

The economic impact of changing our  
relationship with alcohol:  
the *Daybreak* program

Hello Sunday Morning

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## Evaluate

Evaluate was formed in September 2016, to bring fresh thinking to policy and economic questions, particularly those in the social sphere.

Our particular goal is to identify long-term solutions to ensuring the sustainability of Australia's admirable social compact, including universal access to healthcare and education, and the supply of aged care, housing and other social infrastructure.

Our approach is based on a traditional microeconomic toolkit, moderated by the knowledge that social services are accessed by people with a vast variety of experiences, needs and resources. Consequently, we have no bias towards either public or private supply of services, noting that the access and welfare needs of different Australians typically require a mix of both.

The Principals of Evaluate are experienced professionals, and we complement this with external expertise where appropriate.

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[www.hellosundaymorning.org](http://www.hellosundaymorning.org)

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## Table of Contents

Authors.....	2
Evaluate.....	2
Funding.....	2
Executive Summary.....	4
Economic Review of the Daybreak Program.....	7
Prospective Economic Benefits.....	7
Calculations.....	8
Recommendations.....	11
Impact of Alcohol.....	11
Impact of Change.....	16
Evidence from Similar and Competing Approaches to Daybreak.....	18
Consumption Patterns and Drivers.....	21
Case studies.....	24
Case Study One: A year of sobriety.....	24
Case Study Two: the 100 day alcohol-free challenge.....	25
Case Study Three: achieving inner peace.....	25
Appendix One: Demographics of Australian drinkers.....	27
Risky consumption of alcohol.....	27
Age comparisons over time.....	28
Geographic variations.....	29
Reducing alcohol consumption.....	29
Appendix Two: Australia’s Policy Approaches to Alcohol.....	30
1977: Drug Problems in Australia – an intoxicated society?.....	30
1989: National Health Policy on Alcohol in Australia.....	30
National Alcohol Strategy: A Plan for Action 2001 to 2003-04.....	32
National Alcohol Strategy 2006-07: Towards Safer Drinking Cultures.....	34
National Alcohol Strategy 2018-2026: Consultation Draft.....	36
Observations about Australia’s alcohol policies and strategies.....	38



## Executive Summary

The core conclusion of this review is that the *Daybreak* program provides a return on investment to the broader economy in the range of 2.49:1 for every dollar provided by the Federal Government. The program is individually powerful and clearly cost-effective. It is recommended that its role within the suite of interventions to reduce undesirable alcohol consumption in Australia be expanded.

*Daybreak* helps Australians to change their relationship with alcohol with access to an on-line peer community, habit changing activities and supports, and one-on-one chats with health coaches.<sup>1</sup> This paper analyses Hello Sunday Morning's *Daybreak*, including comparing the *Daybreak* app as a stand-alone intervention against a broader program including the app coupled with counselling. *Daybreak* is innovative both domestically and internationally, in that:

- Each participant largely self-directs their activity and interactions; and,
- The online community forms a critical part of the program with support and empathy being provided from peers who are facing similar situations or who have similar experiences.

A quasi-randomised controlled trial of *Daybreak* was undertaken by the National Drug Research Institute (NDRI). It found, in a study by Tait et al, clear reductions in alcohol risk and days out of role associated with use of *Daybreak*. The value of this reduced alcohol consumption, both to individuals and the broader economy, is analysed within this paper.<sup>2</sup>

The range of benefits available from a *Daybreak*-style reduction in alcohol use fall into five key categories including participation benefits, which are consumed by the broader economy; reduction in direct costs to Government, largely in the health arena; savings through managing alcohol-related problems via low-cost interventions rather than face-to-face programs; privately-consumed economic benefit in terms of higher personal income; and, general wellbeing effects on which it is difficult to put an economic value.

The decrease in the mean AUDIT-C score from 9.1 to 5.8 identified by the Tait study represents a significant shift in people's drinking. Whilst still "excessive", it represents a reduction from high- to medium-risk drinking. 'Probably dependent' drinkers decrease their consumption from 40.8 to 20.1 drinks per week; 'hazardous/harmful' drinkers decrease theirs from 22.9 to 11.9 standard drinks; and, for those individuals who participated in the program for at least 3 months, there is a reduction in their drinking from 37.1 to 17.5 standard drinks per week.

The following conclusions to be drawn:

1. The overall annual economic benefits in terms of reduced days out of role are:

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<sup>1</sup> <https://www.hellosundaymorning.org/daybreak/>

<sup>2</sup> Robert J Tait et al, "A quasi-randomized controlled trial of a digital intervention addressing alcohol use problems: The 'Daybreak' program", 2019.



- a. An annualized \$32,624,855.92 for the entire cohort of 20,000 participants in the program (all benefits are from those who participated for at least three months, who within this full cohort, will be 7,390 persons). This represents earnings from over 199,000 days in work or other roles;
  - b. Benefits per person of \$1,631.24 across the 20,000 initial registrants, or \$4,414.93 for those who participated for at least 3 months;
  - c. A return per dollar spent on all registrants of \$10.87;
2. The improvement in household budgets<sup>3</sup> from reduced consumption of alcohol over a twelve-month period is:
- a. \$52,946,540.98 across all 20,000 participants;
  - b. \$2,647.33 per person for all participants, or \$7,164.95 per person for those who participated for 3 months or more;;
  - c. A return per dollar spent on all registrants of \$17.65;
3. A reduction in one-year avoidable healthcare expenditure across the program:
- a. \$1,154,598.86 for all participants;
  - b. \$57.73 per person for all participants, or \$156.25 per person for those who continued participation with *Daybreak*;
  - c. A per-dollar return on healthcare savings only of \$0.38;
4. Savings against all undesirable losses (other costs and productivity losses) from alcohol misuse across the first year of:
- a. \$6,325,556.89 for all participants;
  - b. \$316.28 per person for the full 20,000, or \$856.00 per person for successful registrants; and,
  - c. A broad economic benefit of \$2.11 per person for all participants.

The benefits outlined at 1 and 2 are privately consumed whilst the broader economic returns on investment are represented by 3 and 4. Between these, the economic benefit from health and other savings and productivity gains is \$2.49 for every dollar provided by the Government to *Daybreak*.

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<sup>3</sup> Household budgets are individual matters, but what is important here is that there is more money available for both essential cost-of-living elements (housing, food, health, education, transport) as well as for savings, or allocation to healthier discretionary goods.



An alternative way of representing this is to say that, for every 1,000 registrants for *Daybreak* over the 2.5 years of Government funding:

1. **The cost to Government is \$150,000;**
2. **The benefit to the broader economy is \$373,500, reflecting the return on investment of 2.49:1; which means,**
3. ***Daybreak* has a cost-effective or break-even price of \$373.50, which makes the current Government subsidy of \$150 per person extremely good value.**

These findings are outlined in the following table.

Return on \$3 million	Total expected benefit	Per person (n=20,000)	Per Person (n=7,390)	Per Dollar (n=20,000)	Public Sum Total	Public ROI per Dollar
<b>Healthcare</b>	\$1,154,598.86	\$57.73	\$156.25	\$0.38	<b>\$7,480,155.75</b>	<b>\$2.49</b>
<b>Overall</b>	\$6,325,556.89	\$316.28	\$856.00	\$2.11		
<b>Days out of role</b>	\$32,624,855.92	\$1,631.24	\$4,414.93	\$10.87		
<b>Consumption</b>	\$52,946,540.98	\$2,647.33	\$7,164.95	\$17.65		
<b>TOTAL</b>	<b>\$93,051,552.66</b>	<b>\$4,652.58</b>	<b>\$12,592.13</b>	<b>\$31.02</b>		

At an average return on investment of almost 2.49:1 for every dollar provided by Government, *Daybreak* is clearly an effective program, and delivers value to significant cohort of the Australian community. However, given the limited scale of its promotion and take-up to date, there is merit in extending the program to expand the economic benefits observed.

The recommendations of this paper are therefore that:

1. The current funding for *Daybreak* be continued and expanded so as to enable greater participation; and,
2. Funding should be provided to enable a larger-scale longitudinal study of *Daybreak* that can identify more clearly the demographic factors which make it most effective.

Given the overall cost of alcohol to the Australian community and economy, *Daybreak* is both innovative and cost-effective option for Government.



## Economic Review of the Daybreak Program

This report is an economic analysis of *Hello Sunday Morning's Daybreak* program, including a comparison of the *Daybreak* app alone against a more complete intervention which includes the app plus availability of counselling. It is supported by an extensive survey of international evidence around the efficacy of technology-based interventions in alcohol dependency and misuse.

*Daybreak* itself is a program which assists Australians to change their relationships with alcohol through a supportive community, habit-change experiments and one-on-one chat with health coaches.<sup>4</sup> While this falls into a broad category of online interventions, it is innovative both domestically and internationally, in that it:

- Allows substantial self-direction by each participant; and,
- Draws upon organic online communities, where participants can find empathy and support from others in similar situations and with similar experiences.

The National Drug Research Institute (NDRI), based at Curtin University in Perth, has undertaken a quasi-randomised controlled trial of *Daybreak* comparing standard app participation (the control group) with a separate group who were actively offered complementary counselling.<sup>5</sup>

The NDRI research, in the study by Tait et al, found clear reductions in alcohol risk and the associated metric of days out of work. This paper presents an economic overlay to these data looking at the value, both personally and to the broader economy, of reduced alcohol consumption.

Ultimately, the NDRI analysis finds some merit in additional counselling, but attributes the lion's share of the benefits of *Daybreak* to the standard program. This is because some of those in the control group chose to access online counselling. While this in some ways limits the data, because the *Daybreak* program is intended to be self-directed, in the main it emphasises the core value of the initiative.

### Prospective Economic Benefits

The key questions in translating Tait et al's work into economic returns from the *Daybreak* program are twofold. First the scope of benefits available from a *Daybreak*-style reduction in alcohol use need to be defined. Broadly speaking, this will fall into five categories which are:

1. Participation benefits, which are consumed by the broader economy. These are found predominantly in the value of reduced 'absence from role', which is a direct economic gain;
2. Reduction in direct costs to Government, which are typically found in the health arena;

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<sup>4</sup> <https://www.hellosundaymorning.org/daybreak/>

<sup>5</sup> Tait et al, "A quasi-randomized controlled trial", 2019.



3. Nett savings in management of alcohol-related problems, through use of low-cost interventions such as *Daybreak* as opposed to more intensive face-to-face programs;
4. Privately-consumed economic benefit, typically in terms of higher income for those who reduce their reliance on alcohol; and,
5. General wellbeing effects, on which it is difficult to put an economic value.

There will also be individual savings from lower alcohol consumption, as well as familial benefits for those with partners and dependents, but limited data on these characteristics exist.

The second question is what rates and prices are applied to these benefits. This is examined extensively below, both through an international literature survey and a consideration of Australian public data. From there, these prices are applied to Tait et al's report, to assess the value of various economic effects.

### Calculations

The most significant datum in the Tait study is the rapid reduction in a mean AUDIT-C score of 9.1 to 5.8. In terms of the Australian guidelines, this is still in the excessive consumption range but may be regarded as a reduction from high- to medium-risk drinking. At the mean, this is a reduction:

- For 'probably dependent' drinkers from 40.8 to 20.1 drinks per week; and,
- For 'hazardous/harmful' drinkers from 22.9 to 11.9 standard drinks;
- For *all* successful (3-months plus) participants from 37.12 to 17.49 standard drinks.

Other key data used in our calculations are:

- To extrapolate the effects observed in the study, the entire cohort of *Daybreak* participants at mid-2019 was considered. There are 7912 participants within the last snapshot and, if this group were to drop off at the same rate as the study, this would be adjusted to 2923 likely to be substantially affected by the app and its associated counselling services. This group is used as a sample of the 2.5 year population, to determine whether overall benefit will resemble that of Tait et al's group. On this group, there is a mean AUDIT-C score of 8.10, which is, like the studied dataset, in the high-risk drinking range;<sup>6</sup>
- Over the 2.5 years supported by the Commonwealth's \$3 million public funding for *Daybreak*, 20,000 unique participants will enroll in the program.<sup>7</sup> Assuming that their continued participation and consequent benefits will be at the same rate, figures for the current cohort are scaled up by a factor of  $\frac{20,000}{7,912}$ ;

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<sup>6</sup> AUDIT-C scores supplied by Hello Sunday Morning.

<sup>7</sup> Funding is provided for an expected 20,000 participants but enrolment has exceeded expectations by 100%.



- For direct savings purposes, the average price of an alcoholic drink taken to be A\$7, which is anecdotal and can be varied according to alternative data;
- Based on a 2018 GDP per capita of US\$57,821.00,<sup>8</sup> the mean value of a day out of role is taken as A\$326.91. This is nominally either income or otherwise cost foregone by participants;<sup>9</sup>
- For economists, level of happiness or absence from distress are axiomatically subjective. While the Tait et al data show a significant improvement on the Kessler 10 Scale, there is no credible capacity to attach an economic value to this. Nonetheless, this is an observed public good as shown by an increasing governmental interest in happiness and wellness;<sup>10</sup>
- The QoL scores recorded by Tait et al are equally subjective, though it is noted that they are commonly more than anything predictors of compliance particularly where financial sources of stress are low.<sup>11</sup> Accordingly, an economic value is not applied to this change;
- Population is respectively 20,841,418 persons over 18, from a total of 24,981,326,<sup>12</sup> of which our 16.1% contributors to the costs of alcohol misuse represent some 3,355,468 individuals; and
- The reduction in health services demand of 19% is used as the best available proxy for overall reduction in risk and therefore losses to the economy.

These are cautious factors and a more expansive longitudinal study with more detailed understanding of the individual risks and experiences of participants will provide a more complete analysis. Equally, there are some much higher estimates of alcohol effects which would amplify these calculations.

From the data available, the following conclusions are drawn:

1. The overall annual economic benefits in terms of reduced days out of role are:
  - a. An annualized \$32,624,855.92 for the entire cohort of 20,000 participants in the program (all benefits are from those who participated for at least three months, who within this full cohort, will be 7,390 persons). This represents earnings from over 199,000 days in work or other roles. It is a privately consumed benefit for participants in *Daybreak*;
  - b. Benefits per person of \$1,631.24 across the 20,000 initial registrants, or \$4,414.93 for those who participated for at least 3 months;

<sup>8</sup> <https://www.ceicdata.com/en/indicator/australia/gdp-per-capita> Accessed October 2019.

<sup>9</sup> Nominal exchange rate at October 2019 of US\$1=AUD1.47, 260 days *per annum* 'in role'.

<sup>10</sup> See for example use of the K10 scale in: Victorian Government, Department of Health, "The Victorian happiness report: The subjective wellbeing of Victorians", 2015.

<sup>11</sup> Michael Harley et al, "Completion rates and psychosocial intervention effectiveness in an Australian substance use therapeutic community", *Substance Abuse Treatment, Prevention and Policy*, 2018 (13:33).

<sup>12</sup> Australian Bureau of Statistics, 3101.0 - Australian Demographic Statistics, Jun 2018, 20 December 2018.

<https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3101.0Jun%202018?OpenDocument> Accessed December 2019.



- c. A return per dollar spent on all registrants of \$10.87;
2. The improvement in household budgets<sup>13</sup> (again privately consumed benefits) from reduced number of drinks consumed (over a twelve-month period) is:
  - a. \$52,946,540.98 across all 20,000 participants;
  - b. \$2,647.33 per person for all participants, or \$7,164.95 per person for those who participated for 3 months or more;;
  - c. A return per dollar spent on all registrants of \$17.65;
3. A reduction in one-year avoidable healthcare expenditure across the program:
  - a. \$1,154,598.86 for all participants;
  - b. \$57.73 per person for all participants, or \$156.25 per person for those who continued participation with *Daybreak*;
  - c. A per-dollar return on healthcare savings only of \$0.38;
4. Savings against all undesirable losses (other costs and productivity losses) from alcohol misuse across the first year of:
  - a. \$6,325,556.89 for all participants;
  - b. \$316.28 per person for the full 20,000, or \$856.00 per person for successful registrants; and,
  - c. A broad economic benefit of \$2.11 per person for all participants.

1 and 2 are privately consumed benefits. The return on investment to the broader economy is represented by 3 and 4. Between these, the economic benefit from health and other savings and productivity gains is \$2.49 for every dollar provided by the Government to *Daybreak*.

While there may be some overlap between these different data points, these remain deliberately cautious figures, and this measure of \$2.49 per person is a reasonable estimate of the return on investment for *Daybreak*.

Another way of summarizing these data would be to say that, for every 1,000 registrants for *Daybreak* over the 2.5 years of Government funding:

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<sup>13</sup> Household budgets are individual matters but what is important here is that there is more money available for both essential cost-of-living elements, such as housing, food, health, education, transport, as well as for savings or allocation to healthier discretionary goods.



- 1. The cost to Government is \$150,000;**
- 2. The benefit to the broader economy is \$373,500, reflecting the return on investment of 2.49:1; which means,**
- 3. *Daybreak* has a cost-effective or break-even price of \$373.50, which makes the current Government subsidy of \$150 per person extremely good value.**

The larger scale of reduced economic losses from days out of role compared to broad economic benefits reflects the difference between direct income received, and broader economic productivity.

In turn, the relatively smaller overall gains against observed aggregate losses simply illustrates the scale of the intervention compared to the overall population at risk. The *Daybreak* program is therefore a clearly cost-effective public investment on multiple fronts and its expansion will only increase that return.

This conclusion is supported in the discussion below, which reviews international assessments of online and similar alcohol interventions, noting their delivery at typically less than 20% of the value of quality-adjusted life years (QALYs) gained.

### Recommendations

*Daybreak* is clearly an effective program for a significant cohort of the Australian community. There will naturally be some limits to its effectiveness which we might expect to be characterised by age, language, technology access and simple desire to change drinking patterns.

However, given the limited scale of its promotion and take-up to date, there is merit in extending the marketing and reach of the program to expand the economic benefits observed.

Accordingly, it is recommended that:

1. The current trial funding for *Daybreak* be expanded; and,
2. Associated with this, there should be funding for a larger-scale longitudinal study of the program, to identify more clearly demographic factors which make it more effective.

Given the overall cost of alcohol to the Australian community, *Daybreak* stands out as both an innovative and cost-effective option for Government.

Various evidence supporting these calculations and recommendations are discussed in detail below.

### Impact of Alcohol

Calculating individual or small group economic burden for alcohol dependence is potentially extremely complex and highly subjective. Accordingly, Evaluate has surveyed a substantial body of literature to arrive at some preferred values for outcomes of the *Daybreak* program.



A significant driver of the efficacy of approaches such as *Daybreak* is found in the gap between harmful drinking and access to alcohol-reduction support. This creates what from the health services perspective has been described as a *hidden* population. This is in part due to lack of supply, or absence of offer, as well as demand factors, such as stigmatisation of alcohol reliance.<sup>14</sup>

This is not a situation unique to Australia. Low-cost digital solutions similar to *Daybreak* have been pioneered in the United Kingdom in response to estimates that only 6-10% of problem drinkers are able to access intervention services under the National Health Service.<sup>15</sup> It may be presumed that access to services – as with most healthcare – is maldistributed according to relative disadvantage, geographic remoteness and cultural isolation factors.

The overall burden of alcohol is well-understood. The World Health Organization estimates that, globally, it is responsible for 5.1% of the total burden of disease.<sup>16</sup>

In Australia, best estimates show 1018.3 annual age-standardised Disability-Adjusted Life Years (DALYs) are lost per 100,000 population, and 254.9 age-standardised Years Lost to Disease (YLDs) for the same, attributable to alcohol use.<sup>17</sup> This is disturbing but perhaps not catastrophic, if compared to roughly double the number of lost DALYs found in some other regions of the world.<sup>18</sup> Looking to the total effect, a breakdown of impairment to the nation's health from alcohol misuse can be in terms of DALYs in Figure 1.

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<sup>14</sup> Jessica Jane Louise Kirkman, Briony Leo & Jamie Christopher Moore, "Alcohol Consumption Reduction Among a Web-Based Supportive Community Using the Hello Sunday Morning Blog Platform: Observational Study", *Journal of Medical Internet Research*, 2018 (20:5).

<sup>15</sup> Fiona L Hamilton et al, "Digital Alcohol Management ON Demand (DIAMOND) feasibility randomised controlled trial of a web-based intervention to reduce alcohol consumption in people with hazardous and harmful use versus a face-to-face intervention: protocol", *Pilot and Feasibility Studies*, 2015 (1:28).

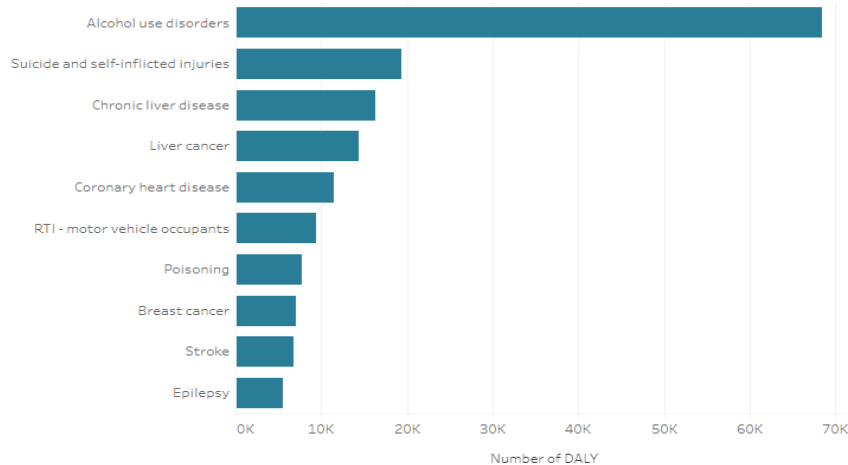
<sup>16</sup> World Health Organization, Classification of Diseases: ICD-11. <https://www.who.int/classifications/icd/en/> Accessed October 2019.

<sup>17</sup> Louisa Degenhardt et al (GBD 2016 Alcohol and Drug Use Collaborators), "The global burden of disease attributable to alcohol and drug use in 195 countries and territories, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016", *Lancet Psychiatry*, 2018 (5), p.1000.

<sup>18</sup> Cf. a mean of 19.2 DALYs per 1000 across North and South America, reported in Kevin D Shield et al, "Alcohol consumption and burden of disease in the Americas in 2012: implications for alcohol policy", *Pan American Journal of Public Health*, 2015 (38:6).



**Figure 1: DALYs Lost to Alcohol Use, 2015<sup>19 20</sup>**



These data are consistent with international studies of alcohol causation or contribution to malignant neoplasms, neuropsychiatric disorders, gastrointestinal disease, and accidental and deliberate self-harm.<sup>21</sup> The underlying data for this chart show 68,455 DALYs attributable to alcohol use.<sup>22</sup> If a generally-accepted mean value of a DALY at AUD50,000 is taken,<sup>23</sup> this provides a total national cost at A\$3.4 billion.

A more stark calculation comes from consideration that DALYs in these data are a combination of fatal burden (years of life lost) and non-fatal burden (years lost to disease). If this total is multiplied by the Australian Government's prevailing valuation of a single year of statistical life – at AUD213,000<sup>24</sup> – a potential economic loss of A\$14.58 billion can be observed.

Looking at broader social costs, the Australian Government, through the Department of the Attorney-General, commissioned a landmark study of economic impact of alcohol and other substances in 2008.<sup>25</sup> Within this, the authors identified a range of costs as outlined in Table 1.

<sup>19</sup> Australian Institute of Health and Welfare, "Australian Burden of Disease Study: Interactive data on risk factor burden", 13 June 2019. <https://www.aihw.gov.au/reports/burden-of-disease/interactive-data-risk-factor-burden/contents/alcohol-use> Accessed October 2019.

<sup>20</sup> These data imply a different total DALY impairment from the previous source. While estimates differ, the total impairment is extremely large, and this table shows the different sources of lost life-years.

<sup>21</sup> For comparative data, see: Robin Room, Thomas F Babor & Juergen Rehm, "Alcohol and Public Health", *The Lancet*, 2005. <https://www.semanticscholar.org/paper/Alcohol-and-public-health-Room-Babor/a733b8068842d1cbc2988bfc0e0dc5387bc1dccc> Accessed October 2019.

<sup>22</sup> Australian Institute of Health and Welfare, "Australian Burden of Disease Study", 13 June 2019.

<sup>23</sup> While this figure is mostly convention in Australia, it resembles per capita share of GDP discounted by a generalised marginal excess burden of taxation.

<sup>24</sup> Australian Government, Department of Prime Minister and Cabinet, Office of Best Practice Regulation, "Best Practice Regulation Guidance Note: Value of Statistical Life", August 2019. [https://www.pmc.gov.au/sites/default/files/publications/value-of-statistical-life-guidance-note\\_0\\_0.pdf](https://www.pmc.gov.au/sites/default/files/publications/value-of-statistical-life-guidance-note_0_0.pdf) Accessed October 2019.

<sup>25</sup> David J Collins & Helen M Lapsley, "The costs of tobacco, alcohol and illicit drug abuse to Australian society in 2004-05", Commonwealth of Australia, 2008.



**Table 1: Tangible (Social) Costs of Alcohol Abuse:<sup>26</sup>**

Costs in A\$ millions		
Year	2004-05	2018-19
<b>Labour in the workforce</b>		
Reduction in workforce	3210.70	4494.98
Absenteeism	367.90	515.06
<b>Total</b>	<b>3578.60</b>	<b>5010.04</b>
<b>Labour in the household</b>		
Premature death	1423.90	1993.46
Sickness	146.90	205.66
<b>Total</b>	<b>1570.80</b>	<b>2199.12</b>
<b>Total paid and unpaid labour costs</b>	<b>5149.40</b>	<b>7209.16</b>
Less consumption resources saved	-1611.30	-2255.82
<b>Total net labour costs</b>	<b>3538.00</b>	<b>4953.20</b>
<b>Healthcare (net)</b>		
Medical	540.70	756.98
Hospital	662.20	927.08
Nursing Homes	401.20	561.68
Pharmaceutical	297.60	416.64
Ambulances	74.80	104.72
<b>Total Healthcare</b>	<b>1,976.70</b>	<b>2,767.38</b>
Road accidents	2,202.00	3,082.80
<b>Crime</b>		
Police	747.10	1,045.94
Courts	85.80	120.12
Prisons	141.80	198.52
Property	67.10	93.94
Insurance Admin	14.30	20.02
Prisoner Productivity	368.00	515.20
<b>Total Crime</b>	<b>1,424.00</b>	<b>1,993.60</b>
Resources for Abuse	1,688.80	2,364.32
<b>Total</b>	<b>10,829.50</b>	<b>15,161.30</b>

<sup>26</sup> Collins & Lapsley, "The costs of tobacco, alcohol and illicit drug abuse", 2008. Table 33, p.64.



Costs for the period 2018-19 have been scaled up according to the Reserve Bank of Australia's inflation measures, at a fixed rate of 1.40.<sup>27</sup> This assumes a common rate of inflation for all costs: while this is not entirely correct – for example health inflation tends to exceed general inflation - it is a reasonable concession within the bounds of this analysis.

These data have also not been adjusted for overall consumption, which has fallen on average *per capita* from 10.49 litres of pure alcohol to 9.39 in 2016-17.<sup>28</sup> Notably it followed a somewhat parabolic path over that period and this change may be cyclical, though hopefully it is more permanent. Nonetheless, adjustment for this change would add complexity without increasing precision. It is also interesting to note here that this shift is relatively small compared to the reduction in harmful alcohol consumption in some similar economies: as an example, Germany shows for both men and women a reduction in harmful consumption of around two-thirds over the survey periods 1990-92 to 2008-11 (albeit from a higher base rate).<sup>29</sup>

As Collins and Lapsley estimate intangible costs, such as loss of life and pain and suffering, at A\$4.49 billion for 2004-05, leading to total social costs of 15.32 billion, this can be scaled up to a notional 2018-19 cost of A\$21.45 billion.<sup>30</sup> These data parallel those calculated by various other public bodies, and so may be relied upon as accepted figures.<sup>31 32</sup>

There is further useful data from this study. In particular the observation that those who consume alcohol in the 'harmful' category have a 20% higher absenteeism rate than non-drinkers.<sup>33</sup> Further, the authors provide a distribution of total losses as follows:<sup>34</sup>

- Households 23.1%;
- Business 50.4%; and
- Government 26.4%.

This calculation differs from some international cost of illness (COI) studies, one of which for the USA places 45% of the burden on alcohol abusers and their families, 38% on Government, 10% for health

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<sup>27</sup> Reserve Bank of Australia, Inflation Calculator. <https://www.rba.gov.au/calculator/annualDecimal.html> Accessed October 2019.

<sup>28</sup> Australian Bureau of Statistics, 4307.0.55.001 - Apparent Consumption of Alcohol, Australia, 2016-17, Table 7, 3 September 2018. <https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4307.0.55.0012016-17?OpenDocument> Accessed October 2019.

<sup>29</sup> Cornelia Lange et al, "Alcohol consumption of adults in Germany: Harmful drinking quantities, consequences and measures", *Journal of Health Monitoring*, 2016 (1:1), p.11.

<sup>30</sup> A\$21,445,480,000.

<sup>31</sup> For example, Matthew Manning, Christine Smith & Paul Mazerolle, "The societal costs of alcohol misuse in Australia", *Trends and Issues in Criminal Justice*, Australian Government, Australian Institute of Criminology, April 2013: calculate direct social costs at AUD14.352 Billion for 2010. <https://aic.gov.au/publications/tandi/tandi454> Accessed October 2019.

<sup>32</sup> Australian Institute of Health and Welfare, "Alcohol, tobacco & other drugs in Australia", 23 September 2019: relies on both the Collins & Lapsley and the Manning, Smith & Mazerolle data sets. <https://www.aihw.gov.au/reports/alcohol/alcohol-tobacco-other-drugs-australia/contents/impacts/economic-impacts> Accessed October 2019.

<sup>33</sup> Collins & Lapsley, "The costs of tobacco, alcohol and illicit drug abuse", 2008.

<sup>34</sup> Collins & Lapsley, "The costs of tobacco, alcohol and illicit drug abuse", 2008.



insurance and 6% for victims of crime and crashes. The same study calculates productivity losses as 72.7% of total burden, while noting the difficulty of observing unproduced goods.<sup>35</sup>

In further contrast, one of the more curious analyses focusing on binge drinking, underage drinking and drinking during pregnancy finds a per-unit effect of US\$2.05 per drink to the public purse.<sup>36</sup> There is currently no comparable figure for Australia but, if there were, it would confute the conclusion that taxes may exceed direct public costs for alcohol.

Overall, there is substantial inconsistency between studies of alcohol impact and its potential amelioration. While most studies use a combination of work loss, direct public health costs and loss of healthy life, a deconstruction of some 22 international studies, including three from Australia, shows that there is little agreement as to what constitutes a full set of effects.<sup>37</sup>

This illustrates the variety and subjectivity of loss assessments for a social phenomenon as complex as alcohol misuse. That said, the lack of local epidemiological data in any given country means that all assessments take into account broader international data to increase the accuracy of estimates.<sup>38</sup> Noting all this, Evaluate is most comfortable with the upscaled Collins & Lapsley data alongside the AIHW estimates.

It is noted here that, while governments may in budgetary terms have a net revenue from alcohol taxes,<sup>39</sup> this is not in itself a compensation for the personal, corporate and economy-wide impacts of alcohol misuse.

### Impact of Change

Moving from quantification of alcohol as a source of economic loss to the potential amelioration offered by different intervention programs further increases the complexity of analysis. In practice, cost-benefit or cost-effectiveness analyses (CBA & CEA) seek to allocate direct or comparative reductions in individual burden per patient treated. The issue here is significant heterogeneity of abuse level, circumstances and consequences (see *Consumption Patterns* below), which makes estimation fraught.

One solution to this is – seeing all alcohol reduction as a good – to focus on CEA which compares the *relative* cost-effectiveness of different approaches.<sup>40</sup> In a sense, this can be done with the control v. intervention groups of the Tait study, though ultimately these overlap.

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<sup>35</sup> National Institute on Alcohol Abuse and Alcoholism, “The Economic Costs of Alcohol Abuse”, pp.367-8. <https://pubs.niaaa.nih.gov/publications/10report/chap06c.pdf> Accessed October 2019..

<sup>36</sup> Jeffrey J Sacks et al, “2010 National and State Costs of Excessive Alcohol Consumption”, *American Journal of Preventive Medicine*, 2015 (49:5).

<sup>37</sup> Montarat Thavorncharoensap et al, “The economic impact of alcohol consumption: a systematic review”, *Substance Abuse Treatment, Prevention, and Policy*, 2009 (4:20).

<sup>38</sup> Lars Møller & Srdan Matic, “Best practice in estimating the costs of alcohol – Recommendations for future studies”, World Health Organization Europe, 2010, p.15.

<sup>39</sup> Møller & Matic, “Best practice in estimating the costs of alcohol”, 2010, p.68.

<sup>40</sup> For discussion of the relative merits of cost-only, CBA and CEA, see: Jeremy W Bray & Gary A Zarkin, “Economic Evaluation of Alcoholism Treatment”, *Alcohol Research and Health*, 2006 (29:1).



The question of relative effects from reduced level of drinking is fundamental to Tait et al’s data. A survey of comparative European data is shown below, illustrating the benefits from lower drinking levels:

**Table 2: Direct and Relative Economic Impairments from Different Drinking Levels<sup>41</sup>**

Percentages of all Hospital & Rehab Patients, and Percentage Impairment in the Workplace						
Level of Drinking	High	Medium	Low	Benefit from high to medium	Benefit from Medium to Low	Benefit from High to Low
Hospitalised Past Year	15.15	10.4	8.23	31.35%	20.87%	45.68%
Rehab Past Year	9.63	5.67	5.66	41.12%	0.18%	41.23%
Absenteeism	16.72	11.06	9.09	33.85%	17.81%	45.63%
Work Productivity Loss	32.49	29.72	19.96	8.53%	32.84%	38.57%

What is of greatest interest in these data are the relativities, showing the percentage reduction in loss from moving from comparatively higher to comparatively lower levels of alcohol misuse or dependency. Some key observations may be made here:

- There is significant unevenness of effect, in different elements of impact, from health-related quality of life proxies (hospital use in particular) to work-productivity measures;
- In terms of hospital consumption as a marker of health status, the greater benefit comes from moving from a high to a medium drinking level, though there is still substantial benefit from moving on to the low level. This is consistent with the argument for substance-abuse interventions which seeks to divert potential ‘frequent flyers’ in emergency rooms and hospital beds. Also, given that much of the relevant study was based on the impact of alcohol-related comorbidities, this is predictable;
- Prevalence of rehabilitation attendance is primarily attached to high levels of drinking, with virtually no variation between medium and low levels. This is a saving to individuals and the health system though it should be noted that, in Australia, there is a well-understood bias toward privately insured patients accessing rehabilitation services;
- In the workplace, the greatest overall benefit is found in reduced absenteeism, though between medium and low drinking, productivity (and the productivity-sapping spectre of presenteeism) shows the greater improvement. This instinctively makes sense, as even medium drinking levels interfere with next-day cognitive processes.

<sup>41</sup> Based on: B L Odlaug et al, “Alcohol Dependence, Co-occurring Conditions and Attributable Burden”, *Alcohol and Alcoholism*, 2016 (51:2), p.207.



While these data are from a different sample, they compare well with the Tait et al experience from *Daybreak*, in terms of quality of life (QoL), health service use and days out of role.<sup>42</sup>

### Evidence from Similar and Competing Approaches to Daybreak

This section examines international evidence on a selection of alternative approaches to reducing alcohol consumption from harmful levels including a variety of short-term and technology-based programs. Of particular interest is the economic analysis of these initiatives.

From the outset, it is notable that there is strong evidence of the effectiveness of brief interventions with meta-analyses of multiple studies showing statistically-significant benefits from programs such as *Daybreak* and associated interventions.<sup>43</sup> Unfortunately, economic analysis is more scarce than pure efficacy analysis with a survey of ten major studies revealing that only one considered cost-effectiveness.<sup>44</sup> Nonetheless, there is a body of economic review available on this subject.

One of the most rigorous models is found in a Canadian microsimulation approach which simulated lifetime alcohol consumption and compared a base case of no intervention with a model of screening and brief intervention (SBI). Like the Tait et al approach, this uses the AUDIT screening and classification tool. Tait describes this as follows: “scores on the AUDIT between 8-19 indicate a pattern of drinking that is likely to fulfil the International Classification of Diseases criteria for “hazardous” or “harmful” drinking while higher scores equate to “alcohol dependence” but the AUDIT is a screening tool, not a diagnostic indicator”.<sup>45</sup>

Key conclusions were:

- SBI reduces alcohol consumption by 15.1% for men and 4.3% for women;
- SBI is cost-effective for AUDIT thresholds between 8 and 4; and,
- At an AUDIT score of 8, SBI has an incremental cost-efficiency ratio (ICER) of CAS8,729 per quality-adjusted life-year (QALY).<sup>46</sup>

On the last observation, the ICER is the ratio of costs to benefits for an improved treatment expressed on a per-QALY basis. The price in Australian dollars is equivalent to A\$9,976 per QALY.<sup>47</sup> Accepting the conventional Australian value of a QALY as AUD50,000, this is less than 20% of the threshold price for approving new healthcare.

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<sup>42</sup> Tait et al, “A quasi-randomized controlled trial”, 2019.

<sup>43</sup> Jaison Joseph & Debasish Basu, “Efficacy of Brief Interventions in Reducing Hazardous or Harmful Alcohol Use in Middle-Income Countries: Systematic Review of Randomized Controlled Trials”, *Alcohol and Alcoholism*, 2017 (52:1).

<sup>44</sup> Sarah Kelly et al, “Interventions to prevent and reduce excessive alcohol consumption in older people: a systematic review and meta-analysis”, *Age and Ageing*, 2018 (47).

<sup>45</sup> Tait et al, “A quasi-randomized controlled trial”, 2019.

<sup>46</sup> Richard M Zur & Gregory S Zaric, “A microsimulation cost-utility analysis of alcohol screening and brief intervention to reduce heavy alcohol consumption in Canada”, *Addiction*, 2015 (111).

<sup>47</sup> Nominal exchange rate in October 2019 of CAD1=AUD1.12.



While this is only a comparison of healthcare costs (not taking into account other economic impacts), it emphasises the potential value of short-term interventions for alcohol consumption.

Similar ICER measures have been reviewed across a range of jurisdictions with emphasis on primary care-based training in which providers were able to refer problem drinkers to online support services. There has been a particular focus on incentives given the recognition that, as per the Canadian study, short-term interventions are highly cost-effective but are only sporadically implemented. Results from a survey of European initiatives find per-QALY ICERs of €3,386 to €4,632<sup>48</sup> (A\$5,485 to A\$7,503),<sup>49</sup> which is again well below the healthcare investment threshold.

One word of caution should be noted in comparing these two studies, which is that the European piece is looking at primary care incentives. This may increase costs on the primary care side but not include the full cost of online-based interventions.

One of the most extensive sets of UK studies shows that for assistance to older drinkers (who may present more substantial chronic disease cost risks), stepped care including counselling is highly effective over 12 months at around £7,997 per QALY at twelve months<sup>50</sup> or A\$14,874.<sup>51</sup> This is more expensive than the data above, but also reflects a more intensive set of interventions. Notably this study allowed for highly granular treatment of cost savings with substantially more information collected for each participant.<sup>52</sup>

Overall, the conclusion from these data is that for interventions of any kind, the ICER is less than 20% of the QALY threshold value, which:

- Within the Australian healthcare system is rated as exceptional value for money; and,
- Provides a strong argument for increased investment in alcohol reduction programs.

It is notable that not all evidence for alcohol reduction is cost-effective. As Tait et al found, there may be some limited incremental differences between enhanced and control groups: a study of counselling v. enhanced primary care in India found only an 87% probability of cost-effectiveness for face-to-face services over existing offers as the QALY price approached the threshold.<sup>53</sup> This may be a culture-

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<sup>48</sup> Colin Angus et al, "Cost-effectiveness of strategies to improve delivery of brief interventions for heavy drinking in primary care: results from the ODHIN trial", *European Journal of Public Health*, April 2019 (29:2).

<sup>49</sup> Nominal exchange rate in October 2019 of €1=AUD1.62.

<sup>50</sup> Simon Coulton et al, "Effectiveness and Cost-effectiveness of Opportunistic Screening and Stepped-care Interventions for Older Alcohol Users in Primary Care", *Alcohol and Alcoholism*, 2017 (52:6).

<sup>51</sup> Nominal exchange rate in October 2019 of £1=AUD1.86.

<sup>52</sup> JM Watson et al, "AESOPS: a randomised controlled trial of the clinical effectiveness and cost-effectiveness of opportunistic screening and stepped care interventions for older hazardous alcohol users in primary care", *Health Technology Assessment*, June 2013 (17:25).

<sup>53</sup> Abhijit Nadkarni et al, "Sustained effectiveness and cost-effectiveness of Counselling for Alcohol Problems, a brief psychological treatment for harmful drinking in men, delivered by lay counsellors in primary care: 12-month follow-up of a randomized controlled trial", *PLOS Medicine*, September 12, 2017.



specific datum and other trials are underway comparing business-as-usual alcohol reduction cases with additional counselling.<sup>54, 55, 56</sup>

Looking specifically to technology-based solutions, a range of approaches have been studied. A review of 100 reports, of which 28 fitted criteria, in the USA raises the challenge for electronic intervention (compared to face-to-face screening and support) that it needs to better demonstrate enduring outcomes rather than short-term effects.<sup>57</sup> This conclusion is paralleled by another literature review which finds that mobile phone-based and similar interventions for various lifestyle diseases appear to be effective up to one year and require further research on sustainability.<sup>58</sup> This is not unique to electronic interventions: even with anti-alcohol medication and extensive behavioural modification, consequence reduction drops off after twelve months although less radically.<sup>59</sup>

Effects also seem both lower and less sustainable for young people aged 15-25,<sup>60</sup> which is likely a reflection of lower immediate health effects and economic consequences for this group.

It is noted here that the *Daybreak* app, as a continuing rather than transient support, falls somewhere in between typical brief interventions and more programmatic management of alcohol. This type of hybrid approach which Tait et al examine is less common in other jurisdictions. However, for the purposes of this paper, calculations are only made for the first year's effect.

Content is also an important issue. One study based on a large cohort of medium-risk drinkers who had been admitted to hospital for alcohol-related injuries found simultaneously that:

- Text-based intervention may have a significant effect on reducing overall alcohol consumption; while,
- Having little or no impact on negative consequences of alcohol.

A suggested explanation of this is that focus simply on the overall level of alcohol consumption may be inadequate to gain the benefits sought. Behavioural choices while drinking are equally important and the former is apparently not a direct proxy for the latter.<sup>61</sup>

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<sup>54</sup> Eleonor Säfsten et al, "Comparing counselling models for the hazardous use of alcohol at the Swedish National Alcohol Helpline: study protocol for a randomized controlled trial", *Trials*, 2017 (18:257).

<sup>55</sup> Dan I Lubman et al, "A structured telephone-delivered intervention to reduce problem alcohol use (Ready2Change): study protocol for a parallel group randomized controlled trial", *Trials*, 2019 (20:515).

<sup>56</sup> Antiopi Ntouva et al, "Assessing the feasibility of screening and providing brief advice for alcohol misuse in general dental practice: a clustered randomized control trial protocol for the DART study", *BMJ Open*, 2015.

<sup>57</sup> Eric A Dedert et al, "Electronic Interventions for Alcohol Misuse and Alcohol Use Disorders A Systematic Review", *Annals of Internal Medicine*, August 4 2015 (163:3).

<sup>58</sup> Ashkan Afshin et al, "Information Technology and Lifestyle: A Systematic Evaluation of Internet and Mobile Interventions for Improving Diet, Physical Activity, Obesity, Tobacco and Alcohol Use", *Journal of the American Heart Association*, 2016.

<sup>59</sup> Katie Witkiewitz et al, "Clinical Validation of Reduced Alcohol Consumption After Treatment for Alcohol Dependence Using the World Health Organization Risk Drinking Levels", *Alcoholism: Clinical and Experimental Research*, January 2017 (41:1).

<sup>60</sup> Geir Smedslund et al, "Effects of Computerized Interventions on Risky Alcohol Use Among Youth: Systematic Review", *Research on Social Work Practice*, 2018.

<sup>61</sup> Sarah Sharpe et al, "Effect of a text message intervention on alcohol-related harms and behaviours: secondary outcomes of a randomized controlled trial", *BMC Research Notes*, 2019 (12:267).



For the purposes of this paper, the data from Tait et al provide both consumption reduction and other measurable effects so the content of *Daybreak* appears to exceed simple drinking levels.

### Consumption Patterns and Drivers

The most recent Australian Bureau of Statistics (ABS) Data on alcohol consumption is shown in Table 3

**Table 3: Prevalence of Alcohol Consumption, 2017-2018<sup>62</sup>**

All Persons Over 18		
Alcohol consumption in the last week	Overall %	
Exceeded guidelines	16.1	
Did not exceed guidelines	38.9	
Never consumed alcohol	11.6	
Consumed alcohol 12 or more months ago	8.5	
Did not consume alcohol in the last week but did less than 12 months ago	23.8	
Total did not exceed guidelines	82.8	
<b>Total</b>	<b>100.0</b>	
Number of standard drinks consumed daily when exceeding guidelines (7-day average)	% Exceeded Guidelines	
More than 2 to 2.5	22.8	3.7
More than 2.5 to 3	16.6	2.7
More than 3 to 3.5	11.7	1.9
More than 3.5 to 4	9.9	1.6
More than 4 to 5	13.1	2.1
More than 5 to 6	9.6	1.5
More than 6 to 7	4.5	0.7
More than 7	12.2	2.0
<b>Total persons who exceeded guidelines</b>	<b>100.0</b>	<b>16.1</b>

For the purposes of this paper, it is assumed that the 16.1% of consumers who exceed Australia’s national guidelines is a moving average.<sup>63</sup> Further it is assumed that this 16.1% is responsible for the economic burden of alcohol use in Australia. This is not a perfect assumption – some people will suffer ill health effects or have impaired driving from much lower consumption – but it provides a useful

<sup>62</sup> Australian Bureau of Statistics, 4364.0.55.001 - National Health Survey: First Results, 2017-18, Table 10.3, 12 December, 2018. <https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4364.0.55.0012017-18?OpenDocument> Accessed October 2019.

<sup>63</sup> National Health & Medical Research Council, “Australian guidelines to reduce health risks from drinking alcohol”, 2009. <https://www.nhmrc.gov.au/about-us/publications/australian-guidelines-reduce-health-risks-drinking-alcohol> Accessed October 2019.

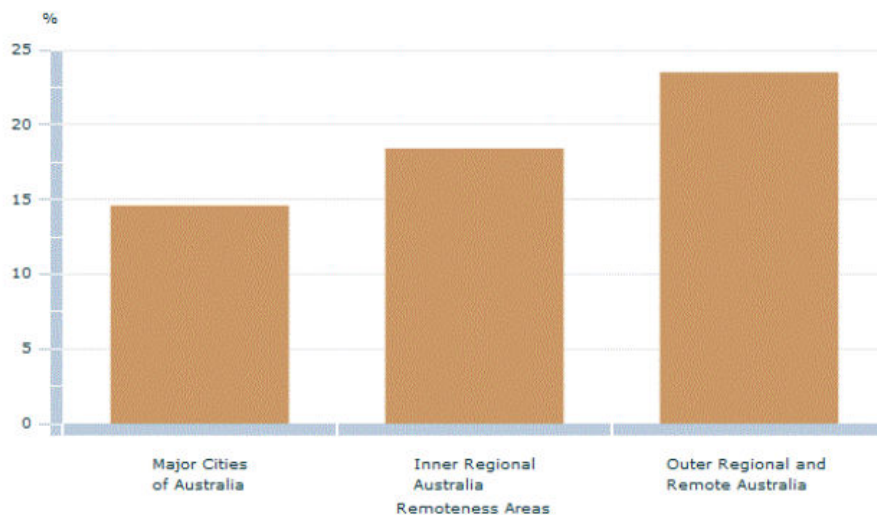


baseline for calculations. Encouragingly, it concurs with the World Health Organization's assessment that, globally, around 16.0% of adults engage in heavy episodic drinking.<sup>64</sup>

Excess alcohol consumption differs by sex with 23.7% of males exceeding guidelines compared to only 8.8% of women.<sup>65</sup> While this is important, Tait et al shows a substantial recruitment bias of 71% females within the studied cohort.<sup>66</sup> For economic analysis however, only the alcohol consumption of the sample is relevant, so this disparity does not affect outputs.

Similarly, excessive alcohol use varies radically by location in Australia, as shown in Figure 2.

**Figure 2: Persons Exceeding Lifetime Alcohol Risk Guidelines by Remoteness, 2017-18<sup>67</sup>**



Associated with this, international studies show clear socio-demographic factors associated with risky drinking with the rate decreasing by increased educational attainment; co-living; marriage; parenthood; and work status, amongst others.<sup>68</sup> Work context also appears to matter, as there is evidence from a limited number of studies that, in contrast to the general population, brief alcohol interventions in military personnel are not efficacious.<sup>69</sup>

While the Tait et al study provides some demography, the size of the cohort limits the statistical significance of individual characteristics. Given the broader scope of *Daybreak* outside the study, these would be interesting variables to add in a more extensive longitudinal analysis. Part of the interest here

<sup>64</sup> World Health Organization, "Global status report on alcohol and health 2014". [https://apps.who.int/iris/bitstream/handle/10665/112736/9789240692763\\_eng.pdf?sequence=1](https://apps.who.int/iris/bitstream/handle/10665/112736/9789240692763_eng.pdf?sequence=1) Accessed October 2019.

<sup>65</sup> Australian Bureau of Statistics, 4364.0.55.001 - National Health Survey: First Results, 2017-18", 2018.

<sup>66</sup> Tait et al, "A quasi-randomized controlled trial", 2019.

<sup>67</sup> Australian Bureau of Statistics, 4364.0.55.001 - National Health Survey: First Results, 2017-18, Overview, 12 December, 2018. <https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4364.0.55.0012017-18?OpenDocument> Accessed October 2019.

<sup>68</sup> Mikkel Magnus Thørrisen, Jens Christoffer Skogen & Randi Wågø Aas, "The associations between employees' risky drinking and sociodemographics, and implications for intervention needs", *BMC Public Health*, 2018 (18:735).

<sup>69</sup> AM Doherty et al, "Are brief alcohol interventions targeting alcohol use efficacious in military and veteran populations? A meta-analysis", *Drug and Alcohol Dependence*, 2017 (178).



is whether these are ‘sticky’ factors which affect the efficacy of programs, such as *Daybreak*, and socio-economic status prediction factors are available.<sup>70</sup>

The argument has also been made that alcohol dependence or misuse should not be separated in a primary care context from other risky behaviours and mental health issues.<sup>71</sup> This would not however diminish the importance of alcohol reduction.

Similarly, it has been observed that for harmful drinkers, their social lives, hobbies and leisure activities tend to revolve around alcohol and a change of life plan is required if any intervention is to prove effective.<sup>72</sup> This is likely to provide a source of variance in the impact of any program. There is also evidence that 50-70% of the risk factor for alcohol use is genetic with the strongest association with a genotype which actually reduces the risk:<sup>73</sup> this may also limit interventional efficacy and efficiency.

Compounding these effects, the ‘alcohol harm paradox’ is presented, which is that people in more disadvantaged socioeconomic circumstances may suffer more alcohol-related loss from lower levels of consumption.<sup>74</sup> This may be due to a combination of factors, including financial resilience and access to healthcare or coincident adverse health factors.

Equally, efficiency and cost-efficiency) may be affected by self-selection and the reasons behind a decision to address perceived harmful drinking habits. Looking to the UK, one snapshot shows that, at any given time, around 20% of high-risk drinkers were trying to reduce their alcohol consumption and that concerns about future health (particularly among older women), weight loss and fitness dominate immediate health problems and criticism by family members.<sup>75</sup>

Finally in this section, it is important to note that there are some key behaviours in alcohol misuse which can be expressed in typically economic language and which may limit the individual efficacy of any treatment or diversion program. These include:

- Delay discounting, which is the preference for short-term rewards, and violates traditional assumptions about intertemporal choices;
- Alcohol demand, which for any individual is part of her consumption function, and shows a relative value placed on alcohol at a given price; and,

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<sup>70</sup> Emma Beard et al (1), “Associations between socio-economic factors and alcohol consumption: A population survey of adults in England”, *PLOS ONE*, February 4, 2019.

<sup>71</sup> Jim McCambridge & Richard Saitz, “Rethinking brief interventions for alcohol in general practice”, *British Medical Journal*, 2017.

<sup>72</sup> Jean M McQueen, Claire Ballinger & Tracey E Howe, “Factors associated with alcohol reduction in harmful and hazardous drinkers following alcohol brief intervention in Scotland: a qualitative inquiry”, *BMC Health Services Research*, 2017 (17:181).

<sup>73</sup> JP Connor, PS Haber & WD Hall, “Seminar: Alcohol Use Disorders”, *The Lancet*, 2016 (387:10022).

<sup>74</sup> Emma Beard et al (2), “Deconstructing the Alcohol Harm Paradox: A Population Based Survey of Adults in England”, *PLOS ONE*, September 28, 2016.

<sup>75</sup> Emma Beard et al (3), “Predictors of and reasons for attempts to reduce alcohol intake: A population survey of adults in England”, *PLOS ONE*, March 9, 2017.



- Proportional Alcohol-related Reinforcement, which is the relative share of enjoyment associated with alcohol-related rather than alcohol-free behaviour.<sup>76</sup>

This is a rich vein for further research, as it is likely to inform better design of interventions to reflect individual drivers and provide more targeted education. As an observation on this, one of the apparently most effective features of the *Daybreak* app is that individuals find their own community, so many of these behavioural factors are likely to be subjectively addressed. This is a significant benefit of a distributed, community-based platform over a more formal intervention.

None of the variables discussed in this section detract from the value of the Tait et al study but they are factors which will affect predicted efficacy of the *Daybreak* platform and similar products for a broader population. For the purposes of this paper, a simple linear extrapolation has been used though this can be refined in future studies.

## Case studies

### Case Study One: A year of sobriety

Early in the morning after her 44<sup>th</sup> birthday, Casey<sup>77</sup> woke up in a panic. She'd been asleep for a couple of hours but couldn't remember if she'd bought her new coat home from the celebrations...or her wallet...and couldn't remember where they'd left the car.

Running out into the parking lot, she tried opening the wrong car door before realising that theirs was parked a few spots away. There was no coat though.

As she panicked, her partner tried to calm her down. Crying, she eventually found her coat on the pile of clothes on the bathroom floor. "I don't want to live like this", she kept repeating.

The next day, Casey spent the day feeling miserable and horribly hungover. Mid-afternoon, she and her partner did the math and worked out that they'd run through \$500 the night before, most of it on alcohol.

Casey joined *Daybreak* and found an "awesome community" and what became her "sober family". She'd doing well and this year, on her 45<sup>th</sup> birthday, she and her partner had a great lunch, went shopping and then stopped for dessert on the way home. No alcohol, no hangover, no hit to the bank account and knowing where all their clothes are.

Casey says she's "blessed" and that "it's only going to get better from here". She's back in control.

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<sup>76</sup> James McKillop, "The Behavioral Economics and Neuroeconomics of Alcohol Use Disorders", *Alcoholism: Clinical and Experimental Research*, April 2016 (40:4).

<sup>77</sup> All names in case studies have been changed to protect privacy.



### Case Study Two: the 100 day alcohol-free challenge

Cindy knew she was drinking too much. Coming to the end of the school year, she was tired, wanting to slow down and her evening glass of wine was expanding from one to a few. The few then turned into consecutive nights drinking and, before she realised, she was “drink fit” or drinking far too much.

She knew she needed to take a break. She knew that, for her at least, alcohol is insidious. It’s creeps into life because it’s socially acceptable and sometimes even “prescribed” or expected as part of festivities and celebrations.

Cindy turned to Daybreak for support and decided to take the 100 day alcohol-free challenge.

Within days, her skin had improved and, within a week, her sleep had too. By the end of a fortnight, she was really committed and within a month was even back at the gym – her energy levels had sky rocketed.

At the five week mark, she noticed that her urge to drink was being replaced with new habits and, a week later, her bloating had dissipated and her muscle tone was improving. Her memory, her concentration and her focus improved dramatically and were “the best they’ve ever been”.

Within two months, her mood was consistent...and positive and she began to question if she ever wanted to drink again. At 14 weeks, she decided to keep committing to Daybreak and go for the full year alcohol-free!!

### Case Study Three: achieving inner peace

Mandy didn’t drink all the time and not even every day. She did often drink more than she meant to though and often felt like she had let herself down. Once or twice a week her drinking left her feeling physically and mentally “blah” and she felt bad about herself because of it. Her sleep was suffering and she knew that she was on a downward trajectory because of her alcohol consumption.

Mandy researched what alcohol was doing to her body and to her mind. She’d given up drinking before, for Dry July or another reason, and had always felt deprived and as though she was missing out.

Joining the Daybreak app changed this though. Mandy gave up drinking for a time and found that access to the app “made this ride much easier than expected” and that the “community is healing”.

Her thoughts about drinking changed and, most of the time, she found that she simply didn’t want to drink. Occasionally, she’d crave a drink but found that it tended to relate to fitting in, old associations or the image of alcohol rather than the reality.

Those cravings pass though and Mandy now finds that her life is much better now. She feels healthier, she sleeps well, is “WAY more level headed emotionally” and never hates herself now. She’s up early exercising, meditating or doing yoga and is excited to be alive and experiencing the world with all her senses.



Mandy still goes out dancing, partying and socialising. She now remembers all the conversations she has though and says that, after chasing inner peace her whole adult life, she's now achieved it.<sup>78</sup>

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<sup>78</sup> Mandy's comments were recorded at Day 80 of her alcohol free journey.



## Appendix One: Demographics of Australian drinkers

The percentage of the Australian population aged 14 and over who consumed alcohol daily decreased from 6.5% in 2013 to 5.9% in 2016.<sup>79</sup> The percentage of people exceeding the guidelines for lifetime risk declined from 18.2% to 17.1% whilst those people exceeding single occasion risk guidelines – consuming 11 or more drinks at least once a month – did not change.

Around 17.4% of those who consumed alcohol in the last year were at harm or put others at risk of harm whilst under the influence of alcohol during the year, most usually by driving a vehicle (9.9% of recent drinkers).

There were a number of decreases in the percentages who experienced other alcohol related harms between 2013 and 2018. 18.7% of people experienced verbal abuse in 2016, down from 18.7%; 7.3% were physically abused, a drop from 8.7%; and 11.4% of people were “put in fear”, a fall of 1.4%.

The statistics for injuries continues to be of concern however. In 2016, 2.8% of drinkers were injured to the point of requiring medical attention while under the influence of alcohol and 1.3% needed to be admitted to hospital for treatment for those injuries.

Overall, however, in 2016, there were 13 of the 18 measures designed to reduce problems associated with alcohol received less support than they had in 2013. Reducing trading hours for pubs and clubs received saw support fall from 47% in 2013 to 39% in 2016 whilst the introducing more severe penalties for drink driving was supported by 84% of those surveyed. 35% of people continued to state that they thought alcohol was the drug that caused the most deaths but excessive use of alcohol was no longer the drug of greatest concern to the community, falling from 43% in 2013 to 28% with meth/amphetamine being mentioned by 40% of people (up from 16.1% in 2013).

### Risky consumption of alcohol

Young people continue to experience disproportionate harm from alcohol related accident or injury. They are more likely to exceed both the NHMRC single occasion risk guidelines for alcohol consumption and at levels well beyond the guidelines (11 or more standard drinks on a single occasion).

At the same time, most people aged 12 and older did not drink at levels that placed them at risk of harm over their lifetime. 58% of people drank at low-risk levels and 25% abstained from alcohol over the 12 month period. Across all age groups, around 20% exceeded the lifetime risk guidelines for alcohol consumption. A number of characteristics of those drinkers are worth noting, including:

- More than twice as likely to be male than female, at 24% and 9.5% respectively

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<sup>79</sup> All figures in this section are from Australian Institute of Health and Welfare, *National Drug Strategy Household Survey 2016: detailed findings*, 2017, unless otherwise stated.



- Females aged in their 50s are now the female group most likely to consume alcohol at risky levels with 13.0% doing so compared to 12.8% of females aged 18-24 who previously were most likely to do so
- Men aged 40–49 were the most likely age group of any group to drink at risky levels at 29%

Overall, however, the lifetime risk of alcohol-related harm declined in 2016, largely because of a fall in the number of men drinking at risky levels fell from 26% in 2013 to 24%. The overall proportion of women drinking at risky levels increased marginally from 2013 from 9.5% to 9.7%.

More than a third of Australians aged 12 and over in 2016 had consumed 5 or more standard drinks on a single occasion at least once in the past year, exceeding the NHMRC single occasion risk guidelines. Almost 25% did this at least once a month and 13% at least once every week. Again, males were more likely to drink alcohol to the extent that it placed them at risk from a single occasion of drinking at 45% and 27% respectively. Men also drank alcohol in quantities exceeding the guidelines more regularly than women 19% of men consuming these quantities at least once a week as opposed to women at 7%.

Age related differences also exist. People aged 18 to 24 were most likely to exceed the single occasion guidelines with 56% doing so. More people between the age of 12 and 17 were likely to abstain from alcohol consumption in 2016 with those numbers increasing from 73% to 80% and 71 to 83% for females and males in that population respectively. Those exceeding the adult guidelines for single occasion risk fell although 9.1% of males and 6.8% of females aged 12 to 17 still exceeded them.

The statistics for those between 30 and 39 and 40 and 49 were relatively similar with nearly 70% of both groups either abstaining entirely in the twelve months prior to the survey, never having more than 4 standard drinks in one sitting or having more than four drinks on one occasion at least once during the year but not monthly.

37% of Australians over the age of 12 drank alcohol levels that represent low risk of harm, that is, from any single drinking occasion in a year and over their lifetime. At the same time, 38% of Australian consumed alcohol at levels that placed them at harm in either the short or long term.

### **Age comparisons over time**

Between 2013 and 2016, younger age groups in Australia tended to reduce their risky levels of alcohol consumption whilst in older age groups these levels increased marginally or remained stable. The percentage of young people aged 12 to 17 abstaining from alcohol has increased from 54% in 2004 to 82% in 2016.

In 2013, people aged 40 to 49 recorded the highest level of drinking at a risk of lifetime harm at 23% and this continued in 2016 although the percentage fell marginally to 21%. 20% of people aged 50



to 59 drank at risky levels, the second highest level for any age group. Overall however, the lifetime risky drinking patterns of people aged 40 or over have remained relatively stable since 2004.

The percentage of people under 30 reducing their alcohol consumption saw the number of total people exceeding the single occasion risk guideline (at least monthly) fall. The proportion of young people aged 12 to 24 drinking quantities of alcohol on a single occasion that exceeded the single occasion risk guidelines significantly fell from 2013 to 2016 from 8.7% to 5.4% for the 12 to 17 age group and 47% to 42% for the 18 to 24 year olds. At the same time, although people aged 30 and older were largely less likely to exceed the guidelines, there was either a slight increase or no improvement in the level of risky drinking on a single occasion. Adults aged under 30 continue to have the highest proportion exceeding the single occasion risk guidelines.

### Geographic variations

Some population groups are far more likely to have used alcohol at risky levels than the overall population. 37% of Australians living in *Remote* and *Very remote* areas drink alcohol in quantities that places them at risk of alcohol-related harm from a single occasion of drinking compared to 24% of those living in *Major cities* compared with 24%.

### Reducing alcohol consumption

Whilst 77% percent of people in Australia aged 14 or older were had had an alcohol drink during the twelve months before the survey but 48% of those “recent drinkers” have tried to reduce their drinking.

The most common actions to try to reduce alcohol consumption included reducing the number of drinking occasions which 29% of people tried and/or reducing the amount consumed at one time, which was the approach taken by 28%. People between 25 and 29 were the most like to try to reduce their alcohol consumption and people aged 70 or older the least likely. People aged between 25 and 29 were the most likely group to reduce the number of times they drank with 34% doing so whilst 32% of people aged 30 to 39 reduced the amount they drank per session, making them the group most like to do this.

50% of those who tried to reduce their alcohol consumption in 2016 did so for health reasons.



## Appendix Two: Australia's Policy Approaches to Alcohol

Australia has long had both national and state-based policy approaches to managing alcohol and its use. In reviewing these policies, it is remarkable that the challenges associated with alcohol and its use/misuse have been well understood for decades and yet many of these challenges have not changed, such as the awareness of the impact of alcohol consumption on hospital admissions.

Reviewing these policy approaches to alcohol – particularly the evolution of these from the 1977 watershed report *Drug Problems in Australia – an intoxicated society?* to the National Alcohol Strategies – demonstrates how long effective approaches to helping people manage their alcohol intake appropriately have been needed and how long Australia's policy makers have acknowledged the issues with risky levels of alcohol consumption. The following highlights the policy approaches taken to date, why additional approaches are needed and further emphasises the impact adopting effective approaches would have on individuals, our society and our health system.

### 1977: Drug Problems in Australia – an intoxicated society?

In October 1977, Australia's Senate Standing Committee on Social Welfare tabled their report *Drug Problems in Australia – an intoxicated society?* The first comprehensive government report on drugs in Australia, the inquiry was chaired by Senator Peter Baume, later Minister for Health, and was tasked with considering "the extent and nature of the inappropriate use of alcohol, tobacco, analgesics and cannabis".<sup>80</sup>

The report was a watershed in acknowledging the use of legal drugs, such as alcohol and cigarettes, as central to the public debate on drugs more generally. Further, the Committee described problems relating to alcohol in Australia as having reached epidemic proportions and that neglecting these would represent gross national irresponsibility.

The report's impact was far-reaching. In 1984, Peter Baume reflected on its legacy, commenting that "the press is now willing to promote health and to promote moderation and to consider the use of legal drugs as part of our problem. All this represents some degree of progress across the spectrum."<sup>81</sup>

Further reports, strategies and policies followed both on drugs generally and also documents focused specifically on alcohol use and misuse.

### 1989: National Health Policy on Alcohol in Australia

In 1989, the "National Health Policy on Alcohol in Australia" was adopted by the Ministerial Council on Drug Strategy, the forerunner of the current Ministerial Drug and Alcohol Forum. Comprised of

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<sup>80</sup> Senate Standing Committee on Social Welfare, *Drug problems in Australia – an intoxicated society?*, October 1977 <https://apo.org.au/node/38156> Accessed 10 September 2019.

<sup>81</sup> Senate Standing Committee on Social Welfare, *Drug problems in Australia – an intoxicated society?*, October 1977 <https://apo.org.au/node/38156> Accessed 10 September 2019.



Commonwealth, State and Territory Ministers with responsibilities for health and law enforcement, the Council identified as the overall objective of the National Health Policy on Alcohol as being the “minimisation of the harm associated with the use of alcohol” and stated that achieving that objective would require that “comprehensive programs for public education and health promotion be implemented together with enhance professional training and education and access to early forms of treatment”.<sup>82</sup>

This recognised that programs related to alcohol had, by that time, been identified by the National Health and Medical Research Council as the fourth most serious health problem in Australia and, in 1985, the Special Premiers’ Conference on Drugs had acknowledged that alcohol related harm significantly exceeded that associated with illicit drugs. The Policy noted that, in 1985, 16% of total deaths caused by drug use could be attributed to alcohol and that one in five admissions to general hospitals were due to alcohol related matters.

The Policy also noted that “most alcohol related problems occur in persons who would be regarded by most Australians as social drinkers” and that, as such, the Policy needed to address its efforts more broadly than at those people who drinking was habitually irresponsible.<sup>83</sup> The Policy then outlined six sub-sections of policy including: educational; control; legal; role of the non-government sector and the community; research; and treatment policies.

Educational policies identified amongst its objectives “to assist people to recognise the legal, health, social and employment implications of their own alcohol use, including its different effects and its significance for others” and to assist people to recognise when they or people they know “require help to cope with problems related to alcohol use”. Changing attitudes and practices was identified as necessary if alcohol related problems were to be reduced and widespread activity on this front “needs to be initiated”.

In terms of intervention, the Policy noted that recent research indicated that “minimal intervention may be as effective as intensive treatment” and that most intervention should occur on an outpatient basis. Access to comprehensive assessment for those identified as having an alcohol related problem needed to be ensured as did an appropriate range of interventions available to all in need regardless of their socioeconomic, cultural, racial or religious background or geographic or physical location.

Early identification of problems was also identified as key as was providing support and information to the families of people with alcohol related problems. Support for health professionals so that they could contribute to a reduction in the level of alcohol related problems in the community was also identified as an objective.

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<sup>82</sup> Commonwealth of Australia, *National Health Policy on Alcohol in Australia and examples of strategies for implementation*, 1990.

<sup>83</sup> Commonwealth of Australia, *National Health Policy on Alcohol in Australia and examples of strategies for implementation*, 1990.



## National Alcohol Strategy: A Plan for Action 2001 to 2003-04

The National Health Policy on Alcohol in Australia was followed, some years later, by the *National Alcohol Strategy: a Plan for Action 2001 to 2003-04*.<sup>84</sup> Endorsed by the Ministerial Council on Drug Strategy in July 2001, the *Strategy* noted the role of alcohol in Australian society, including its association with “celebrations, social and business functions and...in religious and cultural ceremonies

At the same time, the less positive impacts of alcohol were also noted - the “negative health and social consequences of inappropriate levels and patterns of alcohol consumption are of concern to governments and to the community”. The *Strategy* also noted that alcohol misuse is second only to tobacco as a preventable cause of death and hospitalisation in Australia with 3,290 deaths attributable to high risk drinking in 1997 and 72,302 hospitalisations. The harm generated from excessive alcohol consumption is also cited, accounting for 4.9% of the total disease burden in Australia.

The *Strategy* also highlights the breadth of problems associated with risky or high risk alcohol consumption. These were identified as some cancers, heart disease, stroke, liver disease, gastritis, cognitive problems and dementia as well as mental disorders, such as depression, affective disorders and suicide. Alcohol’s role in motor vehicle fatalities and injuries, falls, drowning, burns and occupational injuries as well as interpersonal and domestic violence and child abuse are also noted.

Given this and its goal to balance “minimising alcohol-related harm to the individual, family, and society, while recognising the potential social and health benefits from alcohol”, the *Strategy* focuses significantly on patterns of drinking. This is defined as including aspects of drinking such as location, the number of heavy drinking incidents, activities associated with drinking, the types of drinks consumed and the characteristics of both the drinker and their drinking companions. The “drinking culture” and its norms and behaviours are considered critical whilst prevention is used to “describe measures that prevent or delay onset of harmful alcohol consumption patterns and behaviours as well as measures that protect against risk and reduce the harm associated with alcohol misuse”.

Population groups identified as being at particular risk of alcohol-related problems were listed as:

- Aboriginal and Torres Strait Islander peoples;
- Pregnant women;
- Prisoners;
- People with a mental health disorder;
- Older people;
- Heavy drinkers; and

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<sup>84</sup> Commonwealth of Australia, *National Alcohol Strategy: A Plan for Action 2001 to 2003-04*, July 2001.



- Younger people.

Providing information and advice to people that enabled them to make informed choices and to “enjoy alcohol as part of a healthy lifestyle while avoiding or minimising the harmful consequences that may ensue from risk and high risk drinking patterns” formed part of the *Strategy* with key strategy areas being:

- Informing the community, principally about the harms associated with alcohol misuse, the factors that increase the risk of alcohol related harm and the preventable nature of these problems
- Protecting those at higher risk, by reducing alcohol related problems in the populations identified above
- Preventing alcohol-related harm in young people, by reducing the incidence of high risk patterns of alcohol consumption during adolescence
- Improving the effectiveness of legislation and regulatory initiatives, especially in relation to liquor licensing legislation and regulations
- Responsible marketing and provision of alcohol, in line with community standards and principles of harm minimisation
- Pricing and taxation, that have a positive public health impact
- Promoting safer drinking environments, in order to reduce the incidence of alcohol related crime and violence in and around licensed venues, public events and private gatherings; and reduction in alcohol related domestic and family violence, and in injuries and fatalities in the workplace and aquatic environment
- Drink driving and related issues, to both drivers and non-drivers alike
- Intervention by health professionals, including higher awareness and capacity of health professional to identify and treat alcohol related problems as well as better access to high quality health services to manage alcohol dependence and problem drinking
- Workforce development, that increases individuals’ effectiveness to reduce alcohol related harm
- Research and evaluation, that promotes and improves uptake of evidence-based practice.

The *Strategy* did not identify or cite specific figures of alcohol related harm, the prevalence of risky drinking or targets for improvements for any of the above areas.



## National Alcohol Strategy 2006-07: Towards Safer Drinking Cultures

The *National Alcohol Strategy 2006-2009: Towards Safer Drinking Cultures* was endorsed by the Ministerial Council on Drug Strategy in May 2006 and was later extended to cover the years to 2011.<sup>85</sup>

Like the earlier *Strategy*, *Strategy 2006-07* also notes the role of alcohol in Australian society particularly its importance to the Australian economy – “it generates substantial employment, retail activity, export income and tax revenue” – as well having an “important social role”. At the same time, it notes the negative impacts alcohol has via its cost to the Australian community which is estimated to be \$7.6 billion in 1998-99.

The *Strategy* does also note the contribution of alcohol to the Australian economy and estimates this as \$18.3 billion in 2004-05. The industry is said to directly employ 36,000 people and indirectly contribute to the employment of 205,000 individuals in pubs and bars.

Whilst the *Strategy* notes that consumption of alcohol in Australia had decreased since the 1980s, patterns of use were identified as a key matter for concern, particularly drinking to intoxication. As such, the goal of the *Strategy* was “to prevent and minimise alcohol-related harm to individuals, families and communities in the context of developing safer and healthy drinking cultures in Australia”. This goal was not significantly different from the earlier *Strategy* except that the reference to the potential benefits of alcohol consumption was removed.

Further, the first paragraph of the Executive Summary notes that 83% of Australians reported drinking during 2004. Alcohol is acknowledged as a drug and its capacity to “promote relaxation and feelings of euphoria” are noted together with its ability to “lead to intoxication and dependence and a wide-range of associated harms”. This is elaborated upon further in the *Strategy* when it is noted that alcohol “can impair motor skills and judgement, produce intoxication and dependence, cause illness and death and have other harmful effects on our daily social, economic and living environments”.

Of \$7.6 billion cost to the economy, the main cost was identified as being borne by workplaces as a result of the reduction in the size and capacity of the workforce and due to worker absenteeism due to alcohol related issues. Whilst it is acknowledged that the per capita consumption of alcohol in Australia has fallen since the 1980s, the fact that it is high by world standards is highlighted. Drinking to intoxication is identified as the greatest issue of concern in the community and “is associated wide-ranging impacts on the health, safety and wellbeing of individuals and communities”. Addressing this is a key aim of the *Strategy*.

The priority aims of this *Strategy* were aligned but more specific than the earlier strategy and included:

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<sup>85</sup> Ministerial Council on Drug Strategy, *National Alcohol Strategy 2006-2009: Towards Safer Drinking Cultures*, 2006. [http://www.ihra.net/files/2011/07/21/03.3\\_Ministerial\\_Council\\_on\\_Drug\\_Strategy\\_-\\_National\\_Alcohol\\_Strategy\\_2006-2009\\_1.pdf](http://www.ihra.net/files/2011/07/21/03.3_Ministerial_Council_on_Drug_Strategy_-_National_Alcohol_Strategy_2006-2009_1.pdf) Accessed 24 September 2019.



- Reduce the incidence of intoxication among drinkers;
- Enhance public safety and amenity at times and in places where alcohol is consumed;
- Improve health outcomes among all individuals and communities affected by alcohol consumption; and
- Facilitate safer and healthier drinking cultures by developing community understanding about the special properties of alcohol and through regulation of its availability.

Whilst alcoholism or alcohol dependence is acknowledged by the *Strategy* as an issue, “the reality, however, is that excessive single occasion drinking produces far greater and wide-reaching impacts on the health, safety and wellbeing of individual and communities”. None of the health benefits of alcohol, it is noted, are accrued when it is consumed to intoxication and the social harms for the individual drinker and those around them are more likely, including “injury, verbal abuse, violence, traffic crashes, drowning and other harmful outcomes”.

Over one third of Australians, or 35.4%, consumed alcohol at risky levels or at a level at which there was a high risk of harm at least once year according to the Australian Institute of Health and Welfare in 2005 and nearly two thirds of all alcohol in Australia was noted as being consumed at levels that are risky or have a high risk for short-term harm. Numerous examples are given in the *Strategy* of the types of harm that are commonly generated from consuming alcohol to intoxication including fire fatalities, with around 20% of all fire deaths in Queensland being alcohol-related; and, between 1993-94 and 2000-01, 47,167 hospitalisations from road crash injuries, 76,115 from assaults, and 85,355 from alcohol abuse and psychosis. The link between alcohol consumption and injury is noted and strongly acknowledged.

Having said that and given the significance of the numbers cited, the responses to this seem underwhelming. The responses recommended to addressing drinking to intoxication included:

- Increase community awareness and understanding of the extent and impacts of intoxication, such as labelling of alcohol products, promotion of the alcohol guidelines and developing a national agreed and workable definition of intoxication;
- Improve enforcement of liquor licensing regulations, by increasing the capacity of relevant stakeholders to enforce the law, reviewing the liquor licensing laws and support a better early warning system for potential trouble spots;
- Ensure the inclusion of Aboriginal and Torres Strait Islander groups to identify specific responses for Aboriginal and Torres Strait Islander communities, including improving their access to diversion, pre-sentencing and legal aid for alcohol related offences and implementing harm minimisation strategies; and
- Implement strategies to reduce the outcomes of intoxication and associated harm in and around late night (extended hours) licensed premises and outlets, including Responsible Service of Alcohol training and programs and periodic appraisals of legislative compliance.



## National Alcohol Strategy 2018-2026: Consultation Draft

At present, and since the expiration of the 2006-07 Strategy, there is no National Alcohol Strategy in Australia. A consultation draft is available however<sup>86</sup> and focusing much more strongly than the earlier version on the harms associated with alcohol.

Acknowledging that “alcohol is a complex issue in Australia”, the draft strategy also observes that it is the most widely used drug in the country with 80% of people having consumed alcohol at some point in the last 12 months. Most Australians do not consume alcohol at levels that put them at risk of either disease or injury, the draft notes, but over 25% drink at levels at least once a month that put them at risk of injury from a single occasion of drinking and 17% drink at levels that put them at risk of injury or disease over their lifetime. The social cost of this is noted in terms of alcohol related disease, family and street violence, road accidents and sexual assault.

The harms associated with alcohol are “equivalent to, or greater than, those for illicit drugs” and are listed as:

- Being the second largest contributor behind tobacco to Australia’s burden of disease, linked to more than 200 chronic diseases including seven types of cancer;
- One of Australia’s leading causes of drug-related death with more than 5,500 deaths annually estimated to be attributable to alcohol;
- A significant contributor to domestic, family and intimate partner violence and assaults;
- Available injury and road accidents;
- High economic and service delivery impacts on community services, such as health, justice, policing and local government;
- Birth defects and behavioural and neurodevelopmental abnormalities; and
- Reductions in productivity in the workplace.

Whilst almost identical in sense to the list outlined in the 1990 *National Health Policy on Alcohol*, this list is significantly stronger and more impactful than those noted by the earlier *Strategies*.

It is also more specific about some of these harms observing that 25% of all frontline police time is expended on alcohol-related crime; 32% of episodes where people accessed specialist treatment in 2015-16 noted that alcohol was the most common drug of concern; 34% of intimate partner violence incidents and 29% of family violence incidents had alcohol involved; and 10-15% of presentations to emergency departments are alcohol related. In addition, in 2006-07, almost 20,000 Australian children

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<sup>86</sup> Commonwealth of Australia Department of Health, *National Alcohol Strategy 2018-2026: Consultation Draft*, 2018. <https://www.health.gov.au/sites/default/files/draft-national-alcohol-strategy-2018-2026.pdf> Accessed 18 September 2019.



were victims of substantiated alcohol related child abuse. This is despite the percentages of Australians who recently used alcohol, at risk of lifetime harm from alcohol or at monthly risk of single occasion harm from alcohol falling since 2001.<sup>87</sup>

The draft *Strategy* also notes the impact of alcohol related harm to society, commenting that it is not simply a health or public safety issue but one that has a “whole of society impact”. Productivity is specifically singled out with risky drinkers identified as being more likely to miss at least one day of work in the past three months because of alcohol use than low-risk drinkers.

The draft *Strategy* reaffirms Australia’s commitment to the World Health Organization’s *Global Action Plan for the Prevention of and Control of Non-Communicable Disease 2013-2020* and notes that this includes a targeted reduction in harmful alcohol consumption by 10% by 2025. It links alcohol to mental health issues, trauma and a lack of social connection and harms from alcohol are exacerbated by lack of employment, income, education and housing. Cross-agency responses are needed to deliver effective interventions.

The aims of the draft *Strategy* is to provide a national framework to prevent and minimise alcohol related harms among individuals, families and communities by:

- “identifying agreed national priority areas of focus and opportunities for action;
- Promoting and facilitating collaboration, partnership and commitment from the government and non-government sectors; and
- Targeting a 10% reduction in harmful alcohol consumption”.

Harmful alcohol consumption is defined as levels that put individuals at risk of injury from a single occasion of drinking at least once a month and alcohol consumption that puts individual at risk of disease or injury over a lifetime.

The Priority Areas of Focus for the draft *Strategy* include:

- Improving community safety and amenity, with the objectives of less injury and violence, safer drinking settings and better offender treatment and rehabilitation;
- Managing availability, price and promotion, to strength controls on availability and access, pricing and taxation reforms that reduce risky alcohol consumption and minimised promotion of risk drinking behaviour and inappropriate marketing;

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<sup>87</sup> Australian Institute of Health and Welfare, *National Drug Strategy Household Survey 2016: detailed findings*, Drug Statistics series no. 31. Cat. no. PHE 214. Canberra: AIHW, 2017. <https://www.aihw.gov.au/getmedia/15db8c15-7062-4cde-bfa4-3c2079f30af3/21028a.pdf.aspx?inline=true> Accessed 26 September 2019.



- Supporting individuals to obtain help and systems to respond, with the objectives of promoting the use of evidence based information and support services, delivering a quality and effective treatment system and implementation of a National Foetal Alcohol Spectrum Disorder Strategic Action Plan; and
- Promoting healthier communities, to improve awareness of alcohol harms and communication to target groups.

The draft *Strategy* also lists a series of indicators of change for each of the priority areas including markers such as total alcohol consumption per capita; very high alcohol consumption (11 or more standard drinks at least monthly); single occasion risk; emergency department presentations and hospitalisations attributable to alcohol; lifetime risk; and the age at which individuals first tried alcohol. Identifying indicators is a first for one of the *Strategies* and, whilst not setting specific targets, is a step toward having clear expectations of measurable outcomes from the draft document.

The draft *Strategy* also establishes a new Reference Group with the responsibility of reporting on progress against the target of reducing harmful alcohol consumption by 10% across the life of the *Strategy*.

The target populations for the draft *Strategy* are such that they essentially encompass the entire community with teenagers and young adults, adults in their 40s, 50s and 60s and older people all being identified.

In addition, the draft *Strategy* notes the role technology can play in supporting people who are seeking help to access it in a timely manner. It identifies as opportunities for action as including:

- “Implement evidence-informed e-health options”;
- Encourage general practitioners engage with the Medical Management of People with Alcohol and Other Drug Disorders;
- Improve the frequency and quality of screening and opportunistic interventions for risky alcohol consumption;
- Increase screening, referral and treatment in primary health care settings; and
- Expand the range of intervention options for individuals amongst others.

### **Observations about Australia’s alcohol policies and strategies**

The national policies and strategies outlined above provide a strong insight into Australian Governments’ joint approaches to alcohol and alcohol related harm. Whilst, over time, these policies have become somewhat more specific about the harms attributable to alcohol and certainly more definitive about the numbers involved in them, gaps remain.



Consuming alcohol at risky levels occasionally is recognised within the current draft *Strategy* as a significant issue whilst in the past more focus was given to those drinking at levels of lifetime risk or those individuals actually suffering from alcohol addiction.

The current draft *Strategy* is also more specific in its targets than past *Strategies* and, whilst noting some of the controversy about the document,<sup>88</sup> this is a positive step forward.

The *Strategies* have not provided details of how to best support Australians to stop or reduce their drinking and, whilst again the current draft is more specific about this and names some interventions, room exists for more specific assistance via programs, technology and other methods to help Australians decrease their alcohol consumption. This is particularly true when data show that 48% of Australians who drank alcohol in the previous 12 months took action to decrease their intake of alcohol in 2016 and this was mainly due to concern for their health.<sup>89</sup>

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<sup>88</sup> For background, see Katherine Gregory, “Leaked draft of the National Alcohol Strategy shows why Australia can't stop drinking”, ABC News, 26 July 2019. <https://www.abc.net.au/news/2019-07-26/national-alcohol-strategy-leaked-draft-lobbying-involvement/11346054> Accessed 10 October 2019.

<sup>89</sup> Australian Institute of Health and Welfare, *National Drug Strategy Household Survey 2016: detailed findings*, 2017.