

# Evaluation of Cancer Council Victoria's 2017 *Bowel Screening* Campaign

Prepared by:

Belinda Morley

Sarah Durkin

Melanie Wakefield

Centre for Behavioural Research in Cancer  
Cancer Council Victoria

Prepared for:

Cancer Prevention Centre

2 March 2018



# TABLE OF CONTENTS

---

List of Table and Figures.....	3
Executive Summary.....	4
Introduction.....	5
Background.....	5
Methods.....	6
Study design.....	6
Sample.....	6
Questionnaire.....	7
Procedure.....	7
Data analysis and reporting.....	7
Results.....	8
Sample characteristics.....	8
Campaign awareness.....	9
Perceived campaign effectiveness.....	12
Discussion.....	14
Acknowledgements.....	16
References.....	17

# LIST OF TABLE AND FIGURES

---

Figure 1:	Cancer Council Victoria's <i>Bowel Screening</i> campaign evaluation timeline.....	6
Table 1:	Baseline demographic characteristics of final sample, by state.....	8
Figure 2:	Seen any ad on television about being bowel cancer screening recently, by state and study phase (N=2,648).....	9
Figure 3:	Recall, recognition and total awareness of <i>the Bowel Cancer Screening</i> television advertisement at follow-up, by state (N=1,360).....	10
Figure 4:	Total awareness of any element of the <i>Bowel Screening</i> campaign at follow-up, by state (N=1,360).....	10
Figure 5:	Television campaign awareness in Victoria at follow-up, by sex, age and previous FOBT (N=680).....	11
Figure 6:	Television campaign awareness in Victoria at follow-up, by geographic location and SES (N=676).....	11
Figure 7:	Prompted recognition of the <i>Bowel Screening</i> campaign TV and other media at follow-up, among Victorian respondents (N=680).....	12
Figure 8:	Perceived effectiveness of the <i>Bowel Screening</i> campaign at follow-up, among Victorians aware of the campaign (N=497).....	13

# EXECUTIVE SUMMARY

---

## Introduction

The Australian Government's National Bowel Cancer Screening Program (NBCSP) aims to detect bowel cancer early and reduce the number of Australians who die each year from the disease. In 2017 Cancer Council Victoria (CCV) conducted a mass media communication campaign to raise awareness of the importance of, and encourage participation in, the NBCSP. The television-led campaign was broadcast on Victorian television and other supporting media from July 30 for a period of seven weeks until September 16. Supportive in-program television advertorials promoting the NBCSP were broadcast nationally over the same period. The primary target audience was adults aged 50 to 74 years, the age-group that is targeted by the NBCSP.

## Methods

The campaign was evaluated using a controlled cohort design. Eligible adults were those aged 50 to 74 years who are regular viewers of commercial television (at least 30 minutes on an average weekday). The study excluded those not eligible for an FOBT due to having been diagnosed with bowel cancer. In June and July 2017, baseline telephone population surveys were undertaken with 850 respondents in each of Victoria (paid television-led advertising state + state-based and national supportive media) and South Australia (SA - no paid television advertising comparison state with national social media and advertorials only). Of these respondents, 80% were successfully followed-up in September after the campaign. Analyses used data from people who had completed both the baseline and follow-up surveys. Interactions by state (Victoria: intervention state vs. SA: comparison state) and time (baseline vs. follow-up) were tested.

## Campaign awareness and response

Results indicate high levels of campaign cut through with unprompted recall of the specific television campaign advertisement in Victoria among almost one quarter (23%) of all adults compared to only 3% in SA. In addition, more than half (53%) of adults recalled or recognised the television ad in Victoria (24% in SA), with Victorian adults residing in high SES areas less likely to do so compared with those in low SES areas. In addition to the television ad, the campaign included radio, digital, advertorial and narrowcast of the television advertisement plus posters in GP waiting rooms. With the inclusion of these supportive elements, total campaign awareness in Victoria was 80% (compared with 24% in SA).

Response to the campaign was very positive among those who had been exposed to it. The majority of respondents reported that it was *believable*, *self-relevant* and made them feel like they have *more control over their future health*. Around half indicated the campaign made them *feel inspired* or *concerned* and 69% agreed it made them *think about how family or friends might feel if they got bowel cancer*. It did not cause great sadness or fear in the majority who saw it but did make over three-quarters feel hopeful.

These findings indicate that the television-led CCV *Bowel Screening* campaign had good cut through and was widely recognised by Victorians in the target age-range.

# INTRODUCTION

---

## Background

The Australian Government's National Bowel Cancer Screening Program (NBCSP) aims to detect bowel cancer early and reduce the number of Australians who die each year from the disease. The NBCSP currently invites 50 to 74 year olds to undertake free bowel screening using a Faecal Occult Blood Test (FOBT). The test is mailed to eligible Australians and completed at home.

Although bowel cancer kills more Australian men and women than breast and cervical cancers combined,<sup>1</sup> participation rates for the NBCSP are substantially lower than for those screening programs.<sup>2,3</sup> The NBCSP participation rate in 2014-15 was just 39%.<sup>4</sup> Relative mortality outcomes among those who have participated in the NBCSP are significantly better than for those not screened and there is compelling evidence that increased screening participation will result in more bowel cancer cases detected early, when they are most responsive to treatment.<sup>5</sup> Research shows that lack of awareness, of both bowel cancer generally and the benefits of screening specifically, is a contributor to poor screening rates, even among those invited to participate in the NBCSP.<sup>6</sup>

## The campaign

In 2017 Cancer Council Victoria (CCV) conducted a mass media communication campaign to raise awareness of the importance of, and encourage participation in, the NBCSP. Originally developed by Cancer Council Australia (CCA) and adapted by CCV, the television-led campaign was broadcast on Victorian television and other supporting media from July 30 for a period of seven weeks until September 16. The primary target audience was adults aged 50 to 74 years, the age-group that is targeted by the NBCSP. The media buy was exclusive to the seven and nine networks which gave slightly higher Target Audience Rating Points (TARPs) meaning the ad would be screened during programs watched by a larger proportion of the target audience. The campaign achieved 792 TARPs and 1+ reach among adults aged 50 to 74 in Victoria was 80% with average frequency of 9+. Five in-program television advertorials promoting the NBCSP were aired in Victoria over the same period and an additional 13 were broadcast nationally, provided as unpaid bonus or as standard from the television networks. Television media were supported by radio advertisements broadcast on four Melbourne radio stations including 30-second recorded and live reads. Digital advertising (Victorian geo-targeted) resulted in over 500,000 completed video views as well as more than 30,000 website visits from content marketing and Facebook posts. In addition, the television advertisement was shown in 395 Victorian general medical practices twice each hour across the campaign period and supported by brochures and posters.

## Evaluation

The aim of this summary report is to assess awareness and response to the *Bowel Screening* campaign.

# METHODS

## Study design

Evaluation of the *Bowel Screening* campaign was undertaken using a controlled cohort design. Population surveys of 850 respondents were undertaken at baseline in the campaign state of Victoria (paid television-led advertising state + state-based and national supportive media) and the comparison state of SA (no paid television advertising comparison state with national supportive media only). These same respondents were followed-up after the campaign wave (see Figure 1).

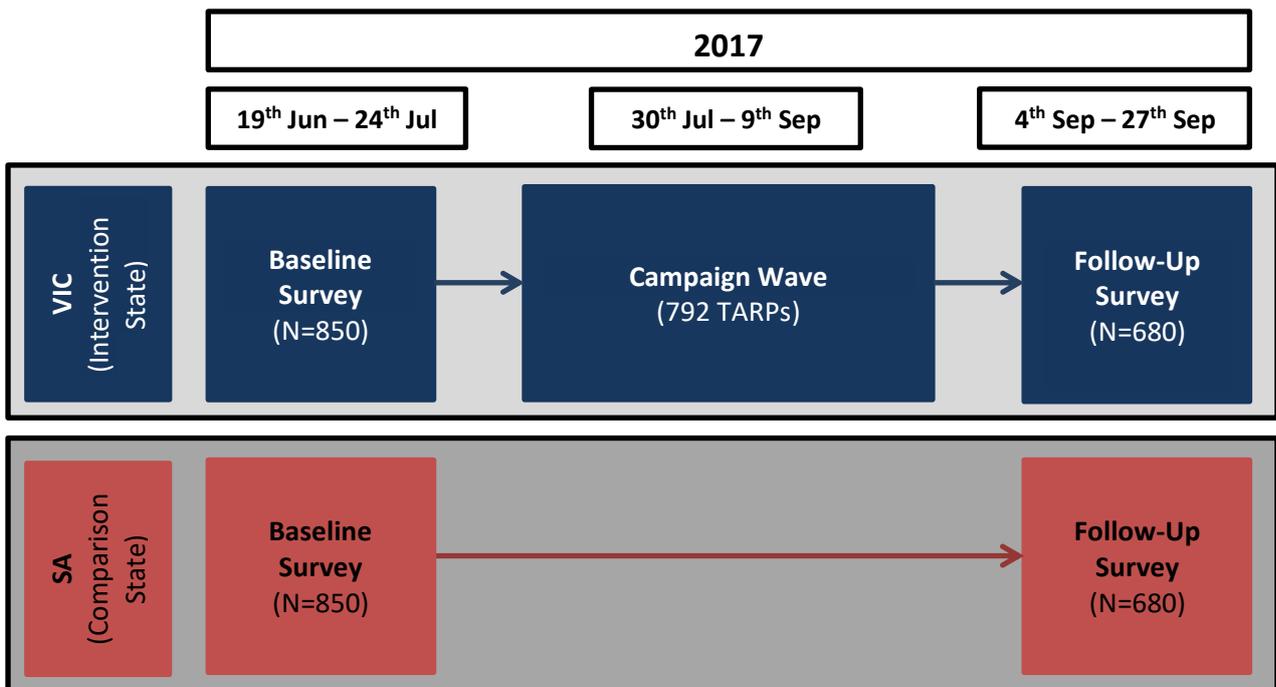


Figure 1: Cancer Council Victoria's *Bowel Screening* campaign evaluation timeline

## Sample

Eligible adults were those aged 50 to 74 years (in line with the campaign's primary target group), residing in private households in metropolitan and regional areas of Victoria (intervention state) and SA (comparison state). Given the media buy was exclusive to the seven and nine networks, only those who are regular viewers of commercial television (at least 30 minutes on an average weekday) were included. The study excluded those not eligible for an FOBT due to having been diagnosed with bowel cancer. At baseline, the survey achieved male/female quotas of 38/62% in both states, and region quotas of 70/30% in Victoria and 77/23% in SA. As well, sample coverage achieved adequate representation of respondents by Socio-Economic Status (SES) categories.

At baseline, the overall cooperation rate was 51% (Victoria 48%; SA 53%). Of these respondents, 80% participated in the follow-up (N=1,360). Figure 1 shows the sample sizes achieved at each study phase by state.

## Questionnaire

The questionnaire was developed by the Centre for Behavioural Research in Cancer using pre-existing validated measures where available.

To measure unprompted recall of the campaign, respondents were asked whether they had seen any ads about bowel cancer screening recently and to describe such ads at both baseline and follow-up. At follow-up only, they were also prompted with a description of the campaign ad and asked whether they recognised it. Those who were aware (i.e., recalled or recognised any element) of the campaign were asked to rate their appraisal of the message on a series of attributes related to perceived effectiveness of the *Bowel Screening* campaign.

The order of the questionnaire was carefully designed to avoid priming responses to later questions.

## Procedure

Data collection was undertaken by the Social Research Centre in Victoria using Computer Assisted Telephone Interviewing (CATI) with a Random Digit Dialling (RDD) sample frame of household numbers. The person who identified as aged 50 to 74 and having the next birthday in the household was selected for interview.

An interviewer briefing was conducted prior to the commencement of interviewing. As shown in Figure 1, baseline data collection commenced on 19<sup>th</sup> June with interviewing completed on 24<sup>th</sup> July. Data collection for the follow-up phase commenced on 4<sup>th</sup> September and was completed on 27<sup>th</sup> September.

## Data analysis and reporting

Data were weighted by sex, age, educational attainment and location using 2016 Census data,<sup>7</sup> except education which used 2011 data,<sup>8</sup> to ensure the sample reflected the population distribution by these factors and follow-up weights were used. Data were analysed using Stata SE 14.2 and initial chi-square analyses were conducted to determine whether the two samples were comparable.

Responses were dichotomised and logistic regression analyses were conducted to assess differences in campaign awareness by socio-demographic characteristics. Only participants with complete datasets across the two survey time-points were included in these analyses (Victoria: N=680 and SA: N=680).

Models controlled for baseline demographic characteristics which differed between the two state samples: SES, geographic location and main language; in addition to colonoscopy history, FOBT completion status, commercial television viewing and number of days between interviews (baseline to follow-up).

# RESULTS

## Sample characteristics

Table 1 provides a summary of the baseline demographic profiles of the two samples (Victoria and SA) for respondents who completed the follow-up survey. Overall, the samples comprised similar proportions by sex, age and family history of bowel cancer, but differed by SES and geographic location. SA respondents were more likely than Victorians to watch two or more hours of commercial television per day. There was also some evidence that compared to Victoria, SA comprised a marginally lower proportion of adults who spoke a language other than English at home ( $p=0.08$ ). As such, subsequent analyses controlled for SES, geographic location, commercial television viewing time and main language spoken at home.

**Table 1: Baseline demographic characteristics of final sample, by state**

	Victoria (N=680)	South Australia (N=680)
<b>Sex</b>		
Males	38.5%	37.8%
Females	61.5%	62.2%
<b>Age</b>		
50-59 years	27.9%	25.6%
60-74 years	72.1%	74.4%
<b>Family history of bowel cancer</b>		
Yes	17.8%	17.3%
<b>Location<sup>a</sup> *</b>		
Major city	69.5%	73.4%
Inner regional	24.9%	10.9%
Outer regional and remote	5.6%	15.7%
<b>Socio-economic status<sup>b</sup> *</b>		
Low SES	32.7%	36.0%
Mid SES	36.5%	41.9%
High SES	30.8%	22.1%
<b>Language</b>		
English	97.4%	98.7%
<b>Commercial TV viewing *</b>		
More than 2 hours	59.6%	66.5%

NOTE: Unweighted percentages. Percentages are rounded so may not sum to 100%.

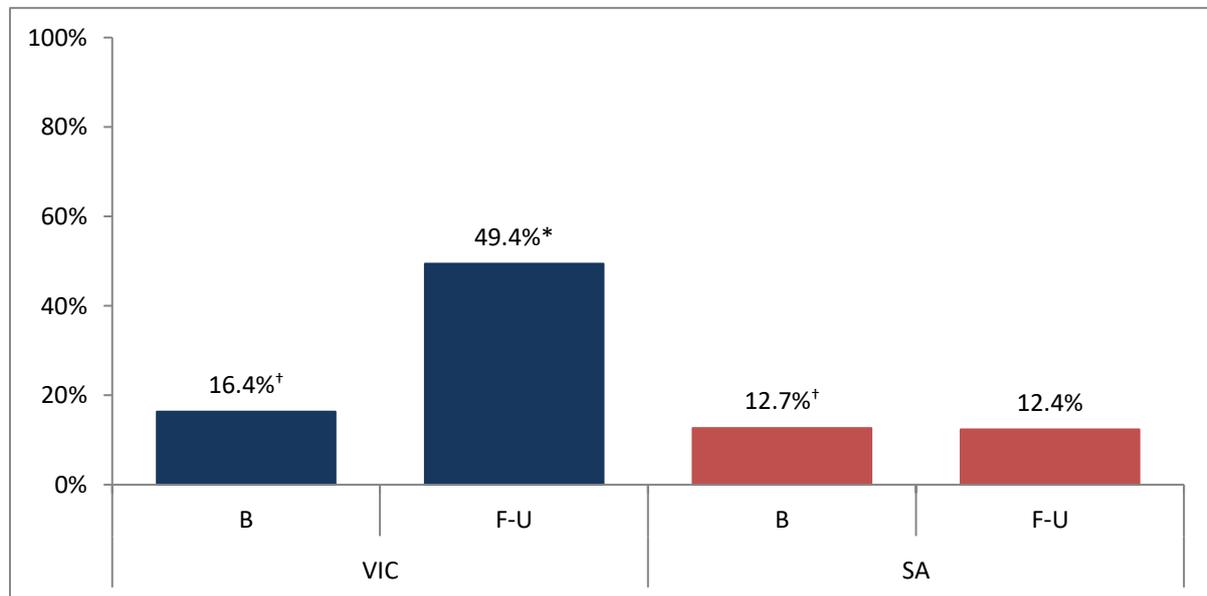
<sup>a</sup> Location was determined according to the Australian Statistical Geography Standard Remoteness Structure.<sup>9</sup>

<sup>b</sup> SES was determined according to the Index of Relative Socio-Economic Disadvantage (IRSD) rankings for Victoria as described by the Australian Bureau of Statistics (2008),<sup>10,11</sup> based on respondent's home postcode. Low IRSD indicates greater disadvantage, high IRSD indicated least disadvantage. Postcode not available/invalid for n=4 respondents.

\*Significant difference at  $p<0.05$ , by state (Victoria cf. SA).

## Campaign awareness

The primary aim of the evaluation was to determine recall and response to the *Bowel Screening* campaign. As shown in Figure 2, adults in the campaign state were significantly more likely to report having seen any advertisement about bowel cancer screening following the launch of the campaign. At baseline, approximately 13 to 16% of adults reported seeing any advertisement about bowel cancer screening. By follow-up, this proportion had significantly increased to 49% among Victorian adults and remained the same among SA adults.



**Figure 2: Seen any ad on television about being bowel cancer screening recently, by state and study phase (N=2,648)**

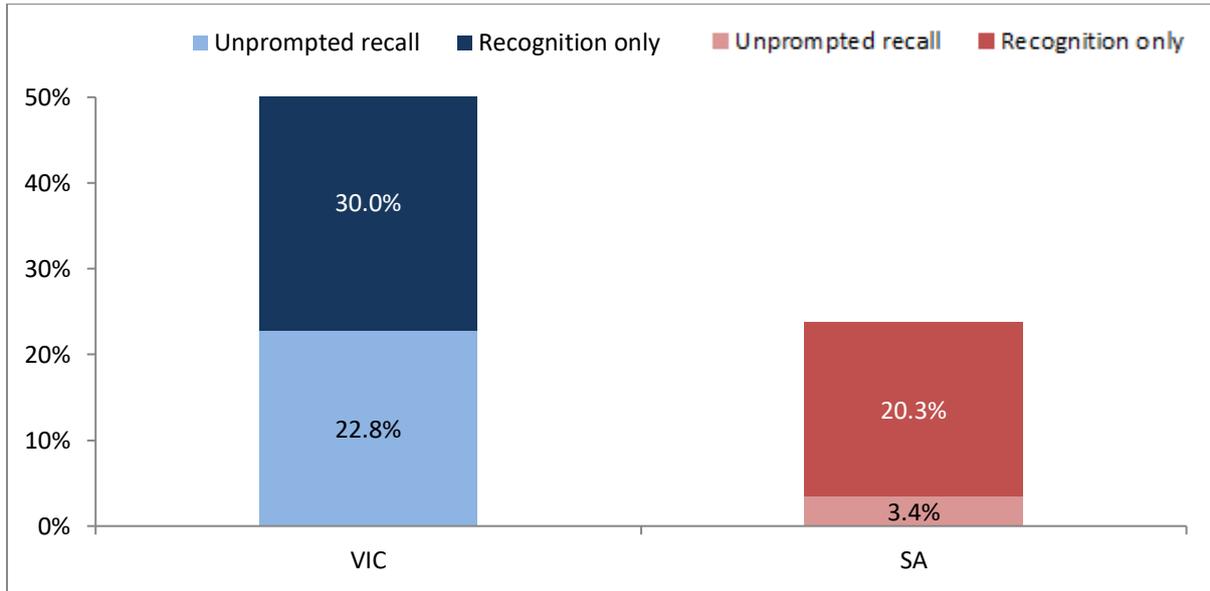
Note: Weighted proportions are adjusted for baseline characteristics: colonoscopy, previous FOBT, SES, geographic location, main language, commercial TV viewing, days between interviews.

B: Baseline; FU: Follow-Up.

\*Significant difference compared to reference category (†) at  $p < 0.05$ .

Figure 3 shows total awareness of the *Bowel Screening* advertisement, comprised of unprompted recall and prompted recognition, within both states. Unprompted recall of the campaign was measured by asking respondents to describe the television advertisements about bowel cancer screening that they had seen recently. Unprompted recall or cut-through of the specific television campaign advertisement in Victoria was high with almost one quarter (23%) of all adults describing the advertisement compared to only 3% in SA.

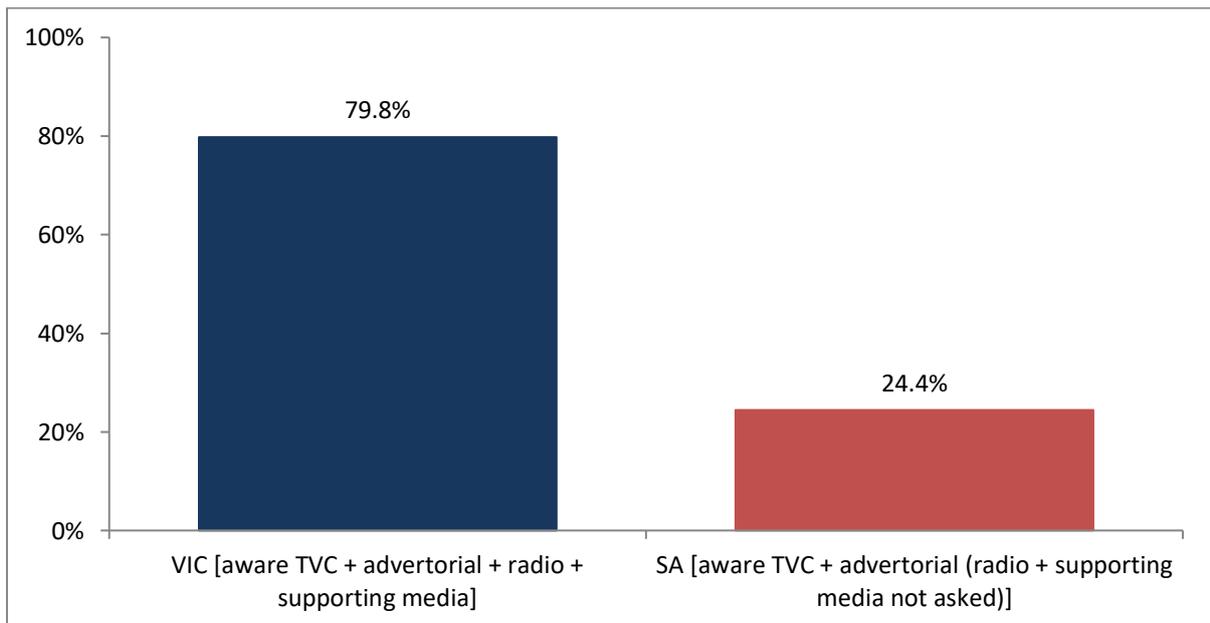
In addition, recognition was measured by prompting respondents with a brief description of the television advertisement and asking whether they had seen it. Overall, more than half (53%) of Victorian adults recalled or recognised the television ad in Victoria, while 24% did so in SA.



**Figure 3: Recall, recognition and total awareness of the *Bowel Cancer Screening* television advertisement at follow-up, by state (N=1,360)**

Note: Weighted proportions are reported.

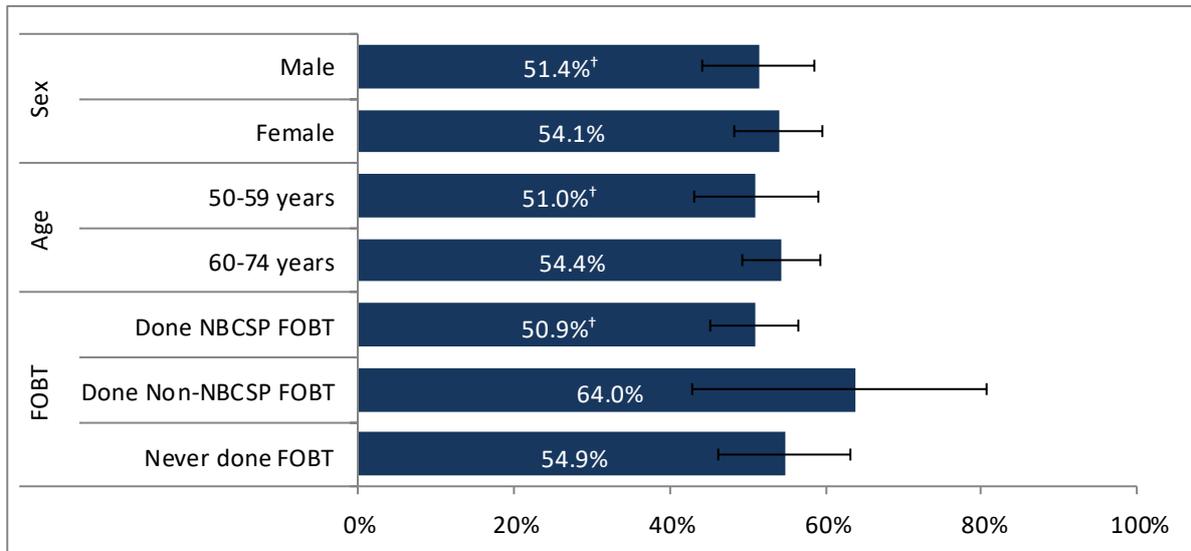
As shown in Figure 4, total awareness of any element of the CCV *Bowel Screening* campaign, including supportive media (listed in Figure 5), was 80% amongst Victorian adults compared to 24% in SA. This includes nationally broadcast in-program television advertorials promoting the NBCSP, which showed prompted recognition of 7% in Victoria and 4% in SA.



**Figure 4: Total awareness of any element of the *Bowel Screening* campaign at follow-up, by state (N=1,360)**

Note: Weighted proportions are reported. Victorian adults were asked prompted recognition of all campaign elements and SA adults were only asked prompted recognition of the TVC and advertorials.

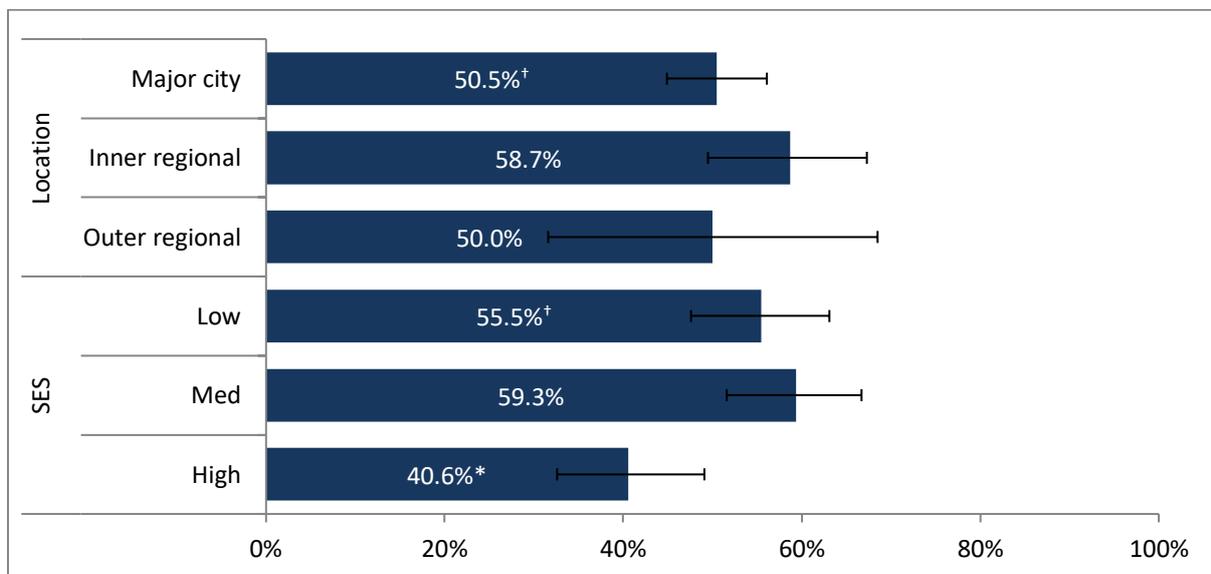
Total awareness of the television advertisement among Victorian respondents was examined by baseline demographic characteristics (see Figures 5 and 6). Figure 5 illustrates awareness did not differ by sex, age or whether respondents had previously done an FOBT.



**Figure 5: Television campaign awareness in Victoria at follow-up, by sex, age and previous FOBT (N=680)**

Note: Weighted proportions are reported.  
<sup>†</sup> Reference category.

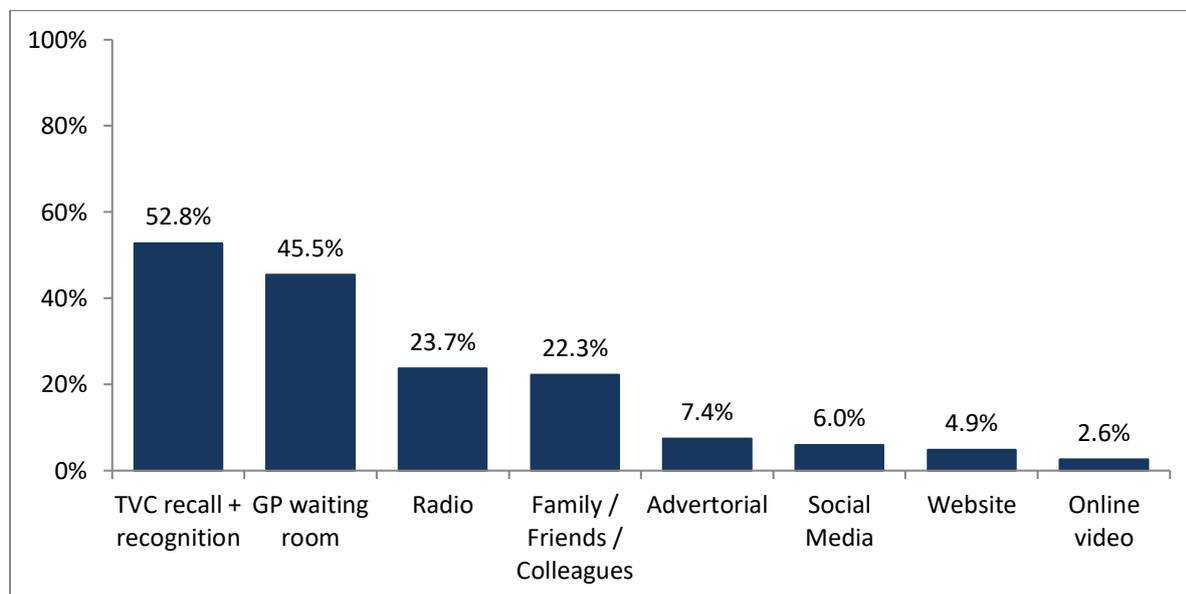
As shown in Figure 6, total awareness of the television advertisement in Victoria was lower among adults residing in high SES areas, compared with those in low SES areas (41% cf. 55%;  $p < 0.05$ ). Total campaign awareness was similar by geographic location of residence within Victoria.



**Figure 6: Television campaign awareness in Victoria at follow-up, by geographic location and SES (N=676)**

Note: Weighted proportions are reported.  
 \*Significant difference compared to reference category (<sup>†</sup>) at  $p < 0.05$ .

In addition to the television ad, the campaign included supportive radio, digital, advertorial and narrowcast of the television advertisement in GP waiting rooms with accompanying posters. The proportion of Victorian adults with prompted recognition of each of these elements is shown in Figure 7. Victorian adults were also asked if they had heard about the campaign from family, friends or work colleagues with more than one in five reporting this form of awareness acquisition, and 3.4% having heard about the campaign only through word of mouth.



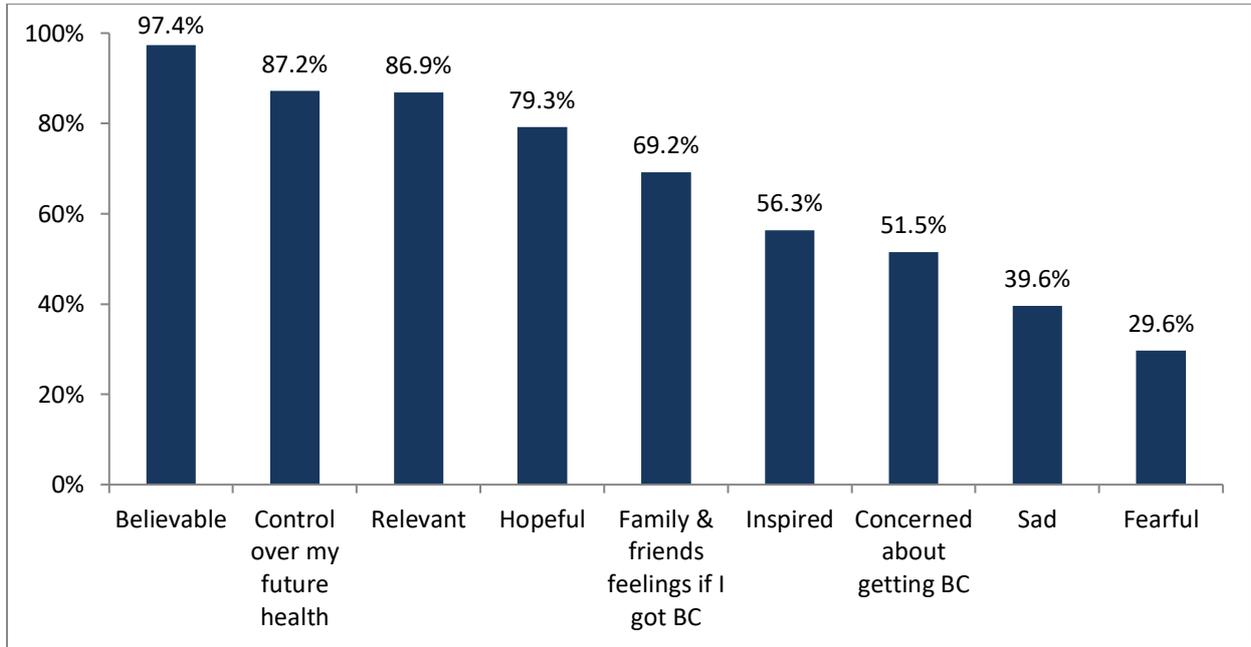
**Figure 7: Prompted recognition of the *Bowel Screening* campaign TV and other media at follow-up, among Victorian respondents (N=680)**

Note: Weighted proportions are reported. The advertorials were broadcast nationally and 4% of SA adults reported prompted recognition.

## Perceived campaign effectiveness

Victorian respondents who were aware of the *Bowel Screening* campaign television advertisement or any of the supporting media elements (80%; N=528), were asked to rate attributes of the perceived effectiveness of the ad (see Figure 8).

Overall, the *Bowel Screening* ad was reported to be *believable* by almost all Victorian respondents who saw it (97%) and the majority agreed it was *relevant* to them and made them feel like they had *more control* over their future health (87%). Most respondents agreed the campaign made them *feel hopeful* (79%) and just over half agreed it made them *feel inspired* (56%). Approximately half (52%) of respondents who were aware of the campaign agreed it made them *feel more concerned about getting bowel cancer* and 69% agreed it made them *think about how family and friends might feel* if they got bowel cancer. On the other hand, they were less likely to agree the campaign made them *feel sad* (40%) or *fearful* (30%).



**Figure 8: Perceived effectiveness of the *Bowel Screening* campaign at follow-up, among Victorians aware of the campaign (N=497)**

Note: Weighted proportions are reported.

# DISCUSSION

---

The Australian Government's NBCSP aims to detect bowel cancer early and reduce the number of Australians who die each year from the disease. CCV conducted a mass media communication campaign in Victoria to raise awareness of the importance of, and encourage participation in, the NBCSP. The campaign was evaluated using a controlled cohort design with population surveys undertaken in Victoria (paid television-led advertisement state + state-based and national supportive media) and SA (no paid television advertisement comparison state with national supportive media) with the primary target audience of adults aged 50 to 74 years, and with these same respondents followed-up after the campaign.

## **Campaign awareness**

The television advertisement was aired on networks seven and nine metro and regional. The campaign clearly penetrated the media environment in Victoria with a sharp increase in the proportion reporting they saw an advertisement about bowel cancer screening that was not mirrored in SA after the campaign. The campaign was 'top of mind' showing high levels of cut-through, a prerequisite for effective communication of health messages via the mass media,<sup>12</sup> with 23% of respondents able to describe the advertising.

When a brief description of the ad was read out, a further 30% of respondents indicated they had seen it. Unprompted awareness in SA was just 3%, however a further 20% reported they had seen the ad after the prompted description. This is likely the result of exposure to the national elements of the campaign such as the advertorials and social media advertising as well as the history of airing of the television advertisement in SA in 2014.

Awareness of the television ad was significantly lower among respondents residing in high SES compared to low SES areas, in line with television viewing being lower among high SES adults in both states<sup>13</sup> and with the media buy which selected programs and channels that lower SES respondents are more likely to be exposed to. Campaign awareness was equivalent by age group, sex, FOBT completion status and geographic location.

In addition to the television ad, the campaign included radio, digital, advertorial and narrowcast of the television advertisement plus posters in GP waiting rooms. With the inclusion of these supportive elements, total campaign awareness was 80% (compared with 24% in SA). Almost half (46%) indicated they saw the campaign in a GP waiting room either on TV or a poster. In line with the campaign objective to extend the reach by promoting discussion of bowel screening, more than one in five (22%) reported they had heard about the campaign from family, friends or work colleagues indicating the campaign generated considerable indirect exposure.

## **Response to the campaign**

Response to the campaign was very positive among those who had been exposed. It did not cause great sadness or fear in the majority who saw it, but did make over three-quarters feel hopeful. The majority of respondents reported that it was *believable*, *self-*

*relevant* and made them feel like they have *more control over their future health*. Around half indicated the campaign made them *feel inspired* or *concerned* and 69% agreed it made them *think about how family or friends might feel if they got bowel cancer*.

### **Evaluation strengths and limitations**

The main strength of the evaluation was the use of a rigorous controlled cohort design which controls for most threats to internal validity. However, some of the media elements of the campaign were broadcast nationally, including the advertorials and social media advertising and online news stories. These appear likely to have been viewed by respondents in the comparison state, as evidenced by the campaign awareness figures. The study is also limited by the use of a landline-only survey given that those residing in mobile-only households may have responded differently to the campaign. However, this is less likely to have had an impact given the older age-group surveyed have the lowest rate of residing in mobile-only households.<sup>14,15</sup>

### **Conclusion**

These findings indicate that the television-led CCV *Bowel Screening* campaign had good cut through and was widely recognised by Victorians in the target age range. The campaign was also rated highly on perceived effectiveness factors such as believability, relevance and concern, which have been found to predict subsequent behaviour changes.<sup>16</sup>

# ACKNOWLEDGEMENTS

---

The authors wish to acknowledge the Social Research Centre for collection of the data.

## REFERENCES

---

1. Australian Institute of Health and Welfare, *Australian Cancer Incidence and Mortality Books*, 2012.
2. Australian Institute of Health and Welfare. *BreastScreen Australia monitoring report 2009–2010*. Canberra, Australia: Australian Institute of Health and Welfare, 2012.
3. Victorian Cervical Cytology Registry. *Statistical report 2011*. Melbourne, Australia: Victorian Cervical Cytology Registry, 2012.
4. Australian Institute of Health and Welfare, *National Bowel Cancer Screening Program monitoring report: 2014-2015*, 2017.
5. Olver I, Grogan, P. Early success for Australia's bowel screening program: let's move it along, *Medical Journal of Australia*, 2013, 198.
6. Duncan A, Wilson C, Cole SR, et al. Demographic associations with stage of readiness to screen for colorectal cancer, *Health Promotion Journal of Australia*, 2009, 20:7-12.
7. Australian Bureau of Statistics 2008.0. *Census of population and housing, Australia, 2016*. Canberra, Australia: Australian Bureau of Statistics, 2017.
8. Australian Bureau of Statistics. 2033.0.55.001. *Census of population and housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2011*. Canberra, Australia: Australian Bureau of Statistics, 2013.
9. Australian Bureau of Statistics. 1270.0.55.005. *Australian Statistical Geography Standard (ASGS): Volume 5 – Remoteness Structure*. Canberra, Australia: Australian Bureau of Statistics, 2013.
10. Australian Bureau of Statistics. 2039.0. *Information paper: an introduction to Socio-Economic Indexes for Areas (SEIFA) 2006*. Canberra, Australia: Australian Bureau of Statistics, 2008.
11. Australian Bureau of Statistics. 2033.0.55.001. *Census of population and housing: Socio-Economic Indexes for Areas (SEIFA) Australian – Data only, 2006*. Canberra, Australia: Australian Bureau of Statistics, 2008.
12. Hornik RC. *Public health communication: Evidence for behaviour change*. New Jersey: Lawrence Erlbaum Associates, 2002.
13. Centre for Behavioural Research in Cancer. *CBRC analysis of Roy Morgan Household Survey data on TV viewing habits by age and SES*, 2017, Cancer Council Victoria: Melbourne.
14. Del Grande E, Chittleborough CR, Campostrini S, et al. Bias of health estimates obtained from chronic disease and risk factor surveillance systems using telephone population surveys in Australia: results from a representative face-to-face survey in Australia from 2010 to 2013. *BMC Medical Research Methodology* 2016, 16:44.
15. Carey RN, Reid A, Peters S, et al. Do demographic profiles of listed and unlisted households differ? Results of a nationwide telephone survey. *Epidemiology*

*Research International* 2014, Volume 2014, Article ID 436548, 5 pages, <http://dx.doi.org/10.1155/2014/436548>.

16. Brennan E, Durkin SJ, Wakefield MA, et al. Assessing the effectiveness of antismoking television advertisements: do audience ratings of perceived effectiveness predict changes in quitting intentions and smoking behaviours? *Tobacco Control*, 2014, 23:412-418.