



## Evaluation of the two-year Cancer Council WA regional 'Find Cancer Early' community awareness campaign Final Report to VLHRF

### Background

#### The Improving Rural Cancer Outcomes (IRCO) Project

The Improving Rural Cancer Outcomes Project has been set up to find the reasons why people from regional and rural areas with cancer experience poorer health and survival outcomes than metropolitan patients. Our task is to devise and deliver a program that will improve the situation.

This Project brings together partner organisations directly involved in cancer services/ delivery/ organisation/ funding, and a multidisciplinary research group. There are two linked phases:

#### 1. Development Phase (2009 -2011)

- Identify health system, doctor and patient factors that affect outcomes in rural patients with cancer of the prostate, breast, colorectal or lung.
- Assess their potential to be modified by a complex intervention.

For information on the results of Phase 1 please refer to the two publications below:

Emery, J; Walter, F; Gray, V; Sinclair, C; et al(2013), **Diagnosing cancer in the bush: a mixed methods study of GP and specialist diagnostic intervals in rural Western Australia**. Family Practice 30 (5): 541-550.

Emery, J; Walter, F; Gray, V; et al (2012), **Diagnosing cancer in the bush: a mixed methods study of symptom appraisal and help-seeking in people with cancer from rural Western Australia**. Family Practice. Jun;30(3):294-301.

#### 2. Implementation / Evaluation Phase (2011 – 2014)

- 'Best-prospects' intervention will be implemented and rigorously evaluated by an experimental trial. Specifically, a community awareness campaign (Find Cancer Early) and a GP Education intervention as identified in the Development Phase.

The protocol paper for Phase 2 has been published below:

Emery, J; Gray, V, Walter, F; Cheetham, S; Croager, E; et al. **The Improving Rural Cancer Outcomes (IRCO) Trial: a factorial cluster-randomised controlled trial of a complex intervention to reduce time to diagnosis in rural cancer patients in Western Australia: study protocol**. BMJ Open 2014;4.

## **Introduction to Find Cancer Early**

The Find Cancer Early Campaign is one of the IRCO Project's 'best-prospects' interventions. Conceptually, the Find Cancer Early campaign has three very important aims:

1. Firstly, raising awareness of the common signs and symptoms associated with the four common cancers – colorectal, lung, breast, prostate;
2. Secondly, helping people overcome the excuses they make for their symptoms; and
3. Thirdly, helping people to overcome the barriers to accessing a doctor or excuses for not going to the doctor.

The two year Find Cancer Early community education campaign was launched in November 2011 in the Wheatbelt, Goldfields and Great Southern regions of WA targeting men and women over 40 years old. The main communication strategies were: through community engagement with regional community groups and services by staff located in the Wheatbelt, Goldfields and Great Southern regions ; and development and dissemination of campaign materials including website, DVD, Checklist, Postcards, paid advertising in regional newspapers and on regional radio, and regional radio and newspaper editorial support. The response to the campaign was very positive, particularly its simple clear message and call to action. The MidWest and Peel/South West regions were acting as the campaign control group, and were unaware of the campaign.

Find Cancer Early resources including symptom checklists, postcards, and videos can be found at [www.findcancerearly.com.au](http://www.findcancerearly.com.au).

## **Our VLHRF Project**

Nested within the IRCO Project is the additional piece of research funded by the Val Lishman Health Research Foundation that aims to measure the impact of the Find Cancer Early campaign in regional WA, which was not funded in the original IRCO Project. Whilst the wider IRCO Project funders made a modest contribution toward campaign, it was not adequate to enable us to evaluate to the standard required to generate a case for continued implementation of the campaign should it be deemed a success.

The following pages outline the objectives, methods and results of the VLHRF funded Project titled: Evaluation of the two-year Cancer Council WA regional "Find Cancer Early" community awareness campaign

## Project Objectives

1. **To finalise the design of a survey** to evaluate the impact and effectiveness of Cancer Council WA's Find Cancer early campaign in the Wheatbelt, Goldfields and Great Southern regions of WA.
2. **To evaluate the Find Cancer Early campaign** by Computer Assisted Telephone Interview (CATI) survey at 18 months in 1,450 people to measure health behaviours, cancer knowledge, campaign awareness, salience and perceived impact in the Wheatbelt, Goldfields and Great Southern campaign regions compared to the control regions of Peel/South West and Midwest.

A third objective was added by the Project Team following the success of the first two objectives:

3. **To evaluate a Find Cancer Early TV commercial concept** through formative development and testing of the comprehension / message take-out to ensure another evidence-based communication strategy for future roll-out of the Find Cancer Early campaign.

## Methods

### Objective 1: Questionnaire development

The questionnaire started with basic demographic questions, before assessing participant health behaviours and cancer knowledge. The remainder of the questionnaire elucidated campaign awareness, followed by salience then perceived impact.

### Objective 2: Telephone Survey to measure campaign impact

Computer-assisted telephone interviews (CATI) were conducted with adults over 40 years old from campaign (n=725) and (n=725) control regions. Households were randomly selected from the Western Australian White Pages telephone directory. Participants were excluded if they were under 40, had not been resident in the region for at least six months or were unable to complete the interview in English. The participation rate, from those who were eligible, was 94.1% (1452/1543).

Quotas were set to ensure equal numbers of respondents from each campaign region (control regions were weighted) and each sex and age group (40-49 years, 50-64 years and 65+ years). Interviews were carried out during a four week period from 1 July 2013.

#### Timing

- Four week period from 1 July 2013
- After campaign media burst

#### Sample size

725 control, 725 in intervention stratified by:

- Sex
- Age: 40 to 50; 50 to 65; 65+
- Intervention Areas: Wheatbelt, Goldfields, Great Southern
- No regional stratification in control area (MidWest and Peel/SouthWest)

### **Objective 3: To evaluate a Find Cancer Early TV ad concept**

An Advertising Agency was given a brief to develop two concepts for a regional TV ad for the Find Cancer Early campaign to raise awareness of the common signs and symptoms for breast, bowel, lung and prostate cancer; and to help people to overcome the barriers and excuses for seeking help and see their doctor.

Two concepts were generated (Concept 1 'Doctors' and Concept 2 'People') and rough animatics of each concept were created to use for formative ad testing.

An ad-test intercept survey was developed which was used to screen out ineligible participants (based on age or occupation). Remaining questions helped to determine their response to the ad in terms of: thoughts and feelings; main message outtake; the likelihood of looking for signs and symptoms; the likelihood of seeing the doctor; believability; relevance; and likability.

Face-to-face intercept surveys were conducted in five regional WA towns (Northam, Albany/Katanning, Geraldton, Bunbury, and Kalgoorlie) targeting a random sample of people between the ages of 40 and 70 years.

Approximately 70 people per concept will be shown 1 of the 2 concepts, providing a total sample of at least 140 people.

The sample needed to include an equal representation of males and females and approximately equal representation of 2 age groups (40-54 years and 55-70 years).

People were intercepted in areas of lots of random human traffic such as shopping malls; rather than group settings such as workplaces.

Each participant was shown an animatic of one of the concepts (on a laptop / iPad). The concept played on the screen twice, with a 5 second black screen break in between. Once participants viewed the concept, the interviewer read out the questions in the questionnaire and filled in the answers provided. Questions were asked exactly as they were written and answers were written verbatim.

Data was entered and analysed to determine the suitability of each concept for the regional target audience.

## Results

### Objective 1: Questionnaire development

Please see Appendix A for a copy of the final Questionnaire.

### Objective 2: Telephone survey to measure campaign impact

#### Sample characteristics

- High participation rate (71%) and response rate (94%)
- No difference in age, gender, between control and campaign regions
- No difference in whether people had cancer or not between campaign or control region

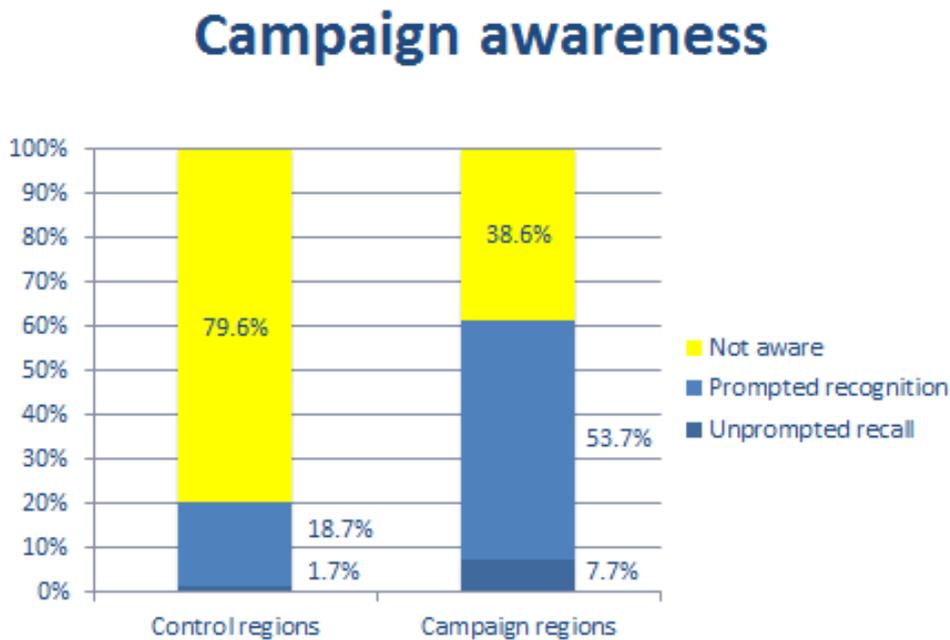
#### Survey results

Residents of the campaign regions were more likely than residents of the control region to have “heard or seen any health message about cancer in the last year”, (88.2% v 80.3%;  $\chi^2[1, N=1452] = 16.84, p = 0.000$ ). Residents of the campaign regions had greater recall, recognition and prompted recognition (Table 1) awareness (56.7% v 16.6%;  $\chi^2[3, N=1446] = 260.00, p = 0.000$ ) of Find Cancer Early, as seen in Figure 1.

**Table 1: Awareness measures for Find Cancer Early**

Measure	Question
Recalled	Over the last year or so there have been health messages in your region that include a yellow checklist of cancer signs and symptoms. Are you aware of this campaign? What was the name of this campaign?
Recognised	Have you heard of the Find Cancer Early Campaign? The logo shows the words ‘Find Cancer Early’, inside a magnifying glass, over a yellow and blue map of Western Australia and includes the checklist I just mentioned.
Prompted	I’m going to describe one of the ads which may have appeared in your local newspaper or as posters or flyers at locations or events around your town. Please let me know if you have seen this ad during the last 12 months: One of the campaign items is a Checklist which asks people “Are you over 40?” and if they have any symptoms like: blood in their poo or pee; looser poo; persistent cough or other symptoms for more than four weeks and if they have, to tell their doctor. Have you seen this Checklist?

Figure 1: Recall, recognition, and total awareness of Find Cancer Early



Respondents were asked “Can you please tell me what you think are the most common signs and symptoms of cancer?”. Their responses are shown in Figure 2. The symptoms showing significant differences between Campaign and Control regions were:

- Blood in your pee (17.6% vs 8.3%,  $P < 0.05$ );
- Blood in your poo; and (31.3% vs 18.7%,  $P < 0.05$ )
- Unusual pain, lump, or swelling (63.9% vs 58.5%,  $P < 0.05$ )

Figure 2: Unprompted signs and symptom identification

## Unprompted symptom identification

	Campaign		Control	
	n	%	n	%
Coughing up blood	56	7.7	51	7.0
A cough or croaky voice	53	7.3	38	5.2
Becoming more short of breath	39	5.4	40	5.5
Blood in your pee	128	17.6*	60	8.3*
Blood in your poo	227	31.3*	136	18.7*
Problems peeing	29	4.0	22	3.0
Looser poo (diarrhoea)	44	6.1	40	5.5
Unusual pain, lump or swelling	464	63.9*	425	58.5*
Unexplained weight loss	157	21.6	140	19.3

Mean number of symptoms identified:

- Campaign 1.6\*
- Control 1.3\*

\*  $P < 0.05$

As shown in Figure 3; of the 60% of those who were aware of the campaign (includes a small number from control regions) 29% thought about making an appointment with their GP and 26% actually did so.

**Figure 3: Intention and behaviour in those aware of Find Cancer Early Campaign**

## Intention and behaviour in those aware of the campaign

	Thought about...	Did...
Anything	46.9%	34.3%
Appointment with/saw GP	28.9%	25.9%
Monitor symptoms	10.6%	5.4%
Symptom knowledge	3.7%	1.5%
Spoke to family/friend	2.0%	2.0%

- As a result of seeing or hearing the campaign did you *think* about doing anything?
  - What did you do?
- As a result of seeing or hearing the campaign did you actually *do* anything?
  - What did you do?

### Objective 3: Formative research to evaluate a Find Cancer Early TV commercial concept

#### Ad Concepts

Please see Appendix B for a copy of the scripts of two ad concepts being tested.

#### Ad test Survey

Please see Appendix C for a copy of the Ad test intercept survey.

#### Sample characteristics

- Sample = 144 (Concept 1 'Doctors' = 68; Concept 2 'People' = 76)
- Sample was not statistically over represented for any one group (male, female, 40-54 years old, 55-70 years old, it was well balanced).

#### Intercept survey results

- Concept 2 'People' made respondents more anxious, worried and concerned than Concept 1 'Doctors' (anxious: 32% vs 14.7%; worried: 32.9% vs 11.8%; concerned: 63.5% vs 29.4%)
- Neither ad was particularly amusing, revolting or surprising
- Concept 1 'Doctors' was more interesting (97% vs 85.4%)
- Both concepts made people feel motivated and more likely to look for the signs and symptoms of cancer
- Concept 2 'People' made one person probably less likely to look for signs and symptoms of cancer, and neither concept made people definitely less likely to look for the signs and symptoms of cancer

- Both concepts made people likely to see their doctor if they had signs and symptoms
- More respondents reported Concept 1 'Doctors' was very believable (86.8% vs 64.5%), very relevant (75% vs 57.9%), and very easy to spot the signs and symptoms of cancer (35.3% vs 11.8%)
- More respondents liked the Concept 1 'Doctors' (79.4% vs 60.5%)
- Very few people found the Concept 1 'Doctors' confusing (4.4% vs 26.3%)

Therefore Concept 1 'Doctors' performed better than Concept 2 'People' and was thus the concept chosen to develop into the FCE TV commercial.

## Discussion

These results show that we were successful in reaching people with the Find Cancer Early message and that there was a measurable difference between the intervention and control regions. This is an important finding given original and ongoing concerns that the modest campaign-spend and lack of TV advertising would not generate a high enough dose to make a difference.

This is a useful lesson for other organisations looking to implement campaigns with a limited budget; as shows that community development approaches with staff on the ground directly engaging the community can be an effective strategy for delivering campaign messages to regional communities.

Find Cancer Early adopted non-medical language which was unique to this campaign; using everyday words like pee and poo when describing symptoms. This language was chosen as a direct result of community consultations with regional people during the IRCO Development Phase. Consequently, this new terminology chosen by the community proved to be the most memorable when telephone survey participants were asked unprompted what the signs and symptoms of cancer were. Most notable were the significant differences between campaign and control regions for: Blood in your pee (17.6% vs 8.3%,  $P < 0.05$ ); and Blood in your poo; and (31.3% vs 18.7%,  $P < 0.05$ ).

This highlights the importance of formative work with the community to ensure messages are appealing to the target audience.

Measuring actual behaviour change as a result of campaigns can be a challenge in the real world, however we were able to measure self-reported action and intention to act. Of the 60% who were aware of the campaign over one quarter reported an action/response to the campaign; 29% of those aware of the campaign thought about making an appointment with their GP and 26% actually did so. This is quite an impressive response to a campaign of this modest magnitude.

The fulfilment of Objective Two of this research, gave Cancer Council WA sufficient evidence internally to investigate means of ensuring interim continuation of the campaign; and find a way to offer the campaign to the control regions (Peel/South West and MidWest) who missed out on the campaign while it was part of the IRCO randomised controlled trial.

To achieve this, VLHRF enabled UWA and Cancer Council WA to conduct the essential formative development and testing of two Find Cancer Early TV ad concepts. This process of testing comprehension / message take-out ensured another evidence-based communication strategy for future roll-out of the Find Cancer Early campaign.

TV advertising is the most efficient method for communicating these messages but because of the nature of the randomised controlled trial and risk of contamination, we were unable to use TV in our original strategy. However, once the RCT was over, television provided the best opportunity to fulfil a moral obligation to offer Find Cancer Early to the control regions and boost awareness in a relatively shorter amount of time.

Following the results of the formative concept testing via intercept surveys, Concept 1 'Doctors' was produced into a television commercial featuring real doctors from regional WA. Respondents felt

this concept was believable, relevant, interesting, and likable. Ad production costs and airtime were funded by the AH Crawford Society who originally provided the seed funding which started the IRCO Project. The ad was launched in October 2014, with four small ad bursts of a few weeks each over a 6 month period. Fortunately, we were also funded to repeat the CATI survey to determine the impact the TV has on raising awareness in the prior control regions, but also whether it is able to boost awareness even more in the original campaign regions. This CATI survey will occur in July 2015 so we are yet to know the impact.

### **Implications of this Project and Future Plans**

Thanks to the results of the CATI survey funded by VLHRF we were able to determine that Find Cancer Early was successful in reaching people with its message and that there was a significant measurable difference between campaign and control regions in terms of awareness.

These had many spin-off effects which have benefited regional WA. The results justified further funding from external sources to extend and expand Find Cancer Early to all of regional WA through a television campaign; the direct impact of which will be known later this year following results of a second CATI survey. Importantly, VLHRF enabled us to do this in an evidence-based way.

Investigators of the wider IRCO Project are still investigating these results in the context of the randomised controlled trial and the impact, if any, on patient outcomes. Preliminary results of the wider IRCO project indicate that although we were successful in raising awareness, we did not improve the time to diagnosis in intervention patients vs control patients who were diagnosed with one of the four cancers in the two years while the campaign was running.

It is possible that we were attempting to measure an effect on patient outcomes too early, which would be consistent with evidence from other health campaigns such as smoking, whereby it takes a much longer time to have an effect.

This is the first study of its kind so despite the lack of significance it is still important information internationally to show that this level of resources does not lead to change this early.

Therefore, the research team is now in the early stages of determining whether it might be feasible to apply for future funding in order to extend our research in regional WA to see if there is an effect after a longer period of exposure and evaluation; and not miss the opportunity to continue what we had the opportunity to start in our 5 year NHMRC grant.

### **Acknowledgements**

Thank you very much to the Val Lishman Health Research Foundation for funding this important piece of research.