30 May 2014

Committee Secretary
Select Committee on Action to Prevent Foetal Alcohol Spectrum Disorder
Legislative Assembly of the Northern Territory
GPO Box 3721
Darwin NT 0801

By email: lcomm@nt.gov.au

To the Secretary of the Committee,

Submission to the Inquiry into Foetal Alcohol Spectrum Disorder

The McCusker Centre for Action on Alcohol and Youth and the Telethon Kids Institute welcome the opportunity to contribute to the Inquiry into Foetal Alcohol Spectrum Disorder (FASD).

The McCusker Centre is an independent organisation committed to reducing harms from alcohol among young people. The work of the McCusker Centre is directed towards raising awareness of the magnitude of alcohol-related harms among young people, the evidence-based approaches we know can work, other options and the need to act without delay.

The Alcohol and Pregnancy & FASD Research Group at the Telethon Kids Institute is committed to improving the health and wellbeing of children through excellence in evidence based research and translating this research to reduce alcohol consumption in pregnancy; improve clinical practice and diagnosis of FASD; and support appropriate interventions, management and services for people with FASD.

This joint submission will include a specific focus on research, treatment and services and outline FASD prevention strategies.
Both organisations share a special concern about FASD. Alcohol use during pregnancy is a leading cause of preventable birth defects.\(^1\) Despite this, almost half of Australian women (48%) still consume alcohol while pregnant.\(^2\) Reducing alcohol use during pregnancy will reduce the prevalence and severity of FASD.

We recognise that there are special concerns related to alcohol in the Northern Territory, but also that alcohol-related harm is a whole-of-community problem that requires a comprehensive approach.

**FASD and Prevalence**

FASD includes a group of clinical diagnoses relating to permanent damage to brain structure and/or function in the context of alcohol exposure during pregnancy. FASD can be diagnosed with or without a recognisable pattern of facial features, growth impairment and birth defects (Fetal Alcohol Syndrome). The consistent feature of FASD is severe lifelong learning and behavioural impairment.\(^3\) Lifelong effects are significant, with 90% of adults with Fetal Alcohol Syndrome having mental health problems, 60% having trouble with the law and disrupted education, 40% having substance abuse issues, and fewer than 10% living or working independently by 21 years of age.\(^4\) FASD most often occurs in the context of early life trauma and disadvantage in the early years, including low socioeconomic status and welfare dependency; and exposure to household stressors including food insecurity, single parenthood, domestic violence, and mental health issues in a carer.\(^5\) For these reasons, it is important to address the causal pathways to drinking in pregnancy, as well as the family and community-level supports and interventions required to prevent FASD, and to support those affected.

Prevalence of FASD varies internationally. International data suggest that 1-2% of the population in the US are affected by FASD.\(^6\) Higher prevalence is observed in communities with high-risk drinking patterns, including Indigenous communities in Canada, the US and Australia.\(^6\) In Australia it is likely that FASD prevalence (0.68 per 1000 births) has been underestimated.\(^7\) The highest rates of FASD

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reported worldwide to date were documented in school-based studies of Cape Coloured populations in South Africa, where FASD prevalence rates of 210 per 1000 (21%) were found.⁸

**What has been achieved so far?**

Over the past decade and a half, the Alcohol & Pregnancy & FASD Research Group at the Telethon Kids Institute and their collaborators have: 1) Undertaken collaborative research to estimate the knowledge, attitudes and practices of health professionals (Payne et al. 2005) justice professionals (Mutch et al. 2013) and Aboriginal (Burns, Black and Elliot, 2009) and non-Aboriginal (Peadon et al. 2007; Peadon et al. 2011) women pertaining to alcohol use in pregnancy and FASD; 2) Developed, distributed and evaluated educational resources designed for health professionals (Payne et al. 2011; Payne et al. 2011; Payne et al 2011); 3) Undertaken epidemiological studies of the risks of mortality, birth defects, language development, cerebral palsy and intellectual disability for children exposed to prenatal alcohol (O'Leary et al. 2012a; O'Leary et al. 2013a, O'Leary et al. 2009a; O'Leary, 2012b; O'Leary et al. 2013b; O'Leary et al. 2013b; O'Leary et al., 2009b; O'Leary et al. 2012c); 4) Produced the first national estimate of FAS incidence in Australia (Elliot et al. 2008); 5) Developed a national instrument for FASD diagnosis (Watkins et al. 2013); 6) Campaigned for and achieved alcohol restrictions in Fitzroy Crossing (Kirby, 2012); 7) Evaluated alcohol use and FASD prevalence in remote Aboriginal settings (Fitzpatrick et al. 2012). We have contributed to: the Intergovernmental Committee on Drugs Strategy Working Party on FASD and its resultant Monograph (Burns et al. 2009); a revision of the NHMRC Guidelines for alcohol use in pregnancy (NHMRC, 2009); WHO guidelines for identification and management of alcohol use in pregnancy; the establishment of a Model of Care for FASD and its implementation plan in WA (Department of Health Western Australia, 2010); state and federal parliamentary inquiries into FASD (Education and Health Standing Committee, 2012; House of Representatives Standing Committee on Social Policy and Legal Affairs, 2012) and the Federal Government’s response to the federal inquiry; and the strategic plans of non-government organisations. All of these inquiries and plans call for action on prevention, diagnosis and management of FASD. These calls are matched by those of support groups and professionals in health, justice and education. Aboriginal communities particularly are at the forefront of these calls – they have grave concerns that FASD is threatening the continuation of their languages and culture.

The above in-text references are provided in Appendix 1.

**A promising model for addressing FASD in remote Aboriginal communities of Western Australia**

In 2006 the communities of the Fitzroy Valley in the remote Kimberley region of WA were devastated by the chronic oversupply and overuse of alcohol. Community members reported attending 50 funerals over a 52 week period, 13 reportedly related to suicide. A coronial inquiry into 22 deaths in the Kimberley over this time period found alcohol to be a contributing factor in all.⁹ The community leaders resolved that unregulated supply of alcohol had to be managed. Community leaders, June Oscar and Emily Carter lobbied the Head of the WA Liquor Licensing board to impose

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restrictions on the sale of full strength take-away alcohol from liquor outlets in Fitzroy Crossing. The successful community-led alcohol restrictions\textsuperscript{10} resulted in:

- 45\% reduction in alcohol-related hospital admissions
- 27\% reduction in alcohol-related violence
- 14\% increased school attendance
- 88\% reduction in take away alcohol sales.

After implementing alcohol restrictions, the community turned their attention to the issue of Fetal Alcohol Spectrum Disorder, developing a broad community strategy to address FASD prevention, diagnosis and management. Preventative and other interventions are required to reduce future incidence and impact of alcohol-related harm and FASD. The theoretical framework adopted for action on alcohol and FASD in the Kimberley is the social ecological model.\textsuperscript{11} This model is cross-sectoral and integrates policy, environmental, organisational, community and individual strategies to address a specific public health issue.\textsuperscript{11} Social ecological theory has been demonstrated as an effective and appropriate framework when delivering social initiatives in remote Northern Territory communities.\textsuperscript{12} Importantly, policy and environmental interventions that are community-led, including alcohol restrictions, have been reported to be the most effective and sustainable.\textsuperscript{13} Effective advocacy on public health issues such as smoking that combine research, marketing and high-level advocacy can raise awareness of and result in policy change for important health issues.\textsuperscript{14}

The impact of alcohol on Northern Territory communities can be reduced by implementing strategies that reduce alcohol demand, restrict alcohol supply, gather high quality data, provide public health messaging and targeted messaging for high risk groups, build capacity in local organisations, and support those families and individuals most impacted by alcohol and FASD.

Working towards the objective of reducing alcohol use during pregnancy will require a comprehensive approach. Alcohol issues related to FASD should be addressed as part of policy responses that reduce alcohol-related harm among all Australians.

We will make brief comment on a number of areas where there is good evidence that action will reduce harm from alcohol, with particular focus on research and prevention of FASD. Action in these areas:


\textsuperscript{12} M M, TG M, S G. Sustained home visiting for vulnerable families and children: A literature review of effective programs. Parkerville, VIC: The Royal Children’s Hospital Centre for Community Child Health, Murdoch Children’s Research Institute, Youth ARAfCa; 2012.

\textsuperscript{13} Husdon S. Alcohol Restrictions in Indigenous Communities and Frontier Towns. Canberra: Centre for Independent Studies (Australia), 2011 Contract No: 362.29089915.


areas will be effective in preventing harms from alcohol across the whole population and is vital to reduce alcohol consumption during pregnancy and the prevalence of FASD.

1. Research and research needs

Routinely collected information on the use of alcohol in pregnancy and the occurrence of FASD is critical to understanding the size of the problem and hence in being able to direct resources for their prevention. Such data are also important to monitor the effects of interventions to reduce alcohol use and FASD, but, unfortunately, are not systematically collected in all states and territories. Although the NT midwives’ data collection form includes an item on self-reported alcohol use at first antenatal visit and at 36 weeks gestation, the data are missing for a sizeable proportion and are only reported as “yes” or “no” (i.e. no quantification of amount of alcohol used). Nevertheless, only 6.3% of women reported alcohol use at their first antenatal visit, which is just a fraction of the 48% reported recently in Australia. Confirmation of the veracity of this NT estimate would be an important first step.

There are no routinely collected data on FASD in the NT. Indeed, it appears that systematic data collection on birth defects generally has not been reported in the NT for some time. However, an NT study reported a rate of FAS of 1.7 per 1000 children (4.7 per 1000 in Indigenous children). We recommend the collection of reliable measures of alcohol use in pregnancy and occurrence of FASD in the NT to allow surveillance and as a basis for research and evaluation of preventive, diagnostic and management strategies.

Diagnosis of disorders within the spectrum (Fetal Alcohol Syndrome (FAS), Partial Fetal Alcohol Syndrome and Neurodevelopmental Disorder-Alcohol Exposed) can improve social, health and educational outcomes and decrease the risk of secondary outcomes through the identification of an individual’s specific areas of need, and optimising functioning by modification of physical and social environments, and other appropriate interventions.

Our Centre of Research Excellence (CRE) will enable the next critical stage of development by providing a platform of expertise to integrate FASD research, research training, workforce development and dissemination and translation of research results into practical tools and models for prevention, diagnosis and management. Our CRE will contribute to the sustainable empowerment of communities, organisations and professionals to promote prevention, diagnosis and management of FASD and reduce its impact on affected children, their families and the wider community.

The **vision** of our CRE is to transform national capacity to prevent, diagnose and manage FASD through a collaborative interdisciplinary approach to knowledge creation and application.

2. **Economic health, service and treatment implications of FASD**

FASD is one of the leading causes of preventable intellectual disability and cost up to $5.4 billion per year in the US.\(^{19}\) The lifetime costs in terms of service use and loss of productivity for an individual with Fetal Alcohol Syndrome (FAS) is estimated to be US$2.5 million.\(^{20}\) For those with any diagnosis on the FASD spectrum the cost is up to US$22,000 per year over their lifetime.\(^{20}\) These estimates exclude welfare and justice costs, which add dramatically to the economic burden. Significantly, it is estimated that 25% of juveniles in detention have a diagnosis on the FASD spectrum.\(^{21}\)

Diagnosis of FASD requires a multidisciplinary team, ideally comprising a paediatrician, psychologist, occupational therapist, speech pathologist, physiotherapist and social worker. A Canadian study has been estimated that the cost of a diagnostic assessment is CAD$3,110-$4,570 per person.\(^{19}\) A diagnosis of FASD requires that significant impairment of 3 or more neurocognitive domains, or two domains plus structural central nervous system abnormality are present. Therefore those with FASD represent a population with a disability as defined for other neurodevelopmental disorders.

Early diagnosis and intervention is crucial in reducing secondary disability in FASD. Currently supported programs such as Better Start provide funding for a range of neurodevelopmental conditions, and we argue that FASD should be included on the list of Better Start eligible diagnoses. The treatments for FASD depend on an individual child’s profile of neurodevelopmental impairment, and are largely delivered by teachers, allied health professionals and psychologists. As Australia moves away from a diagnosis-based disability funding, the NDIS operational guidelines for therapy support estimate that $12,000-$16,000 in therapy per annum would be required to provide early intervention support (0-6 years). In FASD diagnosis is often delayed, and it is important that any disability support funding should acknowledge this by extending eligibility age to 8-10 years.

3. **A comprehensive approach to prevention is needed**

Many pregnancies are not planned\(^{22}\), therefore even if a woman does not intend to drink while pregnant, she may have done so while unaware that she was pregnant. To target FASD prevention strategies only at women who know they are pregnant would be to neglect a vital period of harm to occur – between conception and the time a woman becomes aware she is pregnant, as well as treating this issue in isolation.

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\(^{22}\) Colvin, L, Payne J, Parsons D, Kurinczuk JJ, Bower C. Alcohol Consumption during Pregnancy in Non-indigenous West Australian Women. Alcoholism: Clinical and Experimental Research. 2007; 31(2).
Alcohol consumption during pregnancy and the resulting harms should be considered in the context of an Australian drinking culture where there is so much acceptance of drinking to get drunk.

The Australian School Student Alcohol and Drug Survey conducted in 2011 found that among 16-17 year old WA school students, 42.9% reported that ‘One of the main reasons I drink is to get drunk’.23 Around 80% of alcohol consumed by people aged 14-24 is consumed in ways that puts the drinkers’ and others health at risk of acute harm, for example from falls, assault injuries, road crashes and burns.24 Over half (51.6%) of all drinkers consumed alcohol in excess of Australia’s low risk drinking guidelines for healthy adults in the 12 months prior to 2010.25

Although harm from alcohol is a whole-of-community issue, Indigenous people in Australia and New Zealand are disproportionally represented by alcohol-related harms. Research suggests that Indigenous women are less likely than non-Indigenous women to drink in pregnancy26 but are more likely to drink at hazardous levels.27

There are many factors which influence women to drink alcohol during pregnancy and it is likely that many of these overlap with factors which influence drinking patterns of the wider population. The McCusker Centre has especial concerns about how alcohol is promoted to younger women and access to alcohol.

4. Curbs on alcohol advertising and promotion

Alcohol advertising is increasingly targeting young women; some alcohol companies have even publicly announced their intentions to increase their female market.28

Products designed to appeal to women are often very palatable (e.g. sweet or fruity) and the promotional materials may include health claims (e.g. low carb, low calorie, natural, sugar free) and use imagery which is likely to appeal to young women. An example of such a product is ‘Skinnygirl Cocktails’. Beam Australia launched ‘Skinnygirl Cocktails’ for which they describe the “target

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28 Saunders A. Glass half-full for grandson on task of luring women to bourbon. The West Australian. 2011 Jun 23; 44.
consumer” as “white collar women aged 30 to 39”. Promotional material for ‘Skinnygirl Cocktails’ relates to its brand message of “Open. Pour. Accessorise.” and emphasises the product’s low calorie content and natural flavours.

It is deeply concerning that alcoholic products are being designed, introduced and marketed with a strong appeal to young people. These products, which include alcopops packaged in two litre casks, packaging designed to look like a handbag and “shot buckets”, represent a grossly irresponsible form of marketing. Further to this, many alcoholic products appear to be specifically aimed at young women – they taste sweet, they come in a range of bright colours and we have seen examples where lip gloss or nail polish are offered as gifts with purchase.

The current system of self-regulation in Australia has consistently failed to ensure alcohol is promoted responsibly. A significant body of research has highlighted the serious limitations of the voluntary codes and processes which fail to prevent or adequately respond to inappropriate alcohol promotions, including the exposure of young people to alcohol advertising. The voluntary codes do not apply specific standards to alcohol advertising which appeals to women in general or women of child-bearing age (defined in Australia as 15-49 years). Given that many pregnancies are not planned and that a significant body of evidence indicates that alcohol promotion influences attitudes, decisions and behaviours related to drinking, there are grounds for such standards to be considered as part of a comprehensive approach to reducing alcohol consumption among women of child-bearing age.

Curbs on alcohol promotion are an essential part of a comprehensive approach to preventing harm from alcohol. There is consensus among health groups including the National Preventive Health Taskforce, the National Alliance for Action on Alcohol, the Australian Medical Association and the World Health Organization in regard to the need for appropriate controls on alcohol advertising.

Independent, legislated controls on the content, placement and volume of all forms of alcohol promotion are urgently needed. Such a system would include comprehensive codes and enforceable decisions with sanctions that genuinely act as a deterrent.

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33 National Alliance for Action on Alcohol. Reducing harm from alcohol: Creating a healthier Australia. 2010.
All sectors of the community are exposed to alcohol promotion through a wide variety of media. Disadvantaged communities and young people, including young women, may be all the more vulnerable to current forms of alcohol promotion. Action in this area should be seen as an important component of the broad approach required to address alcohol harms; the absence of action makes all forms of public and community education much more difficult, and sends out a clear message that the interests of alcohol companies take precedence over those of the community.

5. Reduce availability of alcohol

Concerns about availability of alcohol relate to “the ease or convenience of obtaining alcohol”.36 The National Preventive Health Taskforce recommendation to improve the safety of people who drink and those around them urges governments to have proper regard for the impact of the availability and access to alcohol on alcohol-caused harm.32

Research has identified consistent links between the availability of alcohol in a region and the alcohol-related problems experienced there.37 The findings of Australian research on the impact of changes in alcohol availability were summarised by the National Preventative Health Taskforce, “The results of this research are clear: liberalising alcohol availability is likely to increase alcohol-related problems.”37

Liquor licensing provides the opportunity to regulate outlet density, trading hours, days and hours of operation to reduce harm from alcohol. Regulation of these must be a central component of managing availability of alcohol.

We also have particular concerns about the physical and economic availability of packaged liquor. Given that packaged liquor stores account for a large proportion of alcohol sold in Australia, even a small percentage change in availability of alcohol through packaged liquor outlets would be expected to have an identifiable impact on levels of alcohol consumption in Australia. The harm related to packaged liquor is likely to occur away from the packaged liquor premises (e.g. bottle shops) – this harm should be considered in liquor licensing decision making regarding off-premise licenses.

Local initiatives to respond to harmful drinking can be supported through community-driven restrictions and conditions on licences. Evaluations of local approaches to reducing the availability of alcohol, such as the alcohol restrictions in Halls Creek in Western Australia have shown significant success on a range of outcomes.38

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38 Drug and Alcohol Office. The Impact of Liquor Restrictions in Halls Creek, Quantitative Data – 24 month review; November 2011.
6. Making alcohol more expensive

Addressing the pricing and taxation of alcohol is a particular priority. There is consensus among health experts that increasing the price of alcohol through taxation is one of the most effective ways of reducing harm from alcohol.\textsuperscript{39} Even small increases in the price of alcohol can have a significant impact on consumption and harm at the population level.\textsuperscript{40}

While price of alcohol is a primarily federal responsibility, in the Northern Territory strong arguments have been presented about a minimum price per standard drink (also known as “floor price”), which would prevent the sale of very cheap alcohol. The People’s Alcohol Action Coalition has worked to reduce the consumption of alcohol and related harm in central Australia and the NT, particularly through calling for introduction of a minimum price for alcohol and volumetric taxation.

Action on price is possible at a state level. The following example provides evidence of how this was done in the NT previously. A comprehensive program, called Living With Alcohol (LWA) was officially implemented in April 1992 to reduce serious alcohol-related harm in the NT. It was funded by an NT-specific alcohol levy on the sale of alcohol products with more than 3% alcohol by volume. The Levy added 5 cents to the price of a standard drink.\textsuperscript{40} In addition, in July 1995 the Territory Government applied a 35 cents per litre levy on the sale of cask wine as it was shown to contribute disproportionately to consumption and alcohol-related harm.\textsuperscript{41}

In combination, the Living With Alcohol (LWA) program and the LWA Alcoholic Beverage levy reduced the burden of alcohol-attributable injury to the NT in the short term and may have contributed to a reduction in chronic illness in the longer term.\textsuperscript{15} During the period in which the cask wine levy was in place, quarterly per capita consumption of cask wine fell to 0.49 litres (down from 0.73 litres) among persons aged 15 years and older.\textsuperscript{42}

Unfortunately, a 1997 High Court ruling prompted by a dispute in NSW over state tobacco taxes prohibited states and territories from raising licence fees and additional taxes on alcoholic beverages, tobacco and petrol. As a direct result, both levies were removed in August 1997.\textsuperscript{41}

A comprehensive approach to addressing the price of alcohol would include:

- Volumetric taxation, with tax increasing for products with higher alcohol volumes;
- A minimum price per standard drink, which would prevent the sale of very cheap alcohol; and
- Removal of the Wine Equalisation Tax (WET), which supports the production of very cheap wine.


7. Comprehensive public education about alcohol and pregnancy

There is a need for a long-term, well-funded, coordinated education campaign to raise awareness of the risks of alcohol consumption during pregnancy and the relevant evidence-based expert recommendations.

The National Health and Medical Research Council (NHMRC) recommend that for women who are pregnant or planning a pregnancy, not drinking is the safest option. Awareness of the NHMRC guidelines appears to be low among pregnant women in Australia and many women continue to consume alcohol during pregnancy.

Comprehensive, sustained, well-funded social marketing campaigns can build awareness of the risks of harmful alcohol use and de-normalise intoxication.

In Western Australia, the Drug and Alcohol Office and the Telethon Kids Institute, along with a number of other health organisations, developed the first WA campaign to target alcohol use during pregnancy in the general population - No alcohol in pregnancy is the safest choice. More information about this campaign is available on the Alcohol. Think Again website, http://alcoholthinkagain.com.au/Campaigns/No-Alcohol-In-Pregnancy-Is-The-Safest-Choice.aspx.

Education campaigns about alcohol and pregnancy should be part of a comprehensive education strategy encompassing evidence-based school alcohol education programs, targeted education for health professionals and mass media education campaigns.

8. Alcohol-warning labels

The introduction of research-based health information and warning labels on alcohol products can contribute to raising awareness of alcohol-related harms, within a comprehensive approach.

Following a recommendation by the Food Labelling Review Panel in 2011, the Ministerial Food Regulation Council gave industry two years to introduce appropriate labelling on a voluntary basis, before regulating for this change. This period of two years has now passed and research shows that voluntary uptake of alcohol warning labels by the industry is low; only 37% of alcohol products in an audit sample carried the DrinkWise consumer information messages in September 2013.

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43 National Health and Medical Research Council. Australian guidelines to reduce health risks from drinking alcohol. Canberra: Commonwealth of Australia; 2009.
Parnell S. ‘Unreal’ alcohol guidance ignored. The Australian. 2011 Dec 2; 3.
46 Legislative and Governance Forum on Food Regulation – Communiqué, 9 Dec 2011.
Unfortunately, the consumer information messages developed by DrinkWise – an industry social responsibility group – are too weak and indirect to be effective in educating the public as to the risks of consuming alcohol while pregnant.

The Foundation for Alcohol Research and Education (FARE) have proposed a series of health warning labels which we believe are consistent with the Food Labelling Panel’s recommendation for generic alcohol warning messages aimed at pregnant women. The messages are specific, unambiguous and are targeted at specific types of harm. Research shows that the labels developed by FARE are more likely to raise awareness of the harms of consuming alcohol while pregnant and are more effective in preventing women from drinking while pregnant than those developed by DrinkWise.

Provision of strong, specific, government-regulated health warning labels aimed at pregnant women on alcohol products and at the point of sale for unpackaged liquor is an important and necessary element of a comprehensive approach to the prevention of FASD. Warning labels should be developed by governments with advice from relevant experts and should be designed to get through to the target group/s. The alcohol industry, which spends several hundred million dollars each year promoting its products, with much of this promotion having a clear appeal to young people, should play no part in the development of health warning labels.

It is important that action is taken on FASD, but that this should not occur in isolation or be as sufficient to address other alcohol-related problems. This approach must be pursued in the context of a much broader, comprehensive approach to preventing harm from alcohol. To take preventive action on FASD in isolation may be seen as downplaying other important areas of harm caused by alcohol.

It is vital for governments to recognise the importance of alcohol-related harm to society and the need for action. Alcohol-related harm is a whole of community problem that requires a comprehensive approach.

We are deeply concerned about comments previously made by the NT Government on the importance of alcohol for our culture. At an annual awards dinner hosted by the Australian Hotels Association, the NT Chief Minister Adam Giles clearly outlined his support for the liquor industry, saying that the Government would do its best to support it and defending the NT’s drinking culture as a “core social value”. Mr Giles also said that “having a coldie” in a pub should be “enshrined” as part of a Territory life. “This is our lifestyle, this is the way we live,” he further commented.

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We need to recognise that alcohol is not an ordinary commodity, that it is a cause of immense community concern, and that action is needed to address the harms that arise from its consumption. We urge that a strong and comprehensive program of action on FASD be implemented.

We would be happy to meet with the Committee if this is of assistance.

Yours sincerely,

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Appendix 1

References for “What’s been achieved so far?” (page 3)


Department of Health Western Australia. Fetal Alcohol Spectrum Disorder Model of Care. Perth: Health Networks Branch, Department of Health, Western Australia 2010.


