

Evaluation of the voluntary labelling initiative to place pregnancy health warnings on alcohol products

Final Report

23 May 2014



Table of Contents

| | |
|---|-----------|
| Executive summary | iv |
| Acronyms and abbreviations | vi |
| Project team, Siggins Miller | vii |
| Acknowledgements | vii |
| Section 1 Introduction | 1 |
| 1.1 Background to the labelling initiative | 1 |
| 1.2 This Evaluation | 2 |
| 1.2.1 Terms of Reference for the Evaluation | 2 |
| 1.3 Evaluation approach | 3 |
| 1.4 This report | 3 |
| Section 2 Field study of outlets | 4 |
| 2.1 Results | 6 |
| 2.1.2 Aim One sample characteristics (market leading products) | 6 |
| 2.1.3 Aim One data analyses | 6 |
| 2.1.4 Aim Two sample characteristics (all products) | 7 |
| 2.1.5 Aim Two data analysis | 7 |
| 2.2. Key findings – Aim One | 12 |
| 2.3 Key findings – Aim Two | 12 |
| 2.4 Methodological considerations | 12 |
| 2.5 Conclusions | 12 |
| Section 3 Alcohol industry survey of voluntary pregnancy labelling costs | 14 |
| 3.1 Operation details | 14 |
| 3.1.1 Adoption of labelling initiative reported by respondents | 15 |
| 3.2 Cost estimates | 16 |
| 3.3 Conclusions | 18 |
| Section 4 Consumer awareness and understanding of pregnancy health warning labels | 20 |
| 4.1 Findings | 20 |
| 4.1.1 Awareness | 21 |
| 4.1.2 Understanding | 21 |
| 4.2 Conclusions | 21 |
| Section 5 Key contextual factors | 22 |
| 5.1 International trend to incorporate pregnancy health warning labels on alcohol products | 22 |
| 5.2 The role of the voluntary pregnancy health warning labelling initiative in raising awareness of risks and harms of alcohol consumption during pregnancy | 22 |
| 5.3 Evidence based social marketing campaigns | 23 |
| 5.4 Australian women’s attitudes, knowledge and patterns of behaviour | 23 |
| 5.5 The role of industry and government parallel initiatives | 23 |

List of Figures

| | |
|--|----|
| Figure 1: Pregnancy health warnings providing opportunity to be associated with responsible consumption of alcohol | 17 |
|--|----|

List of Tables

| | |
|---|----|
| Table 1: Proportion of products with pregnancy health warning by market | 6 |
| Table 2: Proportion of products with pregnancy health warning by market | 7 |
| Table 3: Proportion of products with pregnancy health warning by year | 8 |
| Table 4: Proportion of products with pregnancy health warning by package type | 8 |
| Table 5: Proportion of products with a pregnancy health warning by location of manufacture | 9 |
| Table 6: Proportion of pregnancy health labels by type and text consistency with NHMRC guidelines | 9 |
| Table 7: Proportion of pregnancy health labels by size and location | 10 |
| Table 8: Proportion of pregnancy health labels by legibility and prominence | 11 |
| Table 9: Types of product package/labels used by companies | 14 |
| Table 10: Proportion of product lines with pregnancy health warnings per product package/label type | 15 |
| Table 11: Types of pregnancy health warning labels used | 15 |
| Table 12: Estimated costs per cost item | 16 |
| Table 13: Estimated total cost to industry | 18 |
| Table 14: Sensitivity analysis of cost estimates | 18 |
| Table 15: Consumer awareness and understanding of pregnancy labels | 20 |

Executive summary

Alcohol exposure in pregnancy is a risk factor for poor pregnancy and child outcomes. Labels can contribute to increasing awareness and understanding of the risks of drinking alcohol during pregnancy. Implemented in the context of an integrated strategy, the pregnancy labels on alcohol products might contribute to awareness and understanding because they act as a reminder or prompt a conversation.

In December 2011, in its response to the report on the *Labelling Logic Review of Food Labelling Law and Policy 2011*, the Legislative and Governance Forum on Food Regulation (FoFR) provided the alcohol industry with a two-year period, commencing December 2011, to adopt the voluntary initiative to place pregnancy health labels on alcohol products, before regulating such a change. This *Evaluation of the voluntary labelling initiative to place pregnancy health warnings on alcohol products* assesses the progress and success of Australian alcohol industry action towards implementing pregnancy health labels on alcohol products.

Findings and conclusions

Breadth and quantity of alcohol products (primary containers) labelled by market share

A sample of 3,020 products was collected with respect to the estimated proportion of products available for sale across each of 12 alcohol product categories. The most appropriate method of assessing the extent to which pregnancy labels have been implemented depends upon which strategy of raising awareness is thought to be most effective:

- If it is thought to be by targeting the products that are most commonly consumed, then considering those products that represent the greatest market share is the appropriate method, and after adjusting for market share, the proportion of products with a pregnancy health warning label is 62.0%.
- If it is thought to be by targeting the products that consumers are exposed to, or are potentially exposed to, at the point of purchase, then considering all products that are for sale is appropriate, and 38.2% of products have a pregnancy health warning label.

The overall percentage (adjusted for market share) of 62.0% masks a wide band of variability across product types (24.5% to 81.3%). Products with long shelf-life or long lags between the time of manufacture and release to the market post labelling will take some time to work through the retail system. Wines might be benefiting from faster natural replacement for labels, given they tend to change their labels more frequently (for example to update labels with respect to vintage year or for other commercial purposes such as altering tasting notes). The most room for improvement appears to be for straight spirits and Ready To Drinks (RTD), where only 37.5% and 23.1% respectively have a pregnancy health warning label. These issues, combined with the fact that the voluntary scheme has only been in place for two years, suggests that the proportion of alcohol products with a pregnancy health warning label may increase in the immediate future, although the extent to which it may increase is unclear.

It is apparent that adoption and implementation of pregnancy health warnings labels has increased over time. For wines with a vintage year before 2011 for example, 17% of the sample carried a pregnancy health warning compared to 66.2% in the 2013 vintage. This is an encouraging sign that the wine sector is shifting towards increasing the proportion of wine labels that have a pregnancy health warning, although only two-thirds of labels had a pregnancy health warning label for 2013 and 2014 vintages, suggesting that there is still room for further improvement.

The proportion of alcohol products for sale with a pregnancy health warning label was comparable across Australia, meaning exposure to pregnancy health warning labels is unlikely to differ nationally. In addition, the proportion of *all* products for sale that had a pregnancy health warning

label and were manufactured in Australia was 38%, compared to 41% of products of international origin.

Economic impacts associated with the voluntary pregnancy health warning labelling initiative

The industry survey of the costs of the voluntary initiative to place pregnancy health warnings on alcohol products found that the main cost items included: 1) redesign and approval of artwork; 2) production of new print plates; and 3) administration costs associated with those changes. The opportunity cost of the package space that a pregnancy health warning label occupies as well as the potential benefit from improving a company's reputation (from including a pregnancy health warning label on their products) were identified as potential key indirect costs and benefits, especially for smaller packages (eg 50ml).

The estimated average cost to include a pregnancy health warning label per stock keeping unit (SKU) was \$1,686.25.¹ The total cost to industry for labelling the SKUs available for sale in April 2014 is estimated to be \$5,408,188. A sensitivity analysis, using the proportion of SKUs that carry a pregnancy health warning label (59.8%) from those products that comprise the top 75% of market leading products (rather than the proportion of all SKUs available for sale), resulted in an estimated cost to industry of \$9,597,773. If updating labels happens in line with other business processes, thus allowing flexibility for producers to incorporate labelling at their own pace, the cost to industry of maintaining the momentum and increasing coverage over time can be kept low.

Consistency of the pregnancy warning message across labels and 2009 NHMRC guidelines

Producers used either or both the DrinkWise Australia (DWA) green text label 'it is safest not to drink while pregnant' and the green pregnancy silhouette pictogram label templates. The templates included a DWA 'Get the Facts' badge with a link to the DWA website for more information about alcohol and pregnancy. The most commonly used pregnancy health warning label is the pictogram by itself (79%). Of the 21% of labels that use text, 82% are consistent with the National Health and Medical research Council (NHMRC) recommendation that it is safest not to drink alcohol while pregnant.

Visibility and readability of pregnancy health warnings on alcohol products

The majority of pregnancy health warnings were visible and readable, being of average or greater size (73%) than the DWA labelling manual and templates, and of average or better legibility or prominence (92% and 90% respectively), both of which are encouraging. The majority of pregnancy health labels were located on the back of the product (81%).

Consumer awareness of pregnancy warning labels on alcohol products

The consumer awareness survey (n= 5,399) found that 4.3% of women were aware of labels when they were not prompted, although 94% of women respondents understood what they meant when they were shown the labels. Once respondents were shown the labels, the pregnancy pictogram label was superior to the text label in producing higher levels of awareness.

When presented with the DWA green pregnancy *pictogram* label, one third (33.3%) of all respondents and 42.2% of the target group of women reported awareness of the pictogram. 19.9% of the total sample and 26.3% of the target group of women reported awareness of the text label after they were shown the label. When presented with the DWA green pregnancy *text* message, one third of all respondents (34.9%) and 23.6% of the target group of women understood the text label to mean "don't drink alcohol when pregnant".

¹ A stock keeping unit (SKU) is a distinct item, such as a product or service, as it is offered for sale, that embodies all attributes associated with the item and that distinguish it from all other items. For a product, these attributes include, but are not limited to: manufacturer, product description, material, size, colour, packaging, and warranty terms
http://en.wikipedia.org/wiki/Stock_keeping_unit

Acronyms and abbreviations

| | |
|-------------------------|--|
| ALSA | Australian Liquor Stores Association |
| AMA | Australian Medical Association |
| ANCD | Australian National Council on Drugs |
| ANPHA | Australian National Preventive Health Agency |
| Brewers | Brewers Association of Australia and New Zealand |
| BWS | Beer, Wine and Spirits |
| CEO | Chief Executive Officer |
| COAG | Council of Australian Governments |
| CUB | Carlton United Breweries |
| DSICA | Distilled Spirits Industry Council of Australia |
| DWA | DrinkWise Australia |
| EAHF | European Alcohol and Health Forum |
| FARE | Foundation for Alcohol Research and Education |
| FAS | Fetal Alcohol Syndrome |
| FASD | Fetal Alcohol Spectrum Disorder |
| FAST | Fetal Alcohol Support Trust |
| FoFR | Legislative and Governance Forum on Food Regulation |
| FRSC | Food Regulation Standing Committee |
| FSANZ | Food Standards Australia New Zealand |
| Health | Commonwealth Department of Health |
| ICAP | International Centre for Alcohol Policies |
| Labelling Logic | <i>Labelling Logic: review of food labelling law and policy</i> |
| NAAA | National Alliance for Action on Alcohol |
| NABIC | National Alcohol Beverage Industries Council |
| NDARC | National Drug and Alcohol Research Centre |
| NDRI | National Drug Research Institute |
| NDSHS | National Drug Strategy Household Survey |
| NHMRC | National Health and Medical Research Council |
| NHMRC guidelines | <i>NHMRC guidelines to reduce health risks from drinking alcohol</i> |
| NIDAC | National Indigenous Drug and Alcohol Committee |
| NOFASD | National Organisation for Fetal Alcohol Spectrum Disorders |
| NZIER | New Zealand Institute of Economic Research |
| RANZCOG | Royal Australian and New Zealand College of Obstetricians and Gynaecologists |
| RG | Reference Group |
| SKU | Stock Keeping Unit |
| TWE | Treasure Wine Estates |
| WFA | Winemakers Federation Australia |
| WHO | World Health Organisation |
| Wine Australia | Wine Australia Corporation |

Project team, Siggins Miller

Professor Mary-Ellen (Mel) Miller, Director

Dr Ian Siggins, Director and Chief Executive Officer

Ms Geraldine Cleary, Associate Director

Professor Anthony Shakeshaft, Senior Associate

Professor Sharyn Rundle-Thiele, Senior Associate

Dr Joshua Byrnes, Senior Associate

Ms Lauren Davies, Senior Consultant

Ms Meghan Achilles, Senior Consultant

Dr Joy Parkinson, Associate

Ms Emma Howarth, Consultant

Ms Aurelia Connelly, Consultant

Mr James Miller, Consultant

Five research assistants

Acknowledgements

In undertaking this evaluation project and preparing this report, the Siggins Miller project team is sincerely grateful for the ongoing advice and support of the Department of Health through Ms Colleen Krestensen (Assistant Secretary, Drug Strategy Branch) and Ms Kathy Dennis (Assistant Secretary, Healthy Living and Food Policy Branch), staff of the Drug Strategy Branch, Drug and Alcohol Policy Section including Mr David McNally (Director), Ms Bronwen Dowse (Assistant Director) and Ms Samantha Navin and staff of the Healthy Living and Food Policy Branch, Food Policy Section including Ms Christel Leemhuis (Director) and Ms Michelle Kennedy (Assistant Director); and the member of the Reference Group not yet mentioned, Dr Jo Mitchell (Director of the Centre for Population Health in the NSW Ministry of Health).

We are also very grateful to all those who took part in the stakeholder consultations, and whose names are listed in Appendix 1.

Evaluation of the voluntary labelling initiative to place pregnancy health warnings on alcohol products

Final Report

Section 1 Introduction

Alcohol exposure in pregnancy is a risk factor for poor pregnancy and child outcomes. High-level or frequent intake of alcohol in pregnancy increases the risk of miscarriage, stillbirth and premature birth, and alcohol related birth defects and neurological problems described in the literature since 1968 under the umbrella of Fetal Alcohol Syndrome (FAS), and more recently Fetal Alcohol Spectrum Disorders (FASD).² Despite potential dangers to children's health, drinking by pregnant women is fairly common in Anglo-Saxon countries such as Australia.³

In Australia, the proportion of women who self-report drinking during pregnancy appears to have decreased over time (60% in 2007 to 51% in 2010). Of those who do drink alcohol during pregnancy, the proportion of women who said that they reduced the amount they drank while pregnant appeared to have decreased over time (57% in 2007 to 49% in 2010).⁴

1.1 Background to the labelling initiative

In 2009, the Australia and New Zealand Food Regulation Ministerial Council (Ministerial Council) announced the review of Food Labelling Law and Policy – the *Labelling Logic Review of Food Labelling Law and Policy* (the Review).

In 2009, in the period leading up to the release of the Review and the Government's response to it, DrinkWise Australia (DWA) (an independent not for profit organisation established by industry focused on promoting change towards a healthier and safer drinking culture in Australia) took the initiative to research and develop four warning labels for the alcohol industry including pregnancy warnings.

The 2009 National Health and Medical Research Council's (NHMRC) *Australian guidelines to reduce health risks from drinking alcohol*, Guideline 4A stated that "For women who are pregnant or planning a pregnancy, not drinking is the safest option".

In December 2011, in its response to the Review, the Legislative and Governance Forum on Food Regulation (FoFR) (formerly known as the Ministerial Council) stated its intention to provide the alcohol industry with a two-year period to December 2013 to adopt voluntary initiatives to place pregnancy health labels on alcohol products, before regulating such a change. FoFR acknowledged that industry had already made efforts to introduce warnings on labels voluntarily and committed to working with industry over the voluntary pregnancy health warning labelling period.

By the time of the release of the government response to the Review, DWA and industry were already engaged in looking at the issue of consumer advisory information including pregnancy health warning labelling on alcohol products. DWA had conducted market research on behalf of industry peak bodies in 2010/11. In July 2011, DWA launched the alcohol industry initiative to place a range

² National Health and Medical and Medical Research Council (2009). *Australian guidelines to reduce health risks from drinking alcohol*. Canberra: Commonwealth of Australia.

³ World Health Organisation (2010). *Global strategy to reduce the harmful use of alcohol*. Geneva: World Health Organisation (WHO)

⁴ Australian Institute of Health and Welfare (2011). 2010 National Drug Strategy Household Survey report. Drug statistics series no. 25. Cat. No. PHE 145. Canberra: AIHW

of health information and responsible drinking labels on alcohol products. Industry peak bodies in turn were working to engage as many producers as possible in health labelling initiatives.

After a 6 – 9 month set up period aimed at achieving consistency and buy-in about placing pregnancy health warning labels on primary packaging of alcohol products as a minimum, producers commenced labelling products. An agreement between DWA and Winemakers Federation of Australia (WFA) enabled winemakers who were not members of DWA to access the DWA labelling templates via a DWA dedicated winemakers portal in September 2012.

1.2 This Evaluation

In January 2014, the Commonwealth of Australia through the Department of Health (Health) engaged Siggins Miller Consultants to undertake the *Evaluation of the voluntary labelling initiative to place pregnancy health warnings on alcohol products* (Evaluation). The aim of the evaluation was to assess the progress and success of Australian alcohol industry action towards implementing pregnancy health warnings on alcohol product labels at the end of the two year period to December 2013, as measured by market capture, visibility, consistency of message with NHMRC Australian guidelines and consumer awareness.⁵

1.2.1 Terms of Reference for the Evaluation

Objectives and scope of the Evaluation are to:

- Analyse and report on the progress and success of the Australian alcohol industry action towards implementing the voluntary labelling initiative as measured by market capture, visibility, consistency of the label message with NHMRC guidelines and consumer awareness
- Provide advice on the progress of the alcohol industry action towards implementing pregnancy health warnings on alcohol product labels at the end of the two year period to December 2013

Evaluation Terms of Reference

- a) The primary focus of the Evaluation is to analyse the progress of alcohol industry action towards implementing voluntary pregnancy health warnings regarding the risks of drinking while pregnant on alcohol product labels, specifically:
- i. measuring the breadth and quantity of alcohol products and containers that carry the pregnancy warning label and/or the pictogram with respect to the market share of those products
 - ii. analysing economic impacts associated with placing pregnancy health warnings labels on alcohol products
 - iii. assessing how consistent the wording of the pregnancy warning message is across product labels and with the 2009 NHMRC guidelines to reduce health risks from drinking alcohol that ‘it is safest not to drink while pregnant’
 - iv. assessing the visibility and readability of alcohol warning labels looking at size, font, colour and placement of pregnancy warning messages on labels in the context of broader labelling requirements
 - v. examining consumer awareness of the alcohol warnings on labels and understanding of the message and/or pictograms they contain.

⁵ The NHMRC guidelines present a review of the evidence on risks associated with alcohol drinking during pregnancy, note the limitations of the studies and that the current evidence does not warrant a “conclusion that drinking alcohol at low-moderate levels during pregnancy is safe.”

- b) The Evaluation will give consideration to issues associated with products which are imported or which have an extended shelf-life or cellar released date. The Evaluation will also be mindful of international regulations and evidence.
- c) In terms of the broader context for the project, the Evaluation will also consider associated industry initiatives designed to supplement and leverage the impact of warning labels on alcohol products. It will also consider the role of activities funded by Government to support these warnings including a point of sale information project, and a project targeting consistent messaging by health professionals about the content of the NHMRC guidelines.

The Evaluation was overseen by a small Reference Group of government officials chaired by a representative of Health. An Evaluation Framework was developed in consultations with key stakeholders and the Reference Group. It details methodology and data collection tools. The Evaluation Framework was presented to FoFR in March 2014.

1.3 Evaluation approach

The methodology to fulfil the Terms of Reference included:

- a field study of outlets to assess the proportion of alcohol products with a pregnancy health warning label in terms of market share, products available for sale, and the consistency of the messages on pregnancy labels with the NHMRC guidelines, as well as their size, legibility and prominence (detailed at Appendix 2)
- an analysis of the estimated cost to industry of placing pregnancy health warning labels on alcohol products (detailed at Appendix 3)
- a survey to examine consumer awareness and understanding of pregnancy labels on alcohol products (detailed at Appendix 4)
- interviews with key informants to understand the context within which industry was implementing the initiative, from both industry and public health perspectives (detailed at Appendix 5).
- literature and document reviews (detailed at Appendix 6) to summarise:
 - current evidence surrounding alcohol exposure in pregnancy as a risk factor for poor pregnancy and child outcomes
 - legislation, regulation and guidance on size and legibility of consumer information labelling on alcohol products nationally and internationally
 - the activities of industry and government being conducted in parallel with the voluntary pregnancy health warning labelling of alcohol products
 - reviews of evidence for the effectiveness of labelling
 - reviews of the literature on social marketing best practice.

1.4 This report

This report presents the results of each aspect of the methodology and an analysis of data from all sources to address the Terms of Reference.

Section 2 Field study of outlets

The field study of outlets (study) was designed to measure the extent to which alcohol products⁶ carry a pregnancy health warning label (text and/or a pictogram), and an examination of the extent to which the warning labels are consistent with the NHMRC guidelines, are legible and are prominent. Given the over-arching aim of the study is to provide information to help inform judgements about the likely exposure of drinkers to a pregnancy health warning label, and drinkers' family members and friends, there are two possible methods for measuring exposure. First, identifying those alcohol products that comprise the majority of the alcohol market share in Australia, and checking those products for a pregnancy health warning label. The logic of this approach is that a majority of people will be exposed to the most commonly sold brands of alcohol. Second, identifying a wide-range of alcohol products that are actually for sale in a variety of alcohol outlets, then randomly sampling from these products to check them for a pregnancy health warning label. The logic of this approach is to identify the extent to which purchasers are exposed to warning labels, irrespective of their actual purchasing choices.

The second method could also help explore whether manufacturers might have implemented the voluntary code by prioritising the application of warning labels to particular types of products (eg those sold most commonly or those that they market to women). The primary strength of the first approach is that it facilitates an exploration of labelling by market share. The primary strength of the second approach is that it allows greater analysis of whether there are differences in pregnancy health warning labelling between different product types.

In line with the methodology in the agreed Evaluation Framework, the specific aims of this study were:

1. To identify the proportion of market-leading alcohol products consumed in Australia that have a pregnancy health warning label and/or a pictogram
2. To identify the proportion of alcohol products for sale in alcohol outlets in Australia that have a pregnancy health warning label and/or a pictogram, and to identify:
 - a. if that proportion differs by product type (eg. beer vs wine vs spirits)
 - b. if that proportion differs by state/territory
 - c. the extent to which warning labels are consistent with NHMRC guidelines
 - d. the size of the warning label with respect to DWA guidelines, and its location
 - e. the extent to which warning labels are legible and prominent with respect to FSANZ legibility requirements.

Study Design and sample selection

Identification of market leading products (Aim 1)

Market leading products were considered with respect to five broad market categories (Beer, Cider, Wine, Spirits, and Ready To Drink products). Within each of these categories, the brands that constitute 75% of each of these broad markets by volume were identified using data provided by

⁶ Packaged-alcohol products available for sale are defined as those stocked on shelves sold through retail outlets and exclude products that are exclusively for sale direct to consumers, such as via wine clubs, cellar door or other distribution networks. In 2010, store-based retailing accounted for 98.4% of off-site (i.e. not on licensed premises) alcohol expenditure. (Euromonitor International (2011) *Wine-Australia* in Country Sector Briefing April 2011. Euromonitor International: Australia

Aztek Australia.⁷ The list of market leading products and their market share by volume (per product category) is provided in Appendix 2.3.

Identification of products for sale in alcohol outlets (Study Aim 2)

A cluster, block-randomised, stratified sampling procedure was used. The detailed description of methods is provided in Appendix 2.2.2. Briefly, all alcohol products were divided into 12 categories:

- Red wine retail price <\$11
- Red wine retail price > \$11
- White wine retail price < \$11
- White wine retail price > \$11
- Cider
- Domestic brand full strength beer
- Domestic brand mid-strength beer
- Australian craft and / or premium beer
- International brand beer
- Dark spirits
- White spirits
- RTD.

A sample size of 4,039 products was estimated to provide a 95% confidence interval of $\pm 5\%$ with respect to the estimated proportion of products with a pregnancy health warning label for each of the 12 alcohol product categories. The total number of products available within each group was estimated from a large national online alcohol merchant.⁸ The sample was stratified by state/territory⁹, based on population size¹⁰, and further stratified across five retail chains¹¹, based on the number of retail outlets operated by each retail chain¹². To ensure representation across different areas within each capital city, one outlet per retail chain was sampled from each district within each city (generally north, south, east and west districts).¹³

To assess the consistency of pregnancy warning labels with respect to NHMRC guidelines, of the pregnancy health warning labels that use text (either alone or in combination with a pictogram) the words were compared to the NHMRC guideline that “it is safest not to drink while pregnant”.

⁷ Excerpts provided by industry with permission for use in this study

⁸ Dan Murphy's: <http://danmurphys.com.au/dm/home.jsp>; accessed 8 Jan 2014

⁹ Sampling alcohol products in the NT was omitted from the project brief because of timeframes and budget. Instead, the required sample within each category was stratified by state/territory to ensure proportional representation nationally, based on population size

¹⁰ This implicitly assumes that population size is proportional to product availability, and this is constant across Australia.

¹¹ The five organisations included account for approximately 92.8% of the retail outlets in Australia.

¹² McKusker Centre for Action on Alcohol and Youth (2014)

http://mcaay.org.au/assets/publications/industryindustryindustry-guides/mcaay_majorsalesoutlets_feb2014-final.pdf

¹³ In Canberra and Hobart, only one outlet was sampled per district.

Field researchers reviewed and evaluated the size of the pregnancy label in relation to the average pictogram and text provided by the DWA guidelines, which our researchers measured as being approximately 0.5cm x 0.7cm. Sizes of labels were classified as being below this standard, standard or above standard size. Given there are no standard recommendations for the location of the pregnancy label, the field researchers noted the location on each alcohol product sampled. The extent to which warning labels are legible and prominent was assessed relative to FSANZ Food Standard 1.2.9: Legibility Requirements (details of assessment criteria used are detailed in Appendix 2.2.3). Labels were classified as 'low' if they met only some of the criteria, 'standard' if they met all criteria and 'above' if they met and exceeded on at least one of the criteria.

In addition, the location of manufacture reported on the product label of each sample was recorded. If an Australian location was provided, the Australian state/territory of manufacture was reported; if it was an international location, the country of origin was reported.

Data collection (sampling) procedure

For both studies, the same lead research officers visited the selected bottle shops in each capital city in each state/territory. The sampling procedure and the sample are described in detail at Appendices 2.1.1 and 2.2. A total of 72 outlets were sampled across Australia. Details of the final number of stores sampled by state/territory and retail chain are presented in Table 3 in Appendix 2.1.1. It highlights relative lack of sampling from independent and Liquor Stores, relative to Wesfarmers, Woolworths and Metcash. While this may present possible selection bias, to exhaust outlet options in the same area the outlet selection methodology was strictly adhered to.

2.1 Results

2.1.2 Aim One sample characteristics (market leading products)

Of the 185 identified market leading products for study one, 184 products were sampled, representing 99.5% completion rate. A description of the Aim One sample (by State, package type and vintage year) is provided in Tables 4 and 5 in Appendix 2.2.1. The sample collected for the Aim One study comprised predominantly individually packaged products (97%). The vintage year for wine samples ranges from 2010 to 2014 with the majority of samples labelled as 2013 or 2012 (69%).

2.1.3 Aim One data analyses

The number of products that had a pregnancy health warning label for each market is provided in Table 1 below. In order to approximate the proportion of products sold that carry a pregnancy health warning label, samples were weighted corresponding to their market share (Appendix 2.3). That is, those products that represent a larger proportion of the volume of alcohol sold (by product category) were weighted higher than those products that represent a smaller proportion.

Table 1: Proportion of products with pregnancy health warning by market

| Market | No pregnancy health warning | Pregnancy health warning | Market share adjusted rates |
|---------|-----------------------------|--------------------------|-----------------------------|
| Spirits | 30 (62.5%) | 18 (37.5%) | 46.0% |
| Wine | 26 (26.8%) | 71 (73.2%) | 78.2% |
| Beer | 7 (33.3%) | 14 (66.7%) | 81.3% |
| RTD | 10 (76.9%) | 3 (23.1%) | 24.5% |
| Cider | 1 (20.0%) | 4 (80.0%) | 79.9% |
| Total | 74 (40.2%) | 110 (59.8%) | 62.0% |

Of those products that represent 75% of the alcohol market, between 23.1% and 80% have a pregnancy health warning of some type depending on the product market. Overall, 59.8% of those

products that represent 75% of the alcohol market carry a pregnancy health warning. In total, of the products that represent 75% of the respective alcohol markets, 62.0% of the alcohol products sold carry some type of pregnancy health warning.

2.1.4 Aim Two sample characteristics (all products)

Of the estimated 4,039 required sample size, 3,125 samples were achieved. Of the 3,125 samples, 105 samples were identified as duplicates and were removed from the sample leaving 3,020 unique samples or 74.6%.

The sample collected for Aim Two is presented in Tables 6 and 7 of Appendix 2.1.1. The distribution of the products sampled reflects the representative sampling strategy (ie across states/territories) and the estimated number of samples required by product group. Of the 3,020 samples, 87.1% were individual packages. For all wine groups the majority of samples collected had a vintage year of 2011 or later.

2.1.5 Aim Two data analysis

The results for the proportion of products that had a pregnancy health warning for each product group are provided in Table 2 below.

Across all product groups, 38.2% of products sampled carried a pregnancy health warning of some type. This ranged from 15.9% for premium/craft beer to 56.3% for red wine with a retail price of less than \$11.

Table 2: Proportion of products with pregnancy health warning by market

| Product Group | No pregnancy health warning | Pregnancy health warning included | 95% CI* |
|-------------------|-----------------------------|-----------------------------------|---------------|
| Dark Spirits | 237 (67.1%) | 116 (32.9%) | 29.3% : 36.4% |
| White Spirits | 105 (62.5%) | 63 (37.5%) | 33.7% : 41.3% |
| RTD | 126 (77.8%) | 36 (22.2%) | 21.7% : 22.7% |
| Cider | 79 (64.8%) | 43 (35.3%) | 34.5% : 36.0% |
| Int. Beer | 110 (71.9%) | 43 (28.1%) | 24.5% : 31.7% |
| Prem/Craft Beer | 190 (84.1%) | 36 (15.9%) | 13.4% : 18.4% |
| Full Beer | 47 (62.7%) | 28 (37.3%) | 36.1% : 38.6% |
| Mid/Light Beer | 28 (66.7%) | 14 (33.3%) | 29.3% : 36.4% |
| Red Wine < \$11 | 184 (43.7%) | 237 (56.3%) | 52.4% : 60.2% |
| Red Wine > \$11 | 312 (66.1%) | 160 (33.9%) | 30.0% : 37.8% |
| White Wine < \$11 | 212 (51.7%) | 198 (48.3%) | 44.3% : 52.3% |
| White Wine > \$11 | 221 (57.9%) | 161 (42.2%) | 38.4% : 45.9% |
| Missing | 14 (41.2%) | 20 (58.8%) | n/a |
| Total | 1,865 (61.8%) | 1,155 (38.2%) | |

CI*: Confidence Interval adjusted for finite population correction.

The proportion of products within a product group that carries a pregnancy health warning label varies by state/territory, however this study was not designed to test whether these differences are statistically significant or an artefact of the sampling frame.

For those states where a substantial sample was collected (NSW = 951; VIC = 819; QLD = 505; WA = 346), rates across all product groups were relatively consistent (34.9% - 39.3%).

Adoption and implementation of pregnancy health warning labels over time

The proportion of products with a pregnancy label by product and year is presented in Table 3 below.

Over time adoption and implementation of pregnancy health warnings has increased. For wines with a vintage year before 2011, for example, 17% of the sample carried a pregnancy health warning compared to 66.2% in 2013.

Table 3: Proportion of products with pregnancy health warning by year

| | <2010 | 2011 | 2012 | 2013 | 2014 | Total |
|-------------------|------------|------------|-------------|-------------|-----------|-------------|
| Product group | 2010 | 2011 | 2012 | 2013 | 2014 | Total |
| Red Wine < \$11 | 11 (23.4%) | 26 (44.1%) | 92 (67.6%) | 62 (82.7%) | 0 (0%) | 191 (60.1%) |
| Red Wine > \$11 | 19 (14.7%) | 44 (37.3%) | 57 (46%) | 9 (40.9%) | | 129 (32.8%) |
| White Wine < \$11 | 1 (4.8%) | 3 (9.7%) | 59 (50.4%) | 78 (70.9%) | 2 (100%) | 143 (50.9%) |
| White Wine > \$11 | 13 (21%) | 13 (29.5%) | 48 (43.6%) | 51 (53.7%) | | 125 (40.2%) |
| Total | 44 (17%) | 86 (34.1%) | 256 (52.6%) | 200 (66.2%) | 2 (66.7%) | 588 (45.1%) |

Comparison of the proportion of products with a pregnancy health warning across differing product package types is provided in Table 4 below.

The proportion of products that carry a pregnancy health warning varies by package type. Individual packaged products have a much higher proportion of products with a pregnancy health warning (41.8%) compared to multi-packs (ie 3 - 12 packs: 12%).

Table 4: Proportion of products with pregnancy health warning by package type

| | Individual | 3-12 pack | 20+ pack | Keg |
|-------------------|--------------------|------------|-----------|----------|
| Product Group | Individual package | 3-12 pack | 20+ pack | Keg |
| Dark Spirits | 115 (33.3%) | 1 (50%) | | |
| White Spirits | 63 (38.7%) | | | |
| RTD | 20 (23.8%) | 15 (20.5%) | | |
| Cider | 37 (44%) | 4 (13.8%) | | |
| Int. Beer | 35 (36.5%) | 5 (13.2%) | 2 (13.3%) | |
| Prem/Craft Beer | 24 (21.2%) | 5 (5.6%) | 5 (29.4%) | 2 (100%) |
| Full Beer | 26 (66.7%) | | 1 (7.7%) | 1 (100%) |
| Mid/Light Beer | 237 (58.4%) | | | |
| Red Wine < \$11 | 160 (33.9%) | | | |
| Red Wine > \$11 | 197 (49.7%) | | | |
| White Wine < \$11 | 160 (42.1%) | 1 (50%) | | |
| White Wine > \$11 | 12 (70.6%) | 1 (9.1%) | | 1 (100%) |
| Total | 1,086 (41.8%) | 32 (12%) | 8 (11.6%) | 4 (80%) |

Domestic and international comparisons

The proportion of Australian manufactured products that carry a pregnancy health warning was compared to the proportion of products of international origin, as shown in Table 5 below. In line with the evidence for an international trend towards implementing pregnancy health warnings on alcohol products, the proportion of Australian manufactured products is similar to the proportion of those products imported for sale in Australia (38% vs. 41%). For both red and white wines with a retail price of \$11 or below as well as international branded beers, Australian manufactured products have a higher proportion of products with a pregnancy health warning label compared to international products (59% vs. 55%; 51% vs. 47% and 33% vs. 26% respectively). On the other hand, Australian produced RTDs, spirits (white and dark) and cider had comparatively lower proportions of products with a pregnancy health warning label.

Table 5: Proportion of products with a pregnancy health warning by location of manufacture

| Product group | Manufacturer located in Aus | Manufacturer located internationally | Manufacturer location information missing | Total |
|-------------------|-----------------------------|--------------------------------------|---|--------------------------|
| Dark Spirits | 16/103 (16%) | 97/245 (40%) | 3/5 (60%) | 116/353 (33%) |
| White Spirits | 15/47 (32%) | 48/117 (41%) | 0/4 (0%) | 63/168 (38%) |
| RTD | 26/140 (19%) | 9/19 (47%) | 1/3 (33%) | 36/162 (22%) |
| Cider | 18/79 (23%) | 24/41 (59%) | 1/2 (50%) | 43/122 (35%) |
| Int. Beer | 9/27 (33%) | 33/125 (26%) | 1/1 (100%) | 43/153 (28%) |
| Red Wine < \$11 | 199/337 (59%) | 37/67 (55%) | 1/17 (6%) | 237/421 (56%) |
| Red Wine > \$11 | 135/406 (33%) | 25/63 (40%) | 0/3 (0%) | 160/472 (34%) |
| White Wine < \$11 | 164/324 (51%) | 33/70 (47%) | 1/16 (6%) | 198/410 (48%) |
| White Wine > \$11 | 107/255 (42%) | 54/126 (43%) | 0/1 (0%) | 161/382 (42%) |
| Total | 783/2,081 (38%) | 363/880 (41%) | 9/59 (15%) | 1,155/3,020 (38%) |

Comparison by state/territory of manufacture

Of the three Australian states that represented the majority of Australian products (NSW, Victoria and South Australia) the proportion of products that carried a pregnancy health warning label was relatively consistent (34%, 33% and 48% respectively) (Table 8 of Appendix 2.1.1).

Type of labels and text consistency with NHMRC guidelines

A comparison of the proportion of pregnancy health warning labels that are pictogram only, vs text only vs pictogram and text is provided in Table 6 below. The majority of pregnancy health warning labels use a pictogram only (79%). Additionally, of those pregnancy health warning labels that use text, an estimated 82% of labels are consistent with NHMRC recommendations, ranging from 29% to 100%.

Table 6: Proportion of pregnancy health labels by label type and text consistency with NHMRC guidelines

| Product Group | No pregnancy health warning | Pictogram pregnancy health warning | Text pregnancy health warning | Text and pictogram | Consistency with NHMRC guidelines |
|---------------|-----------------------------|------------------------------------|-------------------------------|--------------------|-----------------------------------|
| Dark Spirits | 237 | 71 (63%) | 40 (36%) | 1 (1%) | 23 (56%) |
| White Spirits | 105 | 31 (49%) | 31 (49%) | 1 (2%) | 19 (59%) |

| Product Group | No pregnancy health warning | Pictogram pregnancy health warning | Text pregnancy health warning | Text and pictogram | Consistency with NHMRC guidelines |
|-------------------|-----------------------------|------------------------------------|-------------------------------|--------------------|-----------------------------------|
| RTD | 126 | 15 (44%) | 19 (56%) | | 16 (84%) |
| Cider | 79 | 30 (71%) | 10 (24%) | 2 (5%) | 10 (83%) |
| Int. Beer | 110 | 27 (66%) | 13 (32%) | 1 (2%) | 4 (29%) |
| Prem/Craft Beer | 190 | 19 (54%) | 16 (46%) | | 14 (88%) |
| Full Beer | 47 | 16 (57%) | 11 (39%) | 1 (4%) | 7 (58%) |
| Mid/Light Beer | 28 | 10 (71%) | 4 (29%) | | 4 (100%) |
| Red Wine < \$11 | 184 | 217 (92%) | 18 (8%) | 2 (1%) | 15 (75%) |
| Red Wine > \$11 | 312 | 136 (85%) | 24 (15%) | | 24 (100%) |
| White Wine < \$11 | 212 | 176 (89%) | 21 (11%) | 1 (1%) | 22 (100%) |
| White Wine > \$11 | 221 | 125 (78%) | 35 (22%) | | 25 (71%) |
| Missing | 14 | 17 (85%) | 3 (15%) | | 3 (100%) |
| Total | 1,865 | 890 (79%) | 221 (20%) | 9 (1%) | 189 (82%) |

Comparison of the proportion of pregnancy health labels that were smaller or larger than the average is provided in Table 7 below. Additionally, a comparison of the location of health warning labels is also provided. The majority of pregnancy health labels (73%) are of an average¹⁴ or larger size and 81% are placed on the back of the product.

Table 7: Proportion of pregnancy health labels by size and location

| Product group | Smaller size | Average size | Larger size | Front of package | Back of package | Side of package | Neck of package | Top/Bottom of package |
|-----------------|--------------|--------------|-------------|------------------|-----------------|-----------------|-----------------|-----------------------|
| Dark Spirits | 33 (28%) | 72 (62%) | 11 (9%) | 2 (2%) | 103 (92%) | 7 (6%) | 0 | 0 |
| White Spirits | 12 (19%) | 42 (67%) | 9 (14%) | 0 | 53 (84%) | 10 (16%) | 0 | 0 |
| RTD | 11 (31%) | 24 (67%) | 1 (2.8%) | 0 | 12 (36%) | 3 (9%) | 2 (6%) | 16 (48%) |
| Cider | 19 (44%) | 20 (47%) | 4 (9%) | 3 (7%) | 33 (80%) | 3 (7%) | 1 (2%) | 1 (2%) |
| Int. Beer | 18 (42%) | 17 (40%) | 8 (19%) | 2 (5%) | 24 (57%) | 8 (19%) | 3 (7%) | 5 (12%) |
| Prem/Craft Beer | 6 (17%) | 28 (78%) | 2 (6%) | 0 | 13 (42%) | 7 (23%) | 5 (16%) | 6 (19%) |
| Full Beer | 7 (25%) | 20 (71%) | 1 (4%) | 2 (7%) | 5 (19%) | 15 (56%) | 4 (15%) | 1 (4%) |
| Mid/Light Beer | 5 (36%) | 9 (64%) | 0 | 0 | 4 (29%) | 6 (43%) | 3 (21%) | 1 (7%) |
| Red Wine < \$11 | 53 (22%) | 160 (68%) | 24 (10%) | 23 (10%) | 204 (86%) | 10 (4%) | 0 | 0 |
| Red Wine | 40 (25%) | 97 (61%) | 23 (14%) | 4 (3%) | 132 | 20 (13%) | 0 | 0 |

¹⁴ Field researchers reviewed and evaluated the size of the pregnancy label in relation to the average pictogram and text provided by the DWA guidelines, which was approximately 0.5cm x 0.7cm.

| Product group | Smaller size | Average size | Larger size | Front of package | Back of package | Side of package | Neck of package | Top/Bottom of package |
|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------------|-----------------------|
| > \$11 | | | | | (85%) | | | |
| White Wine < \$11 | 50 (25%) | 117 (59%) | 31 (16%) | 4 (2%) | 170 (86%) | 16 (8%) | 0 | 0 |
| White Wine > \$11 | 48 (30%) | 88 (55%) | 25 (16%) | 6 (4%) | 140 (88%) | 9 (6%) | 0 | 0 |
| Missing | 10 (50%) | 10 (50%) | 0 | 0 | 18 (90%) | 2 (10%) | 0 | 0 |
| Total | 312 (27%) | 704 (61%) | 139 (12%) | 46 (4%) | 911 (81%) | 116 (10%) | 18 (2%) | 30 (3%) |

Legibility and Prominence

The legibility and prominence of pregnancy health labels with respect to the FSANZ legibility requirements are summarised in Table 8 below. The majority of pregnancy health labels across all product types (ie the total) were assessed as standard or above in terms of both legibility (92%) and prominence (90%).

Table 8: Proportion of pregnancy health labels by legibility and prominence

| Product group | Low legibility | Standard legibility | Above standard legibility | Low prominence | Standard prominence | Above standard prominence |
|-------------------|----------------|---------------------|---------------------------|------------------|---------------------|---------------------------|
| Dark Spirits | 4 (4%) | 83 (87%) | 8 (8%) | 4 (7%) | 84 (78%) | 17 (16%) |
| White Spirits | 7 (12%) | 44 (77%) | 6 (11%) | 8 (13%) | 39 (63%) | 15 (24%) |
| RTD | 1 (4%) | 22 (88%) | 2 (8%) | 5 (16%) | 24 (75%) | 3 (9%) |
| Cider | 1 (4%) | 27 (93%) | 1 (4%) | 9 (23%) | 22 (56%) | 8 (21%) |
| Int. Beer | 5 (15%) | 26 (76%) | 3 (9%) | 14 (36%) | 14 (36%) | 11 (28%) |
| Prem/Craft Beer | 0 | 26 (87%) | 4 (13%) | 3 (9%) | 30 (86%) | 2 (6%) |
| Full Beer | 2 (8%) | 22 (92%) | 0 | 3 (11%) | 21 (78%) | 3 (11%) |
| Mid/Light Beer | 2 (15%) | 10 (77%) | 1 (8%) | 3 (21%) | 9 (64%) | 2 (14%) |
| Red Wine < \$11 | 2 (3%) | 74 (97%) | 0 | 14 (6%) | 188 (81%) | 31 (13%) |
| Red Wine > \$11 | 3 (5%) | 52 (95%) | 0 | 8 (5%) | 111 (71%) | 36 (23%) |
| White Wine < \$11 | 15 (14%) | 82 (75%) | 14 (15%) | 14 (7%) | 125 (64%) | 56 (23%) |
| White Wine > \$11 | 9 (10%) | 70 (75%) | 14 (15%) | 22 (14%) | 89 (57%) | 46 (29%) |
| Missing | 0 | 0 | 0 | 0 | 6 (100%) | 0 |
| Total | 51 (8%) | 538 (84%) | 53 (8%) | 107 (10%) | 762 (69%) | 230 (21%) |

2.2. Key findings – Aim One

Overall, an estimated 59.8% of those products that comprise 75% of market share carry a pregnancy health label. After adjusting for market share, the proportion of products with a pregnancy health label is 62.0%. The proportion of market leading products (adjusted by market share) that have a pregnancy health warning differs considerably by product: our estimates range from 24.5% to 81.3%.

2.3 Key findings – Aim Two

The proportion of all alcohol products for sale that have a pregnancy label varies between 15.9% and 58.8% by product type, with 38.2% of all products carrying a pregnancy health warning label. Individually packaged products and wines with a later vintage have higher proportions of products with a pregnancy health warning label: wines with a year of 2013 have between 40.9% and 82.7% of products with a pregnancy health warning compared to 4.8% and 23.4% in samples prior to 2011. Only two-thirds of labels had a pregnancy health warning for 2013 and 2014, and for straight spirits and RTDs, only 37.5% and 23.1% respectively have a pregnancy health warning label.

The analysis of the extent to which warning labels are consistent with NHMRC guidelines, and are legible and prominent, was conducted only in the context of the study that examined the range of alcohol products that are actually for sale in a variety of alcohol outlets, as opposed to those products that comprise the majority market share. This means that the findings about consistency, legibility and prominence of pregnancy health warning labels do not necessarily reflect those products that are consumed by the majority of drinkers in Australia, they do represent a much greater range of label types (n=3,020), compared to the relatively small number of label types that comprise 75% of market share (n=148 labels).

The most commonly used pregnancy label is the pictogram by itself (79%). Of the 21% of labels that use text, 82% are consistent with the NHMRC recommendation. The majority of pregnancy health warnings are on the back of the product (81%) and are of average or greater size (73%). 92% of pregnancy health warnings were considered of standard or better with respect to legibility and 90% were of standard or better prominence.

2.4 Methodological considerations

It is important to recognise that the results from both Aim One and Aim Two are with respect to those products that were on the shelf in retail outlets at the time the data were collected. It is plausible that this may represent an underestimate of the proportion of all products that are currently manufactured with a pregnancy health warning (eg because of the natural time lag between production and appearance at retail outlets).

2.5 Conclusions

After adjusting for market share, the proportion of products with a pregnancy health label is 62.0%. In contrast to the market leading products, only 38.2% of *all* alcohol products available for sale had a pregnancy health warning label. A reasonable interpretation of these results is that the most appropriate method of assessing the extent to which pregnancy labels have been implemented depends upon which strategy of raising awareness is thought to be most effective:

- If it is thought to be by targeting the products that are most commonly consumed, then considering the products that represent the greatest market share is appropriate, and 59.8% of products have a pregnancy health warning label with a range across product types of 24.5% to 81.3%.
- If it is thought to be by targeting the products that consumers are exposed to, or are potentially exposed to, at the point of purchase, then considering all products that are for sale is appropriate, and 38.2% of products have a pregnancy health warning label.

The overall percentage of 62.0% (adjusted by market share) masks a wide band of variability across product types (24.5 to 81.3%). The substantial difference in pregnancy warning labels by product category is potentially of concern. Overall, differentiation in the time lag between production and appearing within retail outlets may explain the variance in the proportion of pregnancy health warning labels between product categories observed in the current study. Another contributing factor may be parallel importing – an issue identified by the industry which may affect product markets differently (see Appendix 5 for a summary of the results of the key informant interviews).

Products with long shelf-life or long lags between the time of manufacture and release to the market post labelling will take some time to work through the retail system. Wines might also benefit from faster natural replacement for labels, given they tend to change their labels more frequently (for example to update labels with respect to vintage year or for other commercial purposes such as altering tasting notes). The most room for improvement appears to be for straight spirits and RTDs, where only 37.5% and 23.1% respectively have a pregnancy health warning label.

It is apparent that adoption and implementation of the pregnancy health warnings labels has increased over time. For wines with a vintage year before 2011, for example, 17% of the sample carried a pregnancy health warning compared to 66.2% in 2013. This is an encouraging sign that the wine sector is shifting towards increasing the proportion of wine labels that have a pregnancy health warning, although only two-thirds of labels had a pregnancy health warning for 2013 and 2014, suggesting that there is room for further improvement.

In general, the time lag issues, combined with the fact that the voluntary scheme has only been in place for two years, suggests that the proportion of alcohol products with a pregnancy label may increase in the immediate future, although the extent to which it may increase is unclear.

Parallel importing by some retailers, for example, currently facilitates the sale of alcohol products in Australia that are not manufactured in Australia and so may not be subject to the same voluntary agreements about pregnancy warning labels. Assessing the proportion of alcohol products sold in Australia through parallel importing, and the extent to which those products have pregnancy warning labels that comply with the requirements of their source country and with the current voluntary code in Australia, however, was beyond the scope of this Evaluation.

Producers used either or both the DWA green text label 'it is safest not to drink while pregnant' and the green pregnancy silhouette pictogram label templates. The templates included a DWA 'Get the Facts' badge with a link to the DWA website for more information about alcohol and pregnancy.

The most commonly used pregnancy health warning label is the pictogram by itself (79%). Of the 21% of labels that use text, 82% are consistent with the NHMRC recommendation.

The majority of the pregnancy health warning labels were visible and readable, being of average or greater size (73%) than the DWA labelling manual and template, and of average or better legibility or prominence (92% and 90% respectively), both of which are encouraging. 92% of pregnancy health warnings were considered of standard or better with respect to legibility and 90% were of standard or better prominence. The majority of pregnancy health labels were located on the back (81%).

Section 3 Alcohol industry survey of voluntary pregnancy labelling costs

The online alcohol industry survey of voluntary pregnancy labelling costs was designed to determine the costs associated with actions taken by industry members to implement the voluntary pregnancy labelling initiative. In total, 14 responses to the survey were received which included small, medium and large companies. The majority of respondents were from companies where the main activity was manufacturing, the other two respondents represented an importer/distributor company and an industry representative group. The percentages reported are presented as proportions of total respondents who answered each question, as opposed to the total number of respondents who completed the entire survey. The profile of respondents to the survey is detailed in Appendix 3.

3.1 Operation details

Types of package/labels used

All respondents indicated the types of product package/labels used across their company's product range, as well as the number of their products which use each package/label (see Table 9). The most commonly reported type of product package/label was a "glass bottle approx. 750ml," which was used by 12 of the 14 companies (85.71%). The least commonly used package/label type was "multiple (shrink-wrapped)," only used by two companies (14.29%); and no respondents used "beer mini-kegs." "Glass bottle approx. 750ml" had the highest range and average number of company product lines with any type of package/label, followed by "wine cask."

Table 9: Types of product package/labels used by companies

| Product package/label | Number of companies using package/label type in range | Range of number of company products using package/label type | Average number of company products using package/label type |
|-----------------------------------|---|--|---|
| Glass bottle approx. 750ml | 12 (85.71%) | 8 to 780 | 236.70 |
| Glass bottle (wine) approx. 375ml | 8 (57.14%) | 1 to 38 | 8.57 |
| Glass bottle approx. 187ml | 5 (35.71%) | 2 to 12 | 6.00 |
| Wine cask | 5 (35.71%) | 20 to 77 | 38.00 |
| Glass bottle (beer) approx. 375ml | 8 (57.14) | 1 to 8 | 3.80 |
| Metal can approx. 375ml | 4 (28.57%) | 1 to 13 | 5.67 |
| Multiple (cardboard) | 6 (42.86%) | 1 to 24 | 9.80 |
| Multiple (shrink-wrapped) | 2 (14.29%) | 1 | 1 |
| Carton approx. 30 | 5 (35.71%) | 1 to 17 | 17 |
| Beer mini keg | 0 | - | - |

Half of all respondents (n=7, 50%) indicated that their company uses a product package/label other than those listed in Table 11.

Units sold per year

The number of units (across all product lines and SKUs) sold by respondent companies ranged from 100,000 to 1.57 billion, with a median of 8.5 million.¹⁵

¹⁵ A stock keeping unit (SKU) is a distinct item, such as a product or service, as it is offered for sale that embodies all attributes associated with the item and that distinguish it from all other items. For a product, these attributes include, but are not limited to, manufacturer, product description, material, size, color, packaging, and warranty terms
http://en.wikipedia.org/wiki/Stock_keeping_unit

3.1.1 Adoption of labelling initiative reported by respondents

Reported proportion of product lines with a pregnancy label

The estimated average proportion of company product lines with a pregnancy health label was 71%; with proportions ranging from 0 to 100%.

Reported use of pregnancy health warning labels across product package/label types

Respondents reported on the number of product lines across each of the product package/label types for which they had incorporated a pregnancy health warning on the label (refer Table 10).

Table 10: Proportion of product lines with pregnancy health warning labels per product package/label type

| Product package/label | Number of product lines | Average proportion with a pregnancy label | Range |
|-----------------------------------|-------------------------|---|------------|
| Glass bottle approx. 750ml | 1,835 | 85.1% | 11% - 100% |
| Glass bottle approx. 375ml | 52 | 54.3% | 0% - 100% |
| Glass bottle approx. 187ml | 22 | 88.9% | 75% - 100% |
| Wine cask | 94 | 78.6% | 0% - 100% |
| Glass bottle (beer) approx. 375ml | 14 | 71.4% | 20% - 100% |
| Metal can approx. 375ml | 16 | 71.2% | 33% - 100% |
| Multiple (cardboard) | 45 | 27.1% | 0% - 50% |
| Multiple (shrink-wrapped) | 1 | 100% | 100% |
| Carton approx. 30 | 28 | 21.3% | 0% - 35% |
| Other | 79 | 53.9% | 35% - 98% |

Introduction of pregnancy labels/package

Respondents indicated that pregnancy health warnings had been introduced on their company's product labels/packages between November 2011 and June 2013 (n = 9).

Type of pregnancy health warning labels used

Respondents were asked to select the different types of pregnancy health warning labels incorporated on their SKUs. Nine of the 11 respondents who answered indicated that their products display the pregnancy pictogram label (82%). Approximately half of the respondent used a pregnancy text label (n=6, 55%), and only one used the NHMRC pregnancy text label (refer to Table 11).

Four respondents indicated that their company had incorporated more than one type of label; the majority of which used both the pictogram label and pregnancy text (n=3).

Table 11: Types of pregnancy health warning labels used

| Type of pregnancy health label | n (9) | %* |
|--------------------------------|-------|-----|
| Pictogram label | 9 | 82% |
| Pregnancy text label | 6 | 55% |
| Pictogram and text | 3 | 27% |

*Percentages are presented as the proportion of all respondents to this question who have implemented each label type, therefore percentages do not add up to 100

The three respondents who indicated that their company uses an "other" label provided details about non-pregnancy related DWA logos (eg "get the facts" and "is your drinking harming yourself or others?").

3.2 Cost estimates

Additional cost items

Respondents were asked whether there were any cost items in addition to:

- a) Redesign and approval of artwork
- b) Production of new print plates
- c) Administration costs associated with those changes.

Of the 12 who responded, four indicated that additional cost items needed to be considered; three respondents said that additional costs were “material write-offs”, and one stated that it was the cost associated with “relabelling of imported products”.

Total cost estimates per item

Estimates were provided by eight respondents for the total costs associated with implementing pregnancy health warning labels across each of the identified cost items. Average estimated total costs outlined in Table 12 show that the most costly item associated with the labelling was production of new print plates. No estimated total costs were provided for any additional cost items (ie material write offs and relabelling of imported products). Where a respondent only provided a range of values, the midpoint was used. The estimated average cost to include a pregnancy health warning label per SKU was \$1,686.25. This is lower than that estimated for a minor labelling change to a glass bottle (\$3,967) reported by PricewaterhouseCoopers in its 2008 report to FSANZ.¹⁶

Table 12: Estimated costs per cost item

| Cost item | Average estimated cost | Range of estimated total cost |
|----------------------------------|------------------------|-------------------------------|
| Redesign and approval of artwork | \$638.75 | \$55 - \$2,500 |
| Production of new print plates | \$675.63 | \$0 - \$2,000 |
| Administration costs | \$363.75 | \$0 - \$2,000 |
| Total Cost | \$1,686.25 | \$310 - \$5,500 |

Indirect costs and benefits

The opportunity cost of the package space that a pregnancy health warning occupies as well as the potential benefit from improving a company’s reputation (from including a pregnancy health warning on their products) were identified as potential key indirect costs and benefits. Three out of nine respondents reported that their company considered the inclusion of a pregnancy health warning on their product labels or packaging as a reduction in the capacity or scope to provide alternative information (33%). One respondent from a company that manufactures spirits and RTD alcoholic beverages commented that this was particularly relevant for smaller packages (eg 50ml), where it is very difficult to accommodate the labels and all the mandatory labels on the back and side labels. Another company reported having removed the statement “is your drinking harming yourself or others” in order to include a pregnancy health warning message.

Another respondent believed that the inclusion of additional information presented a challenge to consumer comprehension, dependent on whether a labelling requirement is mandated by format or left to the company to decide on placement and comprehensibility. They noted that had they

¹⁶ PricewaterhouseCoopers (2008). Cost schedule for food labelling changes: Final report. Food Standards Australia and New Zealand p 3

needed to increase the size of a label to accommodate for additional warnings there would have been an impact on the integrity of application and adhesion of the labels, therefore requiring significant machine changes affecting the cost of production.

Zero cost estimates

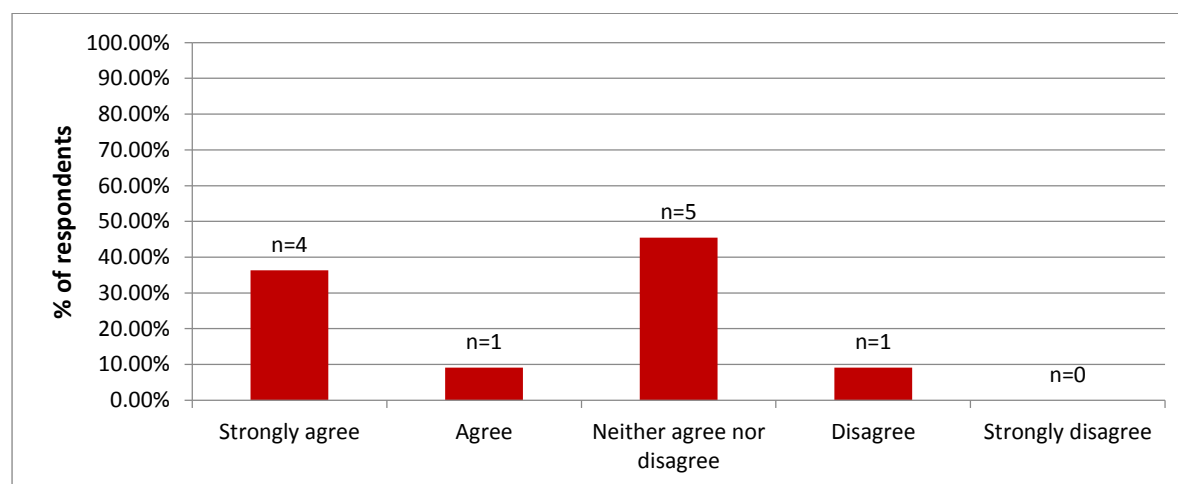
Due to the two year period for implementing the pregnancy health warning, some manufacturers were able to incorporate the pregnancy health warning as part of an otherwise scheduled change in the product label. This resulted in some manufacturers reporting that no marginal costs to the company were incurred due to the timeframe available as part of the voluntary pregnancy health warning initiative. It was reported that management of costs was also facilitated because the companies could maintain some flexibility with respect to the pregnancy health warning design and location.

Two participants (one beer and one wine producer) indicated that there was no additional cost. In the final cost estimates, the proportion of products that these companies produce were set to zero. This is a conservative approach as this does not consider the likelihood of additional producers also reporting a zero cost. One respondent indicated that their remaining stock would be labelled to achieve 100% as new container deposit labelling requirements were introduced in July 2014.

Responsible consumption of alcohol

Respondents were asked to what extent they agreed with the statement “my company considers the inclusion of a pregnancy health warning as an opportunity to be associated with the responsible consumption of alcohol.” As demonstrated in Figure 1, the most common response was “neither agree nor disagree” (n=5, 45%) with 5 respondents (45%) either agree or strongly agree. No respondents strongly disagreed.

Figure 1: Pregnancy health warnings providing opportunity to be associated with responsible consumption of alcohol



The indirect costs and benefits associated with including a pregnancy health warning, whilst potentially not insignificant, were not included in the final estimated cost to industry.

Total cost to industry

The total cost to industry is estimated as the number of SKUs that have adopted the pregnancy health warning multiplied by the proportion of manufacturers that incurred a cost associated with implementing the pregnancy health warning multiplied by the total cost per SKU implementing the change to labels. Table 13 shows the proportion of SKUs with a pregnancy health warning was taken from the estimate of all products that carry a health label (detailed in Section 3 above).

Table 13: Estimated total cost to industry

| Market | SKUs | Proportion with warning | Proportion without cost | Total Cost to industry |
|----------------|-------|-------------------------|-------------------------|------------------------|
| Beer | 636 | 24.4% | 2.2% | \$255,922 |
| Cider | 120 | 35.2% | 0.0% | \$71,227 |
| Wine | 6,076 | 44.9% | 3.1% | \$4,457,690 |
| Spirits | 972 | 34.4% | 0.0% | \$563,828 |
| Ready To Drink | 159 | 22.2% | 0.0% | \$59,521 |
| TOTAL | 7,963 | | | \$5,408,188 |

The total estimated cost to industry of adopting the voluntary initiative is estimated at \$5.4 million. This is significantly dependent on the estimated number of SKUs within the industry, the proportion of those SKUs that have a pregnancy health warning and the per SKU cost of implementing the pregnancy health warning.

A series of one-way sensitivity analyses were conducted to test the sensitivity of the estimated cost figure with alternative parameter estimates. These are presented in Table 14 below. The results from the sensitivity analyses indicate that the total cost figure is particularly sensitive to the estimated cost per SKU to apply a pregnancy health warning label. If the cost estimate from Pricewaterhouse Coopers is used instead of the cost derived from the industry survey, the total cost is estimated as \$12,723,074. The estimates are also sensitive to estimates regarding proportion of products with a pregnancy health label. If the estimates from the market leaders study (Aim One in Section 3 above) the cost is estimated as \$9,597,773.

Table 14: Sensitivity analysis of cost estimates

| Sensitivity Analysis | Total Cost to industry |
|--|------------------------|
| Base Case | \$5,408,188 |
| Increase in number of SKUs by 10% (total of 8,759 vs 7,963) | \$5,949,007 |
| Increase in Proportion of SKUs (estimates based on market leaders vs all products) | \$9,597,773 |
| Increase in cost per SKU to include pregnancy health label(PwC estimate) | \$12,723,074 |

3.3 Conclusions

The estimated average cost per stock keeping unit was \$1,686.25.¹⁷ The total cost to industry for labelling the SKUs available for sale in April 2014 is estimated to be \$5,408,188. In a sensitivity analysis, the proportion of SKUs that carry a pregnancy health warning from those products that comprise the top 75% of market leading products (59.8%) was used instead; the resultant cost to industry was estimated as \$9,597,773.

The opportunity cost of the package space that a pregnancy health warning occupies as well as the potential benefit from improving a company's reputation (from including a pregnancy health warning on their products) were identified as potential key indirect costs and benefits. This could be particularly relevant for smaller packages (eg 50ml), where it is very difficult to accommodate the labels as well as the mandatory contents labels on the back and side labels. If updating labels happens in line with other business processes thus allowing flexibility for producers to incorporate

¹⁷ A stock keeping unit (SKU) is a distinct item, such as a product or service, as it is offered for sale that embodies all attributes associated with the item and that distinguish it from all other items. For a product, these attributes include, but are not limited to, manufacturer, product description, material, size, color, packaging, and warranty terms
http://en.wikipedia.org/wiki/Stock_keeping_unit

labelling at their own pace, the cost to industry of maintaining the momentum and increasing coverage over time can be kept low.

Section 4 Consumer awareness and understanding of pregnancy health warning labels

The consumer awareness online survey was designed specifically to gather and analyse data to understand the extent and nature of consumer awareness of the pregnancy health warnings on alcohol product labels and their understanding of the message and/or pictograms they include. In line with evidence summarised in Section 5 below and in more detail in Appendix 6, that labelling on its own will only affect awareness and/or prompt further information seeking, the survey did not seek to measure effects of labels on attitude change, changes in behavioural intentions, or behaviour change.

The survey asked respondents about their awareness of pregnancy-related messages and campaigns. Unprompted approaches rely solely on a respondent's recall of an alcohol warning message on alcohol products in the absence of prompts. Use of prompts (in this case the DWA pictorial and text alcohol warning messages provided to the Australian alcohol industry as part of the voluntary initiative) were used to further examine consumer awareness. Establishing consumer understanding of the pictogram and text, alcohol warning label messages involved the use of open-ended questions to capture verbatim respondent comments.

The survey was conducted 19 March – 14 April 2014. In total, 5,399 complete responses were obtained. The sample provided the desired population representativeness across target groups, geographies and socio economic status (see sample framework and detailed demographic information in Table 6 in Appendix 4.2). We compared responses of total sample with those of the target group of women (comprising women who were currently pregnant, were planning to become pregnant in the next two years, or had a child under 18 months of age). The online survey design is detailed in Appendix 4.3. The statistical analyses used are detailed in Appendix 4.4. The survey instrument is presented at Appendix 4.5 and the results of the data analyses including detailed demographic group differences are at Appendix 4.6.

4.1 Findings

Comparisons of unprompted and prompted awareness and consumer understanding of the pictogram and the text label and their messages are summarised in Table 15.

Table 15: Consumer awareness and understanding of pregnancy labels

| Construct | Response | Total sample n= (%) | Women*n= (%) |
|--|---|---------------------|---------------|
| Unprompted campaign or message awareness | Yes | 3,386 (62.4%) | 2,100 (67.7%) |
| | No | 2,040 (37.6%) | 1,002 (32.3%) |
| Unprompted campaign or message recall description | Pregnant lady symbol on alcohol products | 183 (5.8%) | 134 (4.3%) |
| | Messages on alcohol products | 231 (7.3%) | 176 (5.7%) |
| Prompted (recall) pictogram awareness | Have seen label | 1807 (33.3%) | 1309 (42.2%) |
| Prompted (recall) text label awareness | Have seen label | 1078 (19.9%) | 816 (26.3%) |
| Pictogram understanding | Don't drink alcohol when pregnant | 4576 (92.5%) | 2627 (84.7%) |
| | Alcohol causes harm to unborn child or mother | 113 (2.3%) | 65 (2.1%) |
| Text label understanding | Don't drink alcohol when pregnant | 1478 (34.9%) | 732 (23.6%) |
| | Alcohol causes harm to unborn child or mother | 1288 (30.4%) | 798 (25.7%) |

*Target group = women who were currently pregnant, were planning to become pregnant in the next two years, or have a child under 18 months of age.

4.1.1 Awareness

Unprompted recall

In the absence of direct prompts, very few respondents were aware of any campaigns or messages. Only 5.8% of all respondents and 4.3% of the target group of women recalled the pictogram which was described by respondents as the “pregnant lady symbol on alcoholic products.” Slightly more (7.3% of all respondents and 5.7% of the target group of women) reported a nondescript alcohol warning label using words such as “messages on bottles” or “messages on bottles of alcohol with warnings.” Overall, results revealed 62.4% of all respondents and 67.7% of the target group of women reported seeing campaigns or messages about pregnant women and alcohol consumption.

Prompted recall

When presented with the DWA green pregnancy pictogram label, one third (33.3%) of all respondents and 42.2% of the target group of women reported awareness of the pictogram, showing that levels of awareness of the pictogram were similar in the target group and the total sample. 19.9% of the total sample and 26.3% of the target group of women reported awareness of the text label after they were exposed to the label.

4.1.2 Understanding

Pictogram label

In total, 92.5% of all respondents and 94% of the target group of women understood the pictogram to mean “do not drink alcohol when pregnant”. Only 2.3% of all respondents (and the target group of women) understood the pictogram to mean “alcohol causes harm to the unborn child.”

Forty-three (2%) of the responses to open-ended questions indicated that using the colour green for the pictogram the use of the colour red would be more effective because the colour red in and of itself signals that it is a warning. Three respondents indicated that the green meant they should drink alcohol. These findings indicate that the pictogram in red rather than green may help to avoid consumer confusion about the message.

Respondents who reported awareness (unprompted) of the pictogram were more likely to understand the label to mean do not drink alcohol when pregnant or alcohol causes harm to the unborn child than those who were not aware of the label until prompted.

Text label

One third of all respondents (34.9%) and 23.6% of the target group of women understood the text label to mean “don’t drink alcohol when pregnant.” While 30.4% of all respondents and 25.7% of the target group of women understood the text label to mean “alcohol causes harm to the unborn child.”

4.2 Conclusions

The consumer awareness survey found that awareness of pregnancy warning labels was low 4.3% when women were not prompted, however, once shown the labels (prompted) 94% of women understood what they meant.

Results indicate that the pictogram is superior to the text label in producing both higher levels of awareness and understanding that are consistent with NHMRC guidelines, but the use of the green pictogram can confuse the message by suggesting that alcohol should be consumed.

Section 5 Key contextual factors

5.1 International trend to incorporate pregnancy health warning labels on alcohol products

Alcohol labelling regulation nationally and internationally is expressed through one or a combination of mechanisms including food standards laws and codes, industry initiatives to promote healthy use of alcohol through labelling or point-of-sale advertising, or voluntary agreements reached between industry and government in relation to alcohol and labelling.¹⁸ Our review of the literature in relation to requirements for, or the adoption of, health warning labelling and specifically pregnancy health warning labelling of alcohol products, internationally, revealed that in the period 2009 to 2014, the number of countries with pregnancy health labelling of alcohol products increased from six to 33 (see Appendix 6.3).

Of the 33 countries with pregnancy health warning labels, 29 are implementing voluntary pregnancy warning labelling initiatives. South Africa, the Russian Federation and the United States are the only countries with both mandatory health warning labels and prescribed pregnancy health warning labels. The only other country to have mandatory pregnancy health warning labels is France, where it is the only mandatory health warning label. Twenty five of the 29 countries with voluntary pregnancy labelling initiatives currently use the red pregnant lady pictogram mandated in France (see Table 4 in Appendix 6.5).

Since 1995 in Australia, the FSANZ Code has required labels on alcoholic beverage containers to legibly display consumer information about volume, standard drinks and ingredients. While the FSANZ Code does not require that alcohol product labels display directional information about safe consumption or warnings about health risks associated with drinking alcohol, it does provide guidance about legibility and prominence (contrast and size).

Both industry and public health sectors support a minimum standard set by government for consistent content, size, and placement to be applied to the pregnancy health warning labels. DWA developed a manual and label templates for use by industry members to guide consistent labelling.

5.2 The role of the labelling initiative in raising awareness

Both public health and industry key informants to this Evaluation reported that there is confusion about the potential role of pregnancy health warning labelling of alcohol products in changing the drinking patterns of women who are pregnant or planning to become pregnant (see Appendix 5).

There is strong evidence that a comprehensive, integrated approach, sustained over time and emphasising the need to address the sensitive issues around alcohol consumption during pregnancy through interpersonal communication and relationship with a trusted health professional, is required to achieve changes in awareness, attitudes and behaviour (see Appendix 6.6). Implemented in the context of an integrated strategy, the pregnancy health warning labels on alcohol products might contribute to awareness and understanding because they act as a reminder or prompt a conversation. Reflecting on the experience of the voluntary initiative to date, key informants agreed that:

- Australians have a right to know that alcohol should not be consumed by women who are pregnant in order to make better decisions about alcohol consumption and this right should be respected.
- Labels are one way of contributing to awareness of the issue but of themselves pregnancy health warning labels do not change drinking behaviours

¹⁸ Stockwell T (2006). *A review of research into the impacts of alcohol warning labels on attitudes and behaviour*. British Columbia, Canada: University of Victoria, Centre for Addictions Research of BC

- Pregnancy health warnings on alcohol products are one mechanism intended to improve the awareness of the community of the potential for alcohol-related harms from drinking whilst pregnant.
- The main impact of the labels is to remind and prompt further information seeking or some interpersonal communication if people see it and are prompted to wonder what it means.

5.3 Evidence based social marketing campaigns

There is strong evidence for what works in awareness, attitude and behaviour change – a comprehensive integrated approach sustained over time and emphasising the need to address the sensitive issues around alcohol consumption during pregnancy through interpersonal communication and relationship with a trusted health professional.

5.4 Australian women’s attitudes, knowledge and patterns of behaviour

A 2010 study of Australian women’s knowledge and attitudes regarding drinking alcohol while pregnant found that most of the 1,103 women surveyed agreed that pregnant women should not drink alcohol (80.2%) and 97% agreed that alcohol can affect the unborn child. However, awareness of the specific risks to the unborn child arising from drinking alcohol during pregnancy was poor in the Australian female childbearing population.¹⁹ Since 2011, the Foundation for Alcohol Research and Education (FARE) has conducted annual polling on awareness of the harms caused by drinking alcohol, including drinking while pregnant or breastfeeding. For its 2014 poll FARE used a Galaxy Research questionnaire online to survey 1,545 respondents over the age of 18 years across Australia.²⁰ The survey results showed that:

- 78% (65% in 2013) of Australians believed that pregnant women should not consume any alcohol in order to avoid harm to the fetus
- 50% (47% in 2013) were aware of Fetal Alcohol Syndrome and related disorders
- 15% (15% in 2013) believed that pregnant women can drink in moderation (safely drink small amounts of alcohol without harming their baby).

5.5 The role of industry and government parallel initiatives

The DWA point of sale project (2011-12 to 2012-13) incorporated the DWA pregnancy text and pictogram labels, and engaged alcohol retailers and producers in providing responsible messages to consumers about reducing harmful drinking, particularly during pregnancy and to promote and explain new labels through a media campaign involving dissemination of resources and website material. The materials integrated the pregnancy health warning labels, promoted the DWA “Get the Facts” badge and provided expert opinion and factual information and guidance in line with the NHMRC guidelines about alcohol and pregnancy. Industry key informants believed that the labelling initiative and the point of sale project served to increase DWA’s profile as a provider of credible online health information. These initiatives are presented in greater detail in Appendix 6.2.

During the two year period of the voluntary pregnancy health warning labelling initiative, governments invested in a range of FASD research, advocacy, policy/guidelines health workforce and community capacity as well as surveillance and management activities (see Appendix 6.2). While these were not integrated with the labelling initiative, key informants believed they provided a foundation and impetus for discussion about labelling and how to better integrate it into broader public health campaigns designed to reduce the risks of alcohol-related harms during pregnancy.

¹⁹ Peadon E, Payne J, Henley N, D’Antoine H, Bartu A, O’leary C, Bower C, Elliot EJ (2010). Women’s knowledge and attitudes regarding alcohol consumption in pregnancy: a national survey. *BMC Public Health*. 10: 510. DOI: 10.1186/1471-2458-10-510

²⁰ Foundation for Alcohol Research and Education (2014). Annual Alcohol Poll: Attitudes and behaviours. Canberra: FARE