55 years (93.8%) than for those aged 65 years (90.8%). For females the rate of referral for colonoscopy was lower for those aged 55 years (91.1%) than for those aged 65 years (92.3%).

Table 2.3.8b: Referrals for colonoscopy or other examination following a positive FOBT result, by geographic location

		Referral for colonoscopy[a]		Referral for other examination[b]		No referral[c]		All GP visits
		Number	Rate (per 100 GP visits)	Number	Rate (per 100 GP visits)	Number	Rate (per 100 GP visits)	Number
Major cities								
Males	55 years	340	93.4	7	2.1	17	4.6	364
	65 years	423	90.9	13	2.9	29	6.2	465
	Total	**763**	**92.0**	**21**	**2.5**	**46**	**5.5**	**829**
Females	55 years	351	90.8	13	3.3	23	5.9	386
	65 years	355	91.2	14	3.5	21	5.3	389
	Total	**705**	**91.0**	**26**	**3.4**	**43**	**5.6**	**775**
Persons	55 years	691	92.1	20	2.7	39	5.2	751
	65 years	777	91.0	27	3.2	49	5.8	853
	Total	**1,468**	**91.5**	**47**	**2.9**	**89**	**5.5**	**1,604**
Inner regional								
Males	55 years	124	95.6	2	1.8	3	2.5	130
	65 years	176	91.7	4	1.8	12	6.5	192
	Total	**300**	**93.3**	**6**	**1.8**	**16**	**4.9**	**322**
Females	55 years	122	90.5	4	2.9	9	6.6	135
	65 years	136	95.2	1	1.0	5	3.8	143
	Total	**258**	**92.9**	**5**	**1.9**	**14**	**5.2**	**278**
Persons	55 years	246	93.0	6	2.4	12	4.6	265
	65 years	312	93.2	5	1.5	18	5.3	335
	Total	**559**	**93.1**	**11**	**1.9**	**30**	**5.0**	**600**
Outer regional								
Males	55 years	59	93.4	2	3.4	2	3.2	63
	65 years	57	86.8	3	4.6	6	8.6	66
	Total	**116**	**90.0**	**5**	**4.0**	**8**	**6.0**	**129**
Females	55 years	58	94.0	1	1.9	3	4.0	62
	65 years	64	91.4	1	1.4	5	7.1	70
	Total	**122**	**92.6**	**2**	**1.7**	**7**	**5.7**	**132**
Persons	55 years	117	93.7	3	2.7	5	3.6	124
	65 years	121	89.2	4	3.0	11	7.8	136
	Total	**238**	**91.3**	**7**	**2.8**	**15**	**5.8**	**261**

(continued)

Table 2.3.8b (continued): Referrals for colonoscopy or other examination following a positive FOBT result, by geographic location

		Referral for colonoscopy[(a)]		Referral for other examination[(b)]		No referral[(c)]		All GP visits
		Number	Rate (per 100 GP visits)	Number	Rate (per 100 GP visits)	Number	Rate (per 100 GP visits)	Number
Remote								
Males	55 years	4	79.8	1	20.2	0	0.0	5
	65 years	5	99.6	0	0.0	0	0.0	5
	Total	**9**	**89.9**	**1**	**10.1**	**0**	**0.0**	**10**
Females	55 years	2	100.0	0	0.0	0	0.0	2
	65 years	3	99.7	0	0.0	0	0.0	3
	Total	**5**	**99.8**	**0**	**0.0**	**0**	**0.0**	**5**
Persons	55 years	6	85.7	1	14.3	0	0.0	7
	65 years	8	99.6	0	0.0	0	0.0	8
	Total	**14**	**93.3**	**1**	**6.7**	**0**	**0.0**	**15**
Very remote								
Males	55 years	0	0.0	0	0.0	0	0.0	0
	65 years	0	0.0	0	0.0	0	0.0	0
	Total	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**	**0**
Females	55 years	1	100.0	0	0.0	0	0.0	1
	65 years	1	100.0	0	0.0	0	0.0	1
	Total	**2**	**100.0**	**0**	**0.0**	**0**	**0.0**	**2**
Persons	55 years	1	100.0	0	0.0	0	0.0	1
	65 years	1	98.2	0	0.0	0	0.0	1
	Total	**2**	**99.1**	**0**	**0.0**	**0**	**0.0**	**2**

(a) Patients referred for colonoscopy with/without referral for other examination.

(b) Patients not referred for colonoscopy but referred for other examination only.

(c) Patients not referred for colonoscopy or other examination.

Notes

1. Rates are the number of consultations following a positive FOBT who received/not received referral for either colonoscopy or other examination as a percentage of the total number of consultations following a positive FOBT.
2. States and territories using the geographic rollout schedule may not have commenced screening in some geographic areas at 31 July 2007. Hence figures for geographic regions should be interpreted with caution.
3. There were 2 GP visits following positive FOBT results with postcodes that do not correspond with the 2001 ABS remoteness classifications by postal area. These are regarded as missing data and are excluded from this table. Hence the sum of the areas may be less than the national total.

- Referral rates for colonoscopy following a positive FOBT result were 91.5% in major cities, 93.1% in inner regional locations and 91.3% in outer regional locations.
- There were 14 colonoscopy referrals for people in remote locations and 2 in very remote locations.

Table 2.3.9: Referrals by primary health carers for colonoscopy or other examination, by age, sex and reporting symptom/no symptoms[a]

	Referral for colonoscopy or other examination				No referral for colonoscopy or other examination			
	With symptoms		No symptoms		With symptoms		No symptoms	
	Number	Rate (per 100 cases)[b]	Number	Rate (per 100 cases)[c]	Number	Rate (per 100 cases)[d]	Number	Rate (per 100 cases)[e]
Males								
55 years	89	16.8	440	83.2	2	10.0	18	90.0
65 years	84	12.7	579	87.3	9	20.5	35	79.5
Total	**173**	**14.5**	**1,019**	**85.5**	**11**	**17.2**	**53**	**82.8**
Females								
55 years	107	20.0	428	80.0	5	15.6	27	84.4
65 years	100	18.1	451	81.9	6	20.0	24	80.0
Total	**207**	**19.1**	**879**	**80.9**	**11**	**17.7**	**51**	**82.3**
Persons								
55 years	196	18.4	868	81.6	7	13.5	45	86.5
65 years	184	15.2	1,030	84.8	15	20.3	59	79.7
Total	**380**	**16.7**	**1,898**	**83.3**	**22**	**17.5**	**104**	**82.5**

(a) Symptoms include:
- recent onset rectal bleeding (less than or equal to 6 months)
- longer standing rectal bleeding (longer than 6 months)
- significant change in bowel habits
- iron deficiency anaemia
- abdominal pain.

(b) Rates are the number of consultations following a positive FOBT and reported symptom(s) that resulted in referral for either colonoscopy or other examination as a percentage of the total number of consultations following a positive FOBT and reported symptom(s).

(c) Rates are the number of consultations following a positive FOBT and no reported symptoms that resulted in referral for either colonoscopy or other examination as a percentage of the total number of consultations following a positive FOBT and no reported symptoms.

(d) Rates are the number of consultations following a positive FOBT and reported symptom(s) that did not result in referral for either colonoscopy or other examination as a percentage of the total number of consultations following a positive FOBT and reported symptom(s).

(e) Rates are the number of consultations following a positive FOBT and no reported symptoms that did not result in referral for either colonoscopy or other examination as a percentage of the total number of consultations following a positive FOBT and no reported symptoms.

Note: There were 80 recorded visits to primary health care practitioners where no symptom status was recorded. These records are excluded from this analysis.

- Of the 2,278 referrals with a recorded symptom status, 380 (16.7%) reported symptoms and 1,898 (83.3%) reported experiencing no symptoms.
- Of the 126 consultations with a reported symptom status which did not result in referral for colonoscopy or other examination, 22 (17.5%) reported symptoms and the remaining 104 (82.5%) reported experiencing no symptoms.

Table 2.3.10: Primary health care consultations following a positive FOBT result that did not result in referral for colonoscopy, by age, sex and reason

		Reason						
		Bowel cancer previously diagnosed	Limited life expectancy	Recent colonoscopy (<18 months)	Patient declines colonoscopy	Significant co-morbidity	Other medical condition(s)	All respondents
Males								
55 years	Number	n.p.	n.p.	13	17	3	11	35
	Per cent	n.p.	n.p.	37.1	48.6	8.6	31.4	100.0
65 years	Number	n.p.	n.p.	30	19	5	18	67
	Per cent	n.p.	n.p.	44.8	28.4	7.5	26.9	100.0
Total	**Number**	**n.p.**	**n.p.**	**43**	**36**	**8**	**29**	**102**
	Per cent	**n.p.**	**n.p.**	**42.2**	**35.3**	**7.8**	**28.4**	**100.0**
Females								
55 years	Number	n.p.	n.p.	18	21	3	12	52
	Per cent	n.p.	n.p.	34.6	40.4	5.8	23.1	100.0
65 years	Number	n.p.	n.p.	26	11	3	13	47
	Per cent	n.p.	n.p.	55.3	23.4	6.4	27.7	100.0
Total	**Number**	**n.p.**	**n.p.**	**44**	**32**	**6**	**25**	**99**
	Per cent	**n.p.**	**n.p.**	**44.4**	**32.3**	**6.1**	**25.3**	**100.0**
Persons								
55 years	Number	2	1	31	38	6	23	87
	Per cent	2.3	1.1	35.6	43.7	6.9	26.4	100.0
65 years	Number	1	1	56	30	8	31	114
	Per cent	0.9	0.9	49.1	26.3	7.0	27.2	100.0
Total	**Number**	**3**	**2**	**87**	**68**	**14**	**54**	**201**
	Per cent	**1.5**	**1.0**	**43.3**	**33.8**	**7.0**	**26.9**	**100.0**

Notes

1. Rates are the number of consultations following a positive FOBT that did not result in referral for colonoscopy as a percentage of the total number of consultations following positive FOBT result.
2. n.p. denotes numbers and rates suppressed due to small cell values.

- There were 201 primary health care consultations following a positive FOBT result that did not result in referral for colonoscopy by the primary health care practitioner. Of these, 87 (43.3%) had a colonoscopy performed within the past 18 months, 68 (33.8%) declined a colonoscopy, 14 (7.0%) had a significant co-morbidity and 54 (26.9%) had other medical conditions which precluded them from having a colonoscopy.
- Of the 87 consultations that had recently had a colonoscopy performed, 56 (49.1%) were aged 65 years and 31 (35.6%) were aged 55 years.

2.4 Colonoscopy

The Australian Cancer Network Colorectal Cancer Guidelines Revision Committee (2005) recommends colonoscopy as the most accurate investigation for assessing the colon and rectum. Colonoscopy allows biopsy and histologic confirmation of the diagnosis. It also allows identification and endoscopic removal of synchronous polyps.

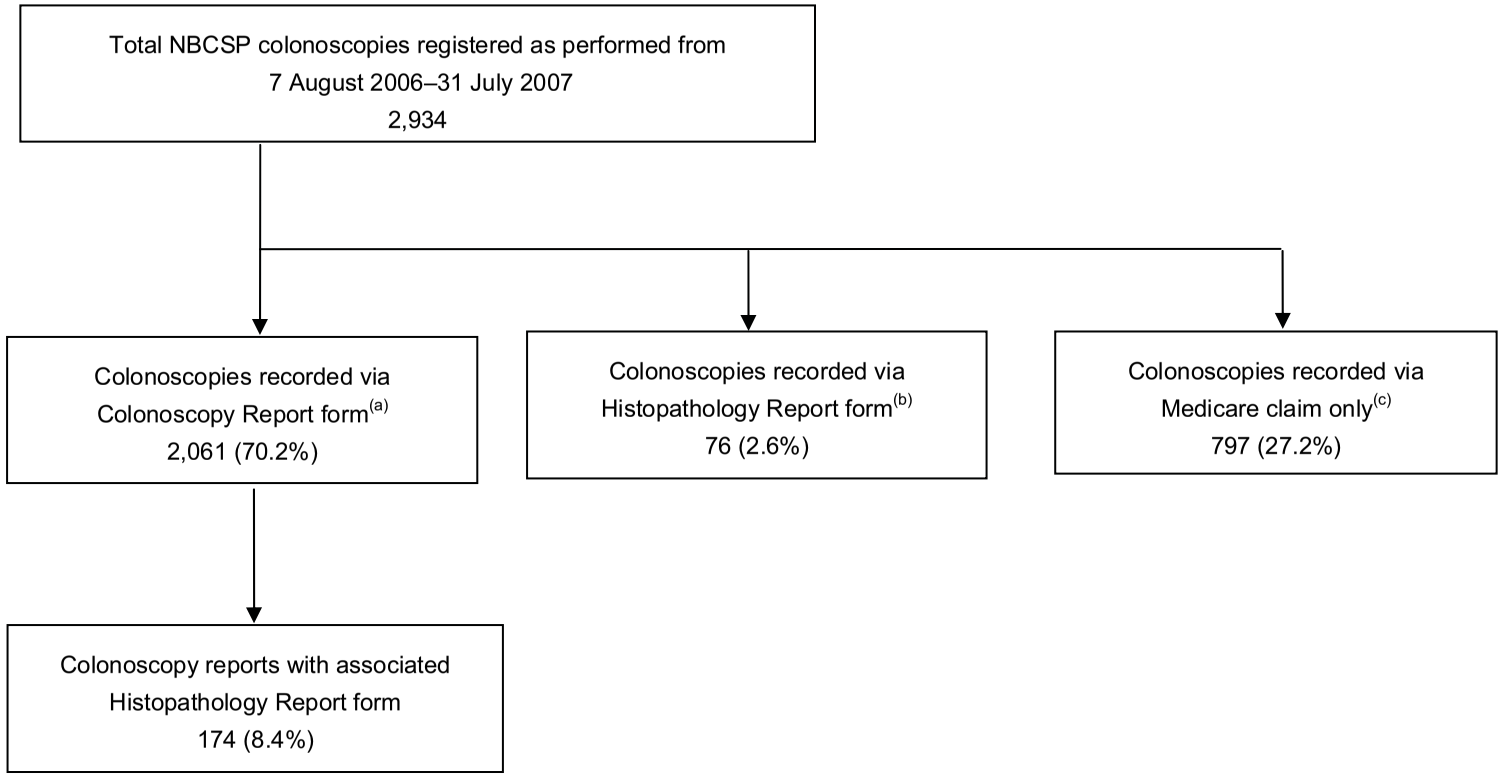
This section provides a summary of colonoscopy procedures up to 31 July 2007 as part of the NBCSP. A participant may undergo more than one colonoscopy as part of an investigation of a positive FOBT for reasons including inadequate bowel preparation, incomplete examination or review of the polypectomy site. There were 8 participants who had more than one colonoscopy recorded in the period 7 August 2006 to 31 July 2007.

The rates presented in this section present the rate of total colonoscopies performed as a proportion of positive FOBT results. Future reports will distinguish between the rates of individual follow-up by colonoscopy following a positive FOBT as distinct from the total number of colonoscopies performed.

The rates presented in this section under-estimate the true result due to a number of factors:

- The data in this section are sourced from NBCSP Colonoscopy Report forms included in the Register as at 31 July 2007. Completion of Colonoscopy Report forms by practitioners is not mandatory. Colonoscopies identified as a result of returned Histopathology Report forms or Medicare claims are not included in this section. Of the 2,934 colonoscopies recorded, 2,061 were identified by Colonoscopy Report forms, 797 were identified by Medicare claims for colonoscopy procedures as part of the NBCSP and 76 by Histopathology Report forms without a corresponding Colonoscopy Report form (Figure 2.4.1).
- The number of positive FOBT results in the denominator includes all FOBTs processed up to 31 July 2007. However, the number of colonoscopies in the numerator only includes those with a positive FOBT who have had time to visit their primary health carer and undergo a colonoscopy. This under-estimation does not affect comparisons between rates for different groups, but it does mean that the absolute levels of follow-up colonoscopies are understated.

Colonoscopies for people who suspended from, or opted off, the NBCSP or were outside the age of 55 or 65 years were also excluded from this analysis.



(a) Colonoscopy Reports recorded in the National Bowel Cancer Screening Register (with or without a Medicare claim) on which colonoscopy analyses can be performed.

(b) Colonoscopies undertaken as part of the NBCSP for which no Colonoscopy Report was recorded but a Histopathology Report (with or without a Medicare claim) was recorded.

(c) Colonoscopies undertaken as part of the NBCSP for which a Medicare Claim was recorded but no Colonoscopy Report or Histopathology Report was recorded.

Figure 2.4.1: National Bowel Cancer Screening Register statistics of colonoscopy procedures performed in the NBCSP, 7 August 2006 to 31 July 2007

Colonoscopy procedures reported

Table 2.4.1: Colonoscopies recorded following a positive FOBT result, by age, sex and state and territory

		NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Males										
55 years	Number	233	147	72	36	23	6	16	0	533
	Per cent	22.4	20.5	20.2	16.0	25.8	12.5	27.6	0.0	21.0
65 years	Number	299	145	76	41	21	8	18	0	608
	Per cent	23.6	18.4	17.6	15.2	16.9	12.1	34.6	0.0	20.2
Total	**Number**	**532**	**292**	**148**	**77**	**44**	**14**	**34**	**0**	**1,141**
	Per cent	**23.1**	**19.4**	**18.8**	**15.6**	**20.7**	**12.3**	**30.9**	**0.0**	**20.6**
Females										
55 years	Number	207	110	46	43	18	10	14	0	448
	Per cent	21.8	17.5	15.0	21.1	20.7	20.8	25.5	0.0	19.6
65 years	Number	223	125	55	23	25	5	16	0	472
	Per cent	23.4	19.5	18.3	12.4	26.0	10.6	34.0	0.0	20.7
Total	**Number**	**430**	**235**	**101**	**66**	**43**	**15**	**30**	**0**	**920**
	Per cent	**22.6**	**18.5**	**16.7**	**17.0**	**23.5**	**15.8**	**29.4**	**0.0**	**20.2**
Persons										
55 years	Number	440	257	118	79	41	16	30	0	981
	Per cent	22.1	19.1	17.8	18.4	23.3	16.7	26.5	0.0	20.3
65 years	Number	522	270	131	64	46	13	34	0	1,080
	Per cent	23.5	18.9	17.9	14.1	20.9	11.5	34.3	0.0	20.4
Total	**Number**	**962**	**527**	**249**	**143**	**87**	**29**	**64**	**0**	**2,061**
	Per cent	**22.9**	**19.0**	**17.9**	**16.2**	**22.0**	**13.9**	**30.2**	**0.0**	**20.4**

Notes

1. Percentages of colonoscopies performed are the number of colonoscopy reports recorded following a positive FOBT as a proportion of the total number of positive FOBT results.
2. There were 8 people with more than one colonoscopy recorded in the Register.

- There were 2,061 Colonoscopy Report forms recorded as part of the National Program between 7 August 2006 and 31 July 2007. This represents 20.4% of the number of positive FOBT results recorded.
- The rate of colonoscopies following a positive FOBT result reported was 20.2% for females and 20.6% for males.
- The rate of colonoscopies following a positive FOBT result recorded was 20.4% for people aged 65 years and 20.3% for those aged 55 years.
- As at 31 July 2007 the states with the highest percentage of colonoscopies reported following a positive FOBT were the Australian Capital Territory (30.2%), New South Wales (22.9%) and South Australia (22.0%).

Table 2.4.2: Colonoscopies reported following a positive FOBT result, by age, sex and geographic location

		Major cities	Inner regional	Outer regional	Remote and very remote	All regions
Males						
55 years	Number	352	132	45	4	533
	Per cent	20.8	22.3	19.0	17.3	21.0
65 years	Number	396	167	42	3	608
	Per cent	21.2	20.9	13.3	16.1	20.2
Total	**Number**	**748**	**299**	**88**	**7**	**1,141**
	Per cent	**21.0**	**21.5**	**15.7**	**16.7**	**20.6**
Females						
55 years	Number	312	102	34	0	448
	Per cent	20.2	19.4	16.6	3.9	19.6
65 years	Number	306	118	45	3	472
	Per cent	21.6	20.4	17.3	16.1	20.8
Total	**Number**	**618**	**219**	**79**	**4**	**920**
	Per cent	**20.9**	**19.9**	**17.0**	**12.3**	**20.2**
Persons						
55 years	Number	664	234	79	4	981
	Per cent	20.5	20.9	17.9	13.5	20.3
65 years	Number	702	285	87	6	1,080
	Per cent	21.4	20.7	15.1	16.1	20.5
Total	**Number**	**1,366**	**518**	**167**	**11**	**2,061**
	Per cent	**21.0**	**20.8**	**16.3**	**14.9**	**20.4**

Notes

1. States and territories using the geographic rollout schedule may not have commenced screening in some geographic areas at 31 July 2007. Hence figures for geographic regions should be interpreted with caution.
2. Data for remote and very remote regions are combined due to small cell values.
3. There were 12 positive FOBT results with postcodes that do not correspond with the 2001 ABS remoteness classifications by postal area. These are regarded as missing data and are excluded from this table. Hence the sum of the areas may be less than the national total.
4. Percentages of colonoscopies performed are the number of colonoscopies reported following a positive FOBT as a proportion of the total number of positive FOBT results.

- Males had a higher rate of positive FOBT results and therefore a higher number of recorded colonoscopies; however, there was no difference in the colonoscopy performance rate between males and females.
- The rate of colonoscopies reported following a positive FOBT result was highest in major cities (21.0%), followed by 20.8% in inner regional locations and 16.3% in outer regional locations. There were 11 colonoscopies reported for participants residing in remote and very remote regions.

Table 2.4.3: Colonoscopies reported following a positive FOBT result, by age, sex and socioeconomic status

		1st quintile (least disadvantaged)	2nd quintile	3rd quintile	4th quintile	5th quintile (most disadvantaged)	Total
Males							
55 years	Number	104	121	96	126	80	527
	Per cent	20.6	23.7	20.6	24.2	15.7	21.0
65 years	Number	127	138	122	116	102	605
	Per cent	22.5	24.4	19.5	18.3	17.1	20.3
Total	**Number**	**231**	**259**	**218**	**242**	**182**	**1,132**
	Per cent	**21.6**	**24.0**	**20.0**	**21.0**	**16.5**	**20.6**
Females							
55 years	Number	124	93	86	82	60	445
	Per cent	25.3	21.9	18.0	18.2	14.3	19.7
65 years	Number	95	94	99	102	80	470
	Per cent	23.4	23.0	20.0	20.4	17.7	20.8
Total	**Number**	**219**	**187**	**185**	**184**	**140**	**915**
	Per cent	**24.4**	**22.4**	**19.0**	**19.4**	**16.1**	**20.2**
Persons							
55 years	Number	228	214	182	208	140	972
	Per cent	22.9	22.9	19.3	21.4	15.1	20.4
65 years	Number	222	232	221	218	182	1,075
	Per cent	22.9	23.8	19.7	19.3	17.4	20.5
Total	**Number**	**450**	**446**	**403**	**426**	**322**	**2,047**
	Per cent	**22.9**	**23.4**	**19.5**	**20.3**	**16.3**	**20.4**

Notes

1. There were 14 recorded colonoscopies and 90 positive FOBT results with postcodes that do not correspond with the 2001 ABS IRSD classifications by postal area. These are regarded as missing data and are excluded from this table. Hence the sum of the columns may be less than the national total.
2. Percentages of colonoscopies performed are the number of colonoscopies reported following a positive FOBT as a proportion of the total number of positive FOBTs recorded.
3. Totals may not sum due to rounding caused by postcodes overlapping category boundaries. See Appendix C.

- The rate of colonoscopies reported following a positive FOBT result was highest in people living in less disadvantaged areas (23.4% for quintile 2 and 22.9% for quintile 1) and lowest in people living in the most disadvantaged areas (16.3% for quintile 5).

Table 2.4.4: Colonoscopies reported following a positive FOBT result, by age, sex and Aboriginal and Torres Strait Islander status

	Aboriginal and Torres Strait Islander		Non-Indigenous		Total	
	Number	Rate (per 100 positive FOBTs)	Number	Rate (per 100 positive FOBTs)	Number	Rate (per 100 positive FOBTs)
Males						
55 years	n.p.	n.p.	n.p.	n.p.	417	29.2
65 years	n.p.	n.p.	n.p.	n.p.	488	28.2
Total	**7**	**29.2**	**898**	**28.7**	**905**	**28.7**
Females						
55 years	n.p.	n.p.	n.p.	n.p.	365	28.1
65 years	n.p.	n.p.	n.p.	n.p.	377	29.6
Total	**5**	**29.4**	**737**	**28.8**	**742**	**28.8**
Persons						
55 years	n.p.	n.p.	n.p.	n.p.	782	28.7
65 years	n.p.	n.p.	n.p.	n.p.	865	28.8
Total	**12**	**29.3**	**1,635**	**28.7**	**1,647**	**28.7**

Notes

1. There were 414 recorded colonoscopies following a positive FOBT result and 4,382 valid FOBT results where Aboriginal and Torres Strait Islander status was not stated. These are regarded as missing data and are excluded from this table. Hence the sum of the areas may be less than the national total.
2. Aboriginal and Torres Strait Islander status is defined by the participant.
3. Rates of colonoscopies performed are the number of colonoscopies recorded following a positive FOBT as a percentage of the total number of positive FOBTs.
4. n.p. denotes numbers and rates suppressed due to small cell values.

- Numbers of colonoscopies recorded in the Register for Aboriginal and Torres Strait Islander people were too small at this point in the NBCSP to draw any conclusions on colonoscopy rates.

Table 2.4.5: Colonoscopies reported following a positive FOBT result, by age, sex and preferred correspondence language

	Preferred correspondence language				Total	
	Language other than English		English			
	Number	Rate (per 100 positive FOBTs)	Number	Rate (per 100 positive FOBTs)	Number	Rate (per 100 positive FOBTs)
Males						
55 years	40	22.0	493	20.9	533	21.0
65 years	41	21.1	567	20.1	608	20.2
Total	**81**	**21.5**	**1,060**	**20.5**	**1,141**	**20.6**
Females						
55 years	41	23.4	407	19.3	448	19.6
65 years	33	26.0	439	20.4	472	20.7
Total	**74**	**24.5**	**846**	**19.9**	**920**	**20.2**
Persons						
55 years	81	22.7	900	20.1	981	20.3
65 years	74	23.1	1,006	20.3	1,080	20.4
Total	**155**	**22.9**	**1,906**	**20.2**	**2,061**	**20.4**

Notes

1. Preferred correspondence language is self-reported to Medicare Australia through this or other programs. Participants are assumed to prefer to correspond in English unless otherwise indicated.
2. Rates of colonoscopies performed are the number of colonoscopies recorded following a positive FOBT as a percentage of the total number of positive FOBT results.

- The rate of colonoscopies performed after a positive FOBT result for people who prefer to correspond in a language other than English was 22.9%. This was very similar to the rate of 20.2% for people who prefer to correspond in English.

Table 2.4.6: Colonoscopies reported following a positive FOBT result, by age, sex and reported disability status

	Disability status					
	Severe or profound limitation		No severe or profound limitation		Total	
	Number	Rate (per 100 positive FOBTs)	Number	Rate (per 100 positive FOBTs)	Number	Rate (per 100 positive FOBTs)
Males						
55 years	27	15.1	502	22.8	529	22.2
65 years	41	15.5	564	21.8	605	21.3
Total	**68**	**15.3**	**1,066**	**22.3**	**1,134**	**21.7**
Females						
55 years	25	15.1	417	20.9	442	20.5
65 years	27	14.8	440	22.4	467	21.7
Total	**52**	**14.9**	**857**	**21.6**	**909**	**21.1**
Persons						
55 years	52	15.1	919	21.9	971	21.4
65 years	68	15.2	1,004	22.1	1,072	21.5
Total	**120**	**15.2**	**1,923**	**22.0**	**2,043**	**21.4**

Notes

1. There were 18 colonoscopies following positive FOBT results and 571 positive FOBT results where disability status was not stated. These are regarded as missing data and are excluded from this table. Hence the sum of the areas may be less than the national total.
2. A 'profound' disability status indicates that a person always needs assistance with self-care, movement and/or communications activities. A 'severe' disability status indicates that a person sometimes needs assistance with these activities.
3. Rates of colonoscopies performed are the number of colonoscopies recorded following a positive FOBT as a percentage of the total number of positive FOBTs.

- Numbers recorded in the Register of people with a disability were small; however, the rate of colonoscopies performed after a positive FOBT result for people reporting a severe or profound limitation was 15.2% compared with 22.0% of people reporting no severe or profound limitation.

Colonoscopy quality

As the NBCSP is the first program to collect data regarding colonoscopy procedures and outcomes for people with positive FOBT results, analyses of the quality of the colonoscopy procedures performed may provide a basis for future colonoscopy certification, accreditation and training to ensure continued provision of quality services.

Quality of the colonoscopy result is influenced by a number of factors:

- Adequate bowel preparation is important for the colonoscopist to clearly visualise the colon lining. Inadequate bowel preparation can result in missed lesions, cancelled procedures, increased procedural time, and a potential increase in complication rates.
- Improved effectiveness of colonoscopy is achieved with sedation.
- A complete colonoscopy is one which visualises the whole colon and requires unequivocal identification of the caecum. A colonoscopy is taken to have visualised the whole colon if the depth of insertion is recorded as reaching the caecum.
- The American Society for Gastrointestinal Endoscopy (ASGE) and the American College of Gastroenterology (ACG) Taskforce on Quality in Endoscopy (2006) stated that longer withdrawal times have been demonstrated to improve polyp detection rates, and, conversely, rapid withdrawal of the colonoscope may miss lesions and reduce the effectiveness of colon cancer prevention by colonoscopy. The Pilot Program noted the suggestion of the Taskforce that a standard withdrawal time of an average of at least 6–8 minutes is necessary to ensure that sufficient care has been taken to thoroughly inspect the large bowel for abnormalities. It further recommended that mean withdrawal times be monitored for analysis.

Table 2.4.7: Bowel preparation quality—colonoscopies reported following a positive FOBT result, by age, sex and adequacy of bowel preparation

	Adequate bowel preparation		Inadequate bowel preparation		All colonoscopies
	Number	Rate (per 100 colonoscopies)	Number	Rate (per 100 colonoscopies)	Number
Males					
55 years	481	90.2	52	9.8	533
65 years	531	87.3	77	12.7	608
Total	**1,012**	**88.7**	**129**	**11.3**	**1,141**
Females					
55 years	410	91.5	38	8.5	448
65 years	425	90.0	47	10.0	472
Total	**835**	**90.8**	**85**	**9.2**	**920**
Persons					
55 years	891	90.8	90	9.2	981
65 years	956	88.5	124	11.5	1,080
Total	**1,847**	**89.6**	**214**	**10.4**	**2,061**

Notes

1. Data are sourced from the Colonoscopy Report form section 4.1.
2. Rates are the number of colonoscopies recorded with adequate or inadequate bowel preparation following a positive FOBT result as a percentage of the total number of colonoscopies recorded.
3. Rates add to 100 across the row.

- Of the 2,061 colonoscopies reported, 1,847 (89.6%) had adequate bowel preparation. The remaining 214 examinations (10.4%) were considered by the colonoscopist to have been compromised by poor bowel preparation.
- Inadequate bowel preparation prior to colonoscopy was higher for males (11.3%) than for females (9.2%). Inadequate bowel preparation was higher for those aged 65 years (11.5%) than for those aged 55 years (9.2%).

Table 2.4.8: Colonoscopies reported following a positive FOBT result, by age, sex and depth of colonoscope insertion

		Complete colonoscopy			Incomplete colonoscopy							
		TI	**CAEC**	***Total***	**ASC**	**HEP**	**TRAN**	**SPLN**	**DESC**	**SIG**	**RECT**	***Total***
Males												
55 years	Number	227	303	*530*	0	1	0	0	1	0	1	*3*
	Per cent	42.6	56.8	*99.4*	0.0	0.2	0.0	0.0	0.2	0.0	0.2	*0.6*
65 years	Number	241	362	*603*	2	1	0	1	0	1	0	*5*
	Per cent	39.6	59.5	*99.2*	0.3	0.2	0.0	0.2	0.0	0.2	0.0	*0.8*
Total	**Number**	**468**	**665**	***1,133***	**2**	**2**	**0**	**1**	**1**	**1**	**1**	***8***
	Per cent	**41.0**	**58.3**	***99.3***	**0.2**	**0.2**	**0.0**	**0.1**	**0.1**	**0.1**	**0.1**	***0.7***
Females												
55 years	Number	203	244	*447*	0	0	0	0	0	1	0	*1*
	Per cent	45.3	54.5	*99.8*	0.0	0.0	0.0	0.0	0.0	0.2	0.0	*0.2*
65 years	Number	189	279	*468*	1	0	0	0	0	1	2	*4*
	Per cent	40.0	59.1	*99.2*	0.2	0.0	0.0	0.0	0.0	0.2	0.4	*0.8*
Total	**Number**	**392**	**523**	***915***	**1**	**0**	**0**	**0**	**0**	**2**	**2**	***5***
	Per cent	**42.6**	**56.8**	***99.5***	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.2**	**0.2**	***0.5***
Persons												
55 years	Number	430	547	*977*	0	1	0	0	1	1	1	*4*
	Per cent	43.8	55.8	*99.6*	0.0	0.1	0.0	0.0	0.1	0.1	0.1	*0.4*
65 years	Number	430	641	*1,071*	3	1	0	1	0	2	2	*9*
	Per cent	39.8	59.4	*99.2*	0.3	0.1	0.0	0.1	0.0	0.2	0.2	*0.8*
Total	**Number**	**860**	**1,188**	***2,048***	**3**	**2**	**0**	**1**	**1**	**3**	**3**	***13***
	Per cent	**41.7**	**57.6**	***99.4***	**0.1**	**0.1**	**0.0**	**0.0**	**0.0**	**0.1**	**0.1**	***0.6***

Notes

1. Percentages are the number of colonoscopies recorded reaching each part of the bowel following a positive FOBT as a proportion of the total number of colonoscopies recorded.
2. Percentages add to 100 across the row (excluding 'all colonoscopies').
3. Abbreviations for depth of insertion are as follows:
   - TI terminal ileum
   - CAEC caecum
   - ASC ascending colon
   - HEP hepatic flexure
   - TRAN transverse colon
   - SPLN splenic flexure
   - DESC descending colon
   - SIG sigmoid colon
   - RECT rectum

- Of the 2,061 colonoscopies reported, 99.4% were recorded as visualising the whole colon.

Table 2.4.9: Colonoscope withdrawal time, by age, sex and state and territory, in minutes

		NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Males										
55 years	Mean	11	9	12	15	9	8	10	0	10
	95% CI of mean	10–12	8–9	10–14	12–18	8–11	6–9	7–12	0–0	10–11
	Median	10	8	9	12	8	8	8	0	9
65 years	Mean	11	9	15	15	12	13	12	0	12
	95% CI of mean	10–12	9–10	12–17	13–17	9–16	4–21	8–15	0–0	11–12
	Median	10	8	10	15	10	9	10	0	10
Total	**Mean**	**11**	**9**	**13**	**15**	**11**	**11**	**11**	**0**	**11**
	95% CI of mean	**10–12**	**9–9**	**12–15**	**13–17**	**9–12**	**6–15**	**9–13**	**0–0**	**11–12**
	Median	**10**	**8**	**10**	**12**	**8**	**8**	**9**	**0**	**9**
Females										
55 years	Mean	10	8	9	13	8	9	9	0	9
	95% CI of mean	9–10	7–9	8–11	11–14	7–9	6–11	8–11	0–0	9–10
	Median	9	7	8	10	8	8	8	0	8
65 years	Mean	10	8	12	13	11	8	10	0	10
	95% CI of mean	9–11	8–9	10–14	10–16	9–13	3–14	6–13	0–0	9–10
	Median	9	8	9	10	10	7	8	0	9
Total	**Mean**	**10**	**8**	**11**	**13**	**10**	**9**	**10**	**0**	**10**
	95% CI of mean	**9–10**	**8–9**	**9–12**	**11–14**	**9–11**	**7–10**	**8–11**	**0–0**	**9–10**
	Median	**9**	**7**	**8**	**10**	**10**	**7**	**8**	**0**	**8**
Persons										
55 years	Mean	10	8	11	14	9	8	10	0	10
	95% CI of mean	10–11	8–9	9–12	12–15	8–10	7–10	8–11	0–0	10–10
	Median	9	7	8	10	8	8	8	0	8
65 years	Mean	11	9	14	14	12	11	11	0	11
	95% CI of mean	10–11	8–9	12–15	13–16	10–13	6–16	8–13	0–0	10–11
	Median	9	8	10	12	10	7	9	0	9
Total	**Mean**	**11**	**9**	**12**	**14**	**10**	**10**	**10**	**0**	**10**
	95% CI of mean	**10–11**	**8–9**	**11–13**	**13–15**	**9–11**	**7–12**	**9–12**	**0–0**	**10–11**
	Median	**9**	**8**	**9**	**11**	**10**	**7**	**9**	**0**	**9**

Notes

1. Colonoscopies with missing withdrawal times are coded as 99 minutes by Medicare Australia. There were 83 colonoscopies with 99 recorded for colonoscope withdrawal time.
2. State and territory refers to the residential state or territory of the patient.

- The mean withdrawal time of all colonoscopies recorded was 10 minutes with a 95% confidence interval of 10–11 minutes.
- There was a small significant difference in mean withdrawal times for males (11 mins) and females (10 mins).
- There were no colonoscopies with a valid withdrawal time recorded for patients residing in the Northern Territory.

Table 2.4.10: Proceduralists with mean colonoscope withdrawal times falling in time groups, by state and territory, in minutes

Time group (minutes)		NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
0–5	Number	13	6	3	0	2	1	1	0	26
	Per cent	7.3	6.7	6.3	0.0	6.7	12.5	8.3	0.0	6.7
6–10	Number	94	59	26	14	14	2	6	0	215
	Per cent	53.1	66.3	54.2	58.3	46.7	25.0	50.0	0.0	55.4
11–15	Number	41	14	12	7	7	3	4	0	88
	Per cent	23.2	15.7	25.0	29.2	23.3	37.5	33.3	0.0	22.7
16–20	Number	12	5	3	2	4	1	1	0	28
	Per cent	6.8	5.6	6.3	8.3	13.3	12.5	8.3	0.0	7.2
21–98	Number	17	5	4	1	3	1	0	0	31
	Per cent	9.6	5.6	8.3	4.2	10.0	12.5	0.0	0.0	8.0
Total	**Number**	**177**	**89**	**48**	**24**	**30**	**8**	**12**	**0**	**388**
	Per cent	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**0.0**	**100.0**

Notes

1. There were 90 colonoscopies with missing withdrawal time, proceduralist provider number or proceduralist state. These were excluded from the analysis.
2. Percentages are the number of proceduralists with mean colonoscope withdrawal times falling in each time group as a proportion of the total number of proceduralists who recorded colonoscopies.
3. Percentages add to 100 down the column (excluding 'Total').

- The majority of proceduralists (55.4%) had mean colonoscopy withdrawal times of 6–10 minutes. A further 22.7% had a mean withdrawal time of 11–15 minutes and 6.7% of proceduralists had a mean withdrawal time of 0–5 minutes.

Table 2.4.11: Colonoscopies with proceduralist's intention of re-examination due to inadequate colonoscopy, by age and sex

	Poor bowel preparation only		Incomplete colonoscopy only		Poor bowel preparation and incomplete colonoscopy		All intended colonoscopy repeats
	Number	Rate (per 100 colonoscopies)	Number	Rate (per 100 colonoscopies)	Number	Rate (per 100 colonoscopies)	Number
Males							
55 years	11	73.3	4	26.7	0	0.0	15
65 years	27	81.8	4	12.1	2	6.1	33
Total	**38**	**79.2**	**8**	**16.7**	**2**	**4.2**	**48**
Females							
55 years	6	66.7	3	33.3	0	0.0	9
65 years	6	54.5	4	36.4	1	9.1	11
Total	**12**	**60.0**	**7**	**35.0**	**1**	**5.0**	**20**
Persons							
55 years	17	70.8	7	29.2	0	0.0	24
65 years	33	75.0	8	18.2	3	6.8	44
Total	**50**	**73.5**	**15**	**22.1**	**3**	**4.4**	**68**

Notes

1. Rates are the number of colonoscopies recorded in each category in terms of 'poor bowel preparation', 'incomplete colonoscopy', 'poor bowel preparation and incomplete colonoscopy' with proceduralist's intention of re-examination as a percentage of the total number of intended colonoscopy repeats due to inadequate colonoscopy.
2. Rates add to 100 across the row.

- Of the 2,061 colonoscopies reported (see Table 2.4.7), there were 68 in which the proceduralist planned to perform another procedure due to an inadequate colonoscopy. Of these, 50 (73.5%) were due solely to poor bowel preparation, 15 (22.1%) due to an incomplete examination and 3 (4.4%) were due to a combination of both poor bowel preparation and incomplete examination.
- The percentage of colonoscopies that needed to be repeated solely due to poor bowel preparation was higher for males (79.2%) than for females (60.0%) and higher for those aged 65 years (75.0%) than for those aged 55 years (70.8%).
- The percentage of colonoscopies that needed to be repeated solely due to an incomplete colonoscopy was higher for females (35.0%) than for males (16.7%) and higher for those aged 55 years (29.2%) than for those aged 65 years (18.2%).

Table 2.4.12: Abnormalities found at colonoscopy, by age and sex

	No abnormality found		Abnormality found						All colonoscopies
			Suspected cancers		1 or more polyps		Other diagnoses		
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number
Males									
55 years	91	17.1	26	4.9	332	62.5	82	15.4	531
65 years	65	10.7	32	5.3	417	68.7	93	15.3	607
Total	**156**	**13.7**	**58**	**5.1**	**749**	**65.8**	**175**	**15.4**	**1,138**
Females									
55 years	136	30.5	17	3.8	178	39.9	115	25.8	446
65 years	89	18.9	32	6.8	237	50.3	113	24.0	471
Total	**225**	**24.5**	**49**	**5.3**	**415**	**45.3**	**228**	**24.9**	**917**
Persons									
55 years	227	23.2	43	4.4	510	52.2	197	20.2	977
65 years	154	14.3	64	5.9	654	60.7	206	19.1	1,078
Total	**381**	**18.5**	**107**	**5.2**	**1,164**	**56.6**	**403**	**19.6**	**2,055**

Source: Colonoscopy Report form section 4.4–4.7

Notes
1. There were 6 colonoscopies in which one or more abnormalities were found but the type of abnormality was not specified or included unreliable abnormality records.
2. An unreliable abnormality record is one where abnormal examination was indicated but no information on suspected cancer, polyps or other diagnoses are included.
3. Percentages are the number of colonoscopies recorded with/without abnormalities as a percentage of the total number of colonoscopies recorded.
4. Abnormalities are mutually exclusive. Where a participant has multiple abnormalities, classification is made according to risk. Suspected cancers have highest risk, followed by polyps. Other diagnoses are classified with lowest risk.

- Of the 2,061 colonoscopy reports recorded, there were 2,055 with abnormality data recorded. Of these, 107 (5.2%) had suspected cancers detected.
- The percentage of suspected cancers was 5.9% for those aged 65 years compared with 4.4% for those aged 55 years.
- There were 1,164 colonoscopies (56.6%) where one or more polyps were detected. The percentage of colonoscopies reported with polyps detected was higher for males (65.8%) than for females (45.3%).
- There were no abnormalities found in 381 (18.5%) colonoscopies reported.

2.5 Overall outcomes

This section presents the overall outcomes from the National Program as at 31 July 2007 at a participant level based on people who returned a positive FOBT and who proceeded to colonoscopy. This section differs from the previous sections which presented FOBT test, primary health care consultation and colonoscopy-level data.

Program outcomes at key pathway points for the National Program are summarised in Figure 2.5.1. Table 2.5.1 tabulates the current screening outcomes for all people invited to participate in the National Program by state and territory.

For participants who returned more than one FOBT the result counted was selected according to the following order of precedence: a positive result was selected over any other result, and a negative result was selected over an inconclusive result.

A person who has had a colonoscopy is classified as having confirmed cancer, suspected cancer, adenoma or neither cancer nor adenoma. For participants with more than one polyp or cancer found at colonoscopy the most serious result was counted.

Data for colonoscopy outcomes are derived from information recorded on both the Colonoscopy Report form and the Histopathology Report form. As reporting by clinicians to the NBCSP is not mandatory, a participant may have a Colonoscopy Report form, a Histopathology Report form or both recorded in the Register. Outcomes are classified as follows:

- Confirmed cancers are those cancers confirmed by histopathology with or without a corresponding Colonoscopy Report form. Confirmed cancers are given a higher priority than suspected cancer.
- Suspected cancers are abnormalities detected at colonoscopy that the colonoscopist suspects to be cancer but are not yet confirmed by histopathology.
- Where a person has a confirmed or suspected cancer, this is given higher priority than adenomas. Adenoma classifications are described in Appendix B.
- Polyps awaiting histopathology are those people with polyps detected at colonoscopy that have not yet had an associated Histopathology Report form recorded.
- Participants recorded as having no cancer or adenoma are those participants that had no polyps or suspected cancers detected at colonoscopy, or had polyps detected at colonoscopy that were classified as non-adenomous by histopathology.

Table 2.5.1 is an interim one only, as virtually all cancers must ultimately be confirmed by pathology. Due to time lags in the pathway, positive predictive value is not able to be calculated until the end of the first phase of the NBCSP when all data have had sufficient time to be reported and recorded in the Register.

Summary

- Of the 436,153 invitation packs sent to eligible people since 7 August 2006, 146,301 people (33.5%) had a completed FOBT recorded by 31 July 2007.
- Of the people who had returned completed FOBT kits by 31 July 2007, there were 10,111 (6.9%) who had a positive FOBT result, 133,069 (91.0%) who had a negative FOBT result, 388 (0.3%) were inconclusive and 2,733 (1.9%) have no result recorded as the kit was incorrectly completed and could not be analysed. People who returned an incorrectly completed FOBT kit were sent another FOBT kit. People who received an inconclusive FOBT result were also sent another FOBT kit. Those people listed as having an inconclusive result or no result are those people who have not yet returned the subsequent kit.
- Of the 10,111 participants that had a positive FOBT result recorded, 7,993 (79.1%) were not recorded as having a colonoscopy by 31 July 2007.
- Of the 2,118 participants with a positive FOBT result that had colonoscopy details reported by 31 July 2007, there were 4 confirmed and 105 suspected cancers and 226 confirmed adenomas.
- There were 993 people with polyps detected at colonoscopy with histopathology results not yet received by the Register.

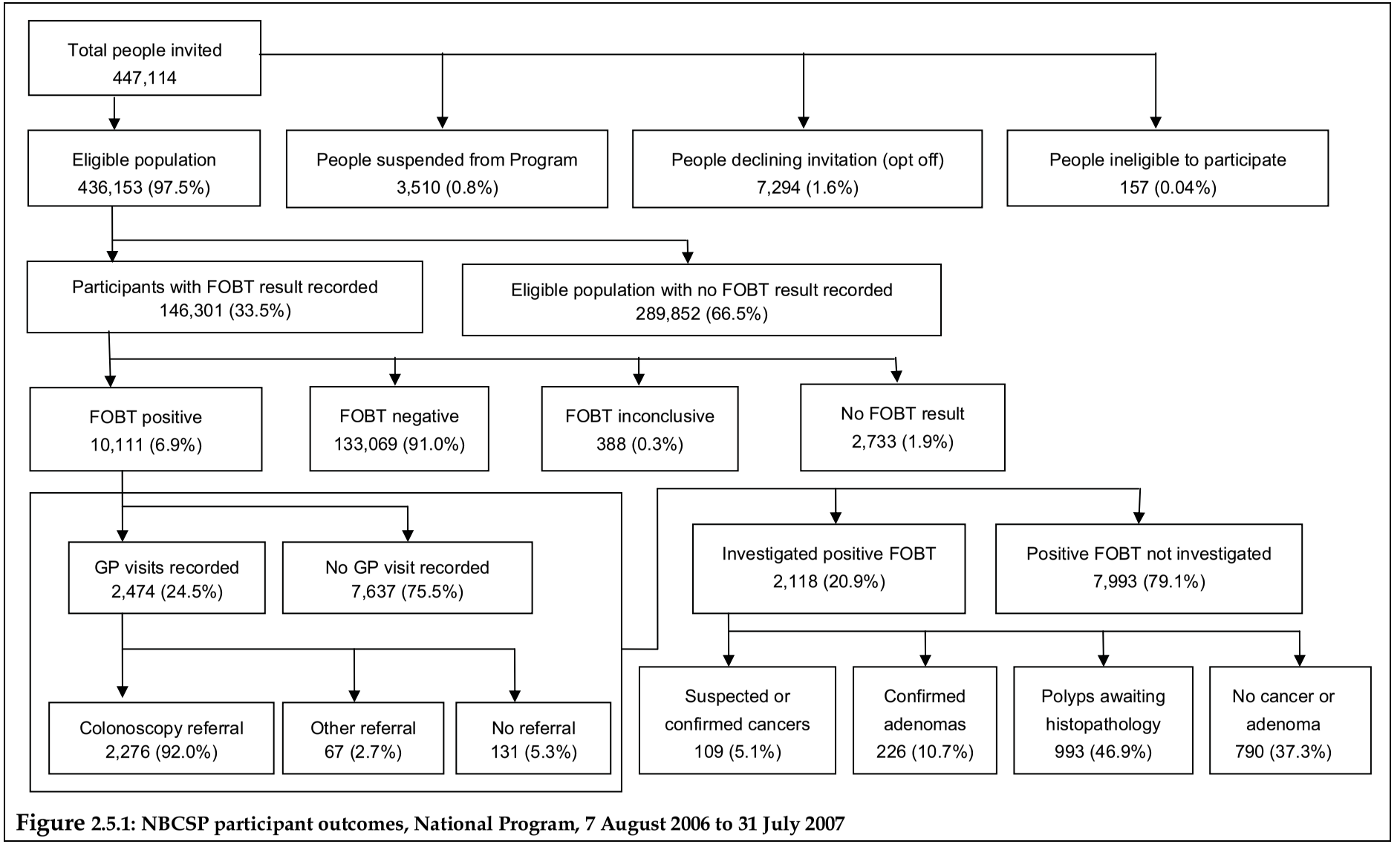


Figure 2.5.1: NBCSP participant outcomes, National Program, 7 August 2006 to 31 July 2007

Table 2.5.1: Preliminary overall participant summary outcomes, by state and territory, National Program, 7 August 2006 to 31 July 2007

				FOBT positive							
State	**Invitations issued[(a)]**	**Number screened[(b)]**	**Total positive FOBT**	**Colonoscopy not done or not recorded**	**No cancer or adenoma[(c)]**	**Polyps awaiting histo-pathology[(d)]**	**Confirmed diminutive adenoma[(e)]**	**Confirmed small adenoma[(e)]**	**Confirmed advanced adenoma[(e)]**	**Suspected cancer[(f)]**	**Confirmed cancer[(g)]**
NSW	178,487	63,684	4,207	3,233	373	486	14	10	46	45	0
Vic	113,739	38,905	2,772	2,220	240	219	14	9	38	31	1
Qld	68,920	19,783	1,393	1,139	71	101	16	18	34	12	2
WA	36,435	12,348	884	727	37	98	5	3	9	4	1
SA	20,538	5,843	396	308	38	40	1	0	4	5	0
Tas	7,179	2,038	209	180	15	7	1	0	4	2	0
ACT	8,472	3,222	212	148	16	42	0	0	0	6	0
NT	2,383	478	38	38	0	0	0	0	0	0	0
Australia	**436,153**	**146,301**	**10,111**	**7,993**	**790**	**993**	**51**	**40**	**135**	**105**	**4**

(a) 'Invitations issued' is the number of eligible people who were issued an invitation to screen in the NBCSP.
(b) 'Number screened' is the number of people who have completed an FOBT kit and results were forwarded to the Register.
(c) No cancers were suspected at colonoscopy or confirmed non-cancerous by histopathology; no polyps identified at colonoscopy, or polyps confirmed as non-adenomous at histopathology.
(d) Polyps detected at colonoscopy and sent to histopathology for analysis. No Histopathology Report received by Register.
(e) Confirmed adenoma figures are based on a combination of the colonoscopy and histopathology forms for a person received by the Register.
(f) Cancer suspected at colonoscopy but not yet confirmed by histopathology.
(g) Cancer confirmed by histopathology.

3 Pilot Program

The Bowel Cancer Screening Pilot Program ran between November 2002 and June 2004 at three sites: parts of Melbourne and Adelaide and in Mackay, Queensland. People aged 55 to 74 years on 1 January 2003 were invited to participate. The evaluation report of the Pilot Program recommended that the frequency of screening for the NBCSP should be biennial.

In order to assess rescreening rates and outcomes of rescreening, the current phase of the NBCSP has offered all members of the Pilot population the opportunity to screen, regardless of whether or not they participated in the initial screening round and regardless of where they now live in Australia.

People involved in the Pilot are identified as either 'participants' (having participated in the initial screening round) or 'invitees' (people re-invited after not having participated in the initial screening round). In order to assess changes in screening activities over time, this report distinguishes between the two groups for participation—FOBT completion and FOBT positivity rates. Due to the small number of people who have progressed through the screening pathway, other rates will not distinguish between the two groups in this report. Distinctions will be made in future reports as numbers increase.

The figures presented in this section are primarily from Mackay and Adelaide. The NBCSP for the Pilot population did not commence in Melbourne until 14 May 2007.

Age ranges are based on a person's age as at 1 January 2003. This is the date by which age cohorts were classified in the Pilot Program and will allow direct comparison to the original Pilot rates. Age-standardised rates are standardised to the 2001 Australian population.

3.1 Participation, Pilot Program

Invitations sent to both Pilot participants to re-screen and Pilot invitees to initially screen are included in this analysis. Invitations sent by mistake to people outside the target population were excluded from this report. These include 20 people outside the eligible ages of 55 to 74 years on 1 January 2003, 503 people who opted off the NBCSP after receiving an invitation to screen and 198 people who suspended participation in the NBCSP.

The NBCSP commenced on 7 August 2006 in Queensland and 22 January 2007 in South Australia. The NBCSP for Pilot participants and invitees commenced in Victoria on 14 May 2007. Therefore, the numbers and rates presented in some tables are not able to be used for comparison of participation between Pilot sites.

In addition, the participation rates presented in Table 3.1.1a represent an under-estimate of the true screening participation rate. This is because the number of invitations in the rate denominator covers all invitations sent up to 31 July 2007. However, the number of responses in the rate numerator only covers people who have received the invitation and had time to respond. This under-estimation does not affect comparisons between rates for different groups, but it does mean that the absolute levels of participation are likely to be understated.

Summary

- There were 28,084 invitations issued to people involved in the Pilot Program to participate in the NBCSP. Of these, 503 people elected to opt off and 198 suspended participation in the Program. A further 20 invitations were sent to people outside the target age of 55–74 years as at 1 January 2003. These invitations are excluded from all analyses in this report.
- There were 27,363 invitations issued by 31 July 2007 to eligible Pilot participants and invitees of which 14,057 were to previous participants to rescreen, and 13,306 to invitees who may wish to participate in this round.
- The participation rate for previous Pilot participants was 70.0% for Mackay, 62.4% for Adelaide and 39.8% for Melbourne.
- The participation rate for Pilot invitees was 19.2% for Mackay, 15.5% for Adelaide and 6.7% for Melbourne. These rates are significantly lower than the participation rates for previous Pilot participants.
- Melbourne commenced invitations for the Pilot Program in May 2007. This means that Pilot participants and invitees had less time to respond to the invitation than people in Mackay and Adelaide, resulting in lower participation rates.
- There was little difference in rescreening rates for different age cohorts or by sex for people who participated in the Pilot Program.
- Participation rates for people who did not participate in the initial Pilot screening were slightly higher for males (12.5%) than for females (11.9%).

Table 3.1.1a: Pilot respondents, by age, sex and previous Pilot participation, all sites

	Pilot participants		Pilot invitees		All invitations	
	Number	Rate	Number	Rate	Number	Rate
Males						
55–59	1,236	57.3	322	12.0	1,558	32.2
60–64	945	57.8	219	13.4	1,164	35.6
65–69	905	56.8	207	12.6	1,112	34.4
70–74	671	60.0	89	12.0	760	40.8
Total	**3,757**	**57.8**	**837**	**12.5**	**4,594**	**34.8**
ASR(A)	. .	**57.9**	. .	**12.5**	. .	**35.3**
95% CI	. .	**56.0–59.8**	. .	**11.6–13.4**	. .	**34.3–36.4**
Females						
55–59	1,390	56.3	315	13.2	1,705	35.1
60–64	1,155	59.5	191	12.0	1,346	38.2
65–69	1,048	56.6	170	10.2	1,218	34.7
70–74	742	57.4	108	11.1	850	37.5
Total	**4,335**	**57.4**	**784**	**11.9**	**5,119**	**36.2**
ASR(A)	. .	**57.4**	. .	**11.8**	. .	**36.3**
95% CI	. .	**55.6–59.3**	. .	**11.0–12.7**	. .	**35.3–37.4**
Persons						
55–59	2,626	56.8	637	12.6	3,263	33.7
60–64	2,100	58.7	410	12.7	2,510	36.9
65–69	1,953	56.7	377	11.4	2,330	34.5
70–74	1,413	58.6	197	11.5	1,610	39.0
Total	**8,092**	**57.6**	**1,621**	**12.2**	**9,713**	**35.5**
ASR(A)	. .	**57.6**	. .	**12.1**	. .	**35.8**
95% CI	. .	**56.4–58.9**	. .	**11.5–12.8**	. .	**35.1–36.5**

Notes

1. Respondents are defined as members of the eligible population who were sent an invitation to screen and who returned a Participant Details form and/or a completed FOBT kit.
2. Rates are the number of people involved in the Pilot Program responding to the invitation to participate in the NBCSP as a percentage of the total number of people involved in the Pilot Program who were sent an invitation to participate in the NBCSP.
3. 'Pilot participants' are those people who participated in the Pilot Program. 'Pilot invitees' are those people invited to participate in the Pilot Program but did not participate. 'All invitations' are the number of invitations to re-screen in the NBCSP sent to those in the Pilot Program.
4. Age cohorts refer to the age of the participant as at 1 January 2003.
5. ASR(A) refers to the age-standardised rate. The AIHW uses the Australian 2001 standard population for age standardisation.
6. Victoria commenced the screening of Pilot participants and invitees on 14 May 2007.

Table 3.1.1b: Pilot respondents, by age, sex and previous Pilot participation, Mackay

	Pilot participants		Pilot invitees		All invitations	
	Number	Rate	Number	Rate	Number	Rate
Males						
55–59	507	69.9	88	18.8	595	49.9
60–64	382	71.9	65	24.3	447	55.9
65–69	302	67.9	40	19.1	342	52.3
70–74	223	69.3	13	8.8	236	50.3
Total	**1,414**	**69.9**	**206**	**18.9**	**1,620**	**52.0**
ASR(A)	. .	**69.9**	. .	**18.3**	. .	**52.1**
95% CI	. .	**66.2–73.6**	. .	**15.8–21.0**	. .	**49.5–54.7**
Females						
55–59	520	70.3	79	22.5	599	54.9
60–64	389	72.8	43	20.7	432	58.2
65–69	321	67.7	46	23.5	367	54.8
70–74	251	68.4	15	8.2	266	48.5
Total	**1,481**	**70.0**	**183**	**19.5**	**1,664**	**54.5**
ASR(A)	. .	**70.0**	. .	**19.3**	. .	**54.4**
95% CI	. .	**66.4–73.8**	. .	**16.9–22.1**	. .	**51.9–57.1**
Persons						
55–59	1,027	70.1	167	20.4	1,194	52.3
60–64	771	72.4	108	22.7	879	57.0
65–69	623	67.8	86	21.2	709	53.5
70–74	474	68.8	28	8.5	502	49.3
Total	**2,895**	**70.0**	**389**	**19.2**	**3,284**	**53.3**
ASR(A)	. .	**69.9**	. .	**18.8**	. .	**53.2**
95% CI	. .	**67.4–72.5**	. .	**16.9–20.8**	. .	**51.4–55.1**

Notes

1. Respondents are defined as members of the eligible population who were sent an invitation to screen and who returned a Participant Details form and/or a completed FOBT kit.
2. Rates are the number of people involved in the Pilot Program responding to the invitation to participate in the NBCSP as a percentage of the total number of people involved in the Pilot Program who were sent an invitation to participate in the NBCSP.
3. 'Pilot participants' are those people who participated in the Pilot Program. 'Pilot invitees' are those people invited to participate in the Pilot Program but did not participate. 'All invitations' are the number of invitations to re-screen in the NBCSP sent to those in the Pilot Program.
4. Age cohorts refer to the age of the participant as at 1 January 2003.
5. ASR(A) refers to the age-standardised rate. The AIHW uses the Australian 2001 standard population for age standardisation.

Table 3.1.1c: Pilot respondents, by age, sex and previous Pilot participation, Adelaide

	Pilot participants		Pilot invitees		All invitations	
	Number	Rate	Number	Rate	Number	Rate
Males						
55–59	461	63.1	146	15.4	607	36.1
60–64	350	64.7	98	18.1	448	41.4
65–69	389	62.9	113	19.0	502	41.4
70–74	362	61.4	71	13.2	433	38.4
Total	**1,562**	**63.0**	**428**	**16.3**	**1,990**	**39.0**
ASR(A)	**. .**	**63.1**	**. .**	**16.4**	**. .**	**39.1**
95% CI	**. .**	**60.0–66.4**	**. .**	**14.9–18.1**	**. .**	**37.4–40.8**
Females						
55–59	527	63.0	146	16.7	673	39.3
60–64	495	66.1	93	15.9	588	44.0
65–69	459	62.1	81	13.2	540	40.0
70–74	409	56.0	89	12.5	498	34.5
Total	**1,890**	**61.8**	**409**	**14.7**	**2,299**	**39.4**
ASR(A)	**. .**	**62.2**	**. .**	**14.9**	**. .**	**39.7**
95% CI	**. .**	**59.0–65.4**	**. .**	**13.3–16.5**	**. .**	**38.0–41.5**
Persons						
55–59	988	63.0	292	16.0	1,280	37.7
60–64	845	65.5	191	16.9	1,036	42.8
65–69	848	62.5	194	16.1	1,042	40.6
70–74	771	58.4	160	12.8	931	36.2
Total	**3,452**	**62.4**	**837**	**15.5**	**4,289**	**39.2**
ASR(A)	**. .**	**62.6**	**. .**	**15.6**	**. .**	**39.4**
95% CI	**. .**	**60.5–64.7**	**. .**	**14.6–16.7**	**. .**	**38.2–40.6**

Notes

1. Respondents are defined as members of the eligible population who were sent an invitation to screen and who returned a Participant Details form and/or a completed FOBT kit.
2. Rates are the number of people involved in the Pilot Program responding to the invitation to participate in the NBCSP as a percentage of the total number of people involved in the Pilot Program who were sent an invitation to participate in the NBCSP.
3. 'Pilot participants' are those people who participated in the Pilot Program. 'Pilot invitees' are those people invited to participate in the Pilot Program but did not participate. 'All invitations' are the number of invitations to re-screen in the NBCSP sent to those in the Pilot Program.
4. Age cohorts refer to the age of the participant as at 1 January 2003.
5. ASR(A) refers to the age-standardised rate. The AIHW uses the Australian 2001 standard population for age standardisation.

Table 3.1.1d: Pilot respondents, by age, sex and previous Pilot participation, Melbourne

	Pilot participants		Pilot invitees		All invitations	
	Number	Rate	Number	Rate	Number	Rate
Males						
55–59	268	38.3	88	7.0	356	18.2
60–64	213	37.9	56	6.8	269	19.4
65–69	214	40.3	54	6.5	268	19.6
70–74	86	41.5	5	8.6	91	34.3
Total	**781**	**39.1**	**203**	**6.8**	**984**	**19.8**
ASR(A)	. .	**39.3**	. .	**7.1**	. .	**22.1**
95% CI	. .	**36.4–42.3**	. .	**5.5–9.0**	. .	**20.4–23.9**
Females						
55–59	343	38.5	90	7.8	433	21.1
60–64	271	41.2	55	6.9	326	22.5
65–69	268	42.0	43	5.0	311	20.9
70–74	82	42.1	4	5.1	86	31.4
Total	**964**	**40.5**	**192**	**6.7**	**1,156**	**21.9**
ASR(A)	. .	**40.7**	. .	**6.4**	. .	**23.5**
95% CI	. .	**37.8–43.7**	. .	**4.8–8.2**	. .	**21.8–25.3**
Persons						
55–59	611	38.4	178	7.4	789	19.7
60–64	484	39.7	111	6.9	595	21.0
65–69	482	41.2	97	5.7	579	20.3
70–74	168	41.8	9	6.6	177	32.8
Total	**1,745**	**39.8**	**395**	**6.7**	**2,140**	**20.9**
ASR(A)	. .	**40.0**	. .	**6.7**	. .	**22.8**
95% CI	. .	**38.0–42.1**	. .	**5.7–7.8**	. .	**21.6–24.0**

Notes

1. Respondents are defined as members of the eligible population who were sent an invitation to screen and who returned a Participant Details form and/or a completed FOBT kit.
2. Rates are the number of people involved in the Pilot Program responding to the invitation to participate in the NBCSP as a percentage of the total number of people involved in the Pilot Program who were sent an invitation to participate in the NBCSP.
3. 'Pilot participants' are those people who participated in the Pilot Program. 'Pilot invitees' are those people invited to participate in the Pilot Program but did not participate. 'All invitations' are the number of invitations to re-screen in the NBCSP sent to those in the Pilot Program.
4. Age cohorts refer to the age of the participant as at 1 January 2003.
5. ASR(A) refers to the age-standardised rate. The AIHW uses the Australian 2001 standard population for age standardisation.
6. Melbourne commenced invitations for the Pilot Program on 14 May 2007.

Table 3.1.2a: Pilot respondents, by sex and Aboriginal and Torres Strait Islander status

	Aboriginal and Torres Strait Islander		Non-Indigenous		Total	
	Number	Rate (per 100 population)	Number	Rate (per 100 population)	Number	Rate (per 100 population)
Males	13	n.a.	2,472	n.a.	2,485	n.a.
ASR(A)	. .	n.a.	. .	n.a.	. .	n.a.
95% CI	. .	n.a.	. .	n.a.	. .	n.a.
Females	15	n.a.	2,602	n.a.	2,617	n.a.
ASR(A)	. .	n.a.	. .	n.a.	. .	n.a.
95% CI	. .	n.a.	. .	n.a.	. .	n.a.
Persons	28	n.a.	5,074	n.a.	5,102	n.a.
ASR(A)	. .	n.a.	. .	n.a.	. .	n.a.
95% CI	. .	n.a.	. .	n.a.	. .	n.a.

Notes

1. There were 4,611 respondents with Aboriginal and Torres Strait Islander status not recorded. These are treated as missing values and are excluded from this analysis.
2. Respondents to the screening invitation are defined as members of the eligible population who were sent an invitation to screen and returned a Participant Details form and/or a completed FOBT kit.
3. Rates are the number of people responding as a percentage of the total number of the eligible population who were sent an invitation. These are unable to be calculated until the end of the first phase of the NBCSP.

- There were 28 people identifying as Aboriginal and Torres Strait Islander who responded to the invitation to participate in the Pilot Program.

Table 3.1.2b: Pilot respondents, by sex and South Sea Islander status

	South Sea Islander		Non-South Sea Islander		Total	
	Number	Rate (per 100 population)	Number	Rate (per 100 population)	Number	Rate (per 100 population)
Males						
Total	**3**	**n.a.**	**2,472**	**n.a.**	**2,475**	**n.a.**
ASR(A)	**. .**	**n.a.**	**. .**	**n.a.**	**. .**	**n.a.**
95% CI	**. .**	**n.a.**	**. .**	**n.a.**	**. .**	**n.a.**
Females						
Total	**9**	**n.a.**	**2,602**	**n.a.**	**2,611**	**n.a.**
ASR(A)	**. .**	**n.a.**	**. .**	**n.a.**	**. .**	**n.a.**
95% CI	**. .**	**n.a.**	**. .**	**n.a.**	**. .**	**n.a.**
Persons						
Total	**12**	**n.a.**	**5,074**	**n.a.**	**5,086**	**n.a.**
ASR(A)	**. .**	**n.a.**	**. .**	**n.a.**	**. .**	**n.a.**
Total	**. .**	**n.a.**	**. .**	**n.a.**	**. .**	**n.a.**

Notes

1. There were 4,627 respondents with South Sea Islander status not recorded. These are treated as missing values and are excluded from this analysis.
2. Respondents to the screening invitation are defined as members of the eligible population who were sent an invitation to screen and returned a Participant Details form and/or a completed FOBT kit.
3. Rates are the number of people responding as a percentage of the total number of the eligible population who were sent an invitation. These are unable to be calculated until the end of the first phase of the NBCSP.

- There were 12 people identifying as South Sea Islander who responded to the invitation to participate in the Pilot Program.

Table 3.1.3: Pilot respondents, by age, sex and preferred correspondence language

	Preferred correspondence language				Total	
	Language other than English		English			
	Number	Rate (per 100 population)	Number	Rate (per 100 population)	Number	Rate (per 100 population)
Males						
55–59	59	n.a.	1,499	n.a.	1,558	n.a.
60–64	42	n.a.	1,122	n.a.	1,164	n.a.
65–69	75	n.a.	1,037	n.a.	1,112	n.a.
70–74	54	n.a.	706	n.a.	760	n.a.
Total	**230**	**n.a.**	**4,364**	**n.a.**	**4,594**	**n.a.**
ASR(A)	**. .**	**n.a.**	**. .**	**n.a.**	**. .**	**n.a.**
95% CI	**. .**	**n.a.**	**. .**	**n.a.**	**. .**	**n.a.**
Females						
55–59	70	n.a.	1,635	n.a.	1,705	n.a.
60–64	76	n.a.	1,270	n.a.	1,346	n.a.
65–69	52	n.a.	1,166	n.a.	1,218	n.a.
70–74	33	n.a.	817	n.a.	850	n.a.
Total	**231**	**n.a.**	**4,888**	**n.a.**	**5,119**	**n.a.**
ASR(A)	**. .**	**n.a.**	**. .**	**n.a.**	**. .**	**n.a.**
95% CI	**. .**	**n.a.**	**. .**	**n.a.**	**. .**	**n.a.**
Persons						
55–59	129	n.a.	3,134	n.a.	3,263	n.a.
60–64	118	n.a.	2,392	n.a.	2,510	n.a.
65–69	127	n.a.	2,203	n.a.	2,330	n.a.
70–74	87	n.a.	1,523	n.a.	1,610	n.a.
Total	**461**	**n.a.**	**9,252**	**n.a.**	**9,713**	**n.a.**
ASR(A)	**. .**	**n.a.**	**. .**	**n.a.**	**. .**	**n.a.**
95% CI	**. .**	**n.a.**	**. .**	**n.a.**	**. .**	**n.a.**

Notes

1. Preferred correspondence language is self-reported to Medicare Australia through this or other programs. Participants are assumed to prefer to correspond in English unless otherwise stated.
2. Respondents to the screening invitation are defined as members of the eligible population who were sent an invitation to screen and returned a Participant Details form and/or a completed FOBT kit.
3. Rates are the number of people responding as a percentage of the total number of the eligible population who were sent an invitation. These are unable to be calculated until the end of the first phase of the NBCSP.

- There were 461 people who prefer to correspond with Medicare Australia in a language other than English who responded to the invitation to participate in the Pilot Program.

Table 3.1.4: Pilot respondents, by age, sex and disability status

	Disability status				Total	
	Severe or profound limitation		No severe or profound limitation			
	Number	Rate (per 100 population)	Number	Rate (per 100 population)	Number	Rate (per 100 population)
Males						
55–59	103	n.a.	1,267	n.a.	1,370	n.a.
60–64	67	n.a.	968	n.a.	1,035	n.a.
65–69	98	n.a.	916	n.a.	1,014	n.a.
70–74	73	n.a.	610	n.a.	683	n.a.
Total	**341**	**n.a.**	**3,761**	**n.a.**	**4,102**	**n.a.**
ASR(A)	**. .**	**n.a.**	**. .**	**n.a.**	**. .**	**n.a.**
95% CI	**. .**	**n.a.**	**. .**	**n.a.**	**. .**	**n.a.**
Females						
55–59	72	n.a.	1,440	n.a.	1,512	n.a.
60–64	98	n.a.	1,094	n.a.	1,192	n.a.
65–69	93	n.a.	1,001	n.a.	1,094	n.a.
70–74	93	n.a.	672	n.a.	765	n.a.
Total	**356**	**n.a.**	**4,207**	**n.a.**	**4,563**	**n.a.**
ASR(A)	**. .**	**n.a.**	**. .**	**n.a.**	**. .**	**n.a.**
95% CI	**. .**	**n.a.**	**. .**	**n.a.**	**. .**	**n.a.**
Persons						
55–59	175	n.a.	2,707	n.a.	2,882	n.a.
60–64	165	n.a.	2,062	n.a.	2,227	n.a.
65–69	191	n.a.	1,917	n.a.	2,108	n.a.
70–74	166	n.a.	1,282	n.a.	1,448	n.a.
Total	**697**	**n.a.**	**7,968**	**n.a.**	**8,665**	**n.a.**
ASR(A)	**. .**	**n.a.**	**. .**	**n.a.**	**. .**	**n.a.**
95% CI	**. .**	**n.a.**	**. .**	**n.a.**	**. .**	**n.a.**

Notes

1. There were 1,048 respondents with disability status not stated. These are treated as missing data and are excluded from this analysis.
2. A 'profound' disability status indicates that a person always needs assistance with self-care, movement and/or communications activities. A 'severe' disability status indicates that a person sometimes needs assistance with these activities.
3. Respondents to the screening invitation are defined as members of the eligible population who were sent an invitation to screen and returned a Participant Details form and/or a completed FOBT kit.
4. Rates are the number of people responding as a percentage of the total number of the eligible population who were sent an invitation.

- There were 697 people reporting severe or profound limitations who responded to the invitation to participate in the Pilot Program.

3.2 FOBT outcomes, Pilot Program

This section of the report covers all FOBT results that were returned to the Register as at 31 July 2007. Each person was initially sent one FOBT kit containing two samples to be completed and returned to the pathology laboratory for analysis. In some cases a person has returned more than one FOBT. In these cases all of their results are included. Results were excluded where the respondent was outside the age of 55 to 74 years as at 1 January 2003, or where the respondent opted off or suspended from the NBCSP.

Pathologists categorise the returned FOBT into one of two groups: correctly completed and incorrectly completed. Respondents with FOBTs that are not correctly completed are requested to complete a subsequent FOBT.

FOBT results are classified by pathologists as either positive (blood is detected in either sample), negative (blood is not detected in either sample) or inconclusive.

The classification of FOBT by return status and positivity is based only on returned kits. In analysing return status, the dependent variable is whether or not the test was correctly completed. In analysing positivity rates, only correctly completed FOBTs are included in the denominator and the dependent variable is whether or not the result was positive (that is, whether or not blood was detected in the sample).

Table 3.2.1a: Pilot FOBT completion status, all sites

	Pilot participants				Pilot invitees				All FOBTs
	FOBT correctly completed		FOBT incorrectly completed		FOBT correctly completed		FOBT incorrectly completed		
	Number	Rate (per 100 FOBTs)	Number	Rate (per 100 FOBTs)	Number	Rate (per 100 FOBTs)	Number	Rate (per 100 FOBTs)	Number
Males									
55–59	1,213	97.7	28	2.3	309	95.4	15	4.6	1,565
60–64	912	96.9	29	3.1	216	97.3	6	2.7	1,163
65–69	881	96.7	30	3.3	195	95.1	10	4.9	1,116
70–74	653	96.3	25	3.7	81	93.1	6	6.9	765
Total	**3,659**	**97.0**	**112**	**3.0**	**801**	**95.6**	**37**	**4.4**	**4,609**
ASR(A)	**. .**	**97.0**	**. .**	**3.0**	**. .**	**95.4**	**. .**	**4.6**	**. .**
95% CI	**. .**	**93.9–100.2**	**. .**	**2.5–3.6**	**. .**	**88.5–102.6**	**. .**	**3.2–6.5**	**. .**
Females									
55–59	1,355	96.9	43	3.1	294	91.6	27	8.4	1,719
60–64	1,124	95.7	50	4.3	177	92.2	15	7.8	1,366
65–69	1,010	94.9	54	5.1	152	84.4	28	15.6	1,244
70–74	720	94.6	41	5.4	96	88.1	13	11.9	870
Total	**4,209**	**95.7**	**188**	**4.3**	**719**	**89.7**	**83**	**10.3**	**5,199**
ASR(A)	**. .**	**95.7**	**. .**	**4.3**	**. .**	**89.5**	**. .**	**10.5**	**. .**
95% CI	**. .**	**92.8–98.7**	**. .**	**3.7–4.9**	**. .**	**82.9–96.4**	**. .**	**8.3–13.1**	**. .**
Persons									
55–59	2,568	97.3	71	2.7	603	93.5	42	6.5	3,284
60–64	2,036	96.3	79	3.7	393	94.9	21	5.1	2,529
65–69	1,891	95.7	84	4.3	347	90.1	38	9.9	2,360
70–74	1,373	95.4	66	4.6	177	90.3	19	9.7	1,635
Total	**7,868**	**96.3**	**300**	**3.7**	**1,520**	**92.7**	**120**	**7.3**	**9,808**
ASR(A)	**. .**	**96.3**	**. .**	**3.7**	**. .**	**92.5**	**. .**	**7.5**	**. .**
95% CI	**. .**	**94.2–98.5**	**. .**	**3.3–4.1**	**. .**	**87.7–97.4**	**. .**	**6.2–9.0**	**. .**

Notes

1. FOBT refers to an entire test kit. Completion status is determined by the pathologist performing the FOBT analysis. It indicates the status of the FOBT received by the laboratory.
2. 'Pilot participants' are those people who participated in the Pilot Program. 'Pilot invitees' are those people invited to participate in the Pilot Program but did not participate. 'All invitations' are the number of invitations to re-screen in the NBCSP sent to those in the Pilot Program.
3. A participant or invitee may complete more than one FOBT kit.
4. Rates are the number of FOBT kits received in each status category as a percentage of the total number of FOBT kits received.
5. Rates add to 100 across the row.
6. Age cohorts refer to the age of the participant as at 1 January 2003.

- There were 9,808 FOBT kits returned by 31 July 2007 of which 8,168 were from previous Pilot participants and 1,640 were from Pilot invitees who had not previously participated in bowel screening.
- The majority of kits were correctly completed. The rate of correctly completed FOBTs was higher for previous Pilot participants (96.3%) than invitees who were participating for the first time (92.5%). This difference was not statistically significant.

Table 3.2.1b: Pilot FOBT completion status, by preferred correspondence language

	Language other than English				English				
	FOBT correctly completed		FOBT incorrectly completed		FOBT correctly completed		FOBT incorrectly completed		All FOBTs
	Number	Rate (per 100 FOBTs)	Number	Rate (per 100 FOBTs)	Number	Rate (per 100 FOBTs)	Number	Rate (per 100 FOBTs)	Number
Males									
55–59	56	96.6	2	3.4	1,466	97.3	41	2.7	1,565
60–64	38	90.5	4	9.5	1,090	97.2	31	2.8	1,163
65–69	72	94.7	4	5.3	1,004	96.5	36	3.5	1,116
70–74	50	94.3	3	5.7	684	96.1	28	3.9	765
Total	**216**	**94.3**	**13**	**5.7**	**4,244**	**96.9**	**136**	**3.1**	**4,609**
ASR(A)	**. .**	**94.1**	**. .**	**5.9**	**. .**	**96.9**	**. .**	**3.1**	**. .**
95% CI	**. .**	**81.4–108.2**	**. .**	**3.0–10.2**	**. .**	**93.9–99.8**	**. .**	**2.6–3.7**	**. .**
Females									
55–59	64	90.1	7	9.9	1,585	96.2	63	3.8	1,719
60–64	70	87.5	10	12.5	1,231	95.7	55	4.3	1,366
65–69	46	90.2	5	9.8	1,116	93.5	77	6.5	1,244
70–74	30	90.9	3	9.1	786	93.9	51	6.1	870
Total	**210**	**89.4**	**25**	**10.6**	**4,718**	**95.0**	**246**	**5.0**	**5,199**
ASR(A)	**. .**	**89.6**	**. .**	**10.4**	**. .**	**95.0**	**. .**	**5.0**	**. .**
95% CI	**. .**	**77.6–102.9**	**. .**	**6.6–15.4**	**. .**	**92.3–97.8**	**. .**	**4.4–5.6**	**. .**
Persons									
55–59	120	93.0	9	7.0	3,051	96.7	104	3.3	3,284
60–64	108	88.5	14	11.5	2,321	96.4	86	3.6	2,529
65–69	118	92.9	9	7.1	2,120	94.9	113	5.1	2,360
70–74	80	93.0	6	7.0	1,470	94.9	79	5.1	1,635
Total	**426**	**91.8**	**38**	**8.2**	**8,962**	**95.9**	**382**	**4.1**	**9,808**
ASR(A)	**. .**	**91.8**	**. .**	**8.2**	**. .**	**95.9**	**. .**	**4.1**	**. .**
95% CI	**. .**	**83.2–101.1**	**. .**	**5.8–11.2**	**. .**	**93.9–97.9**	**. .**	**3.7–4.6**	**. .**

Notes

1. Preferred correspondence language is self-reported to Medicare Australia through this or other programs. Respondents are assumed to prefer to correspond in English unless otherwise indicated.
2. FOBT refers to an entire test kit.
3. A participant may complete more than one FOBT kit.
4. Rates are the number of FOBT kits received in each status category as a percentage of the total number of FOBT kits received.
5. Rates add to 100 across the row.
6. Age cohorts refer to the age of the participant as at 1 January 2003.

- The rate of correctly completed FOBTs was lower for people who indicated that they prefer to correspond with Medicare Australia in a language other than English (91.8%) than those who are assumed to prefer to correspond in English (95.9%).

Table 3.2.1c: Pilot FOBT completion status, by disability status

	Severe or profound limitation				No severe or profound limitation				All FOBTs
	FOBT correctly completed		FOBT incorrectly completed		FOBT correctly completed		FOBT incorrectly completed		
	Number	Rate (per 100 FOBTs)	Number	Rate (per 100 FOBTs)	Number	Rate (per 100 FOBTs)	Number	Rate (per 100 FOBTs)	Number
Males									
55–59	100	97.1	3	2.9	1,239	97.3	35	2.7	1,377
60–64	61	91.0	6	9.0	944	97.4	25	2.6	1,036
65–69	96	97.0	3	3.0	891	97.0	28	3.0	1,018
70–74	65	90.3	7	9.7	593	96.7	20	3.3	685
Total	**322**	**94.4**	**19**	**5.6**	**3,667**	**97.1**	**108**	**2.9**	**4,116**
ASR(A)	**. .**	**94.1**	**. .**	**5.9**	**. .**	**97.1**	**. .**	**2.9**	**. .**
95% CI	**. .**	**83.9–105.2**	**. .**	**3.5–9.3**	**. .**	**94.0–100.3**	**. .**	**2.4–3.5**	**. .**
Females									
55–59	69	94.5	4	5.5	1,400	96.4	53	3.6	1,526
60–64	91	85.8	15	14.2	1,063	96.1	43	3.9	1,212
65–69	85	87.6	12	12.4	964	94.1	60	5.9	1,121
70–74	91	91.0	9	9.0	645	94.0	41	6.0	786
Total	**336**	**89.4**	**40**	**10.6**	**4,072**	**95.4**	**197**	**4.6**	**4,645**
ASR(A)	**. .**	**90.1**	**. .**	**9.9**	**. .**	**95.3**	**. .**	**4.7**	**. .**
95% CI	**. .**	**80.2–100.8**	**. .**	**7.0–13.7**	**. .**	**92.4–98.3**	**. .**	**4.0–5.4**	**. .**
Persons									
55–59	169	96.0	7	4.0	2,639	96.8	88	3.2	2,903
60–64	152	87.9	21	12.1	2,007	96.7	68	3.3	2,248
65–69	181	92.3	15	7.7	1,855	95.5	88	4.5	2,139
70–74	156	90.7	16	9.3	1,238	95.3	61	4.7	1,471
Total	**658**	**91.8**	**59**	**8.2**	**7,739**	**96.2**	**305**	**3.8**	**8,761**
ASR(A)	**. .**	**92.0**	**. .**	**8.0**	**. .**	**96.2**	**. .**	**3.8**	**. .**
95% CI	**. .**	**85.0–99.5**	**. .**	**6.0–10.3**	**. .**	**94.0–98.4**	**. .**	**3.4–4.3**	**. .**

Notes

1. FOBT refers to an entire test kit.
2. A participant may complete more than one FOBT kit.
3. Rates are the number of FOBT kits received in each status category as a percentage of the total number of FOBT kits received.
4. Rates add to 100 across the row.
5. Age cohorts refer to the age of the participant as at 1 January 2003.

- The rate of correctly completed FOBTs was lower for people who report a severe or profound limitation (91.8%) than those who report no severe or profound limitation (96.2%).

Table 3.2.2a: Pilot FOBT results, participants

	FOBT positive		FOBT negative		FOBT inconclusive		All results
	Number	Rate (per 100 results)	Number	Rate (per 100 results)	Number	Rate (per 100 results)	Number
Males							
55–59	72	5.9	1,131	93.2	10	0.8	1,213
60–64	71	7.8	834	91.4	7	0.8	912
65–69	114	12.9	760	86.3	7	0.8	881
70–74	63	9.6	582	89.1	8	1.2	653
Total	**320**	**8.7**	**3,307**	**90.4**	**32**	**0.9**	**3,659**
ASR(A)	. .	**8.7**	. .	**90.4**	. .	**0.9**	. .
95% CI	. .	**7.8–9.7**	. .	**87.4–93.6**	. .	**0.6–1.2**	. .
Females							
55–59	82	6.1	1,267	93.5	6	0.4	1,355
60–64	82	7.3	1,027	91.4	15	1.3	1,124
65–69	90	8.9	909	90.0	11	1.1	1,010
70–74	70	9.7	642	89.2	8	1.1	720
Total	**324**	**7.7**	**3,845**	**91.4**	**40**	**1.0**	**4,209**
ASR(A)	. .	**7.7**	. .	**91.3**	. .	**1.0**	. .
95% CI	. .	**6.8–8.7**	. .	**88.2–94.5**	. .	**0.7–1.3**	. .
Persons							
55–59	154	6.0	2,398	93.4	16	0.6	2,568
60–64	153	7.5	1,861	91.4	22	1.1	2,036
65–69	204	10.8	1,669	88.3	18	1.0	1,891
70–74	133	9.7	1,224	89.1	16	1.2	1,373
Total	**644**	**8.2**	**7,152**	**90.9**	**72**	**0.9**	**7,868**
ASR(A)	. .	**8.2**	. .	**90.9**	. .	**0.9**	. .
95% CI	. .	**7.6–8.8**	. .	**88.8–93.0**	. .	**0.7–1.2**	. .

Notes

1. Rates are the number of FOBT results in each category in terms of 'positive', 'negative' and 'inconclusive' as a percentage of the total number of correctly completed FOBTs.
2. Age cohorts refer to the participant's age as at 1 January 2003.

- There were 7,868 correctly completed FOBTs recorded for the period 7 August 2006 to 31 July 2007 for previous Pilot participants. Of these, 644 (8.2%) were positive and 72 (0.9%) were inconclusive.
- The percentage of positive results was 8.7% for males and 7.7% for females.
- The percentage of positive results was lowest in the 55–59 year age cohort (6.0%) and highest for people in the 65–69 year age cohort (10.8%).

Table 3.2.2b: Pilot FOBT results, invitees

	FOBT positive		FOBT negative		FOBT inconclusive		All results
	Number	Rate (per 100 results)	Number	Rate (per 100 results)	Number	Rate (per 100 results)	Number
Males							
55–59	39	12.6	267	86.4	3	1.0	309
60–64	28	13.0	185	85.6	3	1.4	216
65–69	30	15.4	165	84.6	0	0.0	195
70–74	7	8.6	74	91.4	0	0.0	81
Total	**104**	**13.0**	**691**	**86.3**	**6**	**0.7**	**801**
ASR(A)	. .	**12.5**	. .	**86.8**	. .	**0.7**	. .
95% CI	. .	**10.1–15.3**	. .	**80.1–93.9**	. .	**0.2–1.5**	. .
Females							
55–59	16	5.4	275	93.5	3	1.0	294
60–64	9	5.1	167	94.4	1	0.6	177
65–69	17	11.2	134	88.2	1	0.7	152
70–74	8	8.3	87	90.6	1	1.0	96
Total	**50**	**7.0**	**663**	**92.2**	**6**	**0.8**	**719**
ASR(A)	. .	**7.2**	. .	**92.0**	. .	**0.8**	. .
95% CI	. .	**4.8–10.1**	. .	**85.3–99.1**	. .	**0.4–1.6**	. .
Persons							
55–59	55	9.1	542	89.9	6	1.0	603
60–64	37	9.4	352	89.6	4	1.0	393
65–69	47	13.5	299	86.2	1	0.3	347
70–74	15	8.5	161	91.0	1	0.6	177
Total	**154**	**10.1**	**1,354**	**89.1**	**12**	**0.8**	**1,520**
ASR(A)	. .	**10.0**	. .	**89.2**	. .	**0.8**	. .
95% CI	. .	**8.5–11.8**	. .	**84.3–94.3**	. .	**0.4–1.3**	. .

Notes

1. Rates are the number of FOBT results in each category in terms of 'positive', 'negative' and 'inconclusive' as a percentage of the total number of correctly completed FOBTs.
2. Age cohorts refer to the participant's age as at 1 January 2003.

- There were 1,520 correctly completed FOBTs recorded for the period 7 August 2006 to 31 July 2007 for previous Pilot invitees. Of these, 154 (10.1%) were positive and 12 (0.8%) were inconclusive.
- The percentage of positive results was 13.0% for males and 7.0% for females.
- The percentage of positive results was lowest in the 70–74 year age cohort (8.5%) and highest for people in the 65–69 year age cohort (13.5%).

Table 3.2.3a: Pilot FOBT positivity rates, participants

	Number of positive results	Rate (per 100 valid results)	Total number of valid results
Males			
55–59	72	6.0	1,203
60–64	71	7.8	905
65–69	114	13.0	874
70–74	63	9.8	645
Total	**320**	**8.8**	**3,627**
ASR(A)	. .	**8.8**	. .
95% CI	. .	**7.8–9.8**	. .
Females			
55–59	82	6.1	1,349
60–64	82	7.4	1,109
65–69	90	9.0	999
70–74	70	9.8	712
Total	**324**	**7.8**	**4,169**
ASR(A)	. .	**7.8**	. .
95% CI	. .	**6.9–8.8**	. .
Persons			
55–59	154	6.0	2,552
60–64	153	7.6	2,014
65–69	204	10.9	1,873
70–74	133	9.8	1,357
Total	**644**	**8.3**	**7,796**
ASR(A)	. .	**8.3**	. .
95% CI	. .	**7.6–8.9**	. .

Notes

1. Rates are the number of FOBT positive results as a percentage of the total number of valid results.
2. A valid result is either positive or negative. Inconclusive results are excluded.
3. Age cohorts refer to the participant's age as at 1 January 2003.

- The overall positivity rate for Pilot participants was 8.3%. The lowest positivity rate was in the 55–59 year age cohort (6.0%) and the highest was in the 65–69 year age cohort (10.9%).
- Positivity rates were 8.8% for males compared with 7.8% for females.

Table 3.2.3b: Pilot FOBT positivity rates, invitees

	Number of positive results	Rate (per 100 valid results)	Total number of valid results
Males			
55–59	39	12.7	306
60–64	28	13.1	213
65–69	30	15.4	195
70–74	7	8.6	81
Total	**104**	**13.1**	**795**
ASR(A)	. .	**12.6**	. .
95% CI	. .	**10.2–15.4**	. .
Females			
55–59	16	5.5	291
60–64	9	5.1	176
65–69	17	11.3	151
70–74	8	8.4	95
Total	**50**	**7.0**	**713**
ASR(A)	. .	**7.2**	. .
95% CI	. .	**4.9–10.1**	. .
Persons			
55–59	55	9.2	597
60–64	37	9.5	389
65–69	47	13.6	346
70–74	15	8.5	176
Total	**154**	**10.2**	**1,508**
ASR(A)	. .	**10.1**	. .
95% CI	. .	**8.5–11.9**	. .

Notes

1. Rates are the number of FOBT positive results as a percentage of the total number of valid results.
2. A valid result is either positive or negative. Inconclusive results are excluded.
3. Age cohorts refer to the participant's age as at 1 January 2003.

- The overall positivity rate for Pilot invitees was 10.2%. The lowest positivity rate was in the 70–74 year age cohort (8.5%) and the highest was in the 65–69 year age cohort (13.6%).
- The positivity rate for males was 13.1% compared with 7.0% for females. This difference was statistically significant.

3.3 GP and other primary health care practitioner visits, Pilot Program

Only primary health care practitioner consultations recorded in the Register at 31 July 2007 are included in this section.

Table 3.3.1: Primary health care consultations recorded following a positive FOBT result, by age, sex and Pilot site

	Mackay		Adelaide		Melbourne		All sites	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Males								
Total	**86**	**56.2**	**47**	**28.0**	**22**	**21.4**	**155**	**36.6**
ASR(A)	**. .**	**55.9**	**. .**	**27.8**	**. .**	**20.7**	**. .**	**36.7**
95% CI	**. .**	**44.5–69.3**	**. .**	**20.0–37.5**	**. .**	**12.2–32.3**	**. .**	**31.0–43.2**
Females								
Total	**65**	**58.6**	**63**	**40.4**	**12**	**11.2**	**140**	**37.4**
ASR(A)	**. .**	**57.9**	**. .**	**41.5**	**. .**	**11.9**	**. .**	**37.7**
95% CI	**. .**	**46.6–71.5**	**. .**	**33.6–51.0**	**. .**	**3.8–24.3**	**. .**	**32.0–44.2**
Persons								
55–59	39	50.0	28	38.9	10	16.9	77	36.8
60–64	34	58.6	23	32.4	11	18.0	68	35.8
65–69	42	56.8	34	33.3	11	14.7	87	34.7
70–74	36	66.7	25	31.6	2	13.3	63	42.6
Total	**151**	**57.2**	**110**	**34.0**	**34**	**16.2**	**295**	**37.0**
ASR(A)	**. .**	**57.1**	**. .**	**34.5**	**. .**	**16.0**	**. .**	**37.3**
95% CI	**. .**	**48.2–67.1**	**. .**	**28.1–41.9**	**. .**	**10.5–23.2**	**. .**	**33.0–41.9**

Notes

1. Percentages are the number of primary health care consultations recorded following a positive FOBT as a percentage of the total number of positive FOBT results.
2. Data for age groups by sex are suppressed due to small cell values.
3. Age cohorts refer to the participant's age as at 1 January 2003.
4. Melbourne commenced the Pilot Program on 14 May 2007.

- There were 295 primary health care consultations following a positive FOBT result recorded by the Register for the period 7 August 2006 to 31 July 2007. In Mackay this represented 57.2% of the number of positive FOBTs, but only 34.0% in Adelaide and 16.2% in Melbourne due to reporting time lags.

Table 3.3.2: Referrals for colonoscopy or other examination following a positive FOBT result

	Referral for colonoscopy		Referral for other examination		No referral		All recorded GP visits
	Number	Rate (per 100 GP visits)	Number	Rate (per 100 GP visits)	Number	Rate (per 100 GP visits)	Number
Males							
Total	**131**	**84.5**	**8**	**5.2**	**16**	**10.3**	**155**
ASR(A)	**. .**	**85.0**	**. .**	**5.3**	**. .**	**9.7**	**. .**
95% CI	**. .**	**70.6–101.4**	**. .**	**2.2–10.6**	**. .**	**5.4–15.9**	**. .**
Females							
Total	**124**	**88.6**	**5**	**3.6**	**11**	**7.9**	**140**
ASR(A)	**. .**	**89.1**	**. .**	**3.3**	**. .**	**7.7**	**. .**
95% CI	**. .**	**74.7–105.5**	**. .**	**0.4–9.0**	**. .**	**3.5–14.2**	**. .**
Persons							
55–59	70	90.9	1	1.3	6	7.8	77
60–64	60	88.2	4	5.9	4	5.9	68
65–69	75	86.2	3	3.4	9	10.3	87
70–74	50	79.4	5	7.9	8	12.7	63
Total	**255**	**86.4**	**13**	**4.4**	**27**	**9.2**	**295**
ASR(A)	**. .**	**86.9**	**. .**	**4.3**	**. .**	**8.8**	**. .**
95% CI	**. .**	**76.3–98.4**	**. .**	**2.3–7.4**	**. .**	**5.8–12.9**	**. .**

Notes

1. Rates are the number of consultations following a positive FOBT who received/not received a referral for either colonoscopy or other examination as a percentage of the total number of consultations recorded following a positive FOBT result.
2. Data for age groups by sex are suppressed due to small cell values.
3. Age cohorts refer to the participant's age as at 1 January 2003.

- Of the 295 primary health care consultations recorded following a positive FOBT result, 255 (86.4%) resulted in referral for colonoscopy, 13 (4.4%) in referral for other examination and 27 (9.2%) in no referral. Reasons for non-referral for colonoscopy by a practitioner may include previous diagnosis of bowel cancer; limited life expectancy of the patient; the patient having had a colonoscopy within the previous 18 months; patient declines a colonoscopy; or patient has a significant co-morbidity or other medical condition precluding them from undergoing a colonoscopy.

3.4 Colonoscopy, Pilot Program

Only Colonoscopy Report forms recorded in the Register at 31 July 2007 are included in this section.

Table 3.4.1: Colonoscopies recorded following a positive FOBT result, by age, sex and Pilot site

	Mackay		Adelaide		Melbourne		All sites	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Males								
Total	**41**	**26.8**	**42**	**25.0**	**6**	**5.8**	**89**	**21.0**
ASR(A)	**. .**	**27.3**	**. .**	**24.3**	**. .**	**4.3**	**. .**	**21.0**
95% CI	**. .**	**19.4–37.1**	**. .**	**17.1–33.5**	**. .**	**1.6–9.5**	**. .**	**16.7–26.0**
Females								
Total	**30**	**27.0**	**31**	**19.9**	**1**	**0.9**	**62**	**16.6**
ASR(A)	**. .**	**26.9**	**. .**	**20.1**	**. .**	**1.0**	**. .**	**16.3**
95% CI	**. .**	**19.2–37.0**	**. .**	**12.9–29.4**	**. .**	**–0.8–9.1**	**. .**	**12.0–21.4**
Persons								
55–59	19	24.4	15	20.8	0	0.0	34	16.3
60–64	17	29.3	14	19.7	5	8.2	36	18.9
65–69	21	28.4	27	26.5	2	2.7	50	19.9
70–74	14	25.9	17	21.5	0	0.0	31	20.9
Total	**71**	**26.9**	**73**	**22.5**	**7**	**3.3**	**151**	**18.9**
ASR(A)	**. .**	**26.8**	**. .**	**21.9**	**. .**	**2.7**	**. .**	**18.7**
95% CI	**. .**	**20.9–33.9**	**. .**	**17.0–27.8**	**. .**	**1.1–5.6**	**. .**	**15.8–22.0**

Notes

1. Percentages of colonoscopy follow-up are the number of colonoscopies recorded following a positive FOBT as a percentage of the total number of positive FOBT results.
2. Data for age groups by sex are suppressed due to small cell values.
3. Age cohorts refer to the participant's age as at 1 January 2003.
4. Melbourne commenced the Pilot Program on 14 May 2007.

- There were 151 colonoscopies recorded following a positive FOBT result between 7 August 2006 and 31 July 2007 as part of the Pilot Program. This represented 26.9% of the number of positive FOBT results recorded for Mackay and 22.5% for Adelaide.

3.5 Overall outcomes, Pilot Program

This section presents the overall outcomes from the Pilot Program as at 31 July 2007 at a participant level based on people who returned a positive FOBT and who proceeded to colonoscopy. This section differs from the previous sections that covered FOBT, consultation and colonoscopy level data.

Outcomes at key pathway points for the Pilot Program are summarised in Figure 3.5.1. Current screening outcomes for all people invited to participate in the Pilot Program are tabulated by Pilot site in Table 3.5.1 and by previous Pilot participation in Table 3.5.2.

For participants who returned more than one FOBT, the results were counted according to the following order of precedence: a positive result was selected over any other result, and a negative result was selected over an inconclusive result.

A person who has had a colonoscopy is classified as having confirmed cancer, suspected cancer, adenoma or neither cancer nor adenoma. For those people with more than one polyp or cancer found at colonoscopy the most serious result was counted.

Data for colonoscopy outcomes are derived from information recorded on both the Colonoscopy Report form and the Histopathology Report form. As reporting by clinicians to the NBCSP is not mandatory, a person may have a Colonoscopy Report form, a Histopathology Report form or both recorded in the Register. Outcomes are classified as follows:

- Confirmed cancers are those cancers confirmed by histopathology with or without a corresponding Colonoscopy Report form. Confirmed cancers are given a higher priority than suspected cancer.
- Suspected cancers are abnormalities detected at colonoscopy that the colonoscopist suspects to be cancer but are not yet confirmed by histopathology.
- Where a person has a confirmed or suspected cancer, this is given higher priority than adenomas. Adenoma classifications are described in Appendix B.
- Polyps awaiting histopathology are those people with polyps detected at colonoscopy that have not yet had an associated Histopathology Report form recorded.
- People recorded as having no cancer or adenoma are those that had no polyps or suspected cancers detected at colonoscopy, or had polyps detected at colonoscopy that were classified as non-adenomous by histopathology.

Tables 3.5.1 and 3.5.2 are interim tables only, as virtually all cancers must ultimately be confirmed by pathology. Due to time lags in the pathway, positive predictive value is not able to be calculated until the end of the first phase of the NBCSP when all data have had sufficient time to be reported and recorded in the Register.

Data presented in Table 3.5.1 were greatly affected by the late commencement of the Pilot Program in Melbourne, and therefore should be interpreted with caution.

Summary

- There were 28,084 invitations to screen in the NBCSP sent to people involved in the Pilot Program. Of these, 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.
- Of the 27,363 invitations sent to eligible Pilot participants and invitees since 7 August 2006, there were 9,538 people (34.9%) who participated by returning a completed FOBT by 31 July 2007.
- Of those people who returned FOBT kits, 798 (8.4%) had a positive result.
- Of the 798 people with a positive result, 633 (79.3%) were not recorded as having had a colonoscopy.
- Of the 165 people with positive FOBT results who underwent a colonoscopy and have results recorded in the Register, there were 5 suspected and 1 confirmed cancers and 37 confirmed adenomas.
- There are 62 people with polyps detected at colonoscopy with histopathology details not yet recorded in the Register.

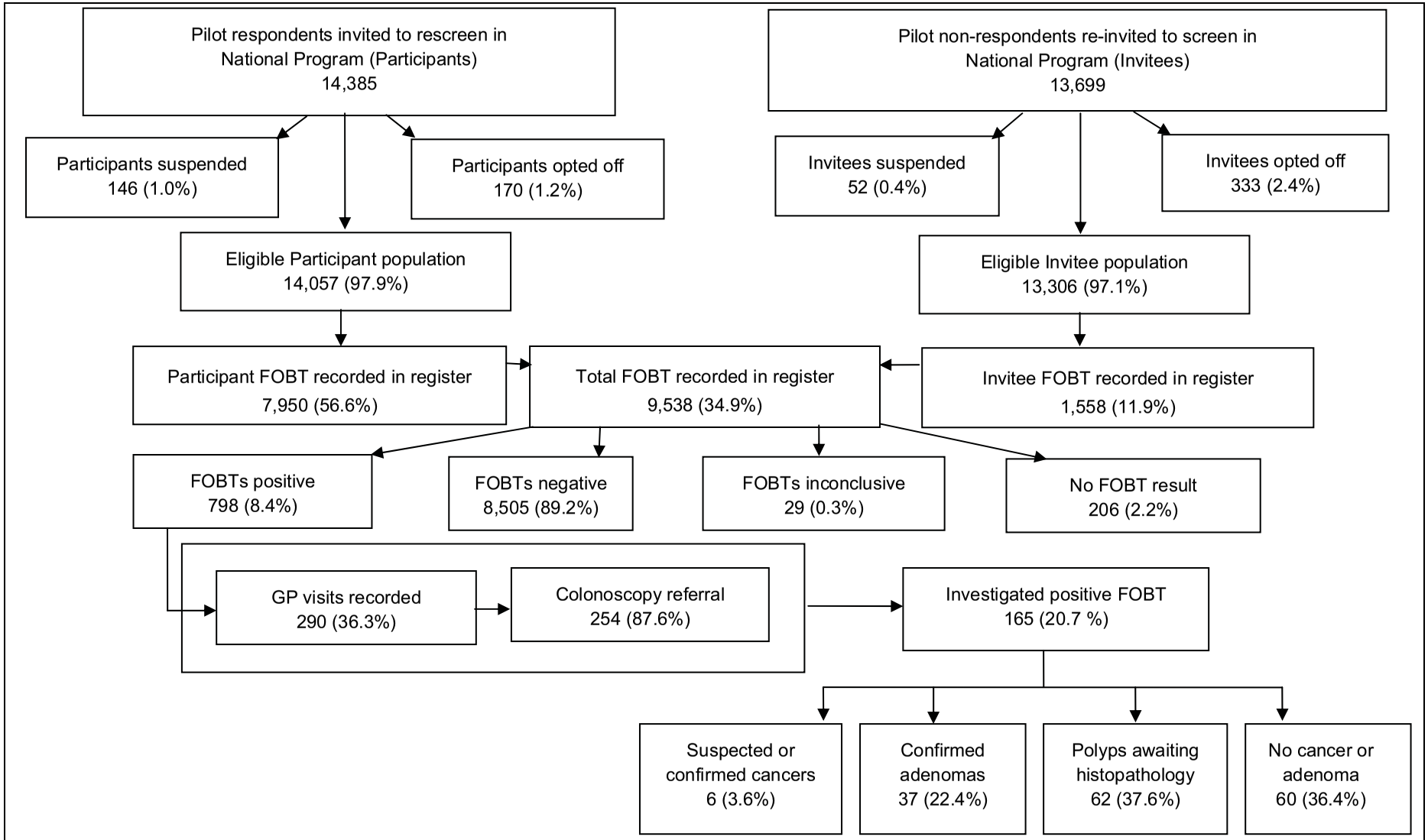


Figure 3.5.1: NBCSP participant outcomes, Pilot Program, 7 August 2006 to 31 July 2007

Table 3.5.1: Preliminary overall participant summary outcomes, by Pilot site, Pilot Program, 7 August 2006 to 31 July 2007

				FOBT positive							
Site	**Invitations issued[(a)]**	**Number screened[(b)]**	**Total positive FOBT**	**Colonoscopy not done or not recorded**	**No cancer or adenoma[(c)]**	**Polyps awaiting histo-pathology[(d)]**	**Confirmed diminutive adenoma[(e)]**	**Confirmed small adenoma[(e)]**	**Confirmed advanced adenoma[(e)]**	**Suspected cancer[(f)]**	**Confirmed cancer[(g)]**
Mackay	6,167	3,244	264	182	29	17	6	6	22	1	1
Adelaide	10,948	4,162	324	249	28	41	0	0	2	4	0
Melbourne	10,248	2,132	210	202	3	4	1	0	0	0	0
All sites	**27,363**	**9,538**	**798**	**633**	**60**	**62**	**7**	**6**	**24**	**5**	**1**

(a) 'Invitations issued' is the number of eligible people who were issued an invitation to screen in the NBCSP.

(b) 'Number screened' is the number of people who have completed an FOBT kit and results were forwarded to the Register.

(c) No cancers were suspected at colonoscopy or confirmed non-cancerous by histopathology; no polyps identified at colonoscopy, or polyps confirmed as non-adenomous at histopathology.

(d) Polyps detected at colonoscopy and sent to histopathology for analysis. No Histopathology Report received by Register.

(e) Confirmed adenoma figures are based on a combination of the colonoscopy and histopathology forms for a person received by the Register.

(f) Cancer suspected at colonoscopy but not yet confirmed by histopathology.

(g) Cancer confirmed by histopathology.

Note: The Pilot Program commenced in Melbourne on 14 May 2007.

Table 3.5.2: Preliminary overall participant summary outcomes by previous Pilot participation status, Pilot Program, 7 August 2006 to 31 July 2007

				FOBT positive							
Status	**Invitations issued[(a)]**	**Number screened[(b)]**	**Total positive FOBT**	**Colonoscopy not done or not recorded**	**No cancer or adenoma[(c)]**	**Polyps awaiting histo-pathology[(d)]**	**Confirmed diminutive adenoma[(e)]**	**Confirmed small adenoma[(e)]**	**Confirmed advanced adenoma[(e)]**	**Suspected cancer[(f)]**	**Confirmed cancer[(g)]**
Participant[(h)]	14,057	7,950	644	510	51	48	7	6	18	3	1
Invitee[(i)]	13,306	1,588	154	123	9	14	0	0	6	2	0
Total	**27,363**	**9,538**	**798**	**633**	**60**	**62**	**7**	**6**	**24**	**5**	**1**

(a) 'Invitations issued' is the number of eligible people who were issued an invitation to screen in the NBCSP.

(b) 'Number screened' is the number of people who have completed an FOBT kit and results were forwarded to the Register.

(c) No cancers were suspected at colonoscopy or confirmed non-cancerous by histopathology; no polyps identified at colonoscopy, or polyps confirmed as non-adenomous at histopathology.

(d) Polyps detected at colonoscopy and sent to histopathology for analysis. No Histopathology Report received by Register.

(e) Confirmed adenoma figures are based on a combination of the colonoscopy and histopathology forms for a person received by the Register.

(f) Cancer suspected at colonoscopy but not yet confirmed by histopathology.

(g) Cancer confirmed by histopathology.

(h) 'Participant' refers to participants in the Pilot Program who were invited to rescreen in the NBCSP

(i) 'Invitee' refers to invitees from the Pilot Program who did not participate, and were reinvited to screen in the NBCSP.

- There were 7,950 participants from the Pilot Program who have re-screened in the NBCSP between 7 August 2006 and 31 July 2007, representing an overall crude response rate of 56.6% compared with 1,588 invitees from the Pilot Program representing an overall crude response rate of 11.9%.
- Positive FOBT results were returned for 8.1% of Pilot participants re-screening in the NBCSP compared with 9.7% for Pilot invitees undergoing initial screening in the NBCSP.

4 Bowel cancer incidence and mortality

Introduction

Bowel cancer comprises cancer of the colon and cancer of the rectum, collectively known as colorectal cancer.

In 2004, the latest year for which incidence statistics are available:

- There were 12,973 people diagnosed with bowel cancer—7,157 males and 5,816 females. Bowel cancer accounted for 13.2% of all invasive cancers diagnosed.
- The age-standardised incidence rate was 75 per 100,000 males, 52 per 100,000 females and 62 per 100,000 persons.
- The risk of being diagnosed with bowel cancer by age 85 years was 1 in 10 for males, 1 in 14 for females and 1 in 12 for persons.
- The average age of diagnosis was 68.8 years for males, 70.6 years for females and 69.6 years for persons.

In 2005, the latest year for which mortality statistics are available:

- There were 4,113 deaths from bowel cancer in Australia—2,302 males and 1,811 females. Bowel cancer accounted for 10.6% of all deaths from invasive cancers.
- The age-standardised death rate was 24 per 100,000 males, 15 per 100,000 females and 19 per 100,000 persons.
- The risk of dying from bowel cancer by age 85 years was 1 in 30 for males, 1 in 50 for females and 1 in 38 for persons.
- There were 52,231 potential years of life lost by age 85 years due to bowel cancer—32,043 for males and 20,188 for females.

Detailed age and sex numbers and rates for bowel cancer in Australia over time can be found in the AIHW *Australian Cancer Incidence and Mortality* workbook for colorectal cancer, an interactive EXCEL workbook which also includes summary measures and trend graphs. It includes incidence data from 1982 to 2004 and mortality data from 1968 to 2005 (as at February 2008). See <www.aihw.gov.au/cancer>.

4.1 Incidence of bowel cancer

An objective of the NBCSP is to reduce the incidence of bowel cancer in Australia. Positive FOBTs and subsequent colonoscopies identify and treat polyps and adenocarcinomas which might develop into cancer.

Age profile

- Bowel cancer is relatively rare before age 45.
- In 2004 there were 1,167 cases diagnosed in those aged 45–54 years, 2,568 in those aged 55–64 years, 3,835 in those aged 65–74 years, 3,720 in those aged 75–84 years, and 1,194 in people aged 85 years and over. However, the highest rates were in people aged 80 years and over, at over 400 cases per 100,000 population.
- Half of the new cases diagnosed were in people aged 55–74 years, the age group which was used for the Pilot Program.

Trends

From 1982 to 2004 the age-standardised incidence of bowel cancer:

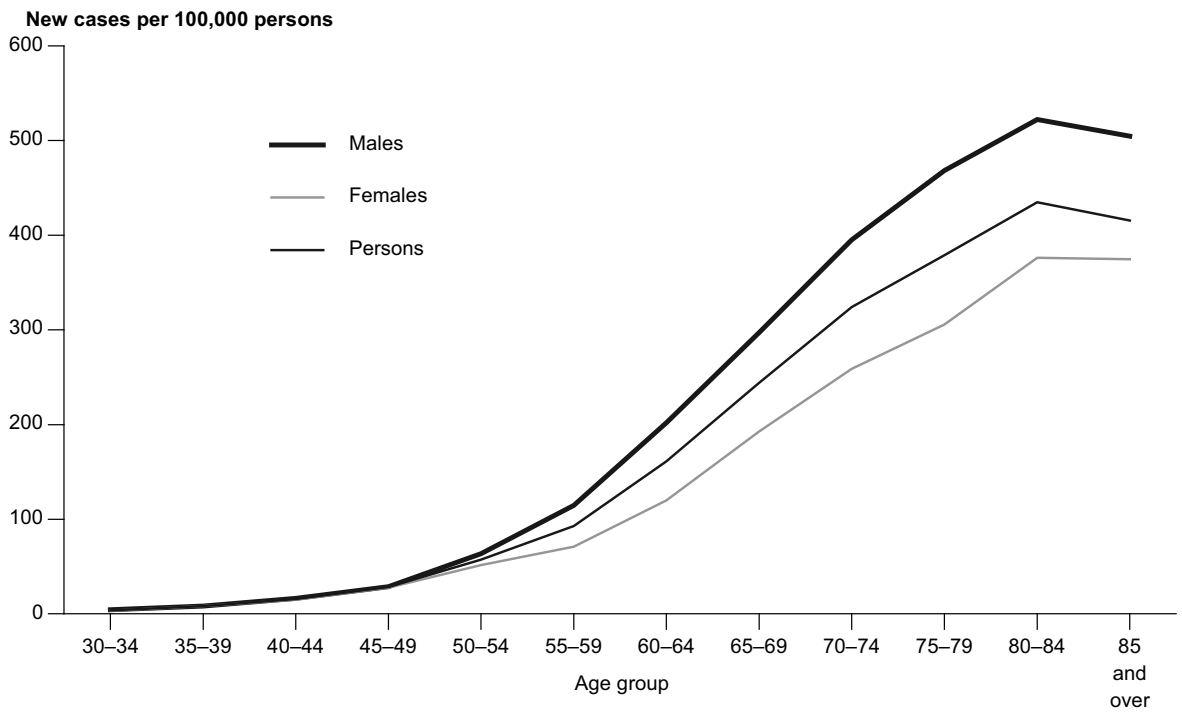
- increased by an average of 0.5% per year for males, from 66.6 per 100,000 in 1982 to 75.1 per 100,000 in 2004
- was relatively unchanged for females, with an average annual decrease of less than 0.1%, from 51.9 per 100,000 in 1982 to 51.5 per 100,000 in 2004, with a peak of 54.5 per 100,000 in 2001
- increased by an average of 0.3% per year for persons, from 58.0 per 100,000 in 1982 to 62.4 per 100,000 in 2004, with a peak of 65.4 per 100,000 in 2001.

State and territory comparisons

Incidence of bowel cancer varied by state and territory in the period 2000–2004. Queensland (65.5 cases per 100,000), South Australia (65.4 per 100,000) and Victoria (65.2 per 100,000) had the highest incidence of bowel cancer. Incidence was significantly lower in the Northern Territory (46.6 per 100,000) than other states and territories.

Regional comparisons

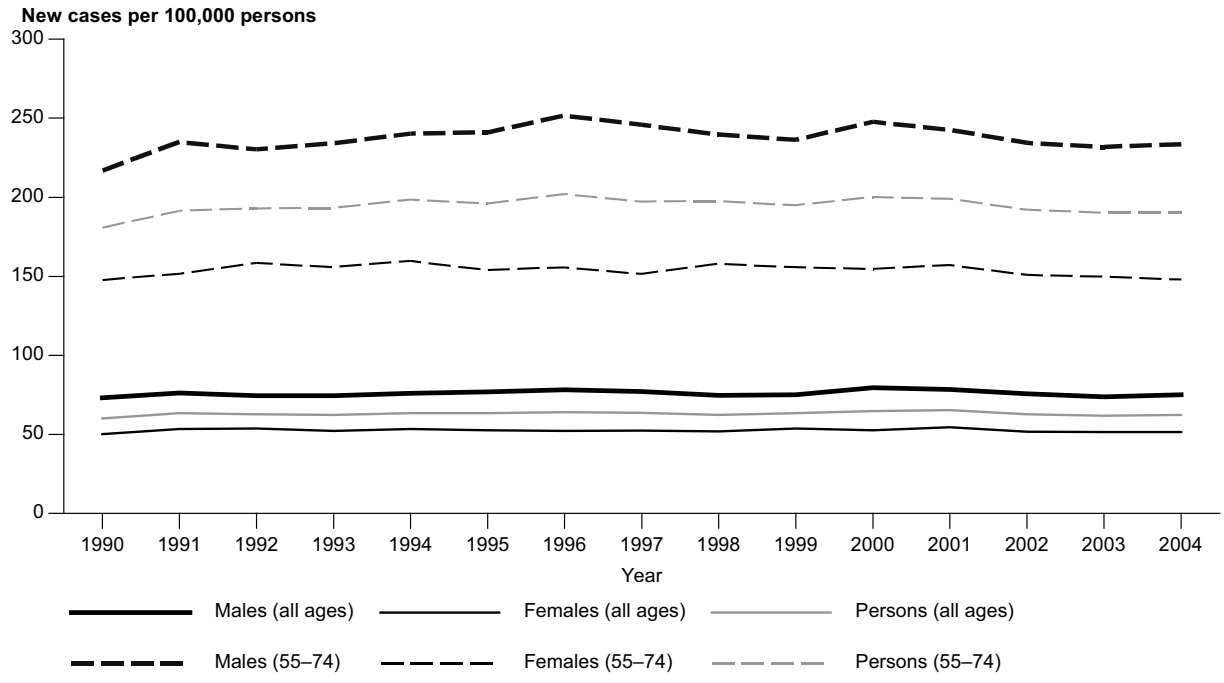
Incidence of bowel cancer was highest in the inner regional areas in 2000–2004 (66.1 cases per 100,000) and outer regional areas (65.9 per 100,000). Very remote areas had a significantly lower incidence rate (50.3 per 100,000) than other regions.



Note: Rates are expressed per 100,000 persons.

Source: AIHW National Cancer Statistics Clearing House.

Figure 4.1.1: Age-specific incidence rates of bowel cancer, 2004



Note: Rates are expressed per 100,000 persons and age standardised to the Australian 2001 population.

Source: AIHW National Cancer Statistics Clearing House.

Figure 4.1.2: Age-standardised incidence rates of bowel cancer, 1990–2004

Table 4.1.1a: Number of new cases of bowel cancer, by age, Australia, 1990–2004, males

Age group	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
0–4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
10–14	0	2	0	3	0	0	0	2	4	0	2	1	1	2	0
15–19	1	0	0	1	3	2	0	2	1	1	1	2	4	1	6
20–24	3	6	5	3	2	4	2	8	5	3	3	7	8	3	15
25–29	12	9	9	10	10	10	9	9	18	19	17	14	11	18	14
30–34	17	27	19	19	20	22	29	20	25	25	32	27	38	23	32
35–39	41	42	38	43	47	48	57	45	53	58	55	65	52	61	59
40–44	105	102	101	138	109	114	119	104	117	92	126	102	101	105	126
45–49	184	170	212	219	200	216	223	224	218	216	233	236	208	209	206
50–54	337	391	322	340	351	369	377	415	378	405	434	410	455	417	419
55–59	483	512	529	506	535	550	640	595	602	567	625	661	620	646	693
60–64	704	761	785	773	766	768	767	803	740	797	877	820	901	846	917
65–69	839	931	878	936	1,033	1,036	986	1,036	1,016	982	999	1,016	1,026	1,100	1,082
70–74	721	828	829	917	955	989	1,134	1,081	1,131	1,163	1,255	1,264	1,181	1,173	1,188
75–79	683	739	695	760	729	827	801	862	856	1,000	1,071	1,138	1,113	1,138	1,147
80–84	399	426	443	409	486	485	555	579	531	537	627	700	704	700	798
85+	236	216	271	244	289	300	307	310	366	390	445	445	435	429	455
Not stated	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
All ages	4,765	5,162	5,136	5,321	5,536	5,740	6,006	6,095	6,061	6,255	6,802	6,908	6,859	6,871	7,157
Ages 55–74	2,747	3,032	3,021	3,132	3,289	3,343	3,527	3,515	3,489	3,509	3,756	3,761	3,728	3,765	3,880

Source: AIHW National Cancer Statistics Clearing House.

Table 4.1.1b: Number of new cases of bowel cancer, by age, Australia, 1990–2004, females

Age group	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
0–4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10–14	1	1	1	1	0	0	1	2	1	0	1	0	2	1	1
15–19	2	0	1	0	1	4	3	2	4	3	4	6	5	2	7
20–24	5	3	2	6	7	3	7	6	4	6	7	7	3	7	10
25–29	7	14	10	8	12	11	9	6	12	13	12	12	10	14	13
30–34	30	24	29	18	25	22	25	30	27	37	31	31	35	32	26
35–39	48	53	63	47	53	48	49	55	55	67	54	62	72	62	62
40–44	104	113	109	84	89	105	97	120	106	119	110	110	113	112	118
45–49	165	162	163	177	179	159	187	205	184	201	205	215	201	217	201
50–54	251	270	276	255	281	285	282	298	283	295	332	308	321	340	341
55–59	341	323	398	396	410	389	401	402	402	424	416	406	433	421	421
60–64	463	476	488	509	497	443	476	447	542	493	546	556	568	569	537
65–69	592	684	668	642	677	661	660	684	658	668	639	680	642	696	722
70–74	641	656	693	691	755	793	795	761	809	833	835	876	831	818	843
75–79	572	697	642	625	694	729	723	804	778	868	889	995	905	874	914
80–84	457	523	564	582	559	623	593	632	653	703	669	754	731	819	861
85+	380	431	437	494	505	504	559	569	579	687	686	773	744	716	739
Not stated	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All ages	4,059	4,430	4,544	4,535	4,744	4,779	4,867	5,023	5,097	5,417	5,436	5,791	5,616	5,700	5,816
Ages 55–74	2,037	2,139	2,247	2,238	2,339	2,286	2,332	2,294	2,411	2,418	2,436	2,518	2,474	2,504	2,523

Source: AIHW National Cancer Statistics Clearing House.

Table 4.1.1c: Number of new cases of bowel cancer, by age, Australia, 1990–2004, persons

Age group	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
0–4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
10–14	1	3	1	4	0	0	1	4	5	0	3	1	3	3	1
15–19	3	0	1	1	4	6	3	4	5	4	5	8	9	3	13
20–24	8	9	7	9	9	7	9	14	9	9	10	14	11	10	25
25–29	19	23	19	18	22	21	18	15	30	32	29	26	21	32	27
30–34	47	51	48	37	45	44	54	50	52	62	63	58	73	55	58
35–39	89	95	101	90	100	96	106	100	108	125	109	127	124	123	121
40–44	209	215	210	222	198	219	216	224	223	211	236	212	214	217	244
45–49	349	332	375	396	379	375	410	429	402	417	438	451	409	426	407
50–54	588	661	598	595	632	654	659	713	661	700	766	718	776	757	760
55–59	824	835	927	902	945	939	1,041	997	1,004	991	1,041	1,067	1,053	1,067	1,114
60–64	1,167	1,237	1,273	1,282	1,263	1,211	1,243	1,250	1,282	1,290	1,423	1,376	1,469	1,415	1,454
65–69	1,431	1,615	1,546	1,578	1,710	1,697	1,646	1,720	1,674	1,650	1,638	1,696	1,668	1,796	1,804
70–74	1,362	1,484	1,522	1,608	1,710	1,782	1,929	1,842	1,940	1,996	2,090	2,140	2,012	1,991	2,031
75–79	1,255	1,436	1,337	1,385	1,423	1,556	1,524	1,666	1,634	1,868	1,960	2,133	2,018	2,012	2,061
80–84	856	949	1,007	991	1,045	1,108	1,148	1,211	1,184	1,240	1,296	1,454	1,435	1,519	1,659
85+	616	647	708	738	794	804	866	879	945	1,077	1,131	1,218	1,179	1,145	1,194
Not stated	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
All ages	8,824	9,592	9,680	9,856	10,279	10,519	10,873	11,118	11,158	11,672	12,238	12,699	12,475	12,571	12,973
Ages 55–74	4,784	5,171	5,268	5,370	5,628	5,629	5,859	5,809	5,900	5,927	6,192	6,279	6,202	6,269	6,403

Source: AIHW National Cancer Statistics Clearing House.

Table 4.1.2a: Age-specific and age-standardised incidence rates for bowel cancer, Australia, 1990–2004, males

Age group	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
0–4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
10–14	0.0	0.3	0.0	0.5	0.0	0.0	0.0	0.3	0.6	0.0	0.3	0.1	0.1	0.3	0.0
15–19	0.1	0.0	0.0	0.2	0.5	0.3	0.0	0.3	0.2	0.2	0.1	0.3	0.6	0.1	0.9
20–24	0.4	0.8	0.7	0.4	0.3	0.6	0.3	1.2	0.7	0.5	0.5	1.1	1.2	0.4	2.1
25–29	1.7	1.3	1.3	1.5	1.5	1.4	1.3	1.2	2.5	2.6	2.4	2.0	1.6	2.6	2.0
30–34	2.4	3.8	2.6	2.6	2.7	3.0	4.0	2.8	3.6	3.6	4.5	3.7	5.1	3.0	4.2
35–39	6.2	6.3	5.6	6.3	6.8	6.8	7.8	6.1	7.1	7.7	7.3	8.8	7.1	8.4	8.1
40–44	16.4	15.6	15.5	21.1	16.5	17.1	17.6	15.2	16.8	13.0	17.5	13.9	13.4	13.8	16.4
45–49	36.5	32.3	37.7	36.8	32.4	34.0	34.1	34.4	33.3	32.6	34.9	35.0	30.3	29.9	28.8
50–54	80.2	90.1	72.2	74.6	73.9	74.4	72.8	74.4	63.8	65.9	68.4	62.8	70.0	63.8	63.5
55–59	131.6	139.4	141.4	131.9	135.8	135.2	152.4	136.9	134.1	120.9	127.5	128.9	112.7	110.8	114.8
60–64	191.4	207.5	216.4	215.9	215.6	217.3	216.8	222.1	198.9	207.0	218.8	198.1	211.4	193.4	201.8
65–69	267.4	290.8	270.2	283.8	310.7	309.1	292.2	307.0	302.9	294.2	300.9	302.8	298.3	311.2	297.1
70–74	330.9	362.4	346.5	366.0	362.0	366.3	410.7	383.4	392.3	394.8	418.9	416.4	388.9	388.7	395.2
75–79	442.0	464.8	428.8	465.4	446.5	487.9	446.0	453.6	426.5	471.3	487.7	500.5	477.9	475.3	468.1
80–84	494.0	504.7	501.3	438.8	493.2	472.7	524.3	532.5	479.3	476.8	527.0	545.8	515.6	484.0	522.4
85+	567.8	488.5	572.4	484.6	542.4	528.5	509.1	485.1	536.5	535.7	574.1	543.2	510.7	489.7	504.8
All ages															
Crude rate	56.0	59.9	58.9	60.5	62.3	63.8	65.9	66.2	65.2	66.6	71.6	71.7	70.3	69.5	71.5
ASR(A)	73.2	76.3	74.6	74.6	76.1	77.0	78.3	77.2	74.8	75.2	79.6	78.4	75.6	73.8	75.1
95% CI	71.0–75.4	74.1–78.5	72.5–76.8	72.5–76.7	74.1–78.2	75.0–79.1	76.3–80.4	75.2–79.2	72.9–76.8	73.3–77.1	77.7–81.5	76.6–80.3	73.8–77.5	72.1–75.6	73.3–76.8
Ages 55–74															
Crude rate	216.9	236.4	232.2	236.9	244.5	244.8	254.2	248.3	241.5	236.7	246.7	240.2	229.6	224.7	225.2
ASR(A)	217.0	235.1	230.4	234.1	240.3	241.1	251.8	245.9	239.8	236.4	247.9	242.8	234.6	232.0	233.7
95% CI	208.9–225.3	226.7–243.7	222.2–238.8	225.9–242.5	232.2–248.7	232.9–249.4	243.5–260.3	237.8–254.1	231.9–247.9	228.6–244.3	240.0–255.9	235.1–250.7	227.1–242.2	224.7–239.6	226.4–241.2

Note: Rates are the number of cases of bowel cancer per 100,000 males. All-age totals and 55–74 year totals are age standardised to the Australian population at 30 June 2001.

Source: AIHW National Cancer Statistics Clearing House.

Table 4.1.2b: Age-specific and age-standardised incidence rates for bowel cancer, Australia, 1990–2004, females

Age group	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
0–4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.2	0.2	0.2	0.2	0.0	0.0	0.2	0.3	0.2	0.0	0.2	0.0	0.3	0.1	0.1
15–19	0.3	0.0	0.2	0.0	0.2	0.6	0.5	0.3	0.6	0.5	0.6	0.9	0.7	0.3	1.0
20–24	0.7	0.4	0.3	0.8	1.0	0.4	1.0	0.9	0.6	0.9	1.1	1.1	0.5	1.0	1.5
25–29	1.0	2.0	1.5	1.2	1.8	1.6	1.3	0.8	1.6	1.8	1.7	1.7	1.5	2.1	1.9
30–34	4.3	3.4	4.0	2.5	3.4	3.0	3.5	4.2	3.8	5.2	4.3	4.2	4.6	4.2	3.4
35–39	7.3	8.0	9.3	6.8	7.6	6.7	6.7	7.4	7.3	8.8	7.1	8.3	9.7	8.4	8.4
40–44	16.8	17.7	17.0	13.0	13.5	15.7	14.3	17.3	15.1	16.7	15.1	14.8	14.8	14.5	15.2
45–49	34.5	32.2	30.3	30.9	30.0	25.8	29.2	31.9	28.2	30.2	30.4	31.5	28.9	30.6	27.8
50–54	62.6	65.3	65.1	58.8	62.0	59.9	56.7	55.5	49.4	49.3	53.3	47.5	49.5	51.9	51.4
55–59	94.9	90.1	108.6	105.4	106.3	98.4	98.4	95.4	92.7	93.7	87.9	81.9	80.8	73.8	70.9
60–64	124.9	128.6	133.6	141.5	139.2	124.2	133.5	122.9	145.5	128.3	137.6	136.3	135.5	132.2	119.8
65–69	169.8	194.7	189.3	180.7	191.0	186.6	186.1	194.2	188.5	193.0	185.2	196.0	181.0	191.4	192.8
70–74	236.8	232.4	236.9	227.6	237.9	245.5	243.1	231.6	244.4	249.9	250.3	261.6	250.2	248.9	258.8
75–79	259.2	309.1	280.3	271.7	304.7	312.3	296.6	313.5	289.4	309.0	309.0	340.8	307.6	294.1	305.5
80–84	328.0	359.7	372.4	367.7	334.4	361.3	335.8	351.4	358.7	384.0	352.1	373.6	346.8	372.2	376.2
85+	359.8	391.7	377.9	405.4	396.1	375.2	394.8	381.0	369.4	413.6	391.7	421.7	393.6	370.5	374.7
All ages															
Crude rate	47.4	51.1	51.8	51.1	52.9	52.6	52.9	53.9	54.1	56.8	56.3	59.2	56.7	56.9	57.4
ASR(A)	50.3	53.4	53.7	52.3	53.5	52.6	52.3	52.5	52.0	53.7	52.7	54.5	51.8	51.5	51.5
95% CI	48.8–51.9	51.8–55.0	52.1–55.3	50.8–53.9	52.0–55.1	51.1–54.1	50.8–53.7	51.0–54.0	50.6–53.5	52.3–55.2	51.3–54.1	53.1–55.9	50.5–53.2	50.2–52.9	50.2–52.8
Ages 55–74															
Crude rate	151.0	157.0	163.2	160.5	165.4	159.9	161.3	156.5	162.2	159.5	157.3	158.8	150.7	147.9	144.8
ASR(A)	147.7	151.6	158.6	155.9	159.9	154.0	155.8	151.6	158.0	155.9	154.8	157.2	151.1	150.0	148.1
95% CI	141.3–154.3	145.2–158.2	152.0–165.3	149.4–162.5	153.4–166.6	147.7–160.5	149.5–162.3	145.4–157.9	151.7–164.4	149.7–162.2	148.7–161.1	151.1–163.4	145.2–157.2	144.1–156.0	142.4–154.0

Note: Rates are the number of cases of bowel cancer per 100,000 females. All-age totals and 55–74 year totals are age standardised to the Australian population at 30 June 2001.

Source: AIHW National Cancer Statistics Clearing House.

Table 4.1.2c: Age-specific and age-standardised incidence rates for bowel cancer, Australia, 1990–2004, persons

Age group	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
0–4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
10–14	0.1	0.2	0.1	0.3	0.0	0.0	0.1	0.3	0.4	0.0	0.2	0.1	0.2	0.2	0.1
15–19	0.2	0.0	0.1	0.1	0.3	0.5	0.2	0.3	0.4	0.3	0.4	0.6	0.7	0.2	0.9
20–24	0.6	0.6	0.5	0.6	0.6	0.5	0.6	1.0	0.7	0.7	0.8	1.1	0.8	0.7	1.8
25–29	1.3	1.6	1.4	1.3	1.6	1.5	1.3	1.0	2.0	2.2	2.0	1.8	1.5	2.3	2.0
30–34	3.4	3.6	3.3	2.5	3.1	3.0	3.7	3.5	3.7	4.4	4.4	4.0	4.9	3.6	3.8
35–39	6.8	7.2	7.5	6.6	7.2	6.7	7.3	6.8	7.2	8.3	7.2	8.5	8.4	8.4	8.2
40–44	16.6	16.6	16.2	17.1	15.0	16.4	15.9	16.3	16.0	14.9	16.3	14.3	14.2	14.1	15.8
45–49	35.5	32.3	34.1	33.9	31.3	30.0	31.7	33.2	30.7	31.4	32.7	33.2	29.6	30.2	28.3
50–54	71.6	78.0	68.7	66.9	68.1	67.3	64.9	65.1	56.8	57.7	60.9	55.2	59.8	57.8	57.4
55–59	113.5	115.0	125.2	118.8	121.2	117.0	125.8	116.5	113.8	107.5	108.0	105.8	97.0	92.5	93.0
60–64	158.0	167.9	174.9	178.6	177.3	170.5	175.0	172.4	172.2	167.7	178.4	167.4	173.8	163.1	161.1
65–69	216.0	240.5	228.0	230.3	248.9	246.2	237.8	249.4	244.6	242.7	241.9	248.5	238.8	250.4	244.2
70–74	278.8	290.6	286.2	290.2	294.3	300.5	319.8	301.7	313.2	317.9	330.1	335.2	316.4	315.8	324.2
75–79	334.5	373.5	341.8	352.1	363.9	386.2	360.0	373.1	348.0	378.9	386.3	410.7	382.8	375.0	378.7
80–84	388.9	412.9	419.9	394.0	393.3	402.9	406.4	419.6	404.3	419.4	419.5	440.5	413.1	416.5	434.7
85+	418.5	419.5	434.4	428.6	439.2	420.7	428.9	412.2	420.1	450.8	447.6	459.2	429.9	407.7	415.5
All ages															
Crude rate	51.7	55.5	55.3	55.8	57.6	58.2	59.4	60.0	59.6	61.7	63.9	65.4	63.5	63.2	64.4
ASR(A)	60.1	63.6	62.7	62.4	63.5	63.5	64.0	63.7	62.3	63.5	64.8	65.4	62.7	61.8	62.4
95% CI	58.8–61.4	62.3–64.9	61.5–64.0	61.1–63.6	62.3–64.8	62.3–64.8	62.8–65.2	62.5–64.9	61.1–63.4	62.3–64.7	63.7–66.0	64.3–66.6	61.6–63.8	60.7–62.9	61.3–63.5
Ages 55–74															
Crude rate	182.9	195.5	196.7	197.7	203.9	201.4	206.8	201.6	201.3	197.6	201.6	199.2	189.9	186.1	184.8
ASR(A)	180.8	191.5	193.0	193.3	198.6	196.1	202.2	197.3	197.7	195.1	200.3	199.2	192.2	190.3	190.3
95% CI	175.7–186.0	186.3–196.9	187.8–198.3	188.1–198.5	193.4–203.8	191.0–201.3	197.0–207.4	192.3–202.5	192.7–202.8	190.2–200.1	195.4–205.4	194.3–204.2	187.4–197.0	185.7–195.1	185.7–195.1

Note: Rates are the number of cases of bowel cancer per 100,000 persons. All-age totals and 55–74 year totals are age standardised to the Australian population at 30 June 2001.

Source: AIHW National Cancer Statistics Clearing House.

Table 4.1.3a: Number of new cases of bowel cancer, by age, states and territories, 2000–2004, males

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
0–4	0	0	0	0	0	0	0	0	0
5–9	1	0	0	0	0	0	0	0	1
10–14	3	0	0	1	1	0	0	1	6
15–19	5	3	2	1	2	0	1	0	14
20–24	9	7	11	3	3	1	1	1	36
25–29	25	17	14	9	5	2	2	0	74
30–34	53	33	30	11	13	3	4	5	152
35–39	104	71	53	29	24	5	2	4	292
40–44	181	138	111	57	35	13	16	9	560
45–49	342	280	212	101	99	29	12	17	1,092
50–54	654	522	417	235	195	47	43	22	2,135
55–59	1,091	759	677	310	244	82	54	28	3,245
60–64	1,488	1,040	894	377	362	117	58	25	4,361
65–69	1,737	1,326	1,013	448	453	147	78	21	5,223
70–74	2,088	1,584	1,103	497	556	145	71	17	6,061
75–79	1,825	1,566	1,021	460	525	142	60	8	5,607
80–84	1,208	994	596	294	303	90	39	5	3,529
85+	688	596	402	217	233	57	14	2	2,209
All ages	11,502	8,936	6,556	3,050	3,053	880	455	165	34,597
Ages 55–74	6,404	4,709	3,687	1,632	1,615	491	261	91	18,890

Source: AIHW National Cancer Statistics Clearing House.

Table 4.1.3b: Number of new cases of bowel cancer, by age, states and territories, 2000–2004, females

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
0–4	0	0	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	0	0	0
10–14	2	1	0	1	1	0	0	0	5
15–19	5	4	7	0	4	1	3	0	24
20–24	10	11	4	6	2	0	0	1	34
25–29	16	17	11	6	6	2	2	1	61
30–34	39	51	33	17	8	2	3	2	155
35–39	99	81	61	32	20	8	3	8	312
40–44	162	164	113	54	47	7	7	9	563
45–49	334	268	195	92	85	33	27	5	1,039
50–54	555	419	295	161	136	42	23	11	1,642
55–59	719	500	424	173	176	57	37	11	2,097
60–64	1,020	647	508	241	232	72	45	11	2,776
65–69	1,177	859	668	247	284	101	32	11	3,379
70–74	1,435	1,146	746	309	404	110	51	2	4,203
75–79	1,457	1,233	838	389	455	146	51	8	4,577
80–84	1,295	1,053	652	299	388	103	39	5	3,834
85+	1,197	1,005	615	310	386	107	36	2	3,658
All ages	9,522	7,459	5,170	2,337	2,634	791	359	87	28,359
Ages 55–74	4,351	3,152	2,346	970	1,096	340	165	35	12,455

Source: AIHW National Cancer Statistics Clearing House.

Table 4.1.3c: Number of new cases of bowel cancer, by age, states and territories, 2000–2004, persons

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
0–4	0	0	0	0	0	0	0	0	0
5–9	1	0	0	0	0	0	0	0	1
10–14	5	1	0	2	2	0	0	1	11
15–19	10	7	9	1	6	1	4	0	38
20–24	19	18	15	9	5	1	1	2	70
25–29	41	34	25	15	11	4	4	1	135
30–34	92	84	63	28	21	5	7	7	307
35–39	203	152	114	61	44	13	5	12	604
40–44	343	302	224	111	82	20	23	18	1,123
45–49	676	548	407	193	184	62	39	22	2,131
50–54	1,209	941	712	396	331	89	66	33	3,777
55–59	1,810	1,259	1,101	483	420	139	91	39	5,342
60–64	2,508	1,687	1,402	618	594	189	103	36	7,137
65–69	2,914	2,185	1,681	695	737	248	110	32	8,602
70–74	3,523	2,730	1,849	806	960	255	122	19	10,264
75–79	3,282	2,799	1,859	849	980	288	111	16	10,184
80–84	2,503	2,047	1,248	593	691	193	78	10	7,363
85+	1,885	1,601	1,017	527	619	164	50	4	5,867
All ages	21,024	16,395	11,726	5,387	5,687	1,671	814	252	62,956
Ages 55–74	10,755	7,861	6,033	2,602	2,711	831	426	126	31,345

Source: AIHW National Cancer Statistics Clearing House.

Table 4.1.4a: Age-specific and age-standardised incidence rates for bowel cancer, states and territories, 2000–2004, males

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
0–4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.3	0.0	0.0	0.3	0.4	0.0	0.0	2.4	0.2
15–19	0.4	0.4	0.3	0.3	0.8	0.0	1.6	0.0	0.4
20–24	0.8	0.8	1.7	0.9	1.2	1.4	1.5	2.4	1.1
25–29	2.1	1.9	2.1	2.6	2.0	2.9	3.1	0.0	2.1
30–34	4.3	3.5	4.4	3.0	4.8	3.9	6.3	10.7	4.1
35–39	8.4	7.7	7.8	7.9	8.5	6.1	3.3	9.0	7.9
40–44	14.4	15.1	15.8	15.1	12.1	14.4	26.4	21.8	15.0
45–49	29.7	33.3	32.6	28.6	36.6	33.9	21.0	47.1	31.7
50–54	60.5	66.7	66.7	71.0	75.5	57.6	76.4	66.6	65.7
55–59	118.5	115.0	126.6	115.5	111.7	116.6	124.6	116.3	118.4
60–64	205.9	198.8	218.2	185.0	211.7	205.7	199.1	156.2	204.5
65–69	291.2	306.7	315.9	281.4	314.0	316.9	370.3	239.8	302.0
70–74	396.3	413.7	408.1	372.7	418.6	360.3	418.9	290.1	401.6
75–79	447.3	528.4	495.7	463.0	488.8	459.8	460.6	245.2	481.6
80–84	502.5	578.3	487.5	523.5	473.6	509.0	530.7	350.1	518.1
85+	473.8	541.4	533.8	601.7	587.6	513.5	364.3	186.9	523.0
All ages									
Crude rate	70.1	74.5	70.6	63.1	81.2	75.1	57.2	31.7	70.9
ASR(A)	73.6	79.2	78.4	74.5	78.6	74.1	77.8	56.9	76.4
95% CI	72.2–75.0	77.5–80.9	76.4–80.3	71.8–77.3	75.8–81.4	69.2–79.2	70.5–85.6	46.7–68.5	75.6–77.2
Ages 55–74									
Crude rate	231.5	235.6	240.1	213.4	242.3	229.6	236.3	166.3	232.9
ASR(A)	235.0	238.9	248.5	221.6	243.8	232.6	256.9	188.6	238.0
95% CI	229.3–240.8	232.1–245.8	240.5–256.7	211.0–232.7	232.0–256.0	212.4–254.1	226.2–290.4	149.3–234.6	234.6–241.4

Note: Rates are the number of cases of bowel cancer per 100,000 males. All-age totals and 55–74 year totals are age standardised to the Australian population at 30 June 2001.

Source: AIHW National Cancer Statistics Clearing House.

Table 4.1.4b: Age-specific and age-standardised incidence rates for bowel cancer, states and territories, 2000–2004, females

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
0–4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.2	0.1	0.0	0.3	0.4	0.0	0.0	0.0	0.2
15–19	0.5	0.5	1.1	0.0	1.6	1.2	5.0	0.0	0.7
20–24	0.9	1.3	0.6	1.8	0.8	0.0	0.0	2.6	1.0
25–29	1.4	1.9	1.7	1.8	2.5	2.8	3.1	2.3	1.8
30–34	3.1	5.3	4.7	4.7	3.0	2.5	4.6	4.4	4.1
35–39	7.9	8.6	8.7	8.7	7.2	9.3	4.8	19.7	8.4
40–44	12.8	17.5	15.8	14.3	16.0	7.5	10.9	23.9	14.9
45–49	28.9	31.2	29.7	26.0	30.8	38.0	43.8	15.0	29.8
50–54	51.8	52.4	47.9	50.2	51.5	51.3	39.6	39.2	50.7
55–59	80.3	76.0	82.8	68.9	79.7	82.1	85.7	59.0	78.6
60–64	142.4	123.0	129.7	122.7	132.7	127.6	153.9	95.6	132.0
65–69	189.9	188.0	211.1	152.3	185.9	211.8	144.3	159.4	189.3
70–74	246.1	268.0	260.8	216.4	272.3	251.3	273.1	42.1	253.9
75–79	280.2	322.6	336.5	321.1	327.5	375.1	304.2	251.8	311.3
80–84	346.8	389.6	363.4	347.5	387.3	358.3	342.6	243.3	364.6
85+	363.0	410.4	392.6	385.2	427.2	424.5	394.3	133.6	390.0
All ages									
Crude rate	57.2	60.5	55.3	48.6	68.4	65.6	44.1	18.3	57.3
ASR(A)	50.8	53.8	54.1	48.6	54.4	55.2	52.2	34.5	52.4
95% CI	49.8–51.9	52.6–55.0	52.6–55.6	46.6–50.6	52.3–56.6	51.4–59.2	46.9–57.9	26.5–43.9	51.8–53.0
Ages 55–74									
Crude rate	154.6	152.4	155.8	128.9	157.2	156.4	145.7	83.7	151.7
ASR(A)	153.8	151.4	158.9	130.9	155.5	156.3	154.1	86.8	152.0
95% CI	149.3–158.4	146.2–156.8	152.5–165.5	122.8–139.4	146.4–165.0	140.1–173.9	131.3–179.8	59.4–122.2	149.4–154.7

Note: Rates are the number of cases of bowel cancer per 100,000 females. All-age totals and 55–74 year totals are age standardised to the Australian population at 30 June 2001.

Source: AIHW National Cancer Statistics Clearing House.

Table 4.1.4c: Age-specific and age-standardised incidence rates for bowel cancer, states and territories, 2000–2004, persons

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
0–4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.2	0.1	0.0	0.3	0.4	0.0	0.0	1.2	0.2
15–19	0.4	0.4	0.7	0.1	1.2	0.6	3.3	0.0	0.6
20–24	0.9	1.1	1.2	1.3	1.0	0.7	0.7	2.5	1.0
25–29	1.7	1.9	1.9	2.2	2.2	2.8	3.1	1.1	1.9
30–34	3.7	4.4	4.5	3.8	3.9	3.1	5.4	7.6	4.1
35–39	8.2	8.2	8.2	8.3	7.9	7.7	4.0	14.1	8.2
40–44	13.6	16.3	15.8	14.7	14.1	10.9	18.4	22.8	14.9
45–49	29.3	32.2	31.1	27.3	33.7	36.0	32.8	31.7	30.8
50–54	56.2	59.5	57.4	60.8	63.4	54.4	57.7	54.0	58.2
55–59	99.7	95.5	105.2	93.0	95.6	99.5	105.2	91.3	98.7
60–64	174.3	160.8	175.0	154.4	171.8	166.8	176.5	130.8	168.5
65–69	239.6	245.8	263.8	216.3	248.1	263.6	254.4	204.3	244.8
70–74	317.4	336.8	332.4	291.9	341.4	303.5	342.4	179.0	324.4
75–79	353.6	412.5	408.6	385.0	397.8	412.6	372.6	248.5	386.5
80–84	407.8	462.9	413.7	417.0	420.9	415.7	416.4	287.1	425.0
85+	396.9	451.0	438.4	452.2	476.2	451.7	385.4	155.8	431.3
All ages									
Crude rate	63.6	67.4	62.9	55.9	74.7	70.3	50.6	25.3	64.1
ASR(A)	61.2	65.2	65.5	60.4	65.4	63.9	64.2	46.6	63.4
95% CI	60.4–62.1	64.3–66.3	64.3–66.7	58.8–62.1	63.7–67.1	60.8–67.0	59.8–68.9	40.0–53.8	62.9–63.9
Ages 55–74									
Crude rate	192.7	193.3	198.4	171.5	198.8	192.7	190.4	130.5	192.0
ASR(A)	193.5	194.0	203.8	176.0	198.3	193.9	204.2	143.8	194.3
95% CI	189.9–197.2	189.7–198.3	198.6–209.0	169.3–182.9	190.9–205.9	180.9–207.5	185.0–224.7	118.4–172.9	192.1–196.4

Note: Rates are the number of cases of bowel cancer per 100,000 persons. All-age totals and 55–74 year totals are age standardised to the Australian population at 30 June 2001.

Source: AIHW National Cancer Statistics Clearing House.

Table 4.1.5a: Number of new cases of bowel cancer, by age and region, 2000–2004, males

Age group	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia
0–4	0	0	0	0	0	0
5–9	1	0	0	0	0	1
10–14	4	1	0	0	1	6
15–19	12	1	1	0	0	14
20–24	23	6	6	1	1	36
25–29	47	13	8	3	3	74
30–34	105	27	10	7	3	152
35–39	196	57	30	7	2	292
40–44	361	122	56	17	4	560
45–49	695	237	125	28	7	1,092
50–54	1,355	457	279	29	16	2,135
55–59	2,008	741	414	60	21	3,245
60–64	2,642	1,078	553	64	25	4,361
65–69	3,095	1,359	662	87	20	5,223
70–74	3,712	1,510	738	82	20	6,061
75–79	3,548	1,359	611	73	16	5,607
80–84	2,315	848	323	35	8	3,529
85+	1,479	491	200	26	13	2,209
All ages	**21,596**	**8,310**	**4,014**	**516**	**162**	**34,597**
Ages 55–74	**11,457**	**4,688**	**2,366**	**291**	**87**	**18,890**

Note: Because some postcodes cross regional boundaries, totals may not add up due to rounding.

Source: AIHW National Cancer Statistics Clearing House.

Table 4.1.5b: Number of new cases of bowel cancer, by age and region, 2000–2004, females

Age group	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia
0–4	0	0	0	0	0	0
5–9	0	0	0	0	0	0
10–14	3	1	0	1	0	5
15–19	17	5	2	0	0	24
20–24	23	7	3	0	1	34
25–29	45	11	3	0	1	61
30–34	107	27	17	2	2	155
35–39	205	63	30	11	3	312
40–44	373	110	55	18	7	563
45–49	696	221	107	9	6	1,039
50–54	1,063	378	177	19	5	1,642
55–59	1,344	487	231	26	8	2,097
60–64	1,750	671	317	30	8	2,776
65–69	2,058	871	397	41	12	3,379
70–74	2,656	1,053	442	42	11	4,203
75–79	2,956	1,120	444	48	9	4,577
80–84	2,578	846	369	33	8	3,834
85+	2,435	860	321	28	14	3,658
All ages	**18,309**	**6,731**	**2,916**	**308**	**95**	**28,359**
Ages 55–74	**7,807**	**3,082**	**1,387**	**139**	**39**	**12,455**

Note: Because some postcodes cross regional boundaries, totals may not add up due to rounding.

Source: AIHW National Cancer Statistics Clearing House.

Table 4.1.5c: Number of new cases of bowel cancer, by age and region, 2000–2004, persons

Age group	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia
0–4	0	0	0	0	0	0
5–9	1	0	0	0	0	1
10–14	7	2	0	1	1	11
15–19	29	6	3	0	0	38
20–24	46	12	9	1	2	70
25–29	92	24	11	3	4	135
30–34	211	54	27	9	5	307
35–39	401	121	60	18	5	604
40–44	733	232	111	35	11	1,123
45–49	1,391	458	232	36	14	2,131
50–54	2,418	835	455	48	21	3,777
55–59	3,352	1,229	646	86	29	5,342
60–64	4,391	1,749	870	94	33	7,137
65–69	5,153	2,230	1,059	128	33	8,602
70–74	6,368	2,563	1,180	123	30	10,264
75–79	6,504	2,479	1,055	121	25	10,184
80–84	4,893	1,695	691	68	16	7,363
85+	3,915	1,351	521	54	26	5,867
All ages	**39,905**	**15,040**	**6,930**	**824**	**257**	**62,956**
Ages 55–74	**19,264**	**7,771**	**3,754**	**430**	**126**	**31,345**

Note: Because some postcodes cross regional boundaries, totals may not add up due to rounding.

Source: AIHW National Cancer Statistics Clearing House.

Table 4.1.6a: Age-specific and age-standardised incidence rates for bowel cancer, by region, 2000–2004, males

Age group	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia
0–4	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.2	0.2	0.0	0.0	2.6	0.2
15–19	0.5	0.1	0.3	0.1	0.0	0.4
20–24	0.9	1.0	2.1	1.2	1.8	1.1
25–29	1.9	2.3	2.6	4.2	7.8	2.1
30–34	4.1	4.2	2.8	10.6	6.9	4.1
35–39	7.9	8.1	7.9	9.6	5.7	7.9
40–44	14.7	15.8	13.9	24.0	11.9	15.0
45–49	31.1	32.4	33.3	44.4	23.6	31.7
50–54	64.1	65.9	78.3	49.8	57.8	65.7
55–59	113.7	123.0	135.2	127.7	99.2	118.4
60–64	197.2	218.0	218.0	178.1	159.4	204.5
65–69	287.6	326.4	319.2	328.9	200.7	302.0
70–74	393.5	412.0	425.8	391.1	261.3	401.6
75–79	474.9	487.9	490.1	531.6	339.7	481.6
80–84	518.2	533.5	468.1	475.4	318.1	518.1
85+	530.4	496.2	449.2	523.4	657.4	523.0
All ages						
Crude rate	67.2	81.9	77.9	60.2	33.9	70.9
ASR(A)	74.8	78.6	78.5	78.3	59.3	76.4
95% CI	73.8–75.8	76.9–80.4	76.0–81.0	71.4–85.6	49.6–70.0	75.6–77.2
Ages 55–74						
Crude rate	223.5	249.4	251.6	224.8	157.2	232.9
ASR(A)	229.8	250.4	255.5	237.8	169.7	238.0
95% CI	225.6–234.1	243.3–257.7	245.3–266.1	210.6–266.5	134.3–209.7	234.6–241.4

Note: Rates are the number of cases of bowel cancer per 100,000 males. All-age totals and 55–74 year totals are age standardised to the Australian population at 30 June 2001.

Source: AIHW National Cancer Statistics Clearing House.

Table 4.1.6b: Age-specific and age-standardised incidence rates for bowel cancer, by region, 2000–2004, females

Age group	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia
0–4	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.2	0.1	0.0	1.6	0.0	0.2
15–19	0.8	0.7	0.6	0.3	0.0	0.7
20–24	1.0	1.2	1.2	0.0	3.1	1.0
25–29	1.8	1.9	1.1	0.0	2.7	1.8
30–34	4.1	4.0	4.8	3.1	6.7	4.1
35–39	8.2	8.5	8.1	17.4	8.4	8.4
40–44	14.9	13.7	14.3	30.1	22.5	14.9
45–49	30.1	29.9	30.5	16.8	25.1	29.8
50–54	49.2	55.1	53.9	40.8	24.5	50.7
55–59	77.1	82.2	82.0	68.3	49.3	78.6
60–64	130.5	136.9	136.4	106.5	69.5	132.0
65–69	179.6	205.6	207.6	186.7	148.1	189.3
70–74	246.0	272.5	263.1	235.9	168.5	253.9
75–79	300.8	335.7	315.6	356.6	201.6	311.3
80–84	363.9	360.0	373.1	346.4	266.2	364.6
85+	380.5	414.2	361.2	330.9	518.4	390.0
All ages						
Crude rate	55.5	65.3	58.7	40.4	22.9	57.3
ASR(A)	51.1	55.1	53.7	50.2	39.9	52.4
95% CI	50.4–51.9	53.8–56.4	51.8–55.7	44.7–56.2	31.9–49.0	51.8–53.0
Ages 55–74						
Crude rate	147.0	162.8	158.8	131.0	92.0	151.7
ASR(A)	147.4	161.7	160.1	137.9	100.1	152.0
95% CI	144.2–150.7	156.1–167.5	151.7–168.7	115.3–162.4	69.8–136.1	149.4–154.7

Note: Rates are the number of cases of bowel cancer per 100,000 females. All-age totals and 55–74 year totals are age standardised to the Australian population at 30 June 2001.

Source: AIHW National Cancer Statistics Clearing House.

Table 4.1.6c: Age-specific and age-standardised incidence rates for bowel cancer, by region, 2000–2004, persons

Age group	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia
0–4	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.2	0.1	0.0	0.8	1.3	0.2
15–19	0.6	0.4	0.4	0.2	0.0	0.6
20–24	1.0	1.1	1.7	0.6	2.4	1.0
25–29	1.9	2.1	1.8	2.2	5.4	1.9
30–34	4.1	4.1	3.8	7.0	6.8	4.1
35–39	8.0	8.3	8.0	13.2	6.9	8.2
40–44	14.8	14.7	14.1	26.9	16.7	14.9
45–49	30.6	31.1	31.9	31.7	24.2	30.8
50–54	56.5	60.5	66.6	45.7	43.0	58.2
55–59	95.5	102.8	109.7	101.0	77.9	98.7
60–64	163.8	177.6	179.0	146.3	121.5	168.5
65–69	231.9	265.5	265.6	264.2	177.2	244.8
70–74	314.7	340.4	345.7	320.0	218.8	324.4
75–79	376.0	405.0	397.6	444.8	272.6	386.5
80–84	423.6	430.0	412.1	402.8	290.3	425.0
85+	426.0	440.7	390.5	402.8	577.7	431.3
All ages						
Crude rate	61.3	73.5	68.4	50.9	28.8	64.1
ASR(A)	61.7	66.1	65.9	64.7	50.3	63.4
95% CI	61.1–62.3	65.1–67.2	64.4–67.5	60.2–69.3	43.9–57.1	62.9–63.9
Ages 55–74						
Crude rate	184.6	206.0	206.9	182.6	128.9	192.0
ASR(A)	187.3	205.7	209.3	192.5	139.3	194.3
95% CI	184.6–189.9	201.1–210.3	202.7–216.2	174.6–211.8	115.2–166.1	192.1–196.4

Note: Rates are the number of cases of bowel cancer per 100,000 persons. All-age totals and 55–74 year totals are age standardised to the Australian population at 30 June 2001.

Source: AIHW National Cancer Statistics Clearing House.

4.2 Mortality from bowel cancer

A major objective of the NBCSP is to reduce mortality from bowel cancer in Australia through early detection and treatment of bowel cancers and through identifying and treating polyps and adenocarcinomas which might develop into cancer.

Age profile

In 2005:

- Death from bowel cancer is relatively rare before age 50 years.
- The highest death rates were in people aged 80–84 years (156 per 100,000 population) and 85 years and over (225 per 100,000).
- There were 1,681 deaths in the 55–74 year age group, 41% of all bowel cancer deaths.

Trends

- From 1982 to 2005 the age-standardised death rate from bowel cancer fell by an annual average of 1.8% per year for males, 2.6% per year for females, and 2.1% per year for persons.

The expected effect of the NBCSP in time will be to accelerate the decline in the death rate.

State and territory comparisons

Tasmania experienced the highest rate of deaths from bowel cancer for 2001–2005 (26.3 deaths per 100,000 population) followed by Victoria (23.4 per 100,000). The Northern Territory (17.8 per 100,000) and New South Wales (19.4 per 100,000) had significantly lower mortality rates for 2001–2005.

Regional comparisons

Deaths from bowel cancer were highest in outer regional (22.8 deaths per 100,000 population) and inner regional (22.5 per 100,000) areas of Australia in 2001–2005. Death rates were significantly lower in major cities (20.5 per 100,000), remote areas (19.6 per 100,000) and very remote areas (14.7 per 100,000).

Mortality of Aboriginal and Torres Strait Islander people

The age-standardised rate of deaths from bowel cancer was significantly lower (7.4 deaths per 100,000 population) in Aboriginal and Torres Strait Islander people in 2001–2005 than in non-Indigenous people (21.7 per 100,000) in Queensland, Western Australia, South Australia and the Northern Territory.

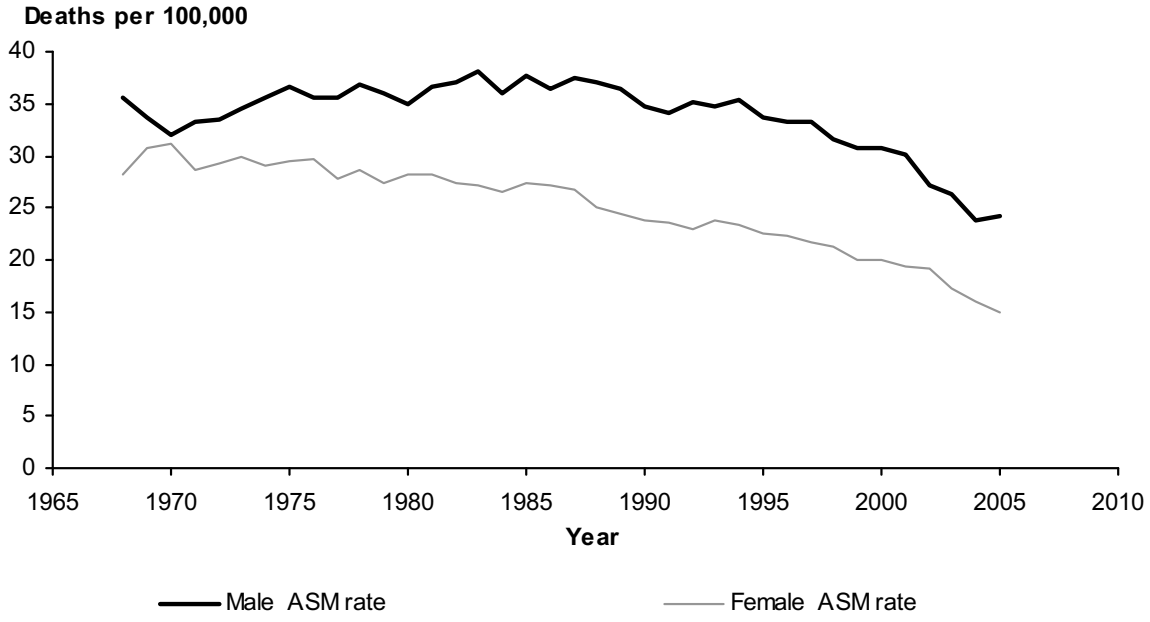


Figure 4.2.1: Trends in death rate for bowel cancer (ICD-10 C18–C20), Australia, 1968–2005

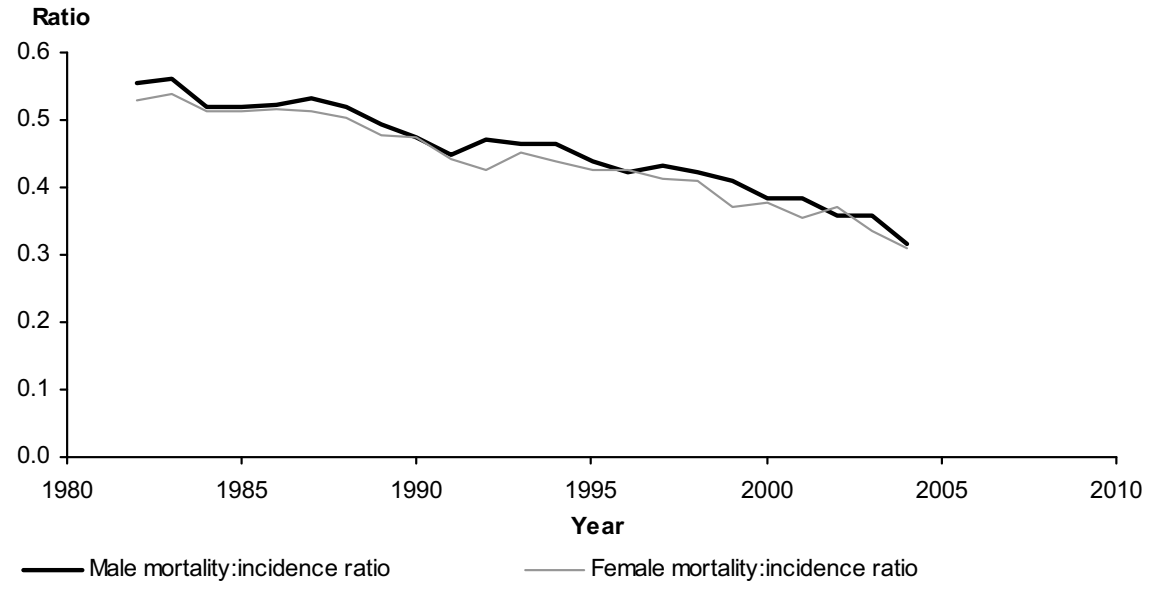


Figure 4.2.2: Trends in mortality:incidence ratios for bowel cancer (ICD-10 C18–C20), Australia, 1982–2004

Table 4.2.1a: Number of deaths from bowel cancer, Australia, 1991–2005, males

Age group	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
0–4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
10–14	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
15–19	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0
20–24	0	0	0	3	1	0	2	2	3	1	1	2	1	1	2
25–29	3	1	4	3	1	4	3	5	4	2	2	3	0	4	4
30–34	9	8	8	6	6	5	6	11	5	9	6	10	6	9	6
35–39	13	11	15	13	12	12	14	18	9	21	18	12	7	10	15
40–44	44	33	36	44	33	30	32	36	20	31	21	17	30	28	21
45–49	66	66	76	69	79	62	71	72	46	63	68	62	64	49	56
50–54	136	140	117	126	121	123	129	104	117	124	111	104	101	103	121
55–59	178	191	194	233	189	197	208	208	209	193	192	196	208	171	151
60–64	304	281	293	310	285	298	297	276	271	298	288	245	262	216	255
65–69	361	366	395	436	388	429	372	358	366	352	342	324	316	289	317
70–74	362	374	366	434	448	479	467	453	489	442	472	418	384	357	351
75–79	357	351	382	350	342	354	400	370	408	417	444	470	429	415	415
80–84	243	258	262	279	292	294	274	320	272	306	338	296	318	298	319
85+	160	196	211	194	216	219	229	224	267	247	279	261	265	238	269
All ages	2,237	2,276	2,359	2,501	2,413	2,506	2,505	2,458	2,486	2,506	2,583	2,420	2,391	2,189	2,302
Ages 55–74	1,205	1,212	1,248	1,413	1,310	1,403	1,344	1,295	1,335	1,285	1,294	1,183	1,170	1,033	1,074

Source: AIHW National Mortality Database.

Table 4.2.1b: Number of deaths from bowel cancer, Australia, 1991–2005, females

Age group	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
0–4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10–14	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
15–19	1	0	1	0	0	0	0	2	0	0	0	2	0	0	0
20–24	1	0	3	0	2	1	2	0	1	3	1	2	1	1	1
25–29	3	3	2	4	1	5	3	1	0	0	4	4	2	4	3
30–34	10	6	5	7	7	10	7	7	9	9	9	7	12	4	4
35–39	12	15	18	10	18	13	13	13	20	13	22	16	14	10	15
40–44	33	39	34	29	37	28	24	34	30	21	27	26	33	36	22
45–49	52	68	56	55	46	63	55	66	55	57	46	54	58	50	42
50–54	97	87	88	77	89	95	100	89	78	80	99	77	87	80	77
55–59	110	127	138	153	132	135	153	125	132	139	122	119	101	113	91
60–64	180	173	183	198	169	179	179	178	159	173	152	164	151	119	129
65–69	282	243	237	266	256	229	236	244	196	207	208	227	185	178	164
70–74	281	309	319	331	307	327	319	325	290	292	286	304	251	241	223
75–79	327	293	321	307	321	308	307	370	331	364	323	346	316	305	292
80–84	285	290	303	301	322	329	319	273	322	309	347	345	340	302	306
85+	318	330	371	398	375	390	409	411	424	475	450	470	449	445	441
Not stated	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
All ages	1,992	1,983	2,079	2,136	2,082	2,112	2,127	2,138	2,047	2,142	2,096	2,164	2,000	1,888	1,810
Ages 55–74	853	852	877	948	864	870	887	872	777	811	768	814	688	651	607

Source: AIHW National Mortality Database.

Table 4.2.1c: Number of deaths from bowel cancer, Australia, 1991–2005, persons

Age group	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
0–4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
10–14	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0
15–19	2	0	1	0	0	0	0	2	0	0	1	2	0	1	0
20–24	1	0	3	3	3	1	4	2	4	4	2	4	2	2	3
25–29	6	4	6	7	2	9	6	6	4	2	6	7	2	8	7
30–34	19	14	13	13	13	15	13	18	14	18	15	17	18	13	10
35–39	25	26	33	23	30	25	27	31	29	34	40	28	21	20	30
40–44	77	72	70	73	70	58	56	70	50	52	48	43	63	64	43
45–49	118	134	132	124	125	125	126	138	101	120	114	116	122	99	98
50–54	233	227	205	203	210	218	229	193	195	204	210	181	188	183	198
55–59	288	318	332	386	321	332	361	333	341	332	314	315	309	284	242
60–64	484	454	476	508	454	477	476	454	430	471	440	409	413	335	384
65–69	643	609	632	702	644	658	608	602	562	559	550	551	501	467	481
70–74	643	683	685	765	755	806	786	778	779	734	758	722	635	598	574
75–79	684	644	703	657	663	662	707	740	739	781	767	816	745	720	707
80–84	528	548	565	580	614	623	593	593	594	615	685	641	658	600	625
85+	478	526	582	592	591	609	638	635	691	722	729	731	714	683	710
Not stated	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
All ages	4,229	4,259	4,438	4,637	4,495	4,618	4,632	4,596	4,533	4,648	4,679	4,584	4,391	4,077	4,113
Ages 55–74	**2,058**	**2,064**	**2,125**	**2,361**	**2,174**	**2,273**	**2,231**	**2,167**	**2,112**	**2,096**	**2,062**	**1,997**	**1,858**	**1,684**	**1,681**

Source: AIHW National Mortality Database.

Table 4.2.2a: Age-specific and age-standardised mortality rates for bowel cancer, Australia, 1991–2005, males

Age group	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
0–4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15–19	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0
20–24	0.0	0.0	0.0	0.4	0.1	0.0	0.3	0.3	0.5	0.2	0.2	0.3	0.1	0.1	0.3
25–29	0.4	0.1	0.6	0.4	0.1	0.6	0.4	0.7	0.5	0.3	0.3	0.4	0.0	0.6	0.6
30–34	1.3	1.1	1.1	0.8	0.8	0.7	0.8	1.6	0.7	1.3	0.8	1.3	0.8	1.2	0.8
35–39	2.0	1.6	2.2	1.9	1.7	1.7	1.9	2.4	1.2	2.8	2.4	1.6	1.0	1.4	2.1
40–44	6.7	5.1	5.5	6.7	5.0	4.4	4.7	5.2	2.8	4.3	2.9	2.3	3.9	3.6	2.7
45–49	12.5	11.7	12.8	11.2	12.4	9.5	10.9	11.0	6.9	9.4	10.1	9.1	9.2	6.9	7.7
50–54	31.4	31.4	25.7	26.5	24.4	23.8	23.1	17.6	19.0	19.5	17.0	16.0	15.4	15.7	18.3
55–59	48.5	51.0	50.6	59.2	46.5	46.9	47.9	46.3	44.6	39.4	37.4	35.6	35.6	28.2	24.2
60–64	82.9	77.5	81.8	87.3	80.6	84.2	82.1	74.2	70.4	74.4	69.6	57.3	59.6	47.3	53.5
65–69	112.8	112.6	119.7	131.2	115.8	127.1	110.2	106.7	109.6	106.0	101.9	94.0	88.8	78.4	82.9
70–74	158.4	156.3	146.1	164.5	165.9	173.5	165.6	157.1	166.0	147.5	155.5	137.3	126.9	118.4	117.0
75–79	224.5	216.6	233.9	214.4	201.8	197.1	210.5	184.3	192.3	189.9	195.3	201.2	178.3	167.6	164.9
80–84	287.9	292.0	281.1	283.1	284.6	277.7	252.0	288.9	241.5	257.2	263.5	215.9	218.2	192.9	195.9
85+	361.8	414.0	419.1	364.1	380.5	363.2	358.3	328.4	366.8	318.6	340.6	302.6	294.5	254.3	264.1
All ages															
Crude rate	26.0	26.1	26.8	28.1	26.8	27.5	27.2	26.4	26.5	26.4	26.8	24.8	24.2	21.9	22.8
ASR(A)	34.8	35.0	35.2	35.7	33.9	33.9	33.0	31.5	31.1	30.2	30.3	27.4	26.3	23.4	23.9
95% CI	33.3–36.4	33.5–36.5	33.7–36.7	34.2–37.1	32.5–35.3	32.6–35.3	31.7–34.4	30.3–32.8	29.8–32.3	29.0–31.4	29.1–31.5	26.3–28.6	25.2–27.4	22.4–24.4	22.9–24.9
Ages 55–74															
Crude rate	93.9	93.2	94.4	105.0	95.9	101.1	94.9	89.6	90.1	84.4	82.6	72.7	69.6	59.6	60.2
ASR(A)	93.6	92.6	93.1	103.4	94.6	99.7	94.2	89.1	90.0	84.8	83.7	74.5	71.9	62.3	63.3
95% CI	88.4–99.1	87.4–98.0	87.9–98.4	98.1–109.0	89.5–99.8	94.5–105.0	89.2–99.3	84.3–94.1	85.2–95.0	80.3–89.6	79.2–88.4	70.3–78.9	67.8–76.1	58.6–66.3	59.6–67.3

Note: Rates are the number of deaths from bowel cancer per 100,000 males. All-age totals and 55–74 year totals are age standardised to the Australian population at 30 June 2001.

Source: AIHW National Mortality Database.

Table 4.2.2b: Age-specific and age-standardised mortality rates for bowel cancer, Australia, 1991–2005, females

Age group	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
0–4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15–19	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0
20–24	0.1	0.0	0.4	0.0	0.3	0.1	0.3	0.0	0.2	0.5	0.2	0.3	0.1	0.1	0.1
25–29	0.4	0.4	0.3	0.6	0.1	0.7	0.4	0.1	0.0	0.0	0.6	0.6	0.3	0.6	0.4
30–34	1.4	0.8	0.7	1.0	1.0	1.4	1.0	1.0	1.3	1.3	1.2	0.9	1.6	0.5	0.5
35–39	1.8	2.2	2.6	1.4	2.5	1.8	1.8	1.7	2.6	1.7	2.9	2.2	1.9	1.4	2.0
40–44	5.2	6.1	5.3	4.4	5.5	4.1	3.5	4.8	4.2	2.9	3.6	3.4	4.3	4.7	2.9
45–49	10.3	12.6	9.8	9.2	7.5	9.8	8.6	10.1	8.3	8.5	6.7	7.8	8.2	6.9	5.7
50–54	23.5	20.5	20.3	17.0	18.7	19.1	18.6	15.5	13.0	12.8	15.3	11.8	13.2	12.0	11.5
55–59	30.7	34.7	36.7	39.7	33.4	33.1	36.3	28.8	29.2	29.4	24.6	22.2	17.7	18.9	14.7
60–64	48.6	47.4	50.9	55.5	47.4	50.2	49.2	47.8	41.4	43.6	37.3	39.1	35.0	26.6	27.6
65–69	80.3	68.8	66.7	75.0	72.3	64.6	67.0	69.9	56.6	60.0	60.0	63.9	50.6	47.1	42.1
70–74	99.6	105.6	105.1	104.3	95.1	100.0	97.1	98.2	87.0	87.5	85.4	91.3	76.1	73.7	68.2
75–79	145.0	127.9	139.5	134.8	137.5	126.3	119.7	137.6	117.8	126.5	110.6	117.4	105.9	101.0	96.9
80–84	196.0	191.5	191.4	180.1	186.7	186.3	177.4	150.0	175.9	162.6	172.0	163.1	153.6	131.1	128.4
85+	289.0	285.4	304.5	312.1	279.2	275.4	273.8	262.2	255.3	271.2	245.5	246.6	228.5	220.3	206.9
All ages															
Crude rate	23.0	22.6	23.4	23.8	22.9	22.9	22.8	22.7	21.5	22.2	21.4	21.9	20.0	18.7	17.7
ASR(A)	23.9	23.3	23.8	23.8	22.6	22.3	21.9	21.4	19.8	20.1	19.1	19.3	17.3	16.0	14.9
95% CI	22.9–25.0	22.2–24.3	22.8–24.8	22.8–24.8	21.6–23.6	21.4–23.3	20.9–22.8	20.5–22.3	19.0–20.7	19.3–21.0	18.3–20.0	18.4–20.1	16.6–18.1	15.3–16.7	14.2–15.6
Ages 55–74															
Crude rate	62.6	61.9	62.9	67.0	60.4	60.2	60.5	58.7	51.2	52.4	48.4	49.5	40.5	37.2	33.6
ASR(A)	60.1	59.8	60.8	64.5	57.9	57.9	58.6	56.7	50.0	51.5	47.9	49.6	41.2	38.1	34.8
95% CI	56.1–64.3	55.8–63.9	56.8–64.9	60.5–68.8	54.1–62.0	54.1–61.9	54.8–62.6	53.0–60.6	46.6–53.7	48.0–55.2	44.5–51.4	46.3–53.2	38.2–44.4	35.2–41.2	32.1–37.7

Note: Rates are the number of deaths from bowel cancer per 100,000 females. All-age totals and 55–74 year totals are age standardised to the Australian population at 30 June 2001.

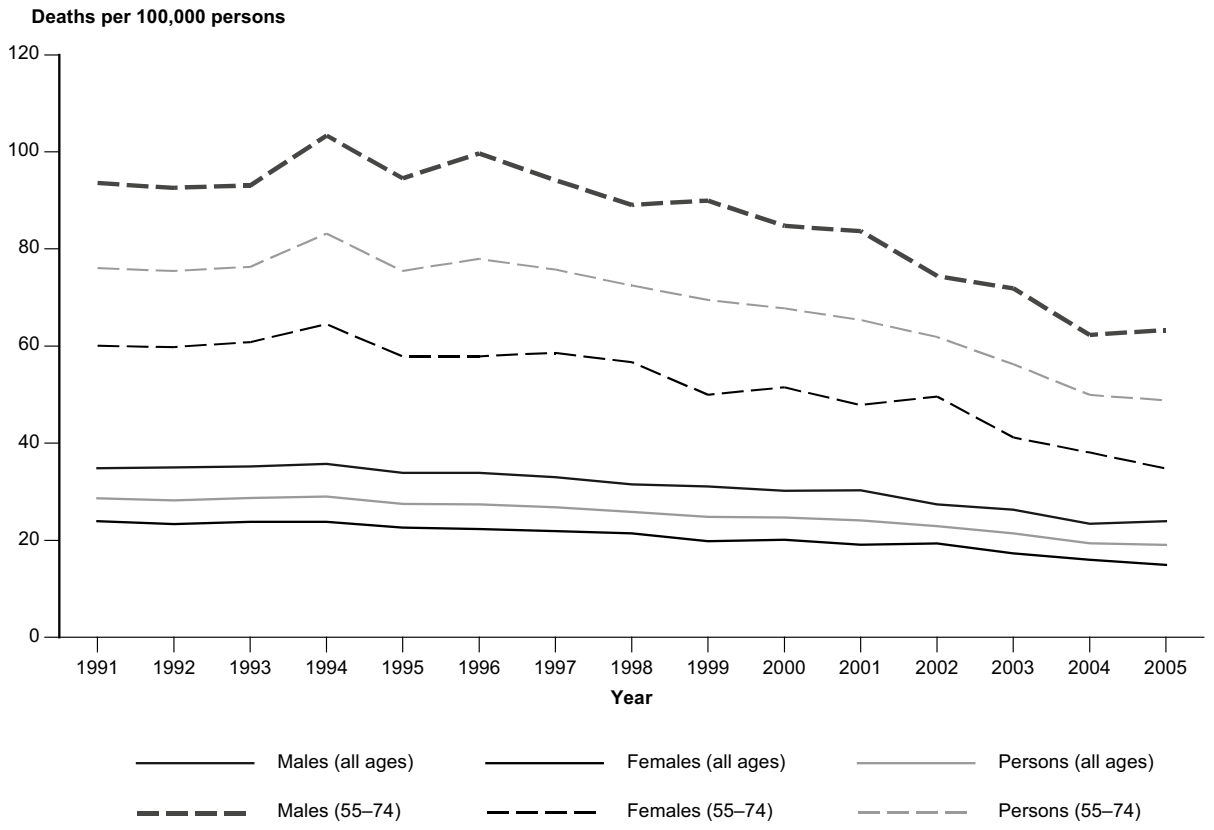
Source: AIHW National Mortality Database.

Table 4.2.2c: Age-specific and age-standardised mortality rates for bowel cancer, Australia, 1991–2005, persons

Age group	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
0–4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15–19	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.0	0.1	0.0
20–24	0.1	0.0	0.2	0.2	0.2	0.1	0.3	0.2	0.3	0.3	0.2	0.3	0.1	0.1	0.2
25–29	0.4	0.3	0.4	0.5	0.1	0.6	0.4	0.4	0.3	0.1	0.4	0.5	0.1	0.6	0.5
30–34	1.3	1.0	0.9	0.9	0.9	1.0	0.9	1.3	1.0	1.3	1.0	1.1	1.2	0.9	0.7
35–39	1.9	1.9	2.4	1.7	2.1	1.7	1.8	2.1	1.9	2.3	2.7	1.9	1.4	1.4	2.0
40–44	5.9	5.6	5.4	5.5	5.3	4.3	4.1	5.0	3.5	3.6	3.2	2.8	4.1	4.1	2.8
45–49	11.5	12.2	11.3	10.2	10.0	9.7	9.7	10.5	7.6	8.9	8.4	8.4	8.7	6.9	6.7
50–54	27.5	26.1	23.0	21.9	21.6	21.5	20.9	16.6	16.1	16.2	16.1	13.9	14.3	13.8	14.8
55–59	39.7	42.9	43.7	49.5	40.0	40.1	42.2	37.7	37.0	34.5	31.1	29.0	26.8	23.6	19.4
60–64	65.7	62.4	66.3	71.3	63.9	67.1	65.6	61.0	55.9	59.0	53.5	48.3	47.4	37.0	40.6
65–69	95.8	89.8	92.2	102.2	93.4	95.1	88.1	87.9	82.7	82.6	80.6	78.7	69.4	62.6	62.3
70–74	125.9	128.4	123.6	131.6	127.3	133.6	128.7	125.6	124.1	115.9	118.7	113.3	100.4	95.2	91.5
75–79	177.9	164.6	178.7	168.0	164.6	156.4	158.3	157.6	149.9	153.9	147.7	154.5	138.2	131.0	127.9
80–84	229.7	228.5	224.7	218.3	223.2	220.6	205.5	202.5	200.9	199.0	207.5	183.9	179.3	155.9	155.8
85+	309.9	322.7	338.0	327.5	309.3	301.6	299.2	282.3	289.2	285.7	274.9	264.0	249.2	231.1	225.4
All ages															
Crude rate	24.5	24.3	25.1	26.0	24.9	25.2	25.0	24.6	24.0	24.3	24.1	23.3	22.1	20.3	20.2
ASR(A)	28.6	28.2	28.7	29.0	27.5	27.4	26.8	25.8	24.8	24.7	24.1	22.9	21.4	19.4	19.0
95% CI	27.8–29.5	27.4–29.1	27.8–29.5	28.2–29.9	26.7–28.3	26.6–28.2	26.0–27.6	25.1–26.6	24.1–25.5	24.0–25.4	23.4–24.8	22.3–23.6	20.8–22.0	18.8–20.0	18.4–19.6
Ages 55–74															
Crude rate	77.8	77.1	78.2	85.6	77.8	80.2	77.4	73.9	70.4	68.2	65.4	61.1	55.0	48.4	46.8
ASR(A)	76.1	75.5	76.3	83.2	75.5	78.0	75.8	72.5	69.5	67.8	65.4	61.9	56.3	50.0	48.9
95% CI	72.8–79.4	72.2–78.8	73.1–79.6	79.9–86.7	72.3–78.7	74.8–81.3	72.7–79.0	69.4–75.6	66.5–72.5	64.9–70.7	62.6–68.3	59.2–64.6	53.8–58.9	47.7–52.5	46.5–51.3

Note: Rates are the number of deaths from bowel cancer per 100,000 persons. All-age totals and 55–74 year totals are age standardised to the Australian population at 30 June 2001.

Source: AIHW National Mortality Database.



Notes

1. Rates are expressed per 100,000 persons and age standardised to the Australian 2001 population.
2. Deaths were derived by year of registration.

Source: AIHW National Mortality Database.

Figure 4.2.3: Age-standardised death rates for bowel cancer, 1991–2005

Table 4.2.3a: Number of deaths from bowel cancer, by age, states and territories, 2001–2005, males

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
0–4	0	0	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	0	0	0
10–14	0	0	0	0	0	0	0	0	0
15–19	2	0	0	0	0	0	0	0	2
20–24	2	1	2	2	0	0	0	0	7
25–29	1	7	2	2	0	1	0	0	13
30–34	8	5	7	6	6	1	3	1	37
35–39	17	15	13	6	10	0	0	1	62
40–44	30	35	21	12	11	4	3	1	117
45–49	80	84	55	34	25	12	8	1	299
50–54	148	149	89	60	60	16	10	8	540
55–59	285	241	190	76	82	21	14	9	918
60–64	371	319	269	128	105	48	21	5	1,266
65–69	518	385	328	150	138	45	18	6	1,588
70–74	671	533	372	168	149	63	21	5	1,982
75–79	692	637	375	171	205	65	23	5	2,173
80–84	483	466	276	161	124	42	15	2	1,569
85+	408	390	215	123	122	45	8	1	1,312
All ages	3,716	3,267	2,214	1,099	1,037	363	144	45	11,885
Ages 55–74	1,845	1,478	1,159	522	474	177	74	25	5,754

Note: State and territory refers to the state or territory of usual residence.

Source: AIHW National Mortality Database.

Table 4.2.3b: Number of deaths from bowel cancer, by age, states and territories, 2001–2005, females

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
0–4	0	0	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	0	0	0
10–14	0	0	0	0	0	0	0	0	0
15–19	0	0	1	0	0	0	1	0	2
20–24	2	3	0	1	0	0	0	0	6
25–29	4	5	3	3	1	1	0	0	17
30–34	4	19	5	2	2	3	0	1	36
35–39	23	25	12	9	5	3	0	0	77
40–44	50	31	26	15	10	6	2	4	144
45–49	68	70	45	23	32	5	6	1	250
50–54	142	114	76	36	32	12	5	3	420
55–59	176	127	121	45	49	22	5	1	546
60–64	242	183	131	56	57	28	13	5	715
65–69	298	269	199	79	77	24	9	7	962
70–74	415	364	263	98	100	43	19	3	1,305
75–79	488	454	278	133	145	56	24	4	1,582
80–84	519	474	274	143	161	51	16	2	1,640
85+	671	638	404	202	219	89	28	4	2,255
Not stated	0	0	0	1	0	1	0	0	2
All ages	3,102	2,776	1,838	846	890	344	128	35	9,957
Ages 55–74	1,131	943	714	278	283	117	46	16	3,528

Note: State and territory refers to the state or territory of usual residence.

Source: AIHW National Mortality Database.

Table 4.2.3c: Number of deaths from bowel cancer, by age, states and territories, 2001–2005, persons

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
0–4	0	0	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	0	0	0
10–14	0	0	0	0	0	0	0	0	0
15–19	2	0	1	0	0	0	1	0	4
20–24	4	4	2	3	0	0	0	0	13
25–29	5	12	5	5	1	2	0	0	30
30–34	12	24	12	8	8	4	3	2	73
35–39	40	40	25	15	15	3	0	1	139
40–44	80	66	47	27	21	10	5	5	261
45–49	148	154	100	57	57	17	14	2	549
50–54	290	263	165	96	92	28	15	11	960
55–59	461	368	311	121	131	43	19	10	1,464
60–64	613	502	400	184	162	76	34	10	1,981
65–69	816	654	527	229	215	69	27	13	2,550
70–74	1,086	897	635	266	249	106	40	8	3,287
75–79	1,180	1,091	653	304	350	121	47	9	3,755
80–84	1,002	940	550	304	285	93	31	4	3,209
85+	1,079	1,028	619	325	341	134	36	5	3,567
Not stated	0	0	0	1	0	1	0	0	2
All ages	6,818	6,043	4,052	1,945	1,927	707	272	80	21,844
Ages 55–74	2,976	2,421	1,873	800	757	294	120	41	9,282

Note: State and territory refers to the state or territory of usual residence.

Source: AIHW National Mortality Database.

Table 4.2.4a: Age-specific and age-standardised mortality rates for bowel cancer, states and territories, 2001–2005, males

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
0–4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15–19	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
20–24	0.2	0.1	0.3	0.6	0.0	0.0	0.0	0.0	0.2
25–29	0.1	0.8	0.3	0.6	0.0	1.5	0.0	0.0	0.4
30–34	0.6	0.5	1.0	1.6	2.2	1.3	4.6	2.1	1.0
35–39	1.4	1.6	1.9	1.6	3.6	0.0	0.0	2.3	1.7
40–44	2.4	3.8	2.9	3.1	3.8	4.4	4.9	2.4	3.1
45–49	6.9	9.8	8.2	9.4	9.1	13.8	14.0	2.7	8.5
50–54	13.6	18.8	14.0	17.8	23.1	19.4	17.9	23.7	16.4
55–59	29.8	34.9	33.5	26.7	35.9	28.5	30.5	35.1	32.0
60–64	50.0	59.3	62.4	60.2	59.8	81.4	69.2	29.2	57.4
65–69	85.4	87.3	97.9	90.7	94.2	94.6	82.8	63.0	89.5
70–74	128.0	139.5	135.7	124.1	113.8	156.4	122.2	83.9	131.3
75–79	166.3	209.2	176.5	166.1	187.0	205.4	172.4	141.6	182.0
80–84	190.6	255.2	213.1	267.7	184.0	225.7	188.2	132.7	217.6
85+	268.6	341.0	270.8	327.0	294.9	391.6	190.9	95.5	297.2
All ages									
Crude rate	22.5	26.9	23.3	22.4	27.4	30.8	17.9	8.6	24.0
ASR(A)	24.0	29.0	26.3	27.1	26.5	30.9	24.8	17.7	26.4
95% CI	23.2–24.8	28.0–30.1	25.2–27.5	25.5–28.8	24.9–28.2	27.7–34.3	20.7–29.3	11.8–25.1	25.9–26.9
Ages 55–74									
Crude rate	65.2	72.0	72.1	65.5	69.5	80.3	64.3	43.0	68.8
ASR(A)	67.0	73.8	75.7	69.1	70.5	82.5	70.5	49.5	71.2
95% CI	64.0–70.1	70.1–77.7	71.4–80.2	63.2–75.3	64.3–77.2	70.8–95.6	55.1–88.8	30.6–75.0	69.3–73.0

Notes

1. Rates are the number of deaths from bowel cancer per 100,000 males. All-age totals and 55–74 year totals are age standardised to the Australian population at 30 June 2001.
2. State and territory refers to the state or territory of usual residence.

Source: AIHW National Mortality Database.

Table 4.2.4b: Age-specific and age-standardised mortality rates for bowel cancer, states and territories, 2001–2005, females

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
0–4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15–19	0.0	0.0	0.2	0.0	0.0	0.0	1.7	0.0	0.1
20–24	0.2	0.4	0.0	0.3	0.0	0.0	0.0	0.0	0.2
25–29	0.3	0.6	0.5	0.9	0.4	1.4	0.0	0.0	0.5
30–34	0.3	1.9	0.7	0.5	0.7	3.7	0.0	2.2	0.9
35–39	1.9	2.7	1.7	2.4	1.8	3.6	0.0	0.0	2.1
40–44	3.9	3.3	3.5	3.9	3.4	6.4	3.1	10.5	3.8
45–49	5.8	8.0	6.7	6.4	11.5	5.7	9.7	2.9	7.0
50–54	13.1	14.1	12.0	11.0	12.0	14.4	8.6	10.3	12.8
55–59	18.8	18.3	22.2	16.9	21.1	30.0	10.9	5.0	19.4
60–64	32.9	33.9	31.7	27.5	31.7	48.0	42.4	40.0	32.9
65–69	47.4	57.9	60.5	47.2	49.6	49.2	39.1	95.3	52.7
70–74	71.9	85.8	91.4	68.1	68.5	98.4	101.2	60.6	79.3
75–79	93.5	117.8	109.8	107.8	104.2	143.7	141.9	119.0	106.7
80–84	133.9	167.7	145.9	158.8	154.0	171.6	132.2	93.2	149.5
85+	197.3	253.3	247.3	242.7	235.4	341.5	290.5	258.1	232.7
All ages									
Crude rate	18.5	22.3	19.2	17.4	23.0	28.4	15.6	7.3	19.9
ASR(A)	15.7	18.9	18.2	16.6	17.1	22.5	18.7	17.4	17.4
95% CI	15.1–16.2	18.2–19.6	17.4–19.0	15.5–17.8	16.0–18.3	20.1–25.0	15.6–22.2	11.5–25.1	17.0–17.7
Ages 55–74									
Crude rate	39.3	44.4	45.3	35.6	39.7	52.2	38.9	35.7	41.7
ASR(A)	39.4	44.6	47.0	36.6	39.6	52.7	43.5	44.9	42.3
95% CI	37.2–41.8	41.8–47.5	43.6–50.6	32.4–41.1	35.1–44.5	43.6–63.2	31.7–58.2	25.0–74.0	40.9–43.7

Notes

1. Rates are the number of deaths from bowel cancer per 100,000 females. All-age totals and 55–74 year totals are age standardised to the Australian population at 30 June 2001.
2. State and territory refers to the state or territory of usual residence.

Source: AIHW National Mortality Database.

Table 4.2.4c: Age-specific and age-standardised mortality rates for bowel cancer, states and territories, 2001–2005, persons

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
0–4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15–19	0.1	0.0	0.1	0.0	0.0	0.0	0.8	0.0	0.1
20–24	0.2	0.2	0.2	0.4	0.0	0.0	0.0	0.0	0.2
25–29	0.2	0.7	0.4	0.7	0.2	1.4	0.0	0.0	0.4
30–34	0.5	1.2	0.8	1.1	1.5	2.5	2.3	2.2	1.0
35–39	1.6	2.1	1.8	2.0	2.7	1.8	0.0	1.2	1.9
40–44	3.1	3.5	3.2	3.5	3.6	5.4	4.0	6.2	3.4
45–49	6.3	8.9	7.4	7.9	10.3	9.7	11.7	2.8	7.8
50–54	13.4	16.4	13.0	14.4	17.5	16.9	13.1	17.5	14.6
55–59	24.3	26.6	28.0	22.0	28.4	29.3	20.7	21.9	25.8
60–64	41.5	46.5	47.4	44.2	45.6	64.8	55.7	33.8	45.2
65–69	66.0	72.2	79.4	68.9	71.2	71.6	60.3	77.1	70.9
70–74	98.6	111.2	113.0	95.2	89.9	126.2	111.2	73.3	104.1
75–79	125.8	158.2	140.2	134.3	140.7	171.3	155.3	130.6	140.3
80–84	156.3	202.1	173.3	202.4	165.7	192.4	154.4	109.5	176.5
85+	219.3	280.7	255.0	268.9	253.7	356.8	260.3	192.5	252.9
All ages									
Crude rate	20.4	24.5	21.2	19.9	25.2	29.6	16.7	8.0	21.9
ASR(A)	19.4	23.4	22.0	21.4	21.4	26.3	21.8	17.8	21.4
95% CI	18.9–19.8	22.8–24.0	21.4–22.7	20.4–22.4	20.5–22.4	24.4–28.3	19.2–24.6	13.5–22.9	21.1–21.7
Ages 55–74									
Crude rate	52.1	58.0	58.9	50.7	54.3	66.1	51.4	39.8	55.2
ASR(A)	52.9	58.8	61.4	52.8	54.6	67.3	56.7	47.3	56.5
95% CI	51.0–54.8	56.5–61.2	58.6–64.2	49.1–56.6	50.8–58.7	59.8–75.5	46.9–68.0	33.2–65.3	55.3–57.6

Notes

1. Rates are the number of deaths from bowel cancer per 100,000 persons. All-age totals and 55–74 year totals are age standardised to the Australian population at 30 June 2001.
2. State and territory refers to the state or territory of usual residence.

Source: AIHW National Mortality Database.

Table 4.2.5a: Number of deaths from bowel cancer, by age and region, 2001–2005, males

Age group	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia
0–4	0	0	0	0	0	0
5–9	0	0	0	0	0	0
10–14	0	0	0	0	0	0
15–19	2	0	0	0	0	2
20–24	3	4	0	0	0	7
25–29	6	6	1	0	0	13
30–34	30	3	2	1	1	37
35–39	42	9	9	0	0	61
40–44	76	20	16	4	0	117
45–49	182	68	40	7	0	297
50–54	338	108	82	8	1	538
55–59	563	220	121	8	4	915
60–64	748	302	182	18	6	1,256
65–69	934	399	210	35	3	1,581
70–74	1,220	529	198	18	4	1,969
75–79	1,368	506	258	33	6	2,171
80–84	994	401	154	9	5	1,563
85+	833	313	147	10	4	1,307
Not stated	0	0	0	0	0	0
All ages	7,339	2,890	1,420	151	34	11,834
Ages 55–74	3,465	1,450	710	78	18	5,721

Notes

1. Regions are defined according to the ASGC Remoteness Areas classification.
2. Because some postcodes cross regional boundaries, totals may not add up due to rounding.
3. There were 51 deaths excluded from these data because the respective postcodes were not able to be matched to the coding used for this analysis or postcodes were not provided.

Source: AIHW National Mortality Database.

Table 4.2.5b: Number of deaths from bowel cancer, by age and region, 2001–2005, females

Age group	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia
0–4	0	0	0	0	0	0
5–9	0	0	0	0	0	0
10–14	0	0	0	0	0	0
15–19	1	1	0	0	0	2
20–24	3	2	0	0	1	6
25–29	13	3	1	0	0	17
30–34	21	8	7	0	0	36
35–39	55	15	6	1	0	77
40–44	92	23	21	6	1	143
45–49	162	54	27	3	2	248
50–54	263	98	45	9	1	417
55–59	351	132	57	3	1	544
60–64	431	172	97	8	1	710
65–69	592	238	108	13	5	956
70–74	803	344	135	11	4	1,297
75–79	1,016	390	153	16	1	1,576
80–84	1,065	392	156	10	9	1,632
85+	1,471	539	213	18	6	2,247
Not stated	0	0	0	0	1	1
All ages	6,338	2,413	1,026	96	35	9,909
Ages 55–74	2,177	886	397	34	12	3,507

Notes

1. Regions are defined according to the ASGC Remoteness Areas classification.
2. Because some postcodes cross regional boundaries, totals may not add up due to rounding.
3. There were 48 deaths excluded from these data because the respective postcodes were not able to be matched to the coding used for this analysis or postcodes were not provided.

Source: AIHW National Mortality Database.

Table 4.2.5c: Number of deaths from bowel cancer, by age and region, 2001–2005, persons

Age group	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia
0–4	0	0	0	0	0	0
5–9	0	0	0	0	0	0
10–14	3	1	0	0	0	4
15–19	3	1	0	0	0	4
20–24	6	6	0	0	1	13
25–29	19	9	2	0	0	30
30–34	51	11	9	1	1	73
35–39	97	25	15	2	0	138
40–44	169	44	37	10	1	260
45–49	343	123	67	10	3	545
50–54	601	207	128	17	2	955
55–59	914	351	178	11	5	1,459
60–64	1,179	474	279	26	7	1,966
65–69	1,526	637	318	47	9	2,537
70–74	2,023	874	333	28	8	3,266
75–79	2,384	895	411	49	7	3,747
80–84	2,059	793	310	19	14	3,195
85+	2,304	852	360	28	10	3,554
Not stated	0	0	0	0	1	1
All ages	13,681	5,303	2,446	247	70	21,747
Ages 55–74	5,642	2,337	1,108	112	29	9,228

Notes

1. Regions are defined according to the ASGC Remoteness Areas classification.
2. Because some postcodes cross regional boundaries, totals may not add up due to rounding.
3. There were 100 deaths excluded from these data because the respective postcodes were not able to be matched to the coding used for this analysis or postcodes were not provided.

Source: AIHW National Mortality Database.

Table 4.2.6a: Age-specific and age-standardised mortality rates for bowel cancer, by region, 2001–2005, males

Age group	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia
0–4	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.0	0.0	0.0	0.0	0.0	0.0
15–19	0.1	0.0	0.0	0.0	0.0	0.1
20–24	0.1	0.6	0.1	0.0	0.0	0.2
25–29	0.2	1.1	0.2	0.0	0.0	0.4
30–34	1.1	0.5	0.6	1.3	2.6	1.0
35–39	1.7	1.4	2.4	0.4	0.0	1.7
40–44	3.1	2.6	3.9	5.7	0.6	3.1
45–49	8.0	9.1	10.5	11.0	0.2	8.5
50–54	15.9	15.3	22.9	14.2	4.3	16.4
55–59	30.4	34.5	37.7	16.6	17.3	31.8
60–64	54.0	58.6	69.7	48.2	38.7	56.7
65–69	84.6	92.5	98.1	127.3	29.8	88.5
70–74	129.5	143.7	113.4	83.7	58.0	130.1
75–79	179.3	175.1	199.0	230.4	116.0	180.7
80–84	209.6	236.7	210.7	117.9	159.2	214.8
85+	283.6	299.4	313.5	190.1	169.4	288.7
All ages						
Crude rate	22.6	28.0	27.3	17.6	7.2	24.0
ASR(A)	25.4	27.2	28.1	23.2	14.2	26.1
95% CI	24.9–26.0	26.2–28.2	26.6–29.6	19.5–27.3	9.4–19.9	25.6–26.5
Ages 55–74						
Crude rate	65.6	74.3	73.3	58.4	31.2	68.1
ASR(A)	68.4	75.5	74.5	62.4	33.8	70.5
95% CI	66.1–70.7	71.6–79.4	69.1–80.2	48.9–77.6	19.0–53.1	68.7–72.3

Notes

1. Rates are the number of deaths from bowel cancer per 100,000 males. All-age totals and 55–74 year totals are age standardised to the Australian population at 30 June 2001.
2. Regions are classified using the 2001 Australian Standard Geographical Classification (ASGC) by postal area. Because some postcodes cross regional boundaries, totals may not add up due to rounding.

Source: AIHW National Mortality Database.

Table 4.2.6b: Age-specific and age-standardised mortality rates for bowel cancer, by region, 2001–2005, females

Age group	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia
0–4	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.0	0.0	0.0	0.0	0.0	0.0
15–19	0.0	0.1	0.0	0.0	0.0	0.1
20–24	0.1	0.4	0.0	0.0	3.1	0.2
25–29	0.5	0.5	0.5	0.0	0.0	0.5
30–34	0.8	1.2	2.0	0.0	0.0	1.0
35–39	2.2	2.0	1.6	2.2	0.3	2.1
40–44	3.6	2.9	5.3	9.4	4.0	3.7
45–49	6.9	7.2	7.4	5.3	9.8	7.0
50–54	12.0	14.0	13.6	18.5	5.6	12.7
55–59	19.1	21.0	19.3	8.0	8.7	19.3
60–64	31.2	33.7	40.7	26.4	9.0	32.6
65–69	50.6	54.4	54.7	55.9	63.3	52.1
70–74	75.0	88.6	80.0	60.0	53.3	78.5
75–79	102.9	114.7	106.6	112.1	27.5	105.8
80–84	143.8	159.4	150.9	101.8	282.1	148.0
85+	221.7	249.2	229.7	200.7	216.0	228.3
All ages						
Crude rate	19.0	23.0	20.5	12.6	8.4	19.8
ASR(A)	16.6	18.5	18.0	15.4	14.9	17.2
95% CI	16.2–17.0	17.8–19.3	16.9–19.1	12.4–18.8	10.2–20.9	16.8–17.5
Ages 55–74						
Crude rate	39.9	45.1	44.1	31.4	26.0	41.3
ASR(A)	40.4	45.2	44.8	33.7	29.6	41.9
95% CI	38.7–42.1	42.3–48.3	40.5–49.5	23.0–46.6	14.9–52.6	40.5–43.3

Notes

1. Rates are the number of deaths from bowel cancer per 100,000 females. All-age totals and 55-74 totals are age-standardised to the Australian population at 30 June 2001.
2. Regions are classified using the 2001 Australian Standard Geographical Classification (ASGC) by postal area. Because some postcodes cross regional boundaries, totals may not add up due to rounding.

Source: AIHW National Mortality Database.

Table 4.2.6c: Age-specific and age-standardised mortality rates for bowel cancer, by region, 2001–2005, persons

Age group	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia
0–4	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.1	0.1	0.0	0.0	0.0	0.1
15–19	0.1	0.1	0.0	0.0	0.0	0.1
20–24	0.1	0.5	0.0	0.0	1.4	0.2
25–29	0.4	0.8	0.3	0.0	0.0	0.4
30–34	1.0	0.8	1.3	0.7	1.4	1.0
35–39	1.9	1.7	2.0	1.2	0.1	1.9
40–44	3.4	2.7	4.6	7.4	2.1	3.4
45–49	7.4	8.1	9.0	8.4	4.5	7.7
50–54	13.9	14.6	18.4	16.2	4.9	14.5
55–59	24.7	27.8	28.9	12.7	13.6	25.6
60–64	42.6	46.2	55.8	38.5	26.1	44.8
65–69	67.1	73.3	77.3	94.9	44.7	70.0
70–74	100.5	115.4	97.0	72.8	55.9	103.2
75–79	136.2	142.4	150.5	172.7	73.4	139.3
80–84	169.5	190.9	175.7	108.9	224.9	174.5
85+	240.7	265.5	257.8	196.7	196.1	247.3
All ages						
Crude rate	20.8	25.5	24.0	15.3	7.8	21.9
ASR(A)	20.5	22.5	22.8	19.6	14.7	21.2
95% CI	20.2–20.9	21.9–23.1	21.9–23.7	17.1–22.2	11.3–18.8	20.9–21.5
Ages 55–74						
Crude rate	52.5	59.7	59.2	46.2	28.9	54.7
ASR(A)	53.9	60.2	60.2	49.4	32.1	55.9
95% CI	52.5–55.4	57.8–62.7	56.7–63.8	40.5–59.3	21.0–45.8	54.8–57.1

Notes

1. Rates are the number of deaths from bowel cancer per 100,000 persons. All-age totals and 55-74 totals are age-standardised to the Australian population at 30 June 2001.
2. Regions are classified using the 2001 Australian Standard Geographical Classification (ASGC) by postal area. Because some postcodes cross regional boundaries, totals may not add up due to rounding.

Source: AIHW National Mortality Database.

Table 4.2.7: Number of deaths from bowel cancer, by age and Aboriginal and Torres Strait Islander status, Queensland, Western Australia, South Australia, Northern Territory, 2001–2005

	Aboriginal and Torres Strait Islander			Non-Indigenous			Australia		
Age group	**Males**	**Females**	**Persons**	**Males**	**Females**	**Persons**	**Males**	**Females**	**Persons**
0–4	0	0	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	0	0	0
10–14	0	0	0	0	0	0	0	0	0
15–19	0	0	0	0	1	1	0	1	1
20–24	0	0	0	4	1	5	4	1	5
25–29	1	0	1	3	7	10	4	7	11
30–34	1	1	2	19	9	28	20	10	30
35–39	0	1	1	29	24	53	30	26	56
40–44	1	3	4	44	51	95	45	55	100
45–49	2	3	5	113	97	210	115	101	216
50–54	4	4	8	211	141	352	217	147	364
55–59	7	0	7	349	216	565	357	216	573
60–64	3	4	7	499	242	741	507	249	756
65–69	4	9	13	613	349	962	622	362	984
70–74	0	1	1	685	460	1,145	694	464	1,158
75+	4	4	8	1,757	1,945	3,702	1,780	1,969	3,749
Not stated	0	1	1	0	0	0	0	1	1
All ages	27	31	58	4,326	3,543	7,869	4,395	3,609	8,004
Ages 55–74	14	14	28	2,146	1,267	3,413	2,180	1,291	3,471

Notes

1. Only Queensland, Western Australia, South Australia and the Northern Territory have Aboriginal and Torres Strait Islander death registration data considered to be of a publishable standard; therefore, data from these jurisdictions only are included in the analysis by Aboriginal and Torres Strait Islander status.
2. 'Australia' includes all states and territories of Australia. 'Aboriginal and Torres Strait Islander' and 'Non-Indigenous' includes Queensland, Western Australia, South Australia and the Northern Territory.
3. Deaths in the 'not stated' category are included in the column for all women, but they are not included in the other columns.
4. There were 77 deaths excluded where Aboriginal and Torres Strait Islander status was not recorded or was unknown.

Source: AIHW National Mortality Database.

Table 4.2.8: Age-standardised and age-specific mortality rates for bowel cancer, by Aboriginal and Torres Strait Islander status, Queensland, Western Australia, South Australia, Northern Territory, 2001–2005

	Aboriginal and Torres Strait Islander			Non-Indigenous			Australia		
Age group	**Males**	**Females**	**Persons**	**Males**	**Females**	**Persons**	**Males**	**Females**	**Persons**
0–4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15–19	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0
20–24	0.0	0.0	0.0	0.3	0.1	0.2	0.3	0.1	0.2
25–29	1.8	0.0	0.6	0.2	0.6	0.4	0.3	0.6	0.4
30–34	2.0	0.9	1.2	1.4	0.7	1.1	1.4	0.7	1.1
35–39	0.0	1.0	0.7	2.2	1.9	2.0	2.2	1.9	2.0
40–44	2.8	3.7	3.4	3.1	3.7	3.4	3.1	3.8	3.5
45–49	7.0	4.6	5.4	8.6	7.5	8.1	8.6	7.5	8.0
50–54	18.3	8.1	11.2	16.9	11.7	14.4	17.1	11.7	14.4
55–59	50.0	0.0	14.9	32.0	20.9	26.6	32.3	20.3	26.4
60–64	30.0	15.4	19.5	60.4	30.9	46.0	60.6	30.8	45.9
65–69	57.2	51.0	52.8	94.4	54.4	74.5	94.8	54.9	74.8
70–74	0.0	8.1	6.0	126.4	80.6	103.0	127.1	79.6	102.6
75+	74.2	25.1	37.5	208.9	158.3	178.8	210.3	158.2	179.3
All ages									
Crude rate	4.0	2.3	2.9	24.0	20.3	22.2	23.5	19.2	21.3
ASR(A)	12.3	5.4	7.4	26.0	17.9	21.7	26.1	17.8	21.7
95% CI	–17.8–52.6	–6.6–21.2	–4.9–22.3	21.2–30.9	14.3–21.6	18.7–24.7	21.4–31.0	14.3–21.5	18.8–24.7
Ages 55–74									
Crude rate	39.4	15.8	22.5	69.0	41.9	55.6	69.3	41.4	55.4
ASR(A)	36.2	16.7	22.5	72.0	42.9	57.5	72.4	42.5	57.4
95% CI	19.6–60.9	9.1–28.1	14.9–32.6	69.0–75.2	40.5–45.3	55.6–59.5	69.4–75.5	40.3–44.9	55.5–59.4

Notes

1. 77 deaths were excluded where Aboriginal and Torres Strait Islander status was not recorded or was unknown.
2. Only Queensland, Western Australia, South Australia and the Northern Territory have Aboriginal and Torres Strait Islander death registration data considered to be of a publishable standard; therefore, data from these jurisdictions only are included in the analysis by Aboriginal and Torres Strait Islander status.
3. 'Australia' includes all states and territories of Australia. 'Aboriginal and Torres Strait Islander' and 'Non-Indigenous' includes Queensland, Western Australia, South Australia and the Northern Territory.
4. Rates are the number of deaths from bowel cancer per 100,000 males, females and persons. All-age totals and 55–74 year totals are age standardised to the Australian population at 30 June 2001.
5. Deaths in the 'not stated' category are included in the column for all Australia, but they are not included in the other columns.

Source: AIHW National Mortality Database.

Appendix A: The screening pathway

The screening pathway has been taken from the Australian Government Department of Health and Ageing website. The screening pathway and other information about the NBCSP and Pilot Program can be found at <www.cancerscreening.gov.au>.

The total number of people invited to participate in the NBCSP and their progression through the pathway is given in Figure A.2.

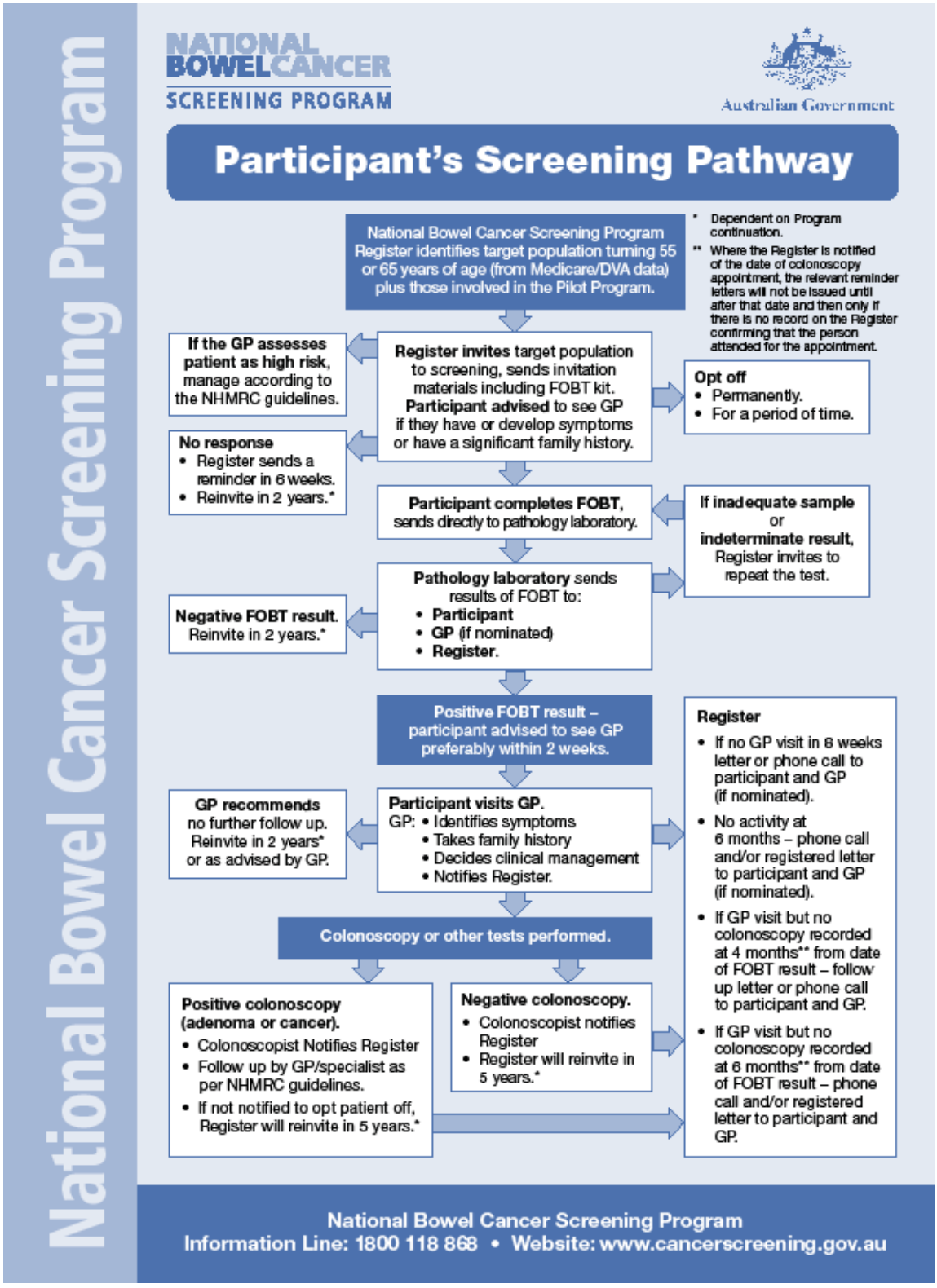


Figure A.1: Participant's screening pathway

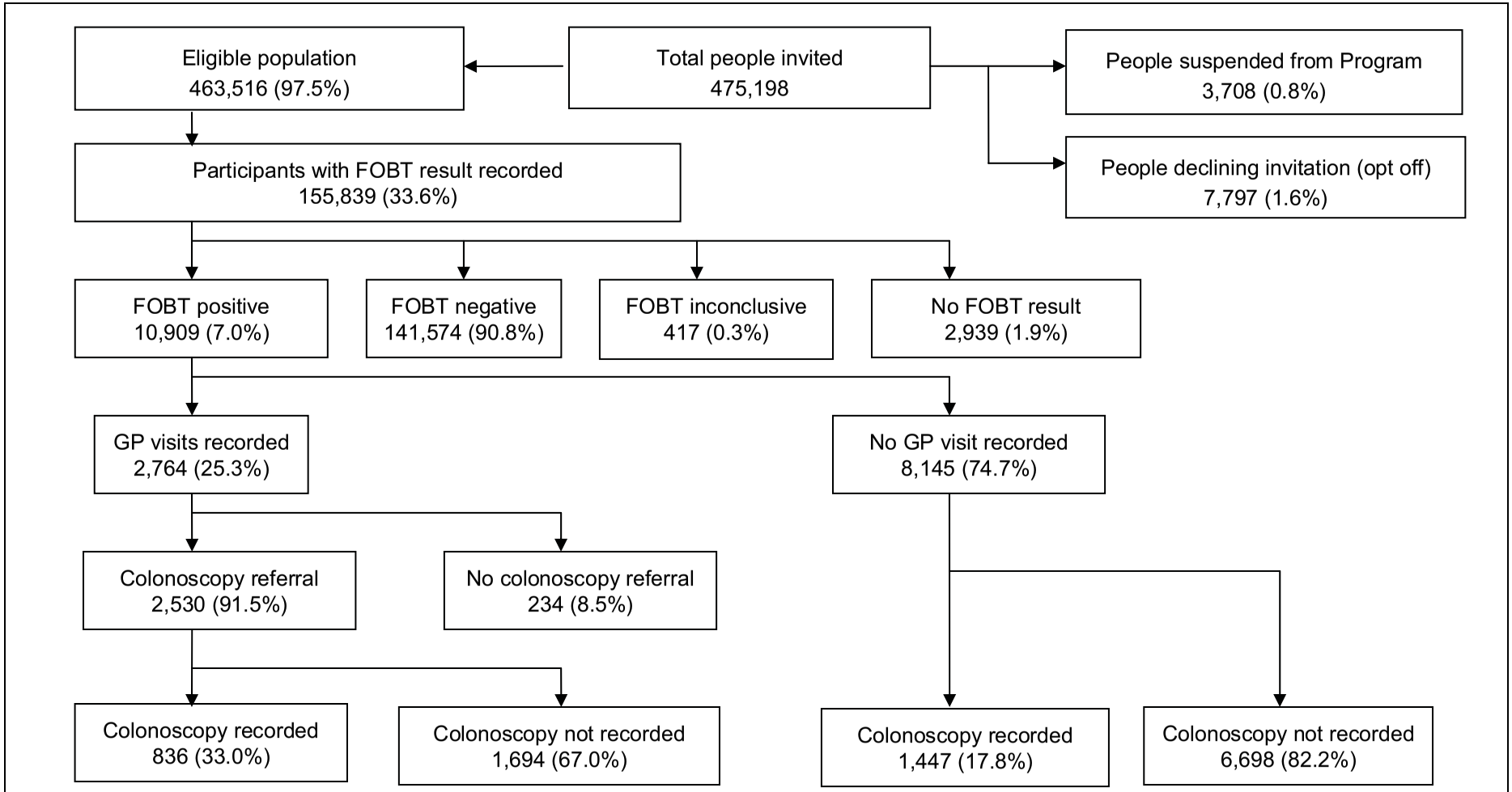


Figure A.2: Total number of people invited to participate in the NBCSP at key pathway points, 7 August 2006 to 31 July 2007

Appendix B: Definitions

Target population

Phase one of the NBCSP defines the eligible population as:

- Australians turning 55 or 65 years of age between 1 May 2006 and 30 June 2008; and
- those who were invited to participate in the Bowel Cancer Screening Pilot Program regardless of whether or not they participated in the Pilot Program.

Eligible population

National Program invitees who turned 55 or 65 year before 1 May 2006 or after 30 June 2008 or Pilot Program participants and invitees who were outside the ages of 55–74 years as at 1 January 2003 are ineligible to participate and are excluded from the analyses.

In addition, a person may choose to opt off or suspend participation in the NBCSP, or their GP may recommend they opt off or suspend participation in the NBCSP (for example, because of a recent colonoscopy or previous diagnosis of bowel cancer). A person can opt off or suspend participation at various points along the pathway, for example, before completing an FOBT, or when following up a FOBT result with their doctor. People choosing to opt off or suspend participation are classified as ineligible and excluded from further analysis.

Geographic location classifications

This report uses the Australian Standard Geographical Classification (ASGC) which groups geographic areas into five classes. These classes are based on Census Collection Districts (CDs) and defined using the Accessibility/Remoteness Index for Australia (ARIA). ARIA is a measure of the remoteness of a location from the services provided by large towns or cities. Accessibility is judged purely on distance to one of the metropolitan centres. A higher ARIA score denotes a more remote location. The five classes of the ASGC, along with a sixth 'Migratory' class, are listed in Table B.1.

Table B.1: Remoteness areas for the ASGC

Region	Collection districts within region
Major cities of Australia	CDs with an average ARIA index value of 0 to 0.2
Inner regional Australia	CDs with an average ARIA index value greater than 0.2 and less than or equal to 2.4
Outer regional Australia	CDs with an average ARIA index value greater than 2.4 and less than or equal to 5.92
Remote Australia	CDs with an average ARIA index value greater than 5.92 and less than or equal to 10.53
Very remote Australia	CDs with an average ARIA index value greater than 10.53
Migratory	Areas composed of off-shore, shipping and migratory CDs

Socioeconomic classifications

Socioeconomic classifications are based on the Australian Bureau of Statistics Index of Relative Socioeconomic Disadvantage. Geographic areas are assigned a score based on attributes such as low income, low educational attainment, high unemployment and jobs in relatively unskilled occupations. It does not refer to the socioeconomic situation of a particular individual but instead refers to the area in which a person lives. A low score means an area has many low income families, people with little training and high unemployment, and may be considered disadvantaged relative to other areas. Areas with high index scores may be considered less disadvantaged relative to other areas. In this report, the index of relative socioeconomic disadvantage is determined using postcodes to define geographic areas, and analysed using quintiles (that is, five groups) which are based on the level of the index.

Adenoma classifications

Adenoma classifications are derived from information reported by colonoscopists and pathologists and are classified as listed below from highest risk (advanced) to lowest risk (diminutive). Where a person has multiple adenomas, he or she is classified according to the adenoma having the highest risk.

Advanced adenoma

If any of the indicators of higher risk listed below are present, the adenoma is classified as advanced.

Indicators of higher risk

- Adenoma multiplicity—three or more adenomas present at examination, regardless of histopathology or size.
- Adenoma size—a size of 10 mm or greater. The measurement of size is subject to certain problems with accuracy. Where colonoscopy and pathology reports differ in their recording of size, the larger size has been used.
- High-grade dysplasia.
- Significant villous change or serrated—adenomas recorded as serrated, tubulovillous or villous on pathology reports.

Small adenoma

A tubular or mixed adenoma between 5 mm and 9 mm in size.

Diminutive adenoma

A tubular or mixed adenoma smaller than 5 mm.

Appendix C: Data and statistical methods

Data sources

Multiple data sources were analysed to produce this report. These are summarised in Table C.1. All data used in this report are based on calendar years.

Table C.1: Sources for data presented in this report

Description	Data source
Participation	National Bowel Cancer Screening Register, MA
Cancer detection	National Bowel Cancer Screening Register, MA
Incidence (ICD-10 C18–20)	National Cancer Statistics Clearing House, AIHW
Mortality (ICD-9 153, 154.0–154.1, ICD-10 C18–20)	National Mortality Database, AIHW

NBCSP data

As data items are collected from a variety of sources, not all data items may be recorded in the Register in sequence. GP, colonoscopy and histopathology forms are received from different sources and there are both time lags in submitting forms and failure of clinicians to complete and submit forms to the Register. Hence there are data for colonoscopies without an associated GP Assessment form, and histopathology results without a completed Colonoscopy Report form. The effect of this under-reporting and lags in reporting is that the data on the actions resulting from a positive FOBT are significantly under-enumerated in this first report on the Program. Hence the data on colonoscopies undertaken and conditions found should be interpreted with great caution. Later monitoring reports will capture the lagged data and result in more reliable statistics for these aspects of the screening pathway.

In those states using geographic rollout outer regional, remote and very remote locations may be relatively more under-reported than major cities and inner regional areas due to the staggered rollout. Hence, the tables in this report by geographic location and socioeconomic status should be interpreted with caution.

Population data

ABS estimated resident population (ERP) data were used to calculate age-standardised screening, and cancer incidence and mortality rates.

As the ABS does not calculate ERP by socioeconomic status an alternative method was used to calculate the denominators for these rates. This involves applying an ABS concordance between postcode and statistical local area (SLA), and then SLA and socioeconomic status.

The most recent direct count of the Aboriginal and Torres Strait Islander population was carried out in the 2006 Census but only data from the 2001 Census and from more recent ABS estimates (ABS 2004) were available at the time of preparation of this report.

Geographic classification

The approach taken in this report to classify participants as belonging to a specific geographic location is based upon the postcode of the participant's residential address. Postcodes do not map directly to the ARIA classification system (see Appendix B for explanation of the ARIA system). ARIA classifications for postal areas (similar to postcodes) are determined by amalgamating component Collection Districts (CDs). Where postal areas have component CDs belonging to more than one remoteness area, the ARIA classification is apportioned. Participants with a postcode that spans ARIA classifications must be likewise apportioned. This results in non-integer counts for remoteness classifications. For example, the Northern Territory postal area 0822 is classified as 70.54% Very Remote, 6.64% Remote and 22.82% Outer Regional. Participants with postcode 0822 have their counts apportioned accordingly.

Tables in this report based on geographical location are rounded to integer values. Where figures are rounded, discrepancies may occur between totals and sums of the component items.

Comparisons and tests of statistical significance

This report includes statistical tests of the significance of comparisons of rates between population groups. Any statistical comparison applied to one variable must take account of any other potentially relevant variables. For example, any comparison of participation by state must also take account of differences in the distribution of age and sex between the states. These other variables are known as 'confounding' variables.

Crude rates

A crude rate is defined as the number of events over a specified period of time divided by the total population. The crude rate (for participation, attendance and follow-up) is the proportion of people who have proceeded to a key point on the screening pathway at the date of the data download out of those eligible to proceed to that point. For example, the crude FOBT participation is the proportion of the eligible people who return a completed FOBT kit by 31 July 2007. The crude colonoscopy follow-up is the proportion of people with a positive FOBT result who proceeded to colonoscopy by 31 July 2007.

The crude proportions will generally underestimate the true proportions of the population who participated in the NBCSP. This is because at any point in time there are members of the population who are eligible to proceed to the next point on the screening pathway but who have not yet had time to do so. For example, a person who has just received an invitation to screen may intend to participate in screening but may not have had time to do so. They will be counted in the denominator of the crude FOBT participation but not in the numerator. Similarly, there is a time lag between when a person with a positive FOBT result is referred for colonoscopy and when they can actually have the colonoscopy. A colonoscopy follow-up calculated during this lag includes them in the denominator but not in the numerator.

Kaplan-Meier estimates of participation, attendance or follow-up

The Pilot Program employed the use of Kaplan-Meier estimates of participation, attendance and follow-up. This statistical method calculates a modelled rate based on the time it takes each individual invited for screening to move between points on the screening pathway. For example, FOBT participation is calculated by following each invited person and, for those who respond, recording the time it takes them to respond. This allows the calculation of a response rate over time from the date of invitation. Kaplan-Meier methods are standard methods used to model the time to an event and the changes in the rates of an event over time. In this case, the event is a person's response (by returning a completed FOBT kit) and the time to the event is measured in weeks from the date the invitation was sent. These Kaplan-Meier estimates represent valid estimates of the true FOBT participation.

The use of Kaplan-Meier estimates in the NBCSP was endorsed by the Implementation Advisory Group and allows direct comparison of participation, attendance and follow-up rates with the Pilot Program. Due to the staggered rollout of the NBCSP, Kaplan-Meier estimates in this report were only calculated for participation at 16 weeks as some states had not had sufficient time for attendance and follow-up data to be returned to the Register.

In principle, the Kaplan-Meier estimate only gives a result at a specific point in time. The estimate is likely to grow for later points in time. However, inspection of these estimates shows that they reach a plateau after which they have only a negligible increase. Further, preliminary analyses based on modelling the survival time with both a Weibull and an exponential distribution shows that the latest observed Kaplan-Meier estimate differs from the long-term modelled estimate by less than 1 percentage point. Hence the latest Kaplan-Meier estimate can be taken as an approximate estimate of the overall rate.

The Kaplan-Meier estimates require that classifying variables be known for the population. Hence they can be calculated for FOBT participation classified by age, sex and state. However, they cannot be used for FOBT participation classified by Aboriginal and Torres Strait Islander status or language group which are not known for all the invited population. These variables are only known for those participants who identify themselves as a member of these groups on their returned Participant Details form. In these cases, a crude participation can be calculated by using known population counts (from the Australian Bureau of Statistics Census data) in the denominator. However, the Kaplan-Meier estimates cannot be applied in this situation. In these cases, all analyses will be based solely on the crude participation. This does mean the FOBT participation presented in this report for Aboriginal and Torres Strait Islander people, people with a disability and people with a language other than English may represent under-estimates of the true proportions.

Aboriginal and Torres Strait Islander and disability status and language group will be known for all people completing FOBT kits (at least to the extent that people self-identify as members of these groups). Hence in principle Kaplan-Meier estimates can be calculated for these groups for participation at subsequent points on the screening pathway. In practice, these calculations depend on sufficient numbers of people self-identifying as group members to allow the calculation of reliable estimates.

Age-specific rates

Age-specific rates are calculated by dividing the number of cases occurring in each specified age group by the corresponding population in the same age group expressed as a rate per 100,000 persons. This rate may be calculated for particular age and sex groupings, for example:

Age-specific bowel cancer incidence rates in males aged 75–79 years

$$= \frac{\text{New cases for this age}}{\text{Population for this age}} \times 100{,}000$$

$$= \frac{1{,}147}{245{,}032} \times 100{,}000$$

$$= 468.1 \text{ per } 100{,}000$$

Age-standardised rates (ASRs)

Rates are adjusted for age to facilitate comparisons between populations that have different age structures, for example, between youthful and ageing communities. There are two different methods commonly used to adjust for age. In this publication direct standardisation is used, in which age-specific rates are multiplied against a constant population (the Australian 2001 Population Standard). This effectively removes the influence of age structure on the summary rate and is described as the age-standardised rate. The method may be used for both incidence and mortality calculations. The method used for this calculation comprises three steps:

1. Calculate the age-specific rate (as shown above) for each age group.
2. Calculate the expected number of cases in each five-year age group by multiplying the age-specific rates by the corresponding standard population and dividing by 100,000, giving you the expected number of cases.
3. To give the age-standardised rate, sum the expected number of cases in each age group. Divide this sum by the total of the standard population used in the calculation and multiply by 100,000.

Confidence intervals (CI)

The age-standardised incidence and mortality rates presented in the body of this report also show 95% confidence intervals. These confidence intervals indicate the variation that might be expected in such estimates purely by chance. The confidence intervals are calculated using the methods presented by Holman et al. (1987).

A relatively simple approximation of the confidence limits that readers might use when examining state and territory age-standardised rates is as set out below:

$$95\%\ \text{CI approximation} = \text{AS rate} \pm 1.96 \times \frac{\text{AS rate}}{\sqrt{\text{Number of cases}}}$$

Glossary of terms

Age-standardised rate: see Appendix C for definition.

Confidence interval: see Appendix C for definition.

Colonoscopy: procedure to examine the bowel usually carried out in a hospital or day clinic.

Colonoscopy depth of insertion: abbreviations for depth of insertion of colonoscope are:

TI	terminal ileum
CAEC	caecum
ASC	ascending colon
HEP	hepatic flexure
TRAN	transverse colon
SPLN	splenic flexure
DESC	descending colon
SIG	sigmoid colon
RECT	rectum

Colonoscopy follow-up rate: the proportion of people with a positive FOBT who were referred by a GP for a colonoscopy and who subsequently had a colonoscopy.

Eligible population: Australians turning 55 and 65 years of age between 1 May 2006 and 30 June 2008, and those invited to participate in the Bowel Cancer Screening Pilot Program who have not opted off or suspended participation in the Program.

FOBT: immunochemical faecal occult blood test—a self-administered test to detect blood in bowel motions, but not bowel cancer itself. The FOBT is analysed by a pathology laboratory and results forwarded to the Program participant and primary health carer (if nominated). Pathologists categorise the returned FOBT into one of four groups: correctly completed, incorrectly completed, damaged and unsatisfactory. Participants are provided with specific instructions on how to complete the FOBT. Any tests not completed according to these instructions are classified as incorrectly completed. Damaged FOBTs are any tests that have arrived spoiled or damaged and unsatisfactory tests refer to those tests that could not be processed due to an inadequate sample (for example, too much or too little faecal matter). Participants with FOBTs that are not correctly completed are requested to complete a subsequent FOBT.

FOBT result: FOBT results are classified by pathologists as either positive (blood is detected in at least one of two samples), negative (blood is not detected) or inconclusive.

GP attendance rate: the proportion of people who were sent a positive FOBT result and who subsequently visit a GP.

Invitee: a person who has been invited to participate in the National Bowel Cancer Screening Program.

MA: Medicare Australia—responsible for managing the National Bowel Cancer Screening Register.

National Program: national participants in the NBCSP. Excludes participants and invitees from the Pilot Program.

NBCSP: National Bowel Cancer Screening Program, including both National Program participants and Pilot Program participants and invitees.

Opt off: invitees who do not wish to participate in the National Bowel Cancer Screening Program now or in the future. Invitees will not be contacted again. Invitees may elect to opt back on at a later date before 30 June 2008.

Participant: a person who has agreed to participate in the National Bowel Cancer Screening Program by returning either a completed FOBT kit and/or a Participant Details form.

Pilot Invitee: invitees from the Pilot Program who did not participate in the Pilot Program but were reinvited to participate in the NBCSP.

Pilot Participant: participants from the Pilot Program who were reinvited to participate in the NBCSP.

Pilot Program: participants and invitees from the Bowel Cancer Screening Pilot Program (a study by the Australian Government from November 2002 to June 2004 in Mackay, Adelaide and Melbourne to assess the effectiveness of a National Bowel Cancer Screening Program) reinvited to participate in the NBCSP.

Positivity rate: number of positive FOBT results as a percentage of the total number of valid FOBT results.

Primary health care practitioner: classified by Medicare Australia as a general practitioner or other primary health care provider. This may include remote health clinics or other specialists providing GP services.

Register: National Bowel Cancer Screening Program Register maintained by Medicare Australia.

Respondent: a person who has responded to an invitation to participate in the National Bowel Cancer Screening Program by returning a Participant Details form.

Screening: the performance of tests on apparently well people in order to detect a medical condition at an earlier stage than would otherwise be the case.

Socioeconomic status: see Appendix B for details.

Suspend: invitees who would like to participate in the National Bowel Cancer Screening Program but are unable to do so at this time. Invitees will be contacted once the nominated suspension period has elapsed.

Target population: Australians turning 55 and 65 years of age between 1 May 2006 and 30 June 2008, and those invited to participate in the Bowel Cancer Screening Pilot Program.

Valid results: only FOBT results that are either positive or negative are classified as valid results. Inconclusive results are excluded.

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