



Parliament of Australia

House of Representatives

Submission to the Inquiry into the harmful use of alcohol in Aboriginal and Torres
Strait Islander communities

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

Prue Walker

FASD Consultant

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

fetal alcohol spectrum disorder

TRAINING AND CONSULTING

Prue Walker

BSW, MA (Social Policy)

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

About the Author

Prue Walker (BA Hons, MA (Soc Pol), BSW) undertook a Churchill Fellowship in 2009 when she travelled to Canada and the United States to explore models of care for children with FASD. She presented her findings at the APCCAN Asia Pacific Conference on Child Abuse and Neglect in Perth 2009, and since that time has convened workshops and delivered training for health and child protection workers in the Northern Territory in relation to FASD, including assessment, prevention and case management.

In 2010 Prue collaborated with Alcohol and Other Drugs and other agencies to run a 3-day symposium on FASD in Alice Springs, which attracted expertise in the field including Professor Elizabeth Elliott from Sydney, Vicki Russell from Tasmania and speakers from the Fitzroy Crossing Lililwan Project and the Ord Valley FASD project in WA. Prue also spoke at a NAPCAN forum to mark International FASD Awareness Day in Darwin in 2011.

Prue has been employed for 15 years in child protection in both Victoria and the Northern Territory, most recently as Practice Leader, Department of Human Services (DHS), Victoria and earlier worked for 10 years in non-government homelessness services. Prue was employed by the NT Department of Children and Families (DCF) between 2006 and 2011 as a Child Protection Manager in both Alice Springs and East Arnhem where she was responsible for case management of a number of children with FASD. Since 2012 she has delivered FASD training for DCF which has become a regular part of the training calendar.

In 2013 Prue completed a FASD research project in conjunction with Menzies Institute of Health Research and the Department of Children and Families (DCF) exploring the prevalence of children at risk of FASD within the child protection system. The report is in the final editing stages prior to publication. Prue presented her findings at the Australasian Fetal Alcohol Spectrum Disorders Conference in Brisbane in September 2013 and at the Australian Association of Social Workers conference in Darwin in March 2014. In 2014 Prue established a

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

consultancy specializing in education and training for professionals and carers in FASD.

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

1. Summary and Recommendations

Alcohol has a devastating impact on family and community life across the Northern Territory. Aboriginal communities are particularly vulnerable to the impacts of alcohol including violence, assaults, alcohol related injuries, deaths, suicides, motor vehicle accidents and exposure of children to abuse and neglect, which is sometimes fatal.

The National Indigenous Drug and Alcohol Committee Strategic Plan 2012-14 states:

Patterns of alcohol, tobacco and other drug use among Indigenous Australians have been shaped by history. With the effects of dispossession, alienation, trauma and loss recognized as contributing factors to the lower health and socio- economic status that Indigenous Australians continue to experience today, the use of alcohol, tobacco and other drugs have consequently become the cause and effect of much suffering in Indigenous communities.¹

My area of expertise includes Fetal Alcohol Syndrome (FAS) and Fetal Alcohol Spectrum Disorder (FASD), particularly in the child welfare context in the Northern Territory, where the majority of children in the Child Protection system are Aboriginal.

FASD is a lifelong condition which is under-recognised and rarely diagnosed in Australia, despite affecting as many as 1:100 people in the population. FASD is more likely to be concentrated in areas where there is a high level of alcohol abuse, and there are vulnerable populations and communities across the NT.

The impact of FASD is long term, and it is suspected that many individuals in prison have in fact a brain injury related to maternal alcohol consumption during pregnancy. It is possible to divert individuals from the correctional system if appropriate interventions are put in place, but these need to commence with

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

early identification, diagnosis and assessment in childhood. For many adults it may be too late to change the course of their lives but we have the capacity to do things differently for children in Australia.

We can learn from effective programs in other Western countries in which FASD is routinely diagnosed and treated as a lifelong condition, the negative consequences of which can be significantly reduced through effective service delivery.

In order to allow individuals with FASD to be identified and supported; to enable affected individuals and families to have positive and fulfilling lives; and to ensure that the impact of parental alcohol use on children's lives, including pre-natal alcohol exposure, abuse and neglect, is reduced, the following is recommended:

Reducing the harm of FASD through Diagnosis

- That FASD be declared a Disability
- That disability support services be resourced to provide support services to individuals and families affected by FASD.

Reducing the harm of FASD through Prevention

- Implementation of population-based prevention programs to address the risks of alcohol in pregnancy
- Implementation of targeted prevention programs based on those developed in Aboriginal communities in Australia to reduce the prevalence of FASD in those communities

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

- Implementation of indicated prevention targeting women most at risk of an alcohol-affected pregnancy including implementation of a prevention program based on the Parent-Child Assistance Program.

Reducing the impact of FASD through treatment and support of affected individuals

- That FASD Multidisciplinary Diagnostic Teams be implemented in all States and Territories
- That training and education be provided to improve the capacity of generic social and health services to respond to individuals and families affected by FASD
- That specialist services be developed to provide expert services to individuals and families affected by FASD.

Reducing the harm of alcohol on children in the child protection system:

- That Child Protection services work closely with Alcohol and Other Drug Services to ensure that family assessments and interventions incorporate evidence based practice from both sectors, and that interventions include longer-term monitoring where there is evidence of long term alcohol use.
- That specialist child protection assessment and planning occur for infants of mothers who are consuming alcohol to a concerning degree
- That children with FASD have access to specialist assessment, diagnosis and intervention planning
- That foster carers and kinship carers receive specialist training and support to manage the care of children with FASD

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

- That Child Protection services develop a model of best practice for supporting children with FASD who are at risk of abuse and neglect.

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

2. Background to the Submission

In 2011 I prepared a written submission to the House of Representatives Standing Committee on Social Policy and Legal Affairs Inquiry into Fetal Alcohol Spectrum Disorders. My submission was quoted extensively in the Final Report of the Inquiry in *Chapter 5: Management Needs*.

I have included relevant sections from this submission where appropriate. Many of my observations and recommendations were based on my experience working in the Northern Territory (NT) Child Protection system, where Aboriginal families are over-represented. Therefore many of my comments about the impact of FASD and alcohol-related harms in families involved with the Child Protection system apply equally to the Aboriginal population.

My comments in this paper relate specifically to Aboriginal communities in the NT where I worked in Child Protection services between 2006-2011 and where I currently provide FASD training and education.

In this submission I will be addressing several of the Terms of Reference, specifically:

- Trends and prevalence of alcohol related harm, including alcohol-fuelled violence and impacts on newborns e.g. Fetal Alcohol Syndrome and Foetal Alcohol Spectrum Disorders
- The implications of Fetal Alcohol Syndrome and Fetal Alcohol Spectrum Disorders being declared disabilities
- Best practice treatments and support for minimising alcohol misuse and alcohol-related harm as they relate to vulnerable families, individuals with FASD and high risk mothers.

3. Trends and Prevalence of Alcohol-related harm

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

Alcohol-related harm can take a number of forms and I am focussing in this submission on the following:

- Fetal Alcohol Syndrome (FAS) and Fetal Alcohol Spectrum Disorders (FASD) as forms of alcohol-related harm
- Additional harms occurring for children and adults with FAS or FASD where these disabilities are not recognised and where children are at risk of abuse or neglect
- Abuse and neglect of children who are exposed to parental alcohol use.

4. Fetal Alcohol Spectrum Disorder (FASD)

Fetal Alcohol Spectrum Disorder (FASD) is an umbrella term for the range of effects of pre-natal exposure to alcohol. In its most severe form, Fetal Alcohol Syndrome (FAS), children have distinctive facial features, impaired growth and central nervous system damage. In less severe cases, there are no visible signs and the main impairment is a brain injury which can be identified through a range of assessments of different domains of functioning – memory, cognition, learning, speech and language processing, motor skills and others. However many individuals with FASD have an IQ in the normal range, and therefore their disability is difficult for a single medical practitioner to assess.

FASD is a lifelong condition and its impact varies across the lifespan. Some infants are particularly affected and have significant health conditions or birth defects. Others present as healthy and their care is straightforward, until some of the brain dysfunctions become evident in childhood, usually in the primary school years. Adults with unrecognised FASD can have particularly poor long term outcomes as detailed below.

Individuals with FAS can be diagnosed by paediatricians in Australia, although not all are confident in making the diagnosis. Broadly speaking, as there are variations between different states and territories, a preschool aged child diagnosed with FAS will be able to access specialist services for children with developmental

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

delays, and a school aged child will be able to access disability supports, as long as their IQ score is below 70 or they have another diagnosis which allows for support funding such as ADHD/ADD. If a diagnosis is not made in childhood, it may not be made at all. The facial features of FASD can be assessed in adults by FASD clinics in the US and Canada but are generally considered to be within the domain of paediatricians in Australia.

Children with FASD who do not meet the diagnostic criteria for FAS are rarely diagnosed in Australia. FASD screening in Australia exists in only a few locations (Fitzroy Valley in WA, the Gold Coast children's developmental clinic) and national guidelines for assessment and diagnosis have not yet been agreed upon. As a result individuals with FASD are rarely identified and therefore go through life with a range of specific impairments but no diagnosis. While many professionals working with children and families are interested in identification and screening of children for FASD, particularly in the NT, the disorder also affects adults, but these adults have no access to diagnostic services and therefore their disability is invisible, but very real.

Some of the functional impairments associated with FASD lead to social and behavioural problems, as the parts of the brain associated with impulse control, emotional regulation, understanding cause and effect and moderating behaviours to be socially acceptable can be impaired. The brain injury, combined with the lack of understanding by those around them, can lead to a range of long term impacts for individuals including:

- Difficulty staying in school
- Difficulty managing housing or paying bills
- Difficulty getting or maintaining employment
- Difficulty managing social relationships
- Vulnerability and risk of exploitation by others
- Difficulty managing the tasks of parenting.

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

The problem is compounded by the fact that FASD is not recognised as a disability and currently not diagnosed in Australia, therefore there are no support designed to meet the needs of individuals with FASD. When the individual does not have their needs identified and met through appropriate support services, the consequences can include:

- Substance abuse
- Mental illness, particularly anxiety and depression
- School exclusion
- Criminal behaviour
- Living in a violent or unsafe environment, or homelessness
- Involvement with the Child Protection system as parents.

One of the challenges of FASD is that there is enormous variety of presentation within the spectrum. Some individual have a normal IQ, others have a significant intellectual disability. Some individuals have clear neurological signs and delayed development, while others only display difficulties when more advanced cognitive functions are required – such as making good social choices.

Barriers to identification of FASD in adults include:

- Facial features are thought to be most distinct between 2-11 years of age but become less pronounced with age
- Growth deficiencies are no longer evident in adolescents
- Lack of reliable sources for personal history other than self-reporting
- Diagnosis often requires a social worker acting as a detective seeking out personal history details
- Few diagnostic options for adult diagnosis (in countries where diagnostic teams exist).²

5. Prevalence of FAS and FASD

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

International estimates of FAS and FASD are generally in the range of 0.5-2.0 births per 1000 for FAS, and 10 per 1000 births for FASD. Estimates vary based on the diagnostic criteria used.³

The report of the House Standing Committee on Aboriginal and Torres Strait Islander Affairs, *Doing Time –Time for Doing: Indigenous Youth in the criminal justice system* identifies the difficulty of obtaining accurate prevalence data for FASD in Australia. This report references submissions which place the rate of FASD as higher among Aboriginal children in Australia, including estimates of FAS affecting 2.97 indigenous children per 1000⁴, and the estimate by Professor Marcia Langton that FASD affects 1:40 indigenous children.

6. Under-recognition of FASD in the child protection system

Until very recently, FASD has received little attention in Australia as either

- a contributing factor to children entering care
- a complicating factor in working with families where parents have addictions, and
- a syndrome requiring significant case management resources for children in care.

Studies focusing on the needs of children whose parents abuse alcohol tend to focus on factors such as: the effect on parenting capacity; risks of abuse or neglect due to alcohol related harms such as violence; health issues of parents; and financial stressors due to addiction. Long term harms to children are often identified as behavioural issues due to parenting deficits. However the issue of harm to the child's health and development through exposure to alcohol in-utero is not given sufficient prominence or attention.

- A literature review entitled *Parental alcohol misuse and the impact on children* published by the NSW Department of Community Services in 2006

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

makes only passing mention of Fetal Alcohol Syndrome and quotes only one reference.

- A practice paper produced by Queensland Government Department of Child Safety in 2007 entitled *Parental substance misuse and child protection: intervention strategies* makes no reference to FAS/FASD or pregnancy.
- A report on *Child Protection and Mothers in Substance Abuse Treatment* produced for the National Drug and Alcohol Research Centre, University of NSW in November 2011 makes no mention of FAS/FASD, although a proportion of mothers sought treatment due to pregnancy. Mothers were in treatment for opioid addiction but 21% had had an alcohol problem in the last 12 months.
- The paper, *Issues for the safety and wellbeing of children in families with multiple and complex problems: the co-occurrence of domestic violence, parental substance misuse, and mental health problems*, published by the National Child Protection Clearinghouse in 2010, mentions the negative impact of alcohol in conjunction with diet, drug use, stress and violence in pregnancy. However there is no reference to FAS/FASD.

Examples of resources where FASD is recognised include the Victorian DHS Specialist Assessment Guide for Assessing Parental Substance Use, 2000. This guide includes prompts around identification of FAS and states:

- *Newborn Infants diagnosed with foetal alcohol substance abuse symptoms are one of the highest protective risk categories for short and long term damage to their physical, social and emotional health and well being.*
- *The World Health Organisation estimates over 90% of pregnant women use some sort of drug during their pregnancy and that 2%-3% of all birth defects are due to drug use.*

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

- *The immediate and unique needs of these infants require parental care and skills not usually evident in substance abusing parents.*
- *These children are likely to require ongoing medical, community health and welfare services to overcome the damage cause to them prior to birth.*

More recent documents from Victoria, such as the DHS guide entitled Infants and their Families: Best interests case practice model (2010), reference FAS as a possible factor in assessments but miss an opportunity to provide child protection workers with a more detailed understanding of FASD and the complexities of assessment and case management.

Western Australia

FASD research and the WA Department of Communities is the only statutory agency which includes a webpage on FASD and Fetal Alcohol Spectrum Disorder in the Child Protection System: Opportunities for Prevention and Intervention and an information brochure on FASD which outlines the signs and ways to support affected children. A Fostering Fact Sheet is also available outlining some of the issues involved in fostering children with FASD.

These limited references are reflective of the under-recognition of the prevalence and impact of FASD in Australia, particularly its impact within families that come to attention of child protection services. Behavioural issues which can be explained as the result of abuse, neglect, exposure to parental alcohol or drug abuse, and consequent parenting deficits may in fact be due to a brain-based disorder which is going unrecognised.

Literature on the issue of child abuse and neglect in families where carers misuse alcohol tends to focus on the impact of impaired parenting, exposure to violence and other consequences, and if FASD is referenced it is generally as a condition affecting infants. However little attention has been paid to the combination of a child with FASD and a parent whose capacity is impaired by alcohol or other drugs. These children are some of the most vulnerable as their disability is unrecognized, their carers may not be attuned to their specific needs and they are not likely to receive the stability, quality care or services required to reduce the risk of secondary disabilities.

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

7. Children with FASD in the Child Protection System

Infants with FASD may present with growth difficulties, and may come to the attention of child protection services due to concerns related to parental alcohol use. Child protection interventions may focus on assisting the parents to address substance abuse while working to protect the child's safety and address their immediate health concerns.

If questions are raised at this stage about possible fetal alcohol exposure, there is unlikely to be a clear pathway into and through the service system. Child protection workers may not have information or resources to allow them to predict that the child may also experience speech and language problems or other developmental delays. The child may be slow to reach milestones but this may be attributed to a poor start in life, exposure to violence, and/or and early neglect or deprivation.

If the infant is placed in foster care, it may be some time before the carer can identify that the infant is not meeting developmental milestones. Allied health services may have waiting lists, and other factors such as family access may also be involved. If the infant is placed with in a kinship placement, carers may not have sufficient experience to identify delays and it may be more difficult for the family to seek help. A carer or family member who suspects FASD may not be confident to raise the issue as they may consider it too sensitive.

When a child with FASD enters the care system, their care is likely to be complex. Typically, children with FASD require:

- Stable, safe environments
- Structure and routine
- Repetition and predictability
- Consistency
- Reward and redirection rather than punishment
- Close supervision
- Role modelling .

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

Children in care can experience changes and instability which are particularly difficulty for children with FASD to process. These include:

- Repeated attempts at reunification with birth or extended family
- Access with family which may be planned or unplanned
- Placement breakdown
- Multiple placements prior to long term placements being identified
- Changes in childcare or school depending on placement.

These children already have a background of abuse, neglect and/or trauma, which will have a significant impact on their emotional and social development, and they are likely to have a range of behavioural issues which may overlap with behaviours associated with FASD.

For indigenous children in the NT in particular, changes and transitions can be very challenging. Moving between family of origin, kinship care and foster care involves changes in culture, language and location. All of these are a challenge for a child with FASD to manage.

An Aboriginal child from a remote community who has FASD may have behaviours which are very challenging for their foster carer to manage due to the different expectations in the home – sitting at the table for dinner, accepting new rules, sleeping alone in a bed - but when returning to family for access the child's behaviours may be more readily tolerated. The child may receive a high level of supervision in foster care and then be exposed to a more relaxed parenting style when returning to their community, for example walking around unsupervised, and they may possibly exposed to greater risks to their safety.

While visiting services as a part of my Churchill Fellowship I attempted to grapple with some of these disparities in assessing what is the best model of care for children with FASD. I concluded that the issue is too complex to make clear recommendations, as there may be a balance on the one hand between a child in foster care receiving good quality care and supervision, access to services which promote their development and reduce the likelihood of secondary disabilities, and on the other hand the knowledge that when these children grow into young

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

adults, they often want to return to their communities, and because they have not grown up with family, suffer the emotional impact of not belonging. The alternative is for the child to be raised with extended family in an environment where they have strong emotional connections and a sense of belonging, which fosters emotional well being, however they may not be able to access the allied health services and developmental supports they require. They may also be living in overcrowded homes with poor food security and hygiene issues, cared for by over-stretched family members. These issues pose a dilemma which can only be resolved on a case by case basis, but requires a practitioner skilled in the area of FASD.

8. Harmful impacts of parental alcohol use for children

It is estimated that alcohol is involved in between 30%-70% of child abuse cases in Australia.⁵ Children in homes where parents consume alcohol to concerning levels experience multiple harms, both immediate and long term.

A recent study by Anne-Marie Laslett which reviewed over 38,000 Victorian child abuse cases identified "likely alcohol abuse" by caregivers in 33% of substantiated cases, 36% of protective interventions and 42% of court orders.⁶

Immediate harms include:

- Exposure to family violence, including the physical risks (ie baby held by mother while assaulted by father), and emotional trauma associated with fear and seeing a primary carer at risk of harm;
- Involvement in high risk activities, ie parents driving while intoxicated, not using seatbelts and the associated risk of car accidents;
- Risks to safety where parents are incapacitated through alcohol, ie children using matches, stoves, being left in baths or swimming pools, wandering the neighbourhood or playing in the home without supervision;

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

- Risks to dependent infants where a parent is substance affected, ie cosleeping with increased risk of smothering or SIDS, risk of being dropped or falling due to lack of supervision;
- Risks to health ie, parents are incapacitated and don't realize the need for urgent medical treatment, other conditions going untreated, being left alone without food or fluid with risk of dehydration;
- Risks to newborns who are exposed to pre-natal alcohol use such as prematurity, low birth weight and alcohol-related birth defects.

Long term harms include:

- Emotional harm through exposure to parenting where parents are emotionally or physically unavailable to children;
- Emotional harm through long term impact to situations where child is exposed to risk to physical safety and resultant impact on brain development;
- Risks to health and wellbeing through lack of treatment for medical or developmental needs;
- Emotional and developmental impacts of lack of access to food due to financial impacts of alcohol use;
- Lack of supervision and positive role modelling leading to children not learning about boundaries, consequences and appropriate social behaviours; with the result that they have difficulty meeting social expectations such as in a classroom or playground;
- Lack of school attendance due to parents sleeping during the day, with consequent impact on emotional and social development, learning, and with a likely consequence of behavioural issues at school.
- Fetal Alcohol Syndrome and Fetal Alcohol Spectrum Disorder

Immediate harms include the risk of child deaths. Child death reviews in NSW in 2003 identified 19% of child deaths were associated with a carer with a history of alcohol abuse; and Victorian data indicates that of the 16 children who died in 2008-9, parental substance abuse was identified in 86% of cases.⁷

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

In the Northern Territory where the majority of children in the child protection system are Aboriginal, these harms are compounded by issues including:

- Poverty and unemployment
- Lack of suitable housing/overcrowding
- Lack of access to health services in remote locations
- Low social economic status and social disadvantage
- Population-based chronic health concerns.

9. Findings of the study: Prenatal Alcohol Exposure among Children in the Child Protection System in the NT

In 2014 I authored a study of pre-natal alcohol exposure among children in the Child Protection system in the NT. The project brief was initially developed in conjunction with staff of the Child Protection Research Program at Menzies School of Health Research in Darwin, Dr Fiona Arney and researcher Kate McGuinness, and myself as the then Manager of Department of Children and Families (DCF) East Arnhem in 2011. By the time ethics and departmental approval had been granted the Menzies research program was no longer funded and I completed the research as an external consultant, having relocated to Victoria.

The project report is currently being finalised by the Department of Children and Families and will be provided to this Committee when completed. Findings reported to date are as follows.

The study involved a file-review of a random sample of 230 client files. 180 children in the sample were under protective investigation, and 50 children were in care on Protection Orders issued by the Northern Territory Magistrates Court, Family Matters.

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

9.1. Aboriginal children in the child protection system in the NT.

The study found that 81% of children in the study were Aboriginal, comprising 79% of children under protective investigation and 90% of children in care. This figure is consistent with Australian Institute of Health and Welfare (AIHW) data which indicates that Indigenous children in the NT represented 86% of all substantiated abuse cases (child protection reports which proceeded to investigation and where it was found that abuse or neglect had occurred) and that 82% of children in care in the NT were Aboriginal.⁸

In comparison to other states and territories, the Northern Territory has by far the greatest proportion of Aboriginal children in its child protection system. In Victoria, 11% of children with substantiated cases are Aboriginal, increasing to 29% in New South Wales and Queensland and 30% in Western Australia. Social issues in NT leading to child protection involvement with Aboriginal families are unique and complex.

AIHW data also indicates that in 2011-12, Indigenous children were:

- Almost 8 times as likely to be the subject of substantiated abuse or neglect
- Almost 10 times as likely to be on a care and protection order
- Just over 10 times as likely to be in out-of-home care.⁹

9.2. Concerning alcohol use by parents

In the absence of information about the levels of alcohol consumption by parents, which would allow a level of "risky" alcohol consumption to be identified, the study identified "concerning" alcohol use by parents, which was recorded where:

- Parental alcohol use was reported as a concern to Child Protection or identified as a concern by family members or professionals;
- Parents had a criminal history including alcohol-related offences;

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

- Alcohol use was identified in the report as impacting on parenting capacity (neglect, lack of supervision, lack of food, or medical neglect);
- Children were placed at risk due to parental alcohol use (exposure to alcohol-related domestic violence, car accidents, being dropped, exposed to the elements, or physically harmed);
- Children were residing with other family members due to parental alcohol use.

The study found that:

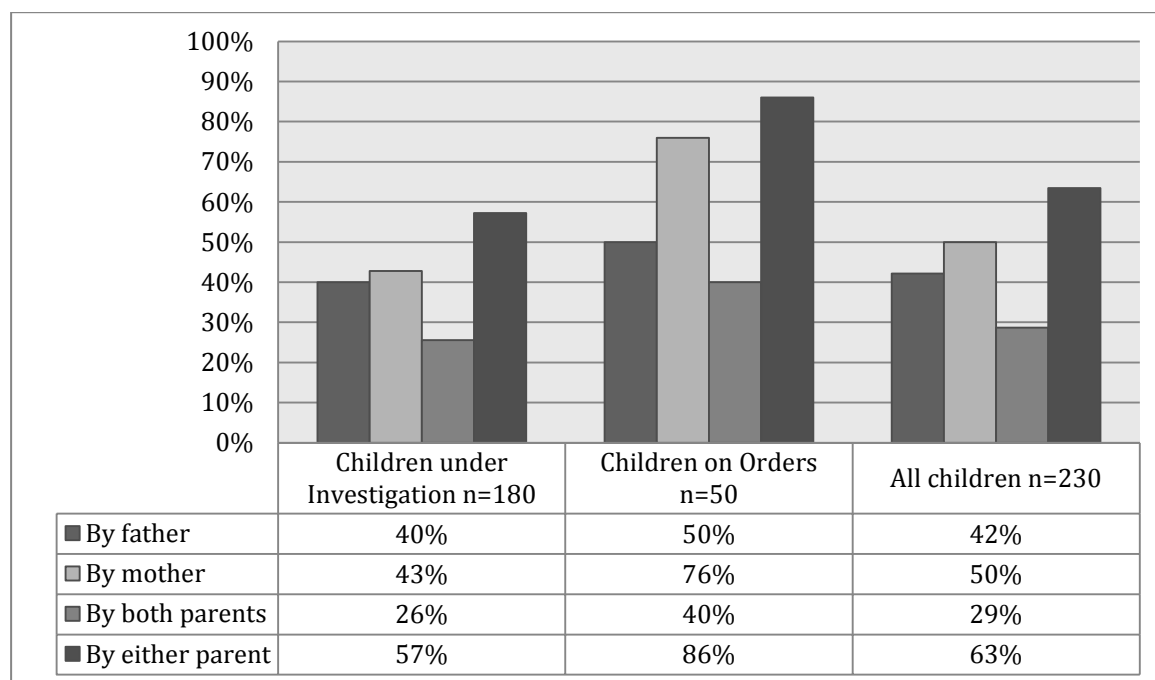
- 63% of children in the study had been exposed to concerning alcohol use by one or both parents;
- 86% of children in care had been exposed to concerning alcohol use by one or both parents;
- 76% of those in care were exposed to concerning maternal alcohol use, and;
- 50% of those in care had been exposed to concerning paternal alcohol use.

Among Aboriginal children the rates were slightly higher.

- 71% of Aboriginal children in the study had been exposed to concerning alcohol use by one or both parents;
- 91% of Aboriginal children in care had been exposed to concerning alcohol use by one or both parents;
- 80% of Aboriginal children in care had been exposed to maternal alcohol use, and;
- 55% of Aboriginal children in care had been exposed to paternal alcohol use.

Figure 1: Concerning alcohol use by parents

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

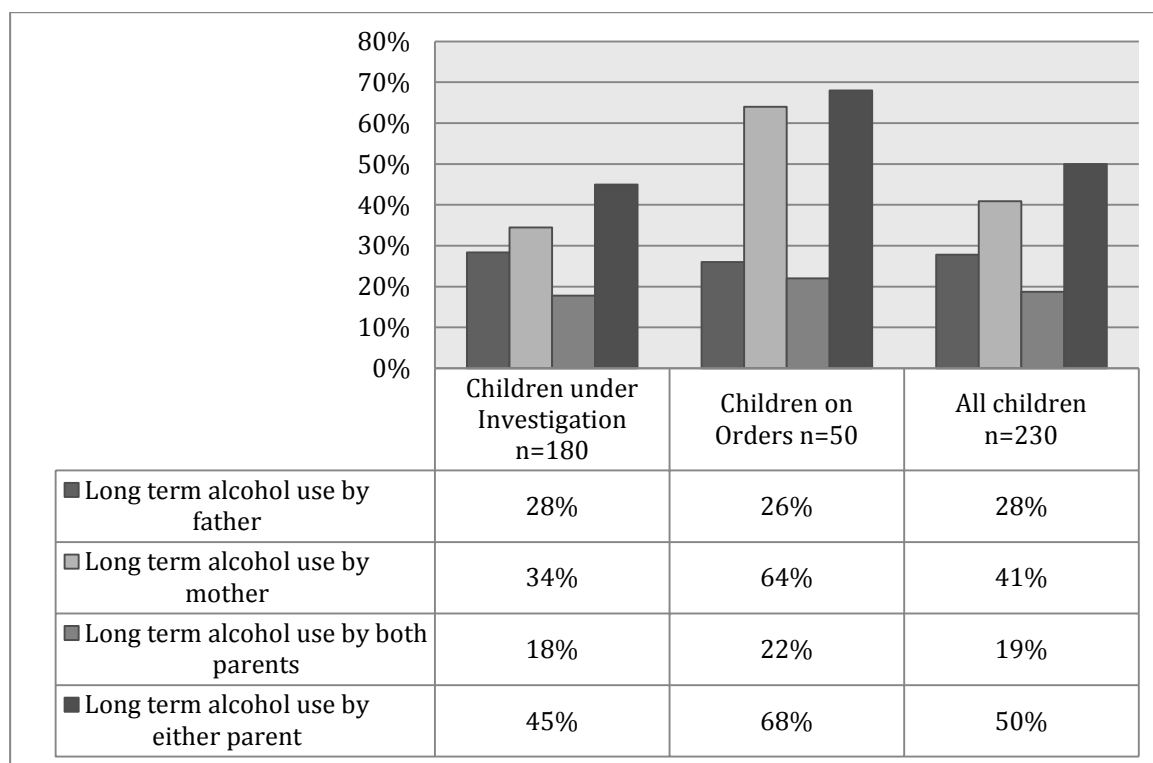


It was also identified that many children were exposed to long term alcohol use by one or both parents. Long term alcohol use was defined as multiple reports of concerning alcohol use in more than one year where the concern did not appear to be an isolated incident. Long term alcohol use by a parent was identified for 45% of children under investigation, 68% of children in care and 50% of all children in the study.

Maternal alcohol use was most prevalent, affecting 34% of children under investigation and 64% of children in care.

Figure 2: Long Term alcohol use by parents

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory



9.3. Pre-Natal Alcohol Exposure

The study identified through case file reviews whether there was evidence of maternal alcohol consumption during pregnancy. In many cases there was no available data, such as in cases where the child was the oldest in the family and the family therefore had no child protection involvement during the pregnancy. The most accurate data was obtained in cases where DCF was involved with older siblings during the period of a subsequent pregnancy.

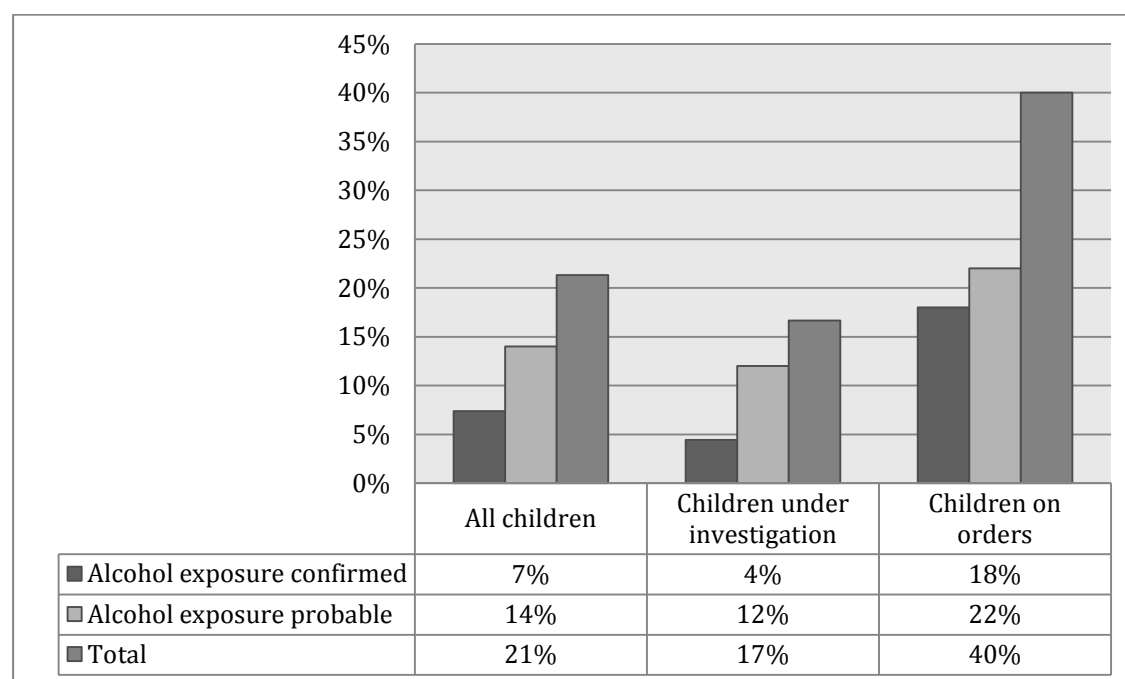
Pre-natal alcohol exposure could be confirmed in cases where there was direct evidence, such as a mother being admitted to hospital for alcohol related causes while pregnant, or police involvement for an alcohol related offence during pregnancy. In these cases, pre-natal alcohol exposure was **confirmed**. In other cases there was no contemporaneous evidence of alcohol consumption during the pregnancy but there was evidence suggestive of alcohol consumption, for example, evidence of alcohol consumption just prior to the start of pregnancy

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

combined with alcohol consumption immediately after the birth. These cases were recorded as **probable**.

21% of all children were recorded as having been exposed to pre-natal alcohol consumption, with 7% of those cases confirmed and 14% probable. This rose to 40% of all children in care, with 18% confirmed and 22% probable. There was no significant difference in rates among Aboriginal children.

Figure 3: Prenatal exposure to alcohol for children under investigation and children in care.



9.4. Presence of FASD Indicators

The study looked at whether FASD indicators could be identified for children who had been pre-natally exposed to alcohol.

Of the children pre-natally exposed to alcohol:

- 6% had a FAS diagnosis
- 8% had suspected FAS

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

- 10% experienced growth delay/prematurity/low birth weight
- 10% experienced speech or language delay
- 23% had behavioural problems

The rate of FAS in the study population was 13:1000 which is comparable to international estimates of 10-15:1000 children in care.

9.5. Child deaths

An unexpected finding of the study was the number of families that had suffered the loss of a child at some stage. Of the 230 children studied, 12% of children who were exposed to concerning maternal alcohol use and 16% of children who were pre-natally exposed to alcohol were from families who had experienced the death of a child. Seven of the child-deaths were of infants, and all of these infants were from families with concerning maternal alcohol use.

Most of the deaths were unexplained and none were subject of a child-death review as they did not meet the guidelines at the time. This finding highlights the high-risk status of infants in families where alcohol is used to concerning levels. The risk of maternal alcohol use appears to be significant which may be attributed to the role of mothers as primary carers.

9.6. Conclusions of the study

The study identified that concerning alcohol use by one or both parents was closely associated with children being investigated by child protection services and to an even greater degree with children being placed in care. Aboriginal children were particularly vulnerable with 91% of children in care being exposed to alcohol use by one or both parents. Significant numbers of children were also found to have been pre-natally exposed to alcohol (40% of those in care) although not all children would be expected to go on to develop a FASD.

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

Recommendations of the study are being finalised at present and will be provided to the Inquiry when available. Some comments are provided below under the heading *Reducing the harm of alcohol on children in the child protection system*.

10. The implications of Foetal Alcohol Syndrome and Foetal Alcohol Spectrum Disorders being declared disabilities

There can only be benefits for children and families if FAS and FASD are declared disabilities. Doing so will have enormous symbolic and practical effects as the conditions become legitimately recognised, reducing the invisibility, and will create a service pathways into disability services.

There will be financial implications for Commonwealth and State/Territory governments if the conditions are declared disabilities. However it is important to note that individuals with FASD are already accessing services in the community.

Children with FASD already use speech and language, occupational therapy and physiotherapy services, and often require assistance at school due to behavioural disorders. If FASD is classified as a disability, these children will receive more timely assistance and some of the adverse long term effects can be avoided. Currently children with FASD don't qualify for classroom assistance unless they have another condition such as ADHD or Oppositional Defiant Disorder.

Adults with FASD may be involved with the criminal system, homelessness services, domestic violence services, mental health and drug and alcohol services. They may seek care from hospital emergency departments, have children placed in care and have repeated episodes of incarceration – all at great cost. Recognition of FASD is the first step in allowing adults with FASD to understand that they have a brain-based disability and to understand why they struggle with some of the tasks of daily living.

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

When I found out I had FASD, it was a big relief. Knowing it was a medical condition explained a lot to me. With help, I began to learn different ways to cope with my difficulties.¹⁰

Disability services are not well resourced to manage the number of affected individuals and are likely to require support, education and training to develop appropriate responses to this target group. However models of service delivery in the US and Canada demonstrate that FASD service provision can be integrated into the broader social service sector, and that it is not necessary to develop stand-alone services.

Recommendations:

- That FASD be declared a Disability
- That disability support services be resourced to provide support services to individuals and families affected by FASD.

11. Reducing the harm of FASD through Prevention

11.1. Community Prevention

Australia requires a broad community strategy to educate the community about the harms of alcohol consumption in pregnancy. Australian culture is one in which alcohol holds a unique place, and in comparison to smoking, is heavily normalized. There has been recent media coverage suggesting that there is no harm in consuming low levels of alcohol in pregnancy. Data from the University of Washington FASD clinic indicated that one in every 14 children diagnosed with FAS (not FASD) was exposed to one drink of alcohol per day. One in every seven children diagnosed with FAS was exposed to between 1-8 drinks per week.¹¹ This message is not reaching the Australian population who feel confused about medical guidelines for alcohol in pregnancy.¹²

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

There have been some short term FASD prevention programs in Australia. The Ord River Aboriginal Health Service in Kununurra, WA, and Anyingini Health Aboriginal Corporation in Tennant Creek, NT, have both developed prevention programs targeting Aboriginal communities. Funding for both projects has now ended. There are a number of television advertisements produced in WA under Alcohol prevention programs and in Broome through Goolari Media. The Liliwan project in the Fitzroy Valley, has raised awareness of FASD as part of a broader Marulu strategy to reduce the harm of alcohol. The NPY Women's Council has also developed prevention resources in Central Australia.

All of these agencies have produced some valuable resources but project funding means that the interventions are short term, and not replicated in other places. Television advertisements developed in WA could be readily used in the NT without the cost of generating the resource.

Effective prevention also requires targeted strategies for high risk groups. The highest risk group, mothers who have already had an alcohol-exposed pregnancy, are almost certain to have further alcohol affected pregnancies and therefore there is a unique opportunity to target individuals most at risk.

11.2. FASD Prevention with High Risk Mothers

Women who give birth to children with FASD have extremely poor long term outcomes, including having multiple children placed in care and being at much greater risk of premature death. Sterling Clarren reviewed a cohort of children who had been diagnosed with FAS and found that three years after a FAS diagnosis was made, 25% of birth mothers were missing or deceased.¹³ A Finnish study found that, 6 - 15 years after a pregnancy complicated by alcohol or drugs, women were at 38 times greater risk of death than the rest of the population and 31 times more likely to have died from accidents or violence.¹⁴

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

The quality of life of women who have given birth to children with FASD is generally very poor and unlikely to improve, even with traditional interventions. A targeted response to this group is required.

Research indicates that interventions with those at risk of alcohol exposed pregnancies should be non-stigmatising and broad-based, including 'enhancing a woman's diet, reducing physical and emotional abuse, and enhancing a woman's current living status'.¹⁵

A highly effective evidence-based program which was developed in Seattle, Washington, is the Parent –Child Assistance Program (PCAP). The program website states:

The Parent-Child Assistance Program (PCAP) is a home visitation intervention program that works with women who abuse alcohol or drugs during pregnancy, with the aim of preventing future alcohol- and drug-exposed births among these mothers. PCAP supports mothers in achieving this goal by helping them complete substance abuse treatment and stay in recovery and by motivating them to choose effective family planning methods.

The goals of the program are to (1) assist mothers in obtaining treatment, maintaining recovery, and resolving the complex problems associated with their substance abuse; (2) guarantee that the children are in a safe environment and receiving appropriate health care; (3) effectively link families with community resources; and (4) demonstrate successful strategies for working with this population to prevent the risk of future drug- and alcohol- affected children.

PCAP provides trained and supervised case managers who work with a caseload of 16 mothers and their families for three years, beginning during pregnancy or up to six months postpartum. The case managers offer regular home visitation and link women and their families with a comprehensive array of existing community resources to address health care, housing, child welfare, and other issues. Case managers help mothers identify personal goals and the steps

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

necessary to achieve them; they monitor progress, facilitate case conferencing and integrated service delivery among providers, transport clients and children to important appointments, and work actively with the extended family.¹⁶

As part of my Churchill Fellowship in 2009 I visited a number of sites in the US and Canada where the PCAP model has been implemented. Evaluation indicates the program has demonstrated success in reduction of further alcohol affected births among very high risk women. An internal evaluation conducted in 2005 identified that after 3 years in the program, participants showed greater participation in substance treatment, improved contraception, and most were no longer at risk of a further alcohol or drug affected pregnancy.¹⁷

A review of a version of the program in Alberta, Canada, found that "at program exit, many participants were abstinent from alcohol and/or drugs and the majority did not experience a subsequent pregnancy."¹⁸

The evaluation of the Canadian program between 1999 and 2007 found:

- The mean age of participants was 26 years
- Most had had an unplanned pregnancy (88%), and after the birth of their child had an average of 2.6 children; 63% had custody of at least one child.
- Nearly half of the clients enrolled were of Aboriginal ethnicity (49%)
- Over the course of the program, regular use of a family planning method increased from 36% to 56%
- Welfare use decreased from 92% to 72%
- After the birth of their child (either before or shortly after program began), 71% did not have a subsequent pregnancy.
- In terms of substance use, 44% were abstinent from drugs and 35% were abstinent from alcohol at program exit.
- During their enrolment in the program, 93% of clients had been clean and sober (with no relapses) for at least one month.¹⁹

Features crucial to the success of PCAP include:

- Three year duration, reflecting the time required for lasting changes to be made.

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

- A strong theoretical basis drawing on Relational Theory (the concept of the therapeutic alliance), Stages of Change Theory (involving motivational interviewing) and Harm Reduction theory.
- Assertive outreach, which acknowledges that women may not have a stable address or be able to attend appointments reliably.
- A two-pronged approach of reducing substance use and improving reliability of birth control.

Dr Therese Grant (2010) reports that PCAP costs approximately \$15,000 USD per client for the three-year program, including intervention, administration and evaluation. The estimated average lifetime cost for an individual with FASD is at least \$1.5 million.

If PCAP were to prevent a single new case of FASD, the estimated lifetime cost savings would be equivalent to the cost of the PCAP intervention for 102 women.²⁰

There is potential for this successful program to be implemented in the Australian context and in the NT in particular. It would be an excellent complementary service to a home-visiting program such as the Family Partnership Program operating through Central Australian Aboriginal Congress, which provides home visiting for new mothers until the child's second birthday. High risk women may be excluded from this program as engagement must commence in the second trimester of pregnancy, and many women who consume high levels of alcohol do not engage in ante-natal care.

*Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal
Communities in the Northern Territory*

Recommendations:

- Implementation of population-based prevention programs to address the risks of alcohol in pregnancy
- Implementation of targeted prevention programs based on those developed in Aboriginal communities in Australia to reduce the prevalence of FASD in those communities
- Implementation of indicated prevention targeting women most at risk of an alcohol-affected pregnancy including implementation of a prevention program based on the Parent-Child Assistance Program

12. Reducing the impact of FASD through treatment and support of affected individuals

The first step in recognising and treating FASD is diagnosis. Diagnostic teams are urgently required to provide multi-disciplinary diagnosis. The team models developed in the US and Canada, and implemented now in New Zealand, Fitzroy Crossing and the Gold Coast, are based on international best practice.

Because FASD is a complex brain based disability with varying presentations, diagnostic teams require a multidisciplinary approach to assess the individual across a number of domains – cognition, motor skills, speech and language, executive functioning, adaptive functioning, sensory processing and others. A team typically includes a paediatrician, psychologist, neuropsychologist where possible, physiotherapist, occupational therapist, social worker, and speech and language therapist.

The diagnostic process is intensive but many children are already receiving assessments from multiple therapists and allied health services – just not in such a coordinated way. Diagnosis was first developed at the University of Washington

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

clinic in Seattle and over 2500 individuals have been assessed in the past 20 years. Diagnosis at the clinic takes 4 hours, with the psychometric tests, interviews and carer checklists completed prior to the clinic. The individual has facial measurements and growth recorded, and the team assesses the results and provides feedback to the family. A key component of diagnosis is a list of recommendations for services and supports – which may include clinical or community based supports and therapeutic activities such as gymnastics, swimming or horseriding. The recommendations may include carer respite, sleep studies, school interventions, caregiver training or mentoring. Strategies to manage behaviours are included – such as wearing headphones to minimise sensory overload, or memory aids or checklists to assist in personal organisation. A review of outcomes for individuals following assessment found a high level of satisfaction by families, with 89% of families reporting that they were somewhat/very successful in accessing the recommended intervention services, and 96% of those accessing services reporting that they met some/all of their needs.²¹

Training for staff dealing with individuals and families affected by FASD is also needed. FASD is a complex condition, and it takes time for individuals to fully understand the disorder beyond the symptoms on a checklist. There is enormous variability and no simple solutions. However with training, staff working with children, families, young people and adults can adapt their practice to make services inclusive of individuals with FASD.

Ideally a service system for those with FASD would include access to a diagnostic clinic and a FASD specialist service in each State and Territory, with those services having a role in training and resourcing agencies working with affected individuals to improve their capacity to respond effectively.

There are very few services for individuals with FASD currently operating in Australia. Support to carers may be provided by the peak body NOFASD Australia, the Russel Family Foundation, independent FASD consultants or Foster Care support groups.

*Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal
Communities in the Northern Territory*

Models of service delivery for individuals with FASD operating in the US and Canada include:

- The FASD Key Worker program, in which a designated worker within an agency resources and educates staff within the agency, and supports children and families referred in by other parts of the program. This is an cost-effective model which allows larger agencies to be responsive to individuals in any area of service delivery. This program exists in many locations in the US and Canada and works effectively with First Nations people.
- Support services to families who have had a child diagnosed with FASD. These services provide support to the family to understand and cope with the diagnosis, and advocate for the child within the broader service system (childcare, kindergarten, school and health services) to ensure that the child's specific needs are understood by all involved. These support services are often attached to diagnostic clinics.
- Behavioural management services to assist families and carers of children to manage behaviours of children with FASD. Often these children do not respond to traditional parenting interventions due to the distinct nature of the brain injury. Specialist behavioural management services can reduce the risk of placement breakdown and prevent carer burnout, keeping children out of the foster care system, or supporting those in care to maintain the placement.
- Youth outreach services targeting young people who have FASD. These young people are at risk of getting involved in crime, and dedicated services with staff who are knowledgeable about FASD can divert young people out of the criminal system.

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

- Services such as the PCAP model (above) also provide a service to adults with FASD as many mothers with FASD go on to have alcohol-affected pregnancies. These individuals struggle with parenting and the PCAP is inclusive of women with FASD. The program can assist in resolving child safety issues and improving quality of life for affected women.

Recommendations:

- That FASD Multidisciplinary Diagnostic Teams be implemented in all States and Territories
- That training and education be provided to improve the capacity of generic social and health services to respond to individuals and families affected by FASD
- That specialist services be developed to provide expert services to individuals and families affected by FASD.

13. Reducing the harm of alcohol on children in the child protection system.

Themes emerging from the study *Prenatal Alcohol Exposure among Children in the Child Protection System in the Northern Territory* include:

- Where parental alcohol use raises concerns for children's safety and wellbeing, interventions need to be longer term, with collaboration between services and close monitoring and evaluation. Short term interventions are generally unsuccessful as they underestimate the severity and duration of the addiction.

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

- Child protection services need to work closely with alcohol and other drug services to develop a joint approach to assessment, treatment and intervention with families where parents are abusing alcohol using best practice approaches from both fields.
- Infants of mothers with alcohol issues are at extremely high risk, including risk of fatality, and they require specialist assessment and planning.
- Children who are likely to have FASD require specialist assessment, diagnosis and intervention planning. There are significant gaps in this area in the absence of FASD diagnosis or specialist support services.
- Carers for children with FASD require specialist training and support to manage the care of these vulnerable individuals and to minimise the likelihood of development of secondary disabilities.

FASD is an under-recognised, preventable, life-long disability. Child Protection services have a responsibility for to be aware of the condition, given that FASD is diagnosed 10 to 15 times more frequently among children in care than in the rest of the population. These children have poor outcomes in care when they do not have access to early diagnosis, and require support from people who are knowledgeable about FASD.

Child protection services can make a difference to these children and families and FASD prevention needs to be embedded within child protection policy and practice across Australia, particularly in areas and among communities where alcohol use is very high.

Child protection services and health services need to develop a collaborative service response to prevent further FASD births among this group. New models of intervention are required to prevent further alcohol-affected pregnancies for women who have already given birth to a child with FASD. This is an area where

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

indicated prevention can significantly reduce the risk of further alcohol affected births. Child identification services are a key place for the engagement of at-risk women.

Recommendations:

- That Child Protection services work closely with Alcohol and Other Drug Services to ensure that family assessments and interventions incorporate evidence based practice from both sectors, and that interventions include longer-term monitoring where there is evidence of long term alcohol use.
- That specialist child protection assessment and planning occur for infants of mothers who are consuming alcohol to a concerning degree
- That children with FASD have access to specialist assessment, diagnosis and intervention planning
- That foster carers and kinship carers receive specialist training and support to manage the care of children with FASD
- That Child Protection services develop a model of best practice for supporting children with FASD who are at risk of abuse and neglect.

*Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal
Communities in the Northern Territory*

14. References

¹ National Indigenous Drug and Alcohol Committee Strategic Plan 2012-14.

² Gelb, K and Rutman, D. (2011) A Literature Review on Promising Approaches in Substance Use Treatment and Care for Women with FASD, School of Social Work, University of Victoria BC.

³ Philip A May, and J. Phillip Gossage (2001) Estimating the Prevalence of Fetal Alcohol Syndrome: A Summary, *Alcohol Res Health* 25(3):159-164

⁴ Bower et al, (2000) Ascertainment of birth defects: the effect on completeness of adding a new source of data. *Journal of Paediatrics and Child Health* 36(6):574-6.

⁵ Laslett, A, et al. The Range and magnitude of Alcohol's harms to others, Alcohol Education and Rehabilitation Foundation, (2010) p 97.

⁶ Laslett, A, Dietze P and Room, R. Carer Drinking and More Serious Child Protection Case Outcomes, *British Journal of Social Work*, Vol 43 Issue 7 PP 1384-1402

⁷ Laslett, A, et al. The Range and magnitude of Alcohol's harms to others, Alcohol Education and Rehabilitation Foundation, (2010) p 97.

⁸ AIHW (2013) *Child Protection Australia* 2011-12, p 42.

⁹ AIHW (2013) *Child Protection Australia*, summary.

¹⁰ Olszewka, A. So You Have Been Diagnosed with FASD, Now What? Boyle Street Education Centre, Alberta Canada (2007)

¹¹ <http://depts.washington.edu/fasdpn/pdfs/astley-oster.pdf>, retrieved 24.4.14.

¹² <http://www.theage.com.au/national/pharmacist-ron-batagol-calls-for-drinking-mothers-to-be-reassured-20140420-36ytp.html>, Retrieved 24.4.14.

Opportunities to Reduce Alcohol Related Harms for Children and Vulnerable Families in Aboriginal Communities in the Northern Territory

¹³ Clarren, S. Address to Yukon Prairie Northern Conference on FASD, 2002.

¹⁴ Autti-Rämö, I (2011). Maternal Welfare, Morbidity and Mortality 6-15 Years After a Pregnancy Complicated by Alcohol and Substance Abuse, 4th International Conference on Fetal Alcohol Spectrum Disorder

¹⁵ Burd L, Cotsonas-Hassler T, Martsolf J & Kerbeshian J (2003) Recognition and management of fetal alcohol syndrome. *Neurotoxicology and Teratology* 25:681–8.

¹⁶ http://depts.washington.edu/chdd/ucedd/ctu_5/parentchildprog_5.html, retrieved 24.4.14.

¹⁷ Grant, T., Ernst, C., Streissguth, A., & Stark, K. (2005). Preventing alcohol and drug exposed births in Washington State: Intervention findings from three Parent-Child Assistance Program sites. *American Journal of Drug and Alcohol Abuse*, 31(3): 471- 490.

¹⁸ Rasmussen, C., Kully-Martens, K., Denys, K., Badry, D., Henneveld, D., Wyper, K., & Grant, T. (2010). The effectiveness of a community-based intervention program for women at risk for giving birth to a child with Fetal Alcohol Disorder (FASD). *Community Mental Health Journal*, DOI: 10.1007/s10597-010-9342-0. Epub 2010 Aug 8.

¹⁹ <http://fasdprevention.wordpress.com/2011/04/page/2/> retrieved 24.4.14.

²⁰ <http://fasdprevention.wordpress.com/2011/04/page/2/> retrieved 24.4.14.

²¹ Astley, S. Twenty Years of Patient surveys confirm a FASD 4-Digit Code Interdisciplinary Diagnosis Afforded Substantial Access to Interventions that met Patients' needs, *J Popul Ther Clin Pharmacol* Vol 21 (1):e81-e101; March 2014