

**'Don't Ignore Diabetes' :
2005 Advertising Campaign Evaluation**

By Owen Carter, Rob Donovan & Geoffrey Jalleh

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DIABETES AUSTRALIA WESTERN AUSTRALIA

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by

Dr Owen Carter, Prof Rob Donovan & Mr Geoffrey Jalleh

of the

Centre for Behavioural Research in Cancer Control

of

Curtin University Of Technology



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CONTENTS

1	BACKGROUND.....	1
1.1	DEVELOPMENT OF ADVERTISEMENT CONCEPTS	1
1.2	DON'T IGNORE DIABETES CAMPAIGN	1
2	THE 2005 STATE-WIDE DID CAMPAIGN	2
2.1	TELEVISION	3
2.2	NEWSPAPERS	3
2.3	RADIO	4
2.4	POSTERS AND LEAFLETS	4
3	METHODOLOGY	5
3.1	PROCEDURE.....	5
3.2	PARTICIPANTS	6
4	RESULTS	9
4.1	DID CAMPAIGN PENETRATION	9
4.1.1	<i>Storybook</i> television advertisement.....	9
4.1.2	Newspaper Advertisements.....	11
4.1.3	Posters and Leaflets.....	12
4.1.4	Comparative Penetration of Various Advertisements	13
4.1.5	Frequency of Exposure to Diabetes Advertising	13
4.1.6	News Items	15
4.1.7	Proportion of Respondents Seeing No Diabetes Advertising.....	15
4.2	BEHAVIOURAL CHANGES	16
4.2.1	Diet	16
4.2.2	Physical Activity	20
4.2.3	Information Sought About Diabetes	24
4.3	CHANGES IN AWARENESS OF DIABETES	25
4.3.1	Changes in the Salience of Diabetes as a Serious Disease	25
4.3.2	Changes in Personal Concern about Diabetes	26
4.3.3	Knowledge and Attitudes towards Diabetes.....	27
5	CONCLUSION.....	32
6	REFERENCES	34

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1 Background

As part of its ongoing efforts to increase the knowledge and salience of diabetes within the community, Diabetes Australia (Western Australia) (DAWA), assisted by funding from Healthway, instigated a project in 2002 entitled *Making Diabetes a Front Page Health Issue: Increasing Diabetes Brand Knowledge*. The aim of the project was to develop and implement a campaign to increase the knowledge and salience of diabetes within the Western Australian community.

1.1 Development of Advertisement Concepts

On behalf of DAWA, the Centre for Behavioural Research in Cancer Control (CBRCC) conducted focus groups in Perth, Bunbury and Geraldton in November 2002 to inform the development of media concepts about diabetes that would be acceptable, credible and personally relevant to Western Australians. The recommendation stemming from this research was to place a major emphasis on the *consequences* of diabetes to heighten salience of the disease (Carter, Donovan & Jalleh, 2002).

Three concept advertisements were consequently developed by Gatecrasher Advertising and tested by CBRCC via intercept interviews in the Perth city centre. Viewer reactions were compared for all three advertisements resulting in a recommendation that "Storybook" should be further developed for the campaign (Donovan, Carter & Jalleh, 2003).

1.2 Don't Ignore Diabetes campaign

In June 2003 a six-week pilot of the *Don't Ignore Diabetes* (DID) campaign was launched in the towns of Geraldton and Bunbury, including the broadcasting of the *Storybook* television advertisement in both towns at 250 Target Audience Rating Points (TARPs) per week. In addition, Bunbury residents were exposed to the *Eye*, *Leg* and *Dialysis* newspaper advertisements and posters, the *Big and Little* and *Washing Machine* radio advertisements and a series of public lectures (for a description of these materials see Carter, Donovan & Jalleh, 2003).

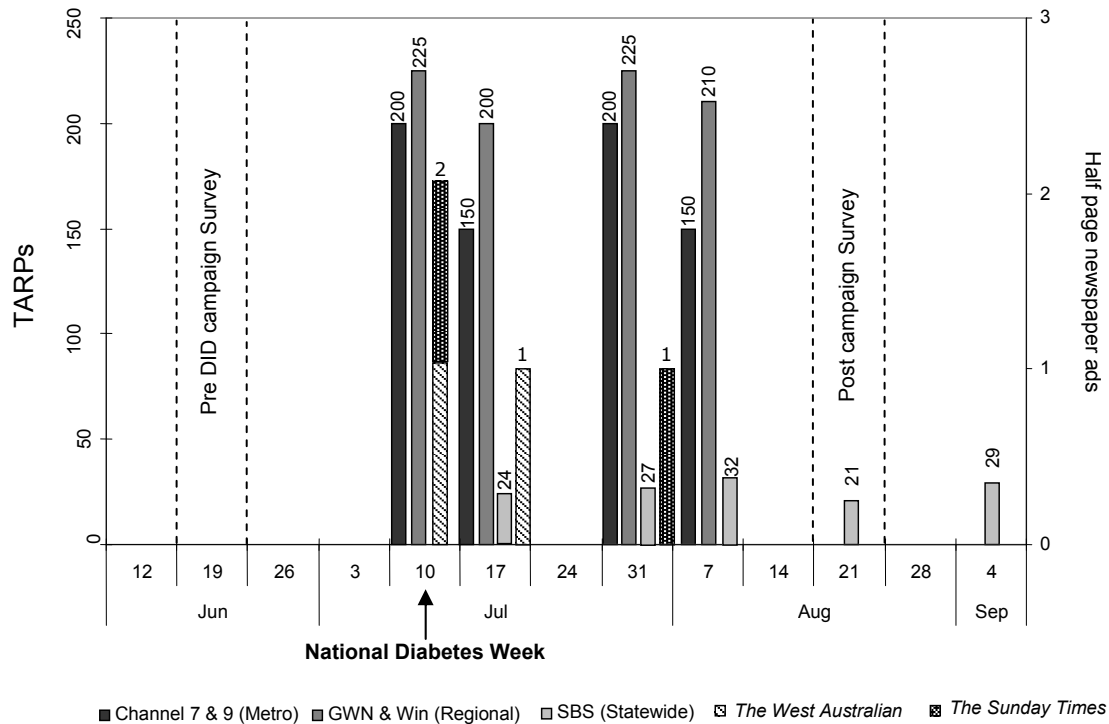
Pre and post campaign telephone surveys were conducted in both towns by the *Survey Research Centre*. Results suggested that *Storybook* achieved excellent cut-through in both towns (75% recall) and was well understood, considered highly credible and personally relevant. The *Leg* and *Eye* newspaper advertisements also achieved reasonably good cut-through in Bunbury (34% and 18% respectively). However the *Dialysis* newspaper advertisement, all the radio advertisements, and the posters achieved spurious recall only. Pre and post campaign surveys of Bunbury and Geraldton residents suggested that the pilot DID campaign significantly increased the salience of diabetes as a serious disease and one of personal concern in both towns, as well as significantly increasing knowledge of the consequences and risk factors associated with diabetes. There was some evidence to suggest that the *Eye* and *Leg* newspaper advertisements in Bunbury had a modest additive effect over and above *Storybook*.

2 The 2005 State-wide DID campaign

The successes of the pilot DID campaign paved the way for a state-wide rollout. Based upon recommendations stemming from the evaluation of the pilot campaign, minor modifications were made to the advertising materials to extend their message to promote active risk reduction, rather than merely to increase awareness. CBRCC undertook concept testing of these alterations in April 2005 and the materials for the next campaign were finalised (see Jalleh, Donovan & Carter, 2005).

The state-wide rollout of the DID campaign was launched to coincide with ‘National Diabetes Week’ on 10 July 2005. It consisted of a media burst in two two-week periods with a gap of one week in between for audiences in Perth and regional Western Australia, with some residual advertising to coincide with ongoing coverage of the Ashes Cricket series. Paid television and newspaper advertisement slots are illustrated in Figure 1 overleaf. The paid media were complemented by television and radio interviews and media releases to state-wide and community newspapers during *National Diabetes Week*. In addition posters and leaflets were distributed throughout the State as part of resource kits to various health services.

Figure 1: Television and Newspaper media schedules for the 2005 *Don't Ignore Diabetes* campaign



2.1 Television

Storybook was broadcast on channels 7, 9 and SBS for audiences in metropolitan Perth for a total of 783 TARPs over the five weeks from 10 July to 13 August 2005. In regional Western Australia it was broadcast on GWN, Win and SBS for a total of 943 TARPs over the same period. The residual coverage of the Ashes series on SBS accounted for another 50 TARPs in both metropolitan and regional areas between the 24 August and 4 September 2005. In addition to purchased media, six unpaid spots were broadcast on Channel 7, five on SBS and one on Channel 9 between 11 and 23 July 2005. This was complemented by nine interviews to launch *National Diabetes Week* on channels 7, 9 and 10 between the 10 and 12 July 2005.

2.2 Newspapers

Half page monochrome placements of *Eye* and *Leg* were paid for in state-wide distributions of *The West Australian* and *The Sunday Times* newspapers. *Leg* appeared in *The Sunday Times* in week two and in *The West Australian* in week three. *Eye* appeared in *The West Australian* in week two and *The Sunday Times* in week five. This was complemented by a strip advertisement appearing in *The West Australian* on the 13th and 27th of July 2005

which included the *Eye*, *Leg* and *Heart* images. Unpaid media coverage included an inside double-page spread on diabetes in the *Health and Medicine* section of *The West Australian* on 27 July 2005, which included a quarter-page image of *Leg* and cropped image of *Eye*.

A media release was also distributed to community newspapers, which contributed to the unpaid newspaper coverage of diabetes as identified by AC Nielsen between 5 and 27 July 2005:

- two articles in *The West Australian* and one in *The Sunday Times*;
- 18 articles in metropolitan community newspapers;
- 21 articles in regional community newspapers; and
- Two newsletters.

2.3 Radio

No radio spots were purchased during the DID campaign period but during *National Diabetes Week* seven interviews discussing diabetes were conducted on Perth radio stations 6PR, ABC Perth, 94.5 FM, Sonshine FM, Curtin FM and Radio Fremantle. During the same period, seven radio interviews were conducted in regional Western Australia in Broome, Carnarvon, Twin City's FM, ABC South West, ABC Kimberley and ABC Great Southern.

2.4 Posters and Leaflets

DAWA distributed 485 resource kits to health services, health professionals, community groups, work places and others across Western Australia prior to *National Diabetes Week*. These kits each contained 200 *Are You At Risk?* leaflets, two *Leg* posters and one *Don't Ignore Diabetes* campaign overview poster. The majority of resource kits went to local health services and to Divisions of General Practice for onward distribution to GPs.

3 Methodology

In order to gather baseline measures of public awareness and attitudes towards diabetes, pre campaign surveys were administered in metropolitan Perth and regional Western Australia in June 2005. An equal number of post campaign surveys was conducted in August 2005 in order to measure changes in public awareness and attitudes towards diabetes following to the DID campaign.

3.1 Procedure

The *Survey Research Centre* conducted pre and post campaign surveys under the direction of CBRCC. Stratified sampling targets were set for equal numbers of males and females aged between 31 and 70 years, and with a 75:25 metropolitan to regional split. Based on postcodes from the Perth metropolitan area, Albany, Broome, Bunbury, Esperance, Geraldton and Kalgoorlie a random sample of telephone numbers was generated from the electronic White Pages. Unanswered numbers were automatically redialled after a set interval. Three attempts to obtain contact were made before substitution. Participants were screened to ensure that they were residents of Western Australia and did not work within the medical or health professions. Where there was more than one eligible respondent in the household, the ‘next birthday’ technique was used to select a respondent. If unavailable, a further two attempts were made to contact the specified individual before another number was substituted.

Professional interviewers conducted the surveys by reading from a set script delivered by Computer Assisted Telephone Interviewing (CATI) software and recorded responses immediately on to a computer database, using pre-arranged coding for both open-ended and close ended items. Open-ended responses that did not conform to the pre-arranged coding were recorded verbatim by the interviewers and coded at a later date by the researchers. The resultant database was analysed using the Statistical Package for the Social Sciences (SPSS) version 13.0.

3.2 Participants

The telephone survey hit rate is displayed in Table 1 below.

Table 1: Diabetes Telephone Survey Participation Rate

	<i>Pre</i>		<i>Post</i>		<i>Total</i>	
	N	%	N	%	N	%
<u>Telephone Survey Hit Rate</u>						
Disconnected, fax, engaged, no answer, etc.	992	41.2	1,022	38.7	2,014	39.9
Did not meet selection criteria	517	21.5	508	19.2	1,025	20.3
Refusals	563	23.4	766	29.0	1,329	26.3
Completed Surveys	338	14.0	344	13.0	682	13.5
<i>TOTAL</i>	<i>2,410</i>	<i>100.0</i>	<i>2,640</i>	<i>100.0</i>	<i>5,050</i>	<i>100.0</i>
<u>Do you have diabetes?</u>						
YES	20	5.9	26	7.6	46	6.7
NO	318	94.1	318	92.4	636	93.3
<i>TOTAL</i>	<i>338</i>	<i>100.0</i>	<i>344</i>	<i>100.0</i>	<i>682</i>	<i>100.0</i>

In total 5,050 telephone numbers were dialled to obtain 682 completed interviews. The ratio of survey refusals versus completed interviews suggests an overall cooperation rate of 33.9%. A comparison of the sample's demographic data with Western Australian population data from Australian Bureau of Statistics (ABS) is displayed in Table 2 overleaf.

As the aim of the DID campaign was to increase the salience of diabetes in populations at risk of developing the disease, respondents who had already developed diabetes were excluded. However, in order to avoid premature prompting of diabetes, respondents were only asked if they had diabetes after completing all questions assessing unprompted salience of the disease. Similar proportions of respondents in the pre and post campaign surveys reported living with diabetes and their responses were excluded from further analysis. By happy coincidence, this reduced the final samples in the pre and post campaign surveys to an equal number of 318 respondents.

Comparisons of sex, age-group distribution, place of residence, and occupation all suggest a close match of the sample to ABS data for Western Australian adults within the target age group. The largest biases within the sample are the disproportionately high number of respondents with a tertiary education (+11.2%), followed by those in the 56 to 70 year age group (+7.2%), and those currently not in the workforce (+6.3%). As the oldest age group is also the most likely to be retired, it is to be expected that if one is over represented then the

Table 2: Sample Demographics Compared to Australian Bureau of Statistics Data

	Pre %	Post %	Total %	Western Australia %	Sample Bias %
<u>Sex</u>	(n=318)	(n=318)	(n=636)	(n=889,331) ¹	
Males	49.4	49.1	49.2	49.9	-0.7
Females	50.6	50.9	50.8	50.1	+0.7
<i>TOTAL</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	-
<u>Age Group</u>	(n=318)	(n=318)	(n=636)	(n=889,331) ¹	
31-39 years	24.2	23.9	24.1	28.1	-4.0
40-55 years	42.8	45.3	44.0	47.2	-3.2
56-70 years	33.0	30.8	31.9	24.7	+7.2
<i>TOTAL</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	
<u>Place of Residence</u>	(n=318)	(n=318)	(n=636)	(n=1,553,156) ²	
Perth	73.9	71.4	72.6	74.3	-1.7
Regional WA	26.1	28.6	27.4	25.7	+1.7
<i>TOTAL</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	-
<u>Highest Educational Level</u>	(n=318)	(n=318)	(n=636)	(n=1,282,104) ³	
Year 10 or less	37.7	46.2	42.0	40.4	+1.6
Year 11	9.7	6.9	8.3	10.4	-2.1
Year 12	26.7	28.0	27.4	38.3	-10.9
Bachelor degree	20.4	15.4	17.9	9.4	+8.5
Postgraduate degree	5.1	3.5	4.2	1.5	+2.7
Refused	0.4	-	0.2	-	+0.2
<i>TOTAL</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	-
<u>Occupation</u>	(n=300)	(n=303)	(n=603)	(n=684,394) ⁴	
White collar ⁵	56.7	46.9	51.7	54.2	-2.5
Blue collar ⁶	13.3	23.1	18.2	22.1	-3.9
Not in work force ⁷	30.0	30.0	30.0	23.7	+6.3
<i>TOTAL</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	-

other should be too. The ABS data on educational attainment includes all Western Australians aged 15 years and above, of whom 9.4% are aged between 15 to 19 years and are very unlikely to have completed a university degree. As such, the educational attainment of

1 Based on 2001 Census data of Western Australians aged 31-70 years

2 Based on 2003 Australian Bureau of Statistics data for Western Australians aged 15+ years

3 Based on 2001 Census data of Western Australians aged 15+ years

4 Based on 2001 Census data of Western Australians aged 25+ years

5 Defined as Managers, Administrators, Professionals, Clerical, Sales, Service and related workers

6 Defined as Trade, Transport, Production, Labourer and related workers

7 Defined as Unemployed, Retirees, Pensioners, Home Duties, and Full-time students

the present sample is likely to be less biased than appears. Furthermore, preliminary analyses suggested that the disproportionate number of respondent responses within the education, age and work status categories had minimal effect on overall response proportions ($\pm 2-6\%$) and none of these altered the statistical significance of differences between pre and post campaign measures. It was therefore determined that weighting the data by education, age or work status for the present survey was not necessary.

4 Results

4.1 DID Campaign Penetration

To test for recall, or the ‘cut-through’, of each advertisement participants were asked whether they had seen any television, newspaper or poster advertisements or heard any radio ads about diabetes in the past two months. They were then read descriptions of each advertisement and asked whether they recognised each to measure actual reach.

4.1.1 *Storybook* television advertisement

Table 3: Television health advertising about diabetes recalled and recognised by respondents in the past two months

<u>TELEVISION</u>	Pre (n=318)		Post (n=318)		Change
	N	%	N	N	
Any Advertisement Recalled*	33	10.4	196	61.6	+51.3
<i>Storybook</i> *	4	1.3	134	42.1	+40.8
“Jelly Beans”	4	1.3	-	-	-1.3
“Man, Dog & BGL device”	-	-	3	0.9	+0.9
Can’t remember details	22	6.9	39	12.3	+5.4
<i>Recognised from description</i>					
<i>Storybook</i>	-	-	193	60.7	-

* denotes a statistically significant difference between pre and post scores at $p < .05$

Table 3 shows that there was a large increase in the proportion of respondents who said they had seen television health advertising about diabetes in the last two months, with 42% providing a description of *Storybook* when asked to describe the advertisement they could recall. The cut-through of *Storybook* was lower than in the pilot (75%) but a clear majority of respondents in the post campaign survey (61%) still recognised a description of the advertisement when it was read to them. The lower recall rates for the present campaign are in approximate proportion to the lower TARPs allocated to the state-wide DID campaign (793-943) in comparison to the pilot (1,500).

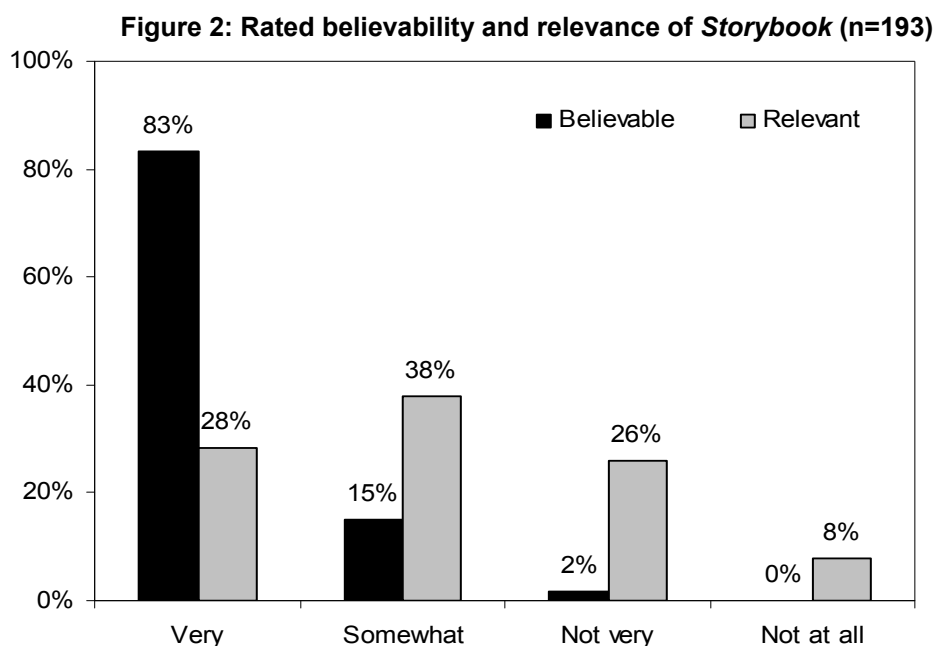
Those respondents in the post campaign survey who recognised the description of *Storybook* were asked what was the main message of the advertisement.

Table 4: What would you say was the main message of the TV advertisement?

Main messages	N=193	
	n	%
Be aware of diabetes	85	44.0
Get a check-up for diabetes	74	38.3
Diabetes is a serious disease	32	16.6
Diabetes is more serious than you think	26	13.5
Keep healthy to avoid diabetes	25	13.0
If you are inactive you are at risk	22	11.4
If you are overweight you are at risk	14	7.3
If you are over 30 years old you are at risk	5	2.6
<i>Don't know</i>	14	7.3
Other	13	6.7

Table 4 shows that the main messages that respondents understood from *Storybook* were not to be complacent about diabetes, get a check up, and to a lesser extent, to exercise and eat a balanced diet to avoid developing the disease. This is an encouraging result as it implies that *Storybook* achieved not only its goal of imparting a message that people should be alert to the dangers of diabetes, but also that calls to action were imparted about seeing your GP (for a check-up), and what are some of the avoidance strategies (get active and watch your weight).

These respondents were then asked to rate both the credibility of *Storybook* and its personal relevance to them. Results are illustrated in Figure 2 below.



A large majority of respondents considered *Storybook* to be ‘very believable’ and two-thirds (66%) also considered it to be either ‘somewhat’ or ‘very’ personally relevant. These are good results and closely mirror those of the pilot DID campaign.

4.1.2 Newspaper Advertisements

Table 5: Newspaper advertising about diabetes recalled and recognised by respondents in the past two months

<u>NEWSPAPERS</u>	Pre (n=318)		Post (n=318)		Change
	N	%	N	%	%
Any Advertisement Recalled*	23	7.2	85	26.7	+19.5
<i>Leg</i>	-	-	21	6.6	+6.6
<i>Eye</i>	-	-	18	5.7	+5.7
<i>Heart</i>	-	-	-	-	-
Other	10	3.1	5	1.5	-1.6
Can't remember*	13	4.1	42	13.2	+9.1
<i>Recognised from description</i>					
<i>Leg</i>	-	-	75	23.6	-
<i>Eye</i>	-	-	61	19.2	-
<i>Heart</i>	-	-	34	10.7	-

* denotes a statistically significant difference between pre and post scores at $p < .05$

Recall of any newspaper advertisements about diabetes increased significantly from the pre to post campaign surveys: from 7% to 27%. However many respondents were unable to describe what they had seen. Recognition rates for *Leg* and *Eye* suggested that between one-quarter and one-fifth of respondents had seen each and processed them sufficiently well to recognise their descriptions. This is far lower than the two-thirds of Bunbury residents who recognised descriptions of the newspaper advertisements during the pilot DID campaign, and reflects the relatively modest media purchasing, which totalled four half-page advertisements and two strip advertisements, in comparison to 20 full-page advertisements used in Bunbury for the pilot.

Heart only appeared twice as part of a sequence of three images including *Eye* and *Leg*. As such its recognition rate is disproportionately high for the number of times it appeared in comparison *Eye* and *Leg*. It may well be that recognition of the press advertisements was boosted by exposure to the same or similar images in *Storybook*.

4.1.3 Posters and Leaflets

Results for poster and leaflet advertising are displayed in Table 6 below.

Table 6: Posters and leaflets about diabetes recalled and recognised by respondents in the past two months

<u>POSTERS AND LEAFLETS</u>	Pre (n=318)		Post (n=318)		Change
	N	%	N	%	%
Any Advertisement Recalled*	59	18.6	81	25.5	+6.9
<i>Leg</i>	1	0.3	4	1.3	+1.0
' <i>Are You at Risk</i> ' Leaflet	12	3.8	5	1.6	-1.6
Can't remember	26	8.2	45	14.2	+6.0
Other	20	6.3	27	8.5	+0.3
<i>Recognised from description</i>					
<i>Leg</i>	-	-	44	13.8	-
' <i>Are You at Risk</i> ' leaflet	-	-	51	16.0	-
<i>Where seen</i>					
GP Offices	-	-	44	13.8	-
Hospital	-	-	8	2.5	-
Chemist	-	-	5	1.6	-
Workplace	-	-	3	0.9	-
Don't know	-	-	8	2.5	-
Other	-	-	17	5.3	-

* denotes a statistically significant difference between pre and post scores at $p < .05$

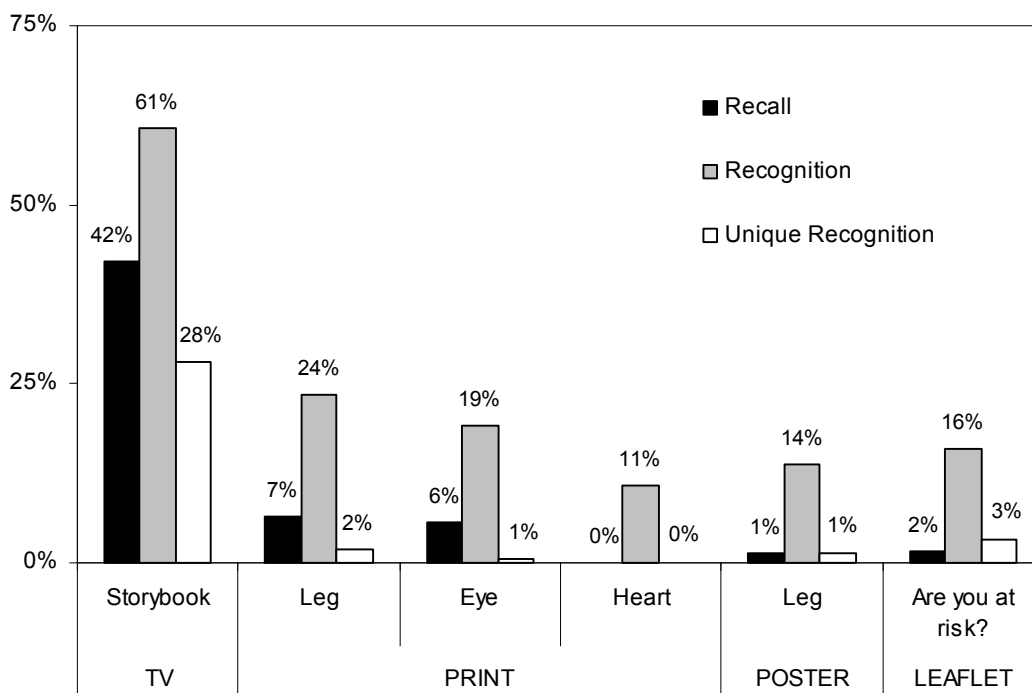
Recall of any posters or leaflets about diabetes increased significantly from the pre to post campaign surveys, although many respondents were unable to describe what they had seen. Recognition of the '*Are You At Risk*' leaflet was marginally higher than for the *Leg* poster. The most common location that respondents reported seeing both the poster and leaflet were in the waiting rooms of GP clinics, suggesting that Divisions of General Practice had been successful in distributing the resource kits forward to their members.

As with the newspaper advertisements, it is possible that respondents falsely recognised the *Leg* poster when in fact they had only seen its image on television. However, a full quarter of respondents who reported seeing the *Leg* poster did not recognise the description of *Storybook* (11 of 44).

4.1.4 Comparative Penetration of Various Advertisements

Figure 2 below illustrates the relative recall and recognition rates of each of the advertisements.

Figure 2: Comparison of recall and recognition rates for various DID campaign advertisements



As with the results from the pilot, recall rates were the best for *Storybook*, followed by the *Leg* and then *Eye* newspaper advertisements. Figure 2 also displays unique recognition, whereby each promotion was assessed for the frequency with which it was recognised by a respondent who recognised no other materials.

4.1.5 Frequency of Exposure to Diabetes Advertising

Those respondents in the post campaign survey who claimed to recognise each of the advertisements were asked to estimate how many times they had seen or heard each. Results are displayed in Table 7 overleaf.

Table 7: Estimated times respondents had seen or heard each diabetes advertisement

Diabetes Promotional Material		Mean times seen or heard	
		<i>If seen or heard at all</i>	<i>Total sample (n=318)</i>
Television	<i>Storybook</i>	8.2 (n=180)	4.8
Print	<i>Eye</i>	5.2 (n=59)	0.5
	<i>Leg</i>	4.9 (n=74)	0.6
	<i>Heart</i>	3.6 (n=32)	0.2
Posters and Leaflets	<i>Leg</i>	3.4 (n=43)	0.2
	<i>'Are You at Risk' Leaflet</i>	2.8 (n=49)	0.2
TOTAL		-	6.5

Table 7 suggests that the respondents saw an average of 6.5 DID promotional materials over the course of the campaign. *Storybook* made a greater contribution to respondents' total exposure than all the other DID promotional materials combined. However, these data suggest that the cumulative contribution of the other promotional DID materials increased average instances of exposure to the campaign by 35%.

The proportion of respondents who recognised the description of *Storybook* (60.7%) multiplied by the frequency with which they estimated seeing the advertisement (8.2) extrapolates to an actual TARPs of 498. This falls short of the 783 and 943 TARPs purchased in Perth and regional centres respectively.

Given the difficult nature of participants being asked to estimate the number of times they have seen each advertisement, we can expect their responses to be inaccurate. However, if anything, we might expect overestimates of the number of times they have seen an advertisement. This is exemplified by respondents' mean estimates for the number of times they had seen the newspaper advertisements actually exceeding the number of times each advertisement appeared. In light of the fact that \$200,000 was spent on media over the course of the present DID campaign, the reasons for such a large discrepancy between reported and expected exposure warrants further investigation.

4.1.6 News Items

Participants were also asked whether they had seen or heard anything in the news about diabetes in the last two months.

Table 8: News about diabetes seen or heard by respondents in the past two months

<u>NEWS ITEMS</u>	Pre (n=318)		Post (n=318)		Change
	N	%	N	%	%
Any Features*	117	36.8	136	42.8	+6.0
TV feature	98	30.8	109	34.3	+3.5
Radio feature	18	5.7	10	3.1	-2.6
Newspaper article	30	9.4	28	8.8	-0.6
Other	11	3.5	6	1.9	-1.6

* denotes a statistically significant difference between pre and post scores at $p < .05$

Table 8 suggests that a significantly higher proportion of respondents in the post campaign survey reported having seen or heard news items about diabetes. It is likely that this can be accounted for by the increased media publicity surrounding *National Diabetes Week*. Most of this increase can be accounted for by respondents who recalled seeing television features, as the proportion of respondents suggesting they had seen or heard features about diabetes on radio or in newspapers actual dropped between the pre and post campaign evaluations. Neither of these drops were statistically significant.

4.1.7 Proportion of Respondents Seeing No Diabetes Advertising

Seventy-four respondents in the post campaign survey neither recalled nor recognised any of the DID advertisement descriptions, representing 23.3% of the sample. Of these, 23 reported seeing at least one news item about diabetes during the period of the DID campaign. The remaining 51 respondents, or 16.0% of the post campaign sample, claimed to have neither seen nor heard any health promotional material about diabetes at all.

4.2 Behavioural Changes

Prior to being prompted that the survey was about diabetes (by being asked direct questions about the disease and the DID campaign advertisements), respondents had been asked a series of health behaviour related questions in terms of diet and physical exercise. An initial comparison of post-campaign responses by those who reported seeing campaign-related materials versus those who had not revealed small differences in the expected direction, but none of these was statistically significant. This is likely due to the small sample sizes available for comparison and uneven proportions in each group. As such only the contribution of the DID campaign to changes in participant responses between the pre and post campaign surveys is examined hereafter.

4.2.1 Diet

4.2.1.1 Reported Changes in Diet in last Six Months

Participants were asked whether they had tried to improve their diet within the last six months, and if so how their consumption habits had changed. Results are shown in Table 9.

Table 9: Proportion of respondents trying to improve their diet and changes attempted

	Pre (n=318)		Post (n=318)		Change %
	N	%	N	%	
Tried to change diet in last 6 months	159	50.0	174	54.7	+4.7
Actually eating better than 6 months ago	115	36.2	131	41.2	+5.0
<u>Changes in Diet Reported</u>					
Less fat	64	20.1	71	22.3	+2.2
More vegetables	63	19.8	75	23.6	+3.8
More fruit	42	13.2	61	19.2	+6.0
Eating smaller meals	24	7.5	29	9.1	+1.6
Less meat	20	6.3	18	5.7	-0.6
Less carbohydrates	20	6.3	13	4.1	-2.2
Less sugar	14	4.4	17	5.3	+0.9
More cereals	11	3.5	18	5.7	+2.2
Less takeaway*	7	2.2	24	7.5	+5.3
Other	3	0.9	15	4.7	+3.8

* denotes a statistically significant difference between pre and post scores at $p < .05$

Half of respondents in the pre campaign survey claimed that they had tried to improve their diets within the past six months, with a larger but non-significant proportion claiming the same in the post campaign survey. Similarly, an increased but non-significant proportion of post campaign survey respondents claimed that they actually were eating more healthily than six months ago. The only statistically significant difference between pre and post campaign survey responses was in the small but larger proportion of post campaign survey respondents trying to eat less takeaway foods; an action not directly referred to in the DID campaign.

4.2.1.2 Changes in Diet Due to Specific Health Concerns

Those respondents who claimed they had tried to improve their diet in the last six months were asked whether it was to avoid any specific health problems or diseases, and if so, to identify these. Results are displayed in Table 10 and expressed as a proportion of the total sample for the pre and post campaign surveys.

Table 10: Proportions motivated to change dietary habits to avoid specific health problems or diseases, and specific health advertising campaigns that may have prompted such

	Pre (n=318)		Post (n=318)		Change %
	N	%	N	%	
Proportion wishing to avoid a specific health problem*	41	12.9	64	20.1	+7.2
<u>Specific health problem or disease</u>					
Cardiovascular diseases	20	6.3	30	9.4	+3.1
Diabetes	8	2.5	14	4.4	+1.9
Cancers	7	2.2	3	0.9	-1.3
Obesity	4	1.3	10	3.1	+1.9
Other	12	3.8	17	5.3	+1.6
Proportion inspired by a specific health campaign	6	1.9	10	3.1	+1.3
<u>Specific health advertising campaign</u>					
<i>2 Fruit & 5 Veg</i>	3	0.9	4	1.3	+0.3
<i>Don't Ignore Diabetes</i>	-	-	1	0.3	+0.3
National Heart Foundation	1	0.3	-	-	-0.3
Can't remember	1	0.3	2	0.6	+0.3
News items	1	0.3	2	0.6	+0.3
Other	-	-	1	0.3	+0.3

* denotes a statistically significant difference between pre and post scores at $p < .05$

A significantly higher proportion of post campaign respondents reported that one or more specific health problems or diseases had prompted them to change their dietary habits. A modest proportion of this increase could be accounted for by concern about diabetes, but this increase was not statistically significant. Indeed none of the changes relating to specific health problems or diseases were statistically significant.

Similarly, respondents were asked whether their dietary change had been inspired by any health advertising campaigns, but the proportions, along with the differences between pre and post campaign survey responses were extremely modest and not significant. Only one respondent specifically mentioned the DID campaign.

4.2.1.3 Perceived Benefits of an Improved Diet

All respondents were then asked to suggest some of the benefits of a better diet. Responses are displayed in Table 12.

Table 11: Nominated benefits of an improved diet

<u>What are the benefits of a better diet?</u>	Pre (n=318)		Post (n=318)		Change
	N	%	N	%	%
Improve general health	236	74.2	213	67.0	-7.2
Lose weight*	114	35.8	143	45.0	+9.1
Lower risk of cardiovascular diseases	47	14.8	49	15.4	+0.6
More energy*	47	14.8	78	24.5	+9.7
Feel better	27	8.5	32	10.1	+1.6
Lower risk of diabetes*	17	5.3	30	9.4	+4.1
Lower risk of cancers	12	3.8	7	2.2	-1.6
Better skin	6	1.9	4	1.3	-0.6
Live longer	5	1.6	14	4.4	+2.8
Don't know	3	0.9	6	1.9	+0.9
Other	14	4.4	27	8.5	+4.1

* denotes a statistically significant difference between pre and post scores at $p < .05$

A small but significantly larger proportion of post campaign survey respondents mentioned a lower risk of diabetes as a benefit of an improved diet. The specific salience of diabetes-avoidance in relation to a good diet remained very low in comparison to generalised benefits such as ‘improved general health’, weight loss and even ‘more energy’. However the salience of diabetes nearly doubled in comparison to other specific diseases such as cardiovascular diseases and cancers, which remained largely static.

4.2.1.4 Diseases Less Likely from an Improved Diet

A similar improvement in the salience of diabetes was observed in relation to diet when respondents were asked what specific health problems and diseases people are less likely to get if they have a healthy diet (see Table 12 below).

Table 12: Nominated health problems and diseases less likely due to a healthy diet

	Pre (n=318)		Post (n=318)		Change %
	N	%	N	%	
<u>Top-of-mind Response</u>					
Cardiovascular diseases	170	53.5	140	44.0	-9.4
Diabetes*	70	22.0	108	34.0	+11.9
Cancers	49	15.4	29	9.1	-6.3
Obesity	4	1.3	-	-	-1.3
Don't know	16	5.0	0	0.0	-5.0
Other	9	2.8	41	12.9	+10.1
<u>Mentioned in any order</u>					
Cardiovascular diseases	259	81.4	262	82.4	+0.9
Diabetes*	157	49.4	196	61.6	+12.3
Cancers*	128	40.3	85	26.7	-13.5
Obesity*	18	5.7	32	10.1	+4.4
Arthritis	6	1.9	8	2.5	+0.6
Osteoporosis*	5	1.6	16	5.0	+3.5
Don't know	18	5.7	15	4.7	-0.9
Other	12	3.8	4	1.3	-2.5

* denotes a statistically significant difference between pre and post scores at $p < .05$

A better diet remained most frequently associated with a lower risk of developing cardiovascular diseases both before and after the DID campaign in terms of both top-of-mind and overall response rates. Diabetes remained the second most frequently mentioned disease in both response categories but it had the greatest *increase* in the proportion of respondents nominating it as both their top-of-mind and overall mentioned disease. The observed gains for diabetes were significant and substantial and appeared to come at the expense of cardiovascular disease and cancer; two diseases that have long enjoyed high salience in the public imagination. It is a reasonable assumption that the observed increases for diabetes were a direct result of the DID campaign.

4.2.2 Physical Activity

To control for ordering effects, half of the respondents were asked the following series of questions regarding changes in physical activity before being asked the previously reported questions on dietary changes. The other half were asked questions about diet first and then about physical activity.

4.2.2.1 Reported Changes in Physical Activity

All respondents were asked whether they had tried to do more physical exercise in the past six months, and if so, what they had tried to do.

Table 13: Proportion of respondents trying to do more physical exercise in the last six months and what they have tried

	Pre (n=318)		Post (n=318)		Change %
	N	%	N	%	
Proportion that tried to do more exercise	159	50.0	153	48.1	-1.9
Proportion successfully more physically active	27	8.5	42	13.2	+4.7
<u>Physical Exercises Tried</u>					
Walking	98	30.8	108	34.0	+3.1
Jogging	17	5.3	9	2.8	-2.5
Cycling	23	7.2	18	5.7	-1.6
Sport*	11	3.5	28	8.8	+5.3
Gymnasium	45	14.2	36	11.3	-2.8
Gardening*	2	0.6	9	2.8	+2.2
Swimming	11	3.5	11	3.5	+0.0
Yoga	7	2.2	7	2.2	+0.0
Other	10	3.1	13	4.1	+0.9

* denotes a statistically significant difference between pre and post scores at $p < .05$

Table 13 shows that a comparison of pre and post campaign survey responses suggests a slight but non-significant drop in the number of respondents *trying* to do more physical exercise before versus after the DID campaign, and a slight but non-significant increase in the number *successfully* undertaking more exercise. Of those undertaking more physical exercise, there were statistically significant increases observed in sports participation and gardening. However we should be cautious in assuming these changes were due to the DID campaign as nothing in the campaign recommended these activities over other physical activities for which no significant differences were observed. These data would therefore

suggest that there was little appreciable change in the physical exercise regimes of respondents that coincided with the DID campaign.

4.2.2.2 Increased Physical Exercise due to Specific Health Concerns

Participants undertaking more physical exercise were asked if they were doing so to avoid any specific health problems or diseases. Results are shown in Table 14.

Table 14: Proportion of respondents trying to do more physical exercise to avoid specific health problems or diseases, and what prompted the change

	Pre (n=318)		Post (n=318)		Change %
	N	%	N	%	
Proportion wishing to avoid specific health problem	46	14.5	60	18.9	+4.4
<u>Specific Health Problem Trying to Avoid</u>					
Heart disease	15	4.7	23	7.2	+2.5
Osteoporosis	10	3.1	12	3.8	+0.6
Obesity	9	2.8	9	2.8	+0.0
Diabetes	6	1.9	6	1.9	+0.0
Arthritis	3	0.9	6	1.9	+0.9
Cancer	3	0.9	3	0.9	+0.0
Other	10	3.1	12	3.8	+0.6
<u>What prompted more physical activity?</u>					
Family	8	2.5	12	3.8	+1.3
Advice from doctor	9	2.8	18	5.7	+2.8
Health advertising	7	2.2	3	0.9	-1.3
Self-motivation	10	3.1	23	7.2	+4.1
Friends*	0	0.0	6	1.9	+1.9
Other	10	3.1	8	2.5	-0.6
Prompted by health advertising campaigns	5	1.6	13	4.1	+2.5
<u>Specific Health Advertising Campaign</u>					
<i>Find Thirty</i>	2	0.6	6	1.9	+1.3
<i>Don't Ignore Diabetes</i>	-	-	3	0.9	+0.9
<i>2 Fruit & 5 Veg</i>	1	0.3	0	0.0	-0.3
<i>Stay on Your Feet</i>	1	0.3	2	0.6	+0.3
National Heart Foundation	0	0.0	1	0.3	+0.3
Media editorials	1	0.3	5	1.6	+1.3

* denotes a statistically significant difference between pre and post scores at $p < .05$

A slight but non-significant increase was observed in the proportion of respondents undertaking more physical exercise to avoid a specific health problem or disease. Concern over diabetes could not account for any of this increase as equal proportions of respondents nominated the disease both before and after the DID campaign. There was actually a non-significant *decrease* in the proportion of unprompted respondents who nominated any health advertising as a motivating factor for more physical activity. Half of the six respondents in the post campaign survey who suggested they wished to reduce their likelihood of developing diabetes mentioned the DID campaign when prompted to nominate a specific health campaign as a motivating factor.

4.2.2.3 Perceived Benefits of Physical Exercise

Participants were asked to nominate the benefits of increased physical activity and then what diseases people are less likely to get if they become more active. Unfortunately a technical error meant that only those respondents in the pre campaign survey who stated they had undertaken physical activity to avoid a specific health problem were asked such. This mistake was identified in preliminary analyses of the pre survey data and rectified for the post survey. However the disparate samples make comparisons problematic and so only post campaign survey respondents who also stated they had *undertaken physical activity to avoid a specific health problem* were used in the comparison. This means that the sample sizes for these questions were low and statistically significant results unlikely.

Table 15: What are the benefits of doing more physical activity and what diseases are people less likely to get if they do more physical activity?

	Pre (n=46)		Post (n=60)		Change %
	N	%	N	%	
<u>What are the benefits of physical activity?</u>					
Improved general health	27	58.7	36	60.0	+1.3
Lose weight	19	41.3	19	31.7	-9.6
Increased fitness	17	37.0	29	48.3	+11.4
Improved mental health	6	13.0	13	21.7	+8.6
More energy	10	21.7	9	15.0	-6.7
Lower risk of cardiovascular disease	5	10.9	8	13.3	+2.5
Better sleep	3	6.5	3	5.0	-1.5
Lower risk of osteoporosis	2	4.3	0	0.0	-4.3
Lower risk of diabetes	1	2.2	0	0.0	-2.2
Lower risk of cancer	0	0.0	1	1.7	+1.7
Don't know	0	0.0	4	6.7	+6.7
Other	1	2.2	1	1.7	-0.5
<u>Diseases less likely from physical activity</u>					
Cardiovascular diseases	40	87.0	55	91.7	+4.7
Diabetes	25	54.3	39	65.0	+10.7
Cancer	9	19.6	9	15.0	-4.6
Osteoporosis	7	15.2	8	13.3	-1.9
Arthritis	5	10.9	4	6.7	-4.2
Obesity	2	4.3	7	11.7	+7.3
Mental illnesses	2	4.3	5	8.3	+4.0
Asthma	1	2.2	1	1.7	-0.5
Don't know	2	4.3	0	0.0	-4.3
Other	2	4.3	4	6.7	+2.3

The data in Table 15 suggest that both before and after the DID campaign, very few respondents spontaneously associated the benefits of physical activity with a reduced risk of diabetes, or any other specific aspect of health for that matter. Rather, physical activity was associated with more holistic vitalisation-type concepts, such as ‘improved general health’, ‘increased fitness’ and ‘increased energy’. When prompted to nominate specific diseases that can be avoided through increased physical activity, cardiovascular diseases were clearly most salient but diabetes remained second most salient both before and after the DID campaign. It also saw the greatest increase of any disease, but not to a statistically significant degree.

4.2.3 Information Sought About Diabetes

Respondents were asked whether they had sought information about diabetes or discussed it with anyone in the past two months. Results are displayed in Table 16 below.

Table 16: Sources of information and discussions had about diabetes

	Pre (n=318)		Post (n=318)		Change %
	n	%	n	%	
<i>Did anything</i>	66	20.8	80	25.2	+4.4
Talked to friends/colleagues	40	12.6	34	10.7	-1.9
Talked to health professional	15	4.7	23	7.2	+2.5
Talked to family*	7	2.2	27	8.5	+6.3
Searched the Internet	4	1.3	3	0.9	-0.3
Had BGL test	3	0.9	0	0.0	-0.9
Read brochure	2	0.6	0	0.0	-0.6
Contacted DAWA	1	0.3	2	0.6	+0.3
Went to library	1	0.3	3	0.9	+0.6

* denotes a statistically significant difference between pre and post scores at $p < .05$

More participants reported either seeking information about diabetes or discussing the topic with others in the post campaign survey, but the increase was not statistically significant. However, there was a statistically significant increase in the proportion of respondents who claimed to have discussed the topic of diabetes with family members between the pre and post campaign surveys.

4.3 Changes in Awareness of Diabetes

4.3.1 Changes in the Salience of Diabetes as a Serious Disease

Participants were asked what came to mind when they thought of serious diseases in Australia. Responses are displayed in Table 17 below.

Table 17: What comes to mind when you think of serious diseases in Australia?

Serious Diseases in Australia	Pre (n=318)		Post (n=318)		Change %
	N	%	N	%	
<u>First to Mind</u>					
Cancer (all types)	187	58.8	177	55.7	-3.1
Cardiovascular diseases	96	30.2	81	25.5	-4.7
Diabetes*	18	5.7	33	10.4	+4.7
Obesity	5	1.6	9	2.8	+1.3
AIDS	3	0.9	3	0.9	0.0
Asthma	1	0.3	4	1.3	+0.9
Mental illnesses	1	0.3	0	0.0	-0.3
Dementia	1	0.3	1	0.3	0.0
Arthritis	0	0.0	1	0.3	+0.3
Other	6	1.9	9	2.8	+0.9
TOTAL	318	100.0	318	100.0	
<u>Mentioned at all</u>					
Cancer (all types)*	280	88.1	259	81.4	-6.6
Cardiovascular diseases	262	82.4	245	77.0	-5.4
Diabetes	112	35.2	124	39.0	+3.8
Obesity	25	7.9	27	8.5	+0.6
Dementia	8	2.5	14	4.4	+1.9
Arthritis	12	3.8	10	3.1	-0.6
Mental illnesses	12	3.8	8	2.5	-1.3
Asthma	6	1.9	12	3.8	+1.9
AIDS	9	2.8	5	1.6	-1.3
Other	39	12.3	38	11.9	-0.4

* denotes a statistically significant difference between pre and post scores at $p < .05$

As is usual with such surveys, cancer had the highest salience of any disease in both the pre and post campaign surveys, followed by cardiovascular disease, and then diabetes. However, diabetes was the only disease to observe a statistically significant increase as a first-to-mind disease between the pre and post campaign surveys. Overall mention of diabetes as a serious disease also evidenced the largest albeit non-significant gain. Diabetes was the

third most salient disease prior to the DID campaign, and its position was further strengthened in the post campaign survey.

4.3.2 Changes in Personal Concern about Diabetes

Participants were asked what diseases were of greatest concern to their own personal health. Responses are displayed in Table 18 below.

Table 18: What illnesses or diseases are of greatest concern for your own personal health?

Diseases of Personal Concern	Pre (n=318)		Post (n=318)		Change %
	N	%	N	%	
<u>First to Mind</u>					
Cancer (all types)*	145	45.6	120	37.7	-7.9
Cardiovascular diseases	90	28.3	92	28.9	+0.6
Diabetes	24	7.5	35	11.0	+3.5
Mental illnesses	3	0.9	1	0.3	-0.6
Dementia	3	0.9	6	1.9	+0.9
Arthritis	6	1.9	9	2.8	+0.9
Osteoporosis	2	0.6	2	0.6	+0.0
Other	10	3.5	15	5.0	+1.6
None	35	11.0	38	11.9	+0.9
<i>TOTAL</i>	<i>318</i>	<i>100.0</i>	<i>318</i>	<i>100.0</i>	
<u>Mentioned in any order</u>					
Cancer (all types)	180	56.6	169	53.1	-3.5
Cardiovascular diseases	167	52.5	175	55.0	+2.5
Diabetes	50	15.7	64	20.1	+4.4
Mental deterioration	18	5.7	19	6.0	+0.3
Loss of eyesight	5	1.6	2	0.6	-1
Arthritis	11	3.5	16	5.0	+1.5
Osteoporosis	8	2.5	7	2.2	-0.3
None*	25	7.9	11	3.5	-4.4
Other	7	2.2	11	3.5	+1.3

* denotes a statistically significant difference between pre and post scores at $p < .05$

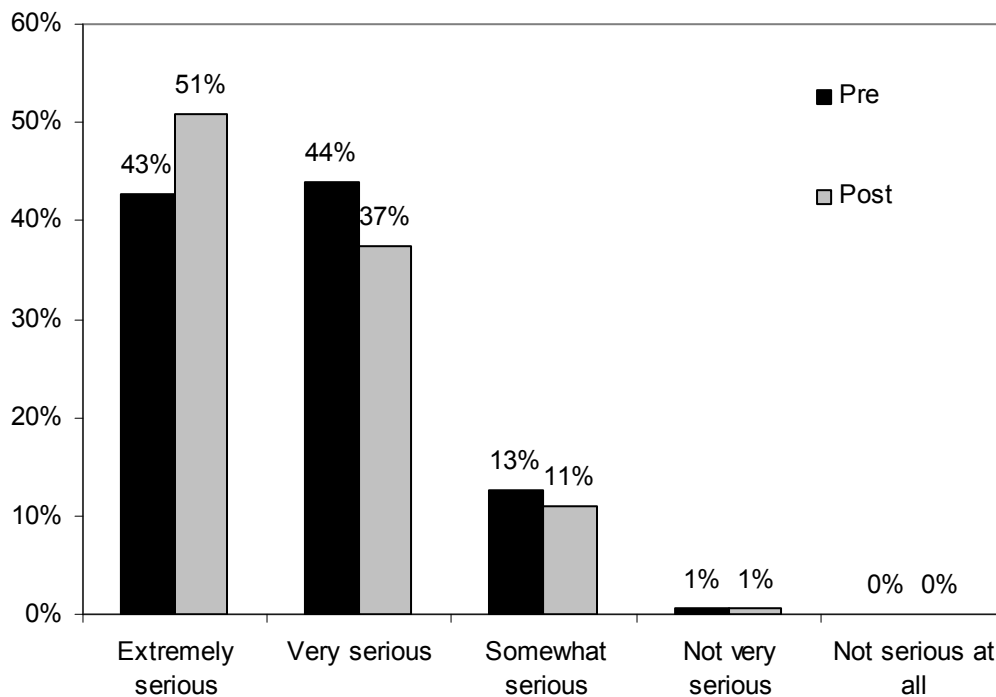
The salience of diabetes as a disease of personal concern saw modest but non-significant increases between the pre and post campaign surveys. These increases were the largest of any disease and appeared to come partly at the expense of personal concern about cancer.

4.3.3 Knowledge and Attitudes towards Diabetes

4.3.3.1 Perceived Seriousness of Diabetes

Having established the relative salience of diabetes to other diseases, all respondents were then prompted to think specifically about diabetes and rate how serious they thought the health consequences are for someone who develops the disease. Results are illustrated in Figure 4 below.

Figure 4: How serious do you think the health consequences are for someone who develops diabetes?



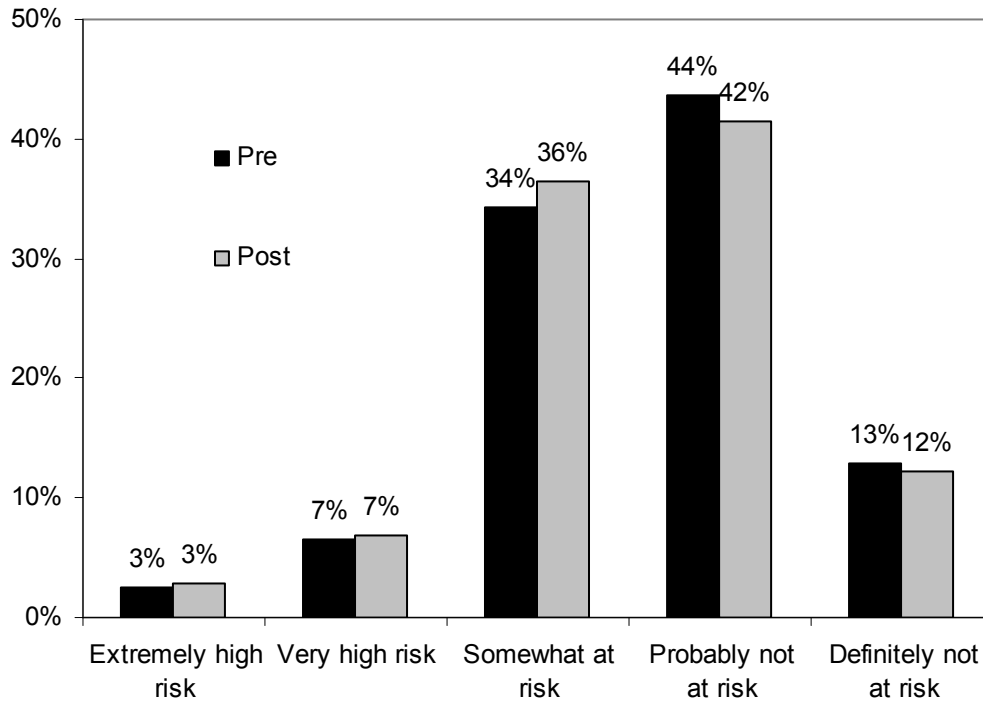
$$t(634)=1.744; p=.082$$

A large majority of respondents in the pre campaign survey (86%) considered the health consequences of diabetes to be either ‘very’ or ‘extremely’ serious. A trend was observed for respondents to consider diabetes to be an even more serious disease after the DID campaign; there was an 8% increase in the proportion of respondents considering diabetes to be ‘extremely’ serious from the pre to post campaign surveys.

4.3.3.2 Perceived Personal Risk of Developing Diabetes

Respondents were also asked to rate how personally at risk they thought they were of developing diabetes. Results are illustrated in Figure 5 below.

Figure 5: How at risk do you personally think you are of developing diabetes?



$$t(634)=.622; p=.534$$

A majority of respondents in both the pre and post campaign surveys did not consider themselves to be at risk of developing diabetes. A slight trend was observed for respondents in the post campaign survey to consider themselves more at risk (+2.8%), but this increase was not significant.

All respondents were then asked why they *did* or *did not* consider themselves at risk of developing diabetes. Responses are outlined in Table 19 overleaf.

Table 19: Reasons why respondents believed they are either at risk or not at risk of developing diabetes

	Pre (n=318)		Post (n=318)		Change
	N	%	N	%	%
<u>Why I am at risk</u>					
I have a family history	70	22.0	63	19.8	-2.2
I am overweight	23	7.2	26	8.2	+0.9
I consume lots of sugar	22	6.9	20	6.3	-0.6
I am getting older	13	4.1	24	7.5	+3.5
I consume lots of fat	8	2.5	16	5.0	+2.5
I don't exercise*	5	1.6	17	5.3	+3.8
Everyone's at risk	5	1.6	9	2.8	+1.3
Other	1	0.3	31	6.3	+6.0
<u>Why I am NOT at risk</u>					
I eat a balanced diet	103	32.4	95	29.9	-2.5
I am fit and healthy	81	25.5	73	23.0	-2.5
I have no family history of diabetes	78	24.5	69	21.7	-2.8
I exercise regularly	56	17.6	61	19.2	+1.6
I have regular health checks	25	7.9	25	7.9	+0.0
I don't have diabetes	11	3.5	18	5.7	+2.2
I am not overweight*	3	0.9	10	3.1	+2.2
The risks of getting it are small	3	0.9	4	1.3	+0.3
Other	34	10.7	29	9.1	-1.6

* denotes a statistically significant difference between pre and post scores at $p < .05$

There were slight statistically significant changes observed from the pre to post campaign surveys in terms of sedentary people considering themselves more at risk, and those not considering themselves overweight considering themselves less at risk. However these changes were small and the overall changes were not particularly meaningful.

4.3.3.3 Knowledge of Diabetes Complications and Risk Factors

Respondents were next asked to relate their knowledge of the major illnesses and health problems that diabetes can lead to. Results are displayed in Table 21.

Table 20: Recall of the major illnesses and health problems associated with diabetes and the sort of people who are most at risk of developing diabetes

	Pre (n=318)		Post (n=318)		Change %
	N	%	N	%	
Consequence					
Blindness*	145	45.6	202	63.5	+17.9
Limb Amputation*	126	39.6	190	59.7	+20.1
Cardiovascular diseases	112	35.2	101	31.8	-3.5
Kidney failure	49	15.4	46	14.5	-0.9
Death*	9	2.8	28	8.8	+6.0
Impotency	1	0.3	3	0.9	+0.6
Not sure*	52	16.4	30	9.4	-6.9
Other	8	2.5	6	1.9	-0.6
<u>Risk Factor</u>					
Overweight	187	58.8	211	66.4	+7.5
High sugar diet	107	33.6	118	37.1	+3.5
Family history	89	28.0	84	26.4	-1.6
Sedentary lifestyle*	76	23.9	118	37.1	+13.2
High fat diet*	65	20.4	108	34.0	+13.5
Unhealthy people	51	16.0	62	19.5	+3.5
Indigenous people	29	9.1	19	6.0	-3.1
Over 30 years old	27	8.5	41	12.9	+4.4
Smokers	18	5.7	17	5.3	-0.3
Heavy drinkers	18	5.7	25	7.9	+2.2
Don't know	15	4.7	17	5.3	+0.6
Other	66	20.8	46	14.5	-6.3

* denotes a statistically significant difference between pre and post scores at $p < .05$

Substantial and significant increases were observed in respondents' knowledge of blindness and limb amputations as complications associated with diabetes between the pre and post campaign surveys, along with a statistically significant drop in the proportion of respondents who were unsure of any consequences of diabetes. It is highly probable that this increase is attributable to the DID campaign's *Eye* and *Leg* images. However the other

images included in *Storybook*, relating to heart disease and kidney failure, had no appreciable effect on knowledge of these complications.

The statistically significant improvement in the proportion of respondents who nominated 'death' as a consequence of diabetes is unusual because it was not mentioned as one of the consequences of diabetes as part of the DID campaign. It is possible that this increase may have been prompted by the well publicised death of an insulin-dependent adolescent who ran away from home around the time of *National Diabetes Week*.

In terms of knowledge of risk factors associated with diabetes, the largest and statistically significant improvements were observed for the proportion of respondents nominating 'a sedentary lifestyle' and 'high fat diet'. The next largest improvements were for being 'overweight' and 'over 30 years old' both of which approached statistical significance ($p=.059$ and $p=.095$ respectively).

5 Conclusion

The results of the present evaluation suggest that the DID campaign achieved reasonably good penetration throughout Western Australia within the desired target audience; three-quarters of respondents claimed to have seen some aspect of the campaign at least once, with respondent estimates suggesting they were exposed to DID campaign material an average of 6.5 times each. However, penetration was slightly lower than might have been expected from paid media and further investigation of the reasons behind this is warranted. By way of example, our previous experience would suggest that a standard Quit campaign with 1,000 TARPs for the 25 to 55 year age group achieves recall rates of around 80%; similar to that achieved in the pilot DID campaign.

Respondents considered the *Storybook* advertisement to be highly credible and personally relevant, and they appeared to process both its *awareness* and *avoidance strategy* messages. The data also suggest that the newspaper advertisements, posters, leaflets and television media interviews played modest but useful roles in increasing the reach of the DID campaign.

In terms of the impact of the DID campaign, Table 21 below gives an overview of the improvements observed in various knowledge and attitudinal measures.

Table 21: Overview of improvements in knowledge and attitudes towards diabetes

		%	P
Knowledge of the consequences of diabetes	<i>Limb amputation</i>	+20.1	<.05
	<i>Blindness</i>	+17.9	<.05
	<i>Death</i>	+6.0	<.05
	<i>Not sure</i>	-6.9	<.05
Knowledge of risk factors contributing to diabetes	<i>Sedentary lifestyle</i>	+13.2	<.05
	<i>High fat diet</i>	+13.5	<.05
	<i>Overweight</i>	+7.5	.059
	<i>Over 30 years old</i>	+4.4	.095
Disease less likely with improved diet	<i>Top-of-mind</i>	+11.9	<.05
	<i>Any mention</i>	+12.3	<.05
Health consequences of diabetes are 'extremely' serious		+8.0	.082
Lower risk of diabetes is a benefit of a better diet (unprompted)		+4.1	<.05
Diabetes is a serious disease in Australia (unprompted)	<i>Top-of-mind</i>	+4.7	<.05
	<i>Any mention</i>	+3.8	<.05
Diabetes as a disease of personal concern	<i>Top-of-mind</i>	+3.5	NS
	<i>Any mention</i>	+4.4	NS
Personal risk of developing diabetes		+2.0	NS

Prior to the campaign, a large majority of people already considered diabetes to be a serious disease. Even so, the proportion of people considering it to be ‘extremely’ serious increased by a further 8% after the campaign and approached statistical significance ($p=.08$). We can also be quite certain that the DID campaign increased the *salience* of diabetes as a serious disease. Furthermore there was an improvement in the direction of personal concern about developing diabetes, but this increase was smaller and not statistically significant.

The DID campaign had a clear and sizable effect of educating people about some of the consequences arising from diabetes, with the proportion of people unsure of any consequences dropping significantly, and awareness of potential complications such as blindness and limb amputation rising significantly. Likewise there were significant improvements in the proportion of people nominating poor diets and physical inactivity as risk factors for developing diabetes, and some improvements in the proportion nominating being overweight and over 30 years old.

In terms of behavioural changes, it would be unrealistic to detect any in such a short time frame and small sample size. As this is the case, it is more interesting to note that there was a robust increase in the proportion of respondents who suggested that one of the benefits of an improved diet was a lowered risk of developing diabetes. When prompted, the number of people who nominated diabetes as a specific disease that could be avoided through improved diet also increased significantly. It is unclear why similar improvements were not observed for the association of physical activity with a lower risk of diabetes. It is possible that because diabetes remains strongly associated with sugar consumption in the popular imagination (*rf.* Table 20 ‘high sugar diet’), it is easier for people to associate it with over-consumption rather than physical inactivity. That is not to say that people do not recognise the benefit of physical activity in avoiding diabetes, just that salience of the disease in relation to exercise is lower than other benefits.

Overall, the data would suggest that the DID campaign successfully met its objectives of increasing the salience of diabetes as a serious disease, increasing knowledge of its complications and risk factors, and increasing understanding of the actions to take to avoid developing it.

6 References

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