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NATIONAL DRUG AND  
ALCOHOL RESEARCH CENTRE

**National Drug and Alcohol Research Centre (NDARC) Submission to the Inquiry  
on the Impact of Illicit Drug Use on Families**

**House Standing Committee on Family and Human Services**

**Contributors:**

Dr Lucy Burns; Ms Louise Mewton; Dr Delyse Hutchinson; Prof Richard Mattick

**Terms of reference:**

The Committee shall inquire into and report on how the Australian Government can better address the impact of importation, production, sale, use and prevention of illicit drugs on families. The Committee is particularly interested in:

1. The financial, social and personal cost to families who have a member(s) using illicit drugs, including the impact of drug-induced psychosis or other mental disorders;
2. The impact of harm minimisation programs on families; and,
3. Ways to strengthen families who are coping with a member(s) using illicit drugs.

UNSW SYDNEY NSW 2052  
A U S T R A L I A  
Telephone: (02) 9385 0333  
Facsimile: (02) 9385 0222  
Email: NDARC@unsw.edu.au  
Location: UNSW Randwick Campus  
King Street, Randwick, NSW, Australia  
A B N 5 7 1 9 5 8 7 3 1 7 9



THE UNIVERSITY OF  
NEW SOUTH WALES

### **Background publications relevant to the Committee inquiry**

As all members of the community are family members in some respect, these terms of reference relate to all Australians and the Committee is consequently referred to the National Drug Strategy website for a comprehensive overview of drug use in the Australian community (<http://www.nationaldrugstrategy.gov.au/>). The National Drug Strategy is a cooperative venture between Australian, State and Territory Governments and the non-government sector, aimed at improving the health, social and economic outcomes for Australians by preventing the uptake of harmful drug use and reducing the harmful effects of licit and illicit drugs in our society. The website contains a full coverage of the key research and data components supporting the Strategy, including publications and links to relevant government, professional organisations and drug-related portal sites. The strategy is monitored on a triennial basis through the National Drug Strategy Household Survey. The 2004 survey is the eleventh in a series that monitors national trends in drug use and included responses from almost 30,000 Australians aged 12 and over (<http://www.aihw.gov.au/publications/index.cfm/title/10122>).

The Committee is also referred to a number of key publications on drug use and associated harms. These are summarized in Appendix A.

## **Summary points**

### **1. The financial, social and personal cost to families who have member(s) using illicit drugs, including the impact of drug induced psychoses or other mental disorders.**

- The relationship between substance abuse and parenting is complex. While children of substance abusing parents are at increased risk of child abuse and neglect, a range of social and individual factors correlate with poor parenting, and it is often the quality of the parent-child relationship that mediates the effects of most risk factors on child development.
- Whilst substance abuse does not automatically diminish the ability to parent adequately, longer-term dependent parents may be diminished in their capacity to parent effectively, due to the significant amount of time given to drug-seeking and drug-taking.
- Children of different ages will be affected differently by substance-using parents. Infants and young children will be more prone to suffer the effects of neglect, whereas older children may also suffer from neglect, but this may also be compounded by being raised in a drug-using environment and being exposed to drug use behaviours.
- Youth drug use is one of a range of health risk behaviours that share common risk factors and outcomes. These include increased rates of educational dysfunction, family stress and economic hardship, high rates of psychological distress, suicidal ideation and completed suicide. This imposes an enormous emotional toll on these families.
- Substance use disorders often co-occur with other mental health disorders. In particular, there are high levels of post-traumatic stress disorder, borderline and antisocial personality disorder, anxiety and depression. This co-occurrence is associated with higher levels of disability and this may well extend to parenting ability. This would be particularly the case when social support and treatment services are unavailable to these individuals.

## **2. The impact of harm minimisation on families.**

- It is estimated that the economic costs associated licit and illicit drug use in Australia amounted to \$34.5 billion in 1998-99. Tobacco accounted for 60%, alcohol 22% and illicit drugs 17%.
- Australia's National Drug Strategy takes a harm minimisation approach. Harm minimisation does not condone drug use; rather it refers to policies and programs aimed at reducing drug-related harm. It aims to improve health, social and economic outcomes for both the community and the individual, and encompasses a wide range of approaches, including abstinence-oriented strategies.
- Harm minimisation encompasses:
  1. Supply reduction strategies to disrupt the production and supply of illicit drugs and the control and regulation of licit substances;
  2. Demand reduction strategies to prevent the uptake of harmful drug use such as education and prevention, including abstinence oriented strategies and treatment to reduce drug use; and,
  3. Harm reduction strategies to reduce drug related harm to individuals and communities.
- Important aspects of harm minimisation introduced into Australia since the 1980s that directly affect the family unit include school-based drug education, the NSW Youth Drug Court, methadone maintenance and needle and syringe programs. All four aspects have been shown to minimise the risks associated with illicit drug-taking, thereby reducing the damaging impact such risks may inflict on the family.

## **3. Ways to strengthen families who are coping with a member(s) who use illicit drugs.**

- As a means of strengthening families who are coping with member(s) using illicit drugs, several programs have been established within Australia.
- The Canberra Playgroup Program, Parents Under Pressure Program and Behavioural Exchange Systems Training (BEST) Program are programs that have

been initiated within Australia fairly recently, and have been found to have positive impacts on the family unit.

- Family support organisations including the Parents Prepared Program and Family Drug Support give guidance, support and advice to families through peer support and telephone services. General drug and alcohol phone assistance is also available in each jurisdiction through dedicated phone lines.

#### **4. Recommendations.**

**Improved understanding of the following issues to guide preventative interventions, treatment and policy in Australia:**

- The prevalence and incidence of illicit drug use among Australian families, including use among both parents and children.
- The developmental pathways via which parental drug use problems impact on family life, including how drug problems interact with other risks at different stages of individual and family development to influence later outcomes.
- How treatments and interventions can most effectively address the multiple risks experienced by families affected by drug use.
- The protective factors within families that minimise the negative impact of drug use among parents and children.

**1. The financial, social and personal cost to families who have member(s) using illicit drugs, including the impact of drug induced psychoses or other mental disorders.**

Parental drug use

In 2004, approximately 15% of Australians aged 14 years and over had used an illicit drug at least once in the preceding 12 months (National Drug Strategy Household Survey 2004). Many of these individuals will also be parents. Cannabis was the most commonly used illicit drug, with 11% of the population having used it in the previous 12 months, followed by pain-killers/analgesics (6%), MDMA or ecstasy (3%), meth/amphetamine "speed" (3%) and injected drugs (2%).

Illicit drug use will affect people differently, depending on several factors, including the purity/potency of the specific substance used (e.g., the percent purity of heroin, cocaine or amphetamine can vary from quite low up to 80-90% pure, and forms of cannabis vary in THC content), the frequency of use (weekly or less frequent use, daily use, use several times daily, and use many times daily), the amount taken, the duration of time since last use, and the tolerance of the user to drug effects (regular use leads to tolerance) (Appendix A). Despite this it is well established that excessive drug use leads to a number of negative outcomes including increased morbidity, mortality and disability in everyday functioning. This disability clearly extends to the role of parenting, although the international research specifically on this topic is more limited than is available for other harms.

However, some existing reports place the extent of the problem in perspective. The Victorian Department of Human Services reported that in 2000-2001, about a third of parents of children and young people entering foster care reported having problems with alcohol abuse and a third had other substance abuse problems. It was also suggested that increasing levels of substance abuse are one of the main reasons for the increasing number of children entering the child protection system (Victorian Government Department of Human Services 2002). Similarly, in the New South Wales Department of Community Services 2002 Annual Report, it was estimated that up to 80% of all child

abuse reports investigated had concerns about drug and alcohol-affected parenting (Ainsworth 2004).

Although few Australian studies attempt to determine the extent to which child maltreatment and substance abuse interact (Keys Young cited in Tomison 1996), US research indicates problems related to alcohol and other drug use increase the number of children and their families who require child welfare services (Curtis & McCullough 1993). US research has also concluded that children of families with substance abuse problems tend to come to the attention of child welfare agencies at a younger age than other children, are more likely to be placed in care, and once in care are likely to remain in care longer (Semidei et al. 2001). It is reasonable to surmise that similar observations would also apply in Australia.

While commentators and researchers have considered the effects of ongoing parental illicit substance abuse on the health and well-being of children, there is little evidence to show a strong causal relationship between the two (Ainsworth 2004; Rittner & Dozier 2000). Despite this, there is little dispute that parental substance abuse is a concern in numerous child protection cases (Ainsworth 2004; Home Office 2003), and that parental intoxication, pre-occupation with obtaining and using drugs, and recovering from the intoxicating effects of illicit drugs, is likely to impact seriously on parenting ability.

The relationship between substance abuse and parenting is complex as demonstrated in a literature review concerning parenting skills and methadone maintenance (Dawe et al. 2000). While children of substance abusing parents are at increased risk of child abuse and neglect, these children are also often exposed to a range of social and individual factors (such as disadvantage, lack of social support, high levels of stress and poor mental health) that also correlate with poor parenting. The risks will also differ depending on the age of the child and the type and amount of substances used (Johnson & Leff 1999). Bernard (1999) has identified the following risks associated with parental drug use:

- substance use in pregnancy;
- financial strain within the family;

- shifts in familial roles;
- a lack of normal routine in the child's life;
- the impairment of parenting due to psychiatric illness;
- child abuse and neglect;
- child behavioural, social and psychological problems;
- difficulties in the child's social development;
- impairment of the child's cognitive functioning; and,
- subsequent use of illicit drugs by children themselves.

### Substance use in pregnancy

There is now considerable evidence that maternal substance abuse is associated with a range of negative foetal and neonatal outcomes (Burns et al, 2006; Hogan, 1998).

Prenatal exposure to opioids, stimulants and cannabis has been linked to poor growth, low birthweight and neonatal withdrawal, although findings are often confounded by the many other factors associated with illicit drug use including: poverty and disadvantage, maternal characteristics, family genetics, polydrug use, substance abuse lifestyle, and low levels of family and social support (Hulse et al. 1997; Soepatmi 1994; van Baar et al. 1994). These other factors are likely to significantly contribute to the negative outcomes.

Recent work undertaken through the National Drug and Alcohol Research Centre has estimated the prevalence and neonatal outcomes associated with substance use in pregnancy in New South Wales. Using linked administrative health data Burns et al (2006; Appendix B) examined all birth to women in NSW who also recorded an ICD-10AM diagnostic code for substance use (opioid; cannabis; stimulants) during pregnancy or at birth. Using this method a total of 416,834 delivery records were extracted from 1998 and 2002. Of these records, 2172 had a cannabis ICD-10AM diagnosis, 1974 had an opioid ICD-10AM diagnosis and 552 had a stimulant ICD-10AM diagnosis. Births to mothers in each of the drug groups were to women who were younger, had a higher number of previous pregnancies, were more likely to be indigenous, smoke heavily and to lack private health insurance. These women also presented later on in their pregnancy to antenatal services and were more likely to arrive at hospital for delivery unbooked,



with women who had a stimulant diagnosis presenting latest and most likely to present unbooked. Neonates born to women in each of the drug groups were more likely to be premature, and were admitted to neonatal intensive care and special care nursery more often, with neonates born to women in the opioid group admitted most often.

In further work undertaken through the National Drug and Alcohol Research Centre, Wallace et al. (2007) (Appendix C) examined the prevalence and demographic characteristics of pregnant and/or breastfeeding Australian women who used licit and illicit substances. Data from the 2004 National Drug Strategy Household Survey were used. From this survey 975 women reported being pregnant and/or breastfeeding in the last 12 months. These women were significantly less likely than non-pregnant women to consume alcohol (47% vs. 85%) or any illicit drug (6% vs. 17%). Women who used substances in pregnancy were older, more likely to have had a tertiary education, had a higher household income, spoke English at home and were less likely to reside in a major city. These findings suggest the need for increased screening for substance use during pregnancy and for more training for clinicians based in regional areas, along with increased availability of treatment options.

#### Financial strain within the family

There is no doubt that drug use results in immediate and severe financial demands on the user and his/her family. Money can be channelled away from necessary household resources and into sustaining parents' drug use (McKegney 2002). This may also be exacerbated by parental inability to maintain employment, or pursue the steps necessary to maintain eligibility for public assistance. As a result, children's material needs for food, shelter, clothing, hygiene and medical care may be neglected (Magura & Laudet 1996).

#### Shifts in familial roles

Substance affected parents may be unable to fulfil their parental roles, and other family members, such as grandparents may subsequently take on these responsibilities (Straussner 1994). As older children tend to become aware of their parents drug use,

children may feel they are responsible for, or ashamed of, their parents' drug use (Breshears et al. 2004), the child may take on the role and responsibilities of the parent ('parentified'), such as caring for siblings (Howard 2000), or imitate the behaviour and attitudes of the parent. The adoption of these adult responsibilities, behaviours and attitudes by children may occur at the expense of their own later development.

#### A lack of normal routine in the child's life

A lack of routine has been found in the lives of children with a drug using parent. The routines that often order and structure children's lives (such as meal times, bed times, dropping off and picking up from school) may be neglected as a result of parents' focus on sustaining their drug use (McKegeny 2002).

#### The impairment of parenting due to psychiatric illness

Approximately 30% of patients attending community mental health centres have substance abuse problems co-existing with mental health problems (Gerada 2005). High rates of depression, phobias, anxiety disorders, mood disorders and psychoses have been found among individuals with substance use disorders (Hogan 1998). These psychiatric disorders may also be associated with greater parental difficulties among drug users than among non-drug users (Hogan 1998). This would be most likely in situations where treatment and social support are unavailable or, if available, not accessed effectively.

#### Child abuse and neglect

As infants are helpless, they may experience neglect or abuse in the form of malnourishment, exposure to drugs (actively to sedate the child, or passively through smoke inhalation or access to drugs/drug paraphernalia; Klein et al. 2000) and poor parental bonding due to the parent being physically and emotionally unavailable to respond effectively to the child's needs (Breshears et al. 2004; Mitchell et al. 2001). Some research indicates there is an increased risk of Sudden Infant Death Syndrome (SIDS) in infants of substance abusing parents, although the strongest relationship is between maternal smoking and SIDS (Kandall & Gaines 1991). Exposure to high levels

of environmental tobacco smoke increases the prevalence of asthma, respiratory tract infections and house fires.

Other risks to consider include poor hazard detection such as driving with children in the car while under the influence of drugs and leaving children with an inappropriate caretaker or unattended, inconsistent behaviour towards children, neglect of basic needs such as regular meals, clothing and cleanliness, using funds to purchase drugs instead of necessities such as food, and impaired judgment regarding the needs of the child.

#### Child behavioural, social and psychological problems

Compared with children of non-drug abusing parents, children of parents with substance abuse problems are more likely to demonstrate conduct problems such as severe aggressiveness, destructive behaviour, Attention Deficit Hyperactivity Disorder, unwillingness to follow instructions, and detached and withdrawn behaviour (Dawe et al. 2000). Elevated rates of depression and trait anxiety have been identified in these children (Johnson et al. 1991). They may experience difficulties in social development and be more impulsive, irresponsible and immature than children of non-drug using parents (Johnson et al. 1991). Cognitive development may be impaired with resultant poor speech development, learning problems at school, lower IQ and perceptual motor skills, as well as more need for remedial teaching and poor school attendance (Nichtern 1973). However, there are a number of important resource factors other than drug use that could determine these outcomes: maternal and child nutrition and health; familial patterns of temperament, intelligence, or psychopathology; perinatal problems; family socioeconomic status; psychosocial supports; family stability; and quality of the relationship between the child and caregivers.

#### Subsequent use of illicit drugs by children themselves

There is clear evidence that problem drug use by parents is associated with drug use by their children. Several studies conducted from the 1970s onwards found that adolescents whose parents or older sibling used drugs were more likely to use drugs themselves (Klee

1998; Mitchell et al. 2001). This has the potential to create a cycle of drug abuse within the family.

#### The impact of drug use by a child

Cannabis is the most widely used illicit drug among young people (aged 12 to 19 years), followed by methamphetamine and MDMA (Australian Institute of Health and Welfare 2005). Although there is a growing interest in interventions to reduce youth substance abuse, the impact of youth substance abuse on the family has been somewhat overlooked. However, current research identifies four key areas in which adolescent substance abuse may have a significant impact on the parent:

1. The emotional toll of adolescent substance abuse;
2. The effect of adolescent substance abuse on parental mental health;
3. Associations between adolescent substance abuse and comorbid mental health problems; and,
4. Associations between adolescent substance abuse and youth suicide.

#### The emotional toll of adolescent substance abuse

The association between parental neglect and youth substance abuse has contributed to a social milieu that tends to blame parents for youth substance abuse. This can lead the parents of substance-abusing children to experience feelings of guilt, shame, anger, distress, stigma and despair associated with a perceived failure in the parenting role (Gilvarry 2000; Toumbourou et al. 2001).

#### The effect of adolescent substance abuse on parental mental health

Parents dealing with adolescent substance abuse are more likely to experience poor mental health. Parents in this situation have been shown to be particularly affected by depressive symptoms and research suggests the levels of mental health problems in parents of children who abuse substances are severe enough to impair functioning and undermine the potential for effective parenting (Toumbourou et al. 2001).

Associations between adolescent substance abuse and comorbid mental health problems, including drug induced psychosis

Drug use is not an isolated health-risk behaviour. Rather, it may be seen as one of a range of health risk behaviours, including school problems and delinquency, which have common risk and protective factors and share common outcomes (Spooner et al. 2001). Evidence suggests that amongst vulnerable individuals, the use of illicit drugs in adolescence predicts an increased risk for the development of mental health disorders (Degenhardt & Hall, 2006). The development of mental health disorders in adolescence can subsequently have a serious impact on the family. For example, adolescents with mental health disorders find it harder to find and maintain employment (Woodside et al. 2006), meaning that parents may need to provide increased financial support.

Associations between adolescent substance abuse and youth suicide

Mental disorders and substance abuse are critical risk factors for youth suicide, attempted youth suicide and suicidal ideation amongst adolescents. Studies have demonstrated the high rates of comorbid depressive disorders and substance abuse disorders among both suicide completers and attempters (Gilvarry 2000). Psychotic illness and symptoms of schizophrenia may be exacerbated by cannabis use. Use of methamphetamine has risen in Australia and is associated with health and psychological harms including increased rates of aggression in users (National Drug and Alcohol Research Centre 2005). This places enormous grief and strain on familial relations and the family unit.

**2. The impact of harm minimisation on families.**

The risks of substance abuse, such as poor mental health, increased criminality, overdose and the contraction of infectious diseases, can have serious and deleterious impacts on the family unit. Harm minimisation is the broad approach to drug use in Australia. Harm minimisation reduces the risk of harm that occurs with substance abuse, acknowledging that the abuse of drugs is harmful to the individual, family, and community, but that complete prohibition of illicit drug use is largely an unattainable goal (Bonomo & Bowes 2001; The Australian Government Department of Health and Ageing 2004). Harm minimisation incorporates the following three strategies;

1. Demand reduction: through education and prevention;
2. Supply control: through policing, regulation and legislation; and
3. Harm reduction: helping people who use drugs to do so as safely as possible.

Successful aspects of harm minimisation introduced into Australia since the 1980s that particularly focus on the family unit are:

1. School-based drug education;
2. Targeted treatments such as the Adolescent Cannabis Check-Up and Cannabis Clinics;
3. NSW Youth Drug Court;
4. Methadone maintenance; and,
5. Needle and syringe programs.

Each of these has been shown to minimise the risks associated with illicit drug taking, thereby reducing the damaging impact such risks may inflict on the family.

#### School-based drug education

School-based drug education involves lessons, programs and activities aimed at affecting students' knowledge, attitudes and behaviours regarding drugs by providing relevant information about potential harms, safe use and the recognition of harmful use (Bonomo & Bowes 2004). Evidence from reviews which include a broad variety of school-based drug prevention programs suggest that school-based programs are effective in increasing student knowledge of drugs and related harms, but typically have minimal impact on actual drug use behaviour. However, reviews which focus on school-based drug prevention programs based specifically on the social influence and competence-enhancement models, have been able to demonstrate significant changes in drug use behaviour.

Social influence programs and competence enhancement drug prevention programs were different to previous programs (i.e., information only, affective and alternate) as these programs recognised the importance of external social pressures in influencing young

people's decision to use drugs. The social influence programs include three important components: (1) information on the legal, social and health consequences of drug use; (2) normative information on the low prevalence of drug use (i.e., to decrease the perceived pressure to conform to a drug using norm), and (3) skills to resist social pressure and reduce the harms associated with drug use (e.g., assertion, problem solving, decision making and practical first aid and harm minimisation tips). Social influence programs clearly addressed the role of external social pressure in drug use. The competence-enhancement model extends this further by recognising that young people not only use drugs as a result of social pressures, but also use drugs for instrumental reasons (e.g., to cope with depression, anxiety or escape from feelings of low self-esteem). Hence, competence enhancement approaches also included an additional fourth component which focused on teaching other important life skills. These life skills included teaching young people skills to enhance their self-esteem and cope with anxiety, depression and other negative emotions. Research has shown that social influence programs lead to significant reductions in drug use. Competence enhancement approaches lead to larger program effect sizes, but this increased effect size is not significantly greater than the social influence programs.

The majority of school-based drug prevention research has been conducted in the United States where the desired goal of prevention program is abstinence. The focus on abstinence as the desired goal of such programs may not be as applicable to the Australian setting, where the goal of the National Drug Strategy is one of harm minimisation. However, recent programs which have allowed for, or, focused upon harm minimisation outcomes, have demonstrated considerable reductions in drug use and related harms.

For example, CLIMATE Schools (Vogl et al. 2006) is a universal school-based alcohol prevention program developed at the National Drug and Alcohol Research Centre. The program advocates a harm minimisation approach to adolescent drinking and aims to prevent alcohol use, misuse and related harm. The intervention consists of six lessons and utilises a computerised cartoon-based teenage drama and interactive classroom activities

to impart information and skills to young people. Content areas covered include alcohol guidelines, normative alcohol use information, short- and long-term harms of alcohol use, peer and media influences, drink refusal, harm minimisation skills and first aid.

A randomised controlled trial was conducted involving 1435 grade 8 students from 16 schools in New South Wales and Australian Capital Territory (Vogl et al. 2006). Schools were randomly allocated to receive the intervention or personal development, health and physical education classes, which included the usual alcohol prevention education delivered in each school. At the 12 month follow-up, students who received the CLIMATE intervention had significantly greater knowledge of information to aid in reducing alcohol-related harm and reduced expectancies regarding the benefits of consuming alcohol compared to students in the control group. Females who received the CLIMATE intervention also had lower average increases in alcohol consumption, frequency of binge drinking and alcohol related harms compared to females in the control group, however only minimal and transient changes in drinking behaviour were detected for males. As the control schools received alcohol prevention education which was also based on a harm minimisation approach, the effects which were detected are a conservative measure of program success. This program is promising because positive changes in both drinking attitudes and behaviour were detected, however it appears that the intervention has greater efficacy for reducing alcohol use and misuse in adolescent females than in males. Given the partial success of this program, it is now being trialed in a study being conducted by the National Drug and Alcohol Research Centre in the context of illicit drug education and intervention focusing on cannabis use among young adolescents.

#### Adolescent Cannabis Check-Up and Cannabis Clinics

Cannabis is the most widely used drug by young Australians. There is also strong evidence that the average age of initiation of cannabis use has been decreasing over several decades (Degenhardt et al 2000) and that younger users are more susceptible to develop dependence and suffer adverse psychosocial consequences (Chen & Anthony 2003; Fergusson et al. 2002). The Adolescent Cannabis Check-Up is a brief intervention



for young cannabis users. The intervention involves four sessions; one session with parents to discuss concern about their adolescent's cannabis use and three sessions with the young person. The latter three sessions involve assessing levels and patterns of use and then feeding this information back to the adolescent using motivational interviewing techniques to help them make a more detailed and objective assessment of their cannabis use and the role it plays in their life. A final optional session is also offered to provide participants with pragmatic strategies for quitting or reducing cannabis use. Preliminary program evaluation results showed a significant decrease in the frequency of adolescent cannabis use and in rates of cannabis dependence (Martin et al 2005; Appendix D).

Four Cannabis Clinics are currently operational in NSW and provide individual psychotherapy and pharmacotherapy for cannabis dependent young people and group interventions for dependents and families of cannabis dependent people. The clinics specifically target young people and young adults at risk of dependence and/ or mental health problem, and provide outreach clinics to surrounding communities. Preliminary outcomes data indicate that clients are responding well to treatment (Commonwealth of Australia 2006).

#### The NSW Youth Drug Court (YDC).

The YDC was introduced in NSW in 2000 following the NSW Drug Summit. The aims of the YDC were to reduce offending and drug use amongst young people who have become entrenched in the criminal justice system. As these young people have a range of other difficulties such as poor educational achievement and psychological problems, the YDC attempts to address the needs of their needs through intensive case management. This objective is to be achieved by establishing a scheme, under which drug dependent persons, who are charged with criminal offences, can be diverted into programs designed to eliminate, or at least reduce, their dependency on drugs. Following initial evaluation, YDC's have been introduced in a wider range of locations (Eardley et al 2004; Appendix E).

### Methadone maintenance

Methadone is the drug most widely used in Australia for long-term maintenance of opioid addiction. Methadone maintenance has been found to:

- reduce illicit drug taking;
- retain patients in treatment;
- reduce criminal activity;
- reduce mortality;
- reduce HIV risk-taking behaviour (needle sharing); and,
- improve social functioning (Gerada 2005; Mattick et al. 2003).

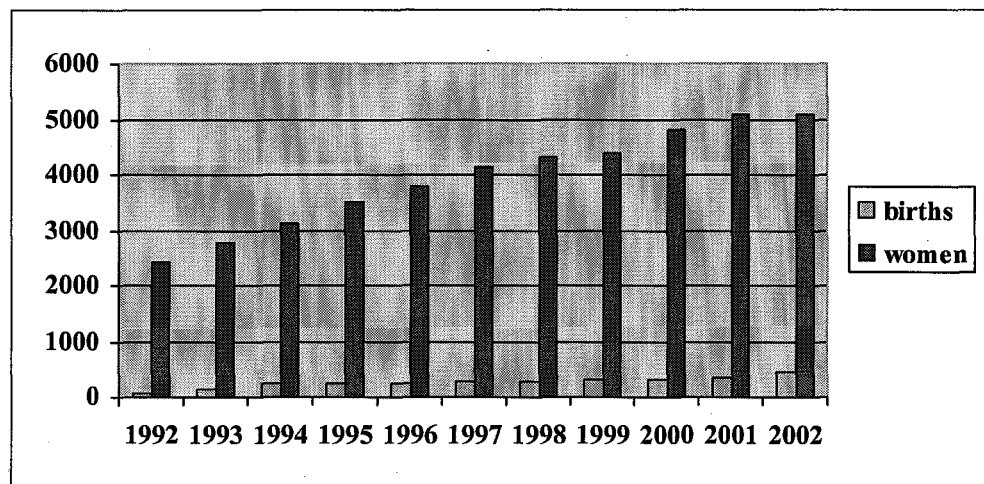
Overall, the success of methadone maintenance is comparable to treatments of other chronic diseases such as diabetes, hypertension and asthma in its effectiveness for reducing health morbidity and mortality, and social functioning (Gerada 2005). With respect to neonatal outcomes, recent research has found that longer retention in methadone maintenance is associated with earlier entrance to antenatal care and significant decreases in levels of prematurity (Burns et al 2006). A study conducted through the National Drug and Alcohol Research Centre examined all births to women on methadone maintenance over an 11 year period (1992 to 2002). In total there were 2,993 births to women recorded as being on methadone at delivery, increasing from 62 in 1992 to 459 births in 2002 (Figure 1).

Neonatal outcomes were also compared for three groups of women who were or had been on methadone maintenance treatment during pregnancy: a group who entered continuous treatment at least one year prior to birth, the “early entrant” group; a second group who entered continuous treatment in the six months prior to birth (with any previous program ending at least one year prior to birth), the “late entrant” group; and a third a group whose last treatment program prior to birth ended at least one year prior to the birth, the “previous treatment” group (Burns et al, 2007; Appendix F). Compared to early entrants, late entrants presented later to antenatal services, were more likely to arrive at hospital for delivery unbooked, were more often unmarried, indigenous, and smoked more heavily. Compared to neonates of early entrants, those born to mothers who entered

treatment late were more likely to be premature and admitted to special care nursery. These findings suggest early rather than late entrance to methadone treatment during pregnancy is associated with earlier antenatal care and improved neonatal outcomes.

Figure 1

Number of births to women on the NSW Methadone Program at 30<sup>th</sup> June, by year (1992-2002)



#### Needle and syringe exchange programs (NSPs)

Needle and syringe exchange programs were introduced as a means of controlling the transmission of the Hepatitis C virus and HIV through the sharing of injecting equipment. NSPs provide intravenous drug users with free sterile needles and syringes, as well as education about safe sexual and injecting behaviours. These programs have been successful in containing the spread of HIV. In cities that had ever had NSPs, there had been an average annual decrease in HIV prevalence of 18.6%, compared with an average annual increase of 8.1% in cities without such programs (Law & Batey 2003).

#### Harm minimisation and the family

The success of harm minimisation has reduced the negative impact of drug use on the individual, the family and the community. Students are able to make more informed decisions about drug use, which has been shown to impact positively on their drug-taking

behaviours in some studies. Financial strain on the family, the lack of routine within the family and the family's exposure to criminal activity is reduced by effective treatment options and opioid replacement therapy. By reducing drug overdose, as well as the contraction of infectious diseases, NSPs reduce the painful toll these negative outcomes can have on the family as a unit. Moreover, methadone clinics and NSPs provide actual sites from which further medical and psychological treatment for drug dependence can be recommended.

### **3. Ways to strengthen families who are coping with a member(s) who use illicit drugs.**

As a means of strengthening families who are coping with member(s) using illicit drugs, a range of programs and services have been established within Australia. The following programs have been initiated fairly recently. These programs have been found to have positive impacts on the family and/or are currently being evaluated:

1. The Canberra Playgroup Program;
2. The Parents Under Pressure Program;
3. The Behavioural Exchange Systems Training (BEST) Program; and,
4. The Parents Prepared Program.

The first two programs focus on strengthening families in which a parent uses illicit drugs. The third is aimed at strengthening family members coping with adolescent drug use and the fourth aims to support parents through peer education about drug use and associated harms.

#### The Canberra Playgroup Program

The Canberra Playgroup Program involved parents who used illicit drugs and their young children gathering weekly, in an informal playgroup setting, to access social support, preventative health services and referral. The playgroup offered a relaxed atmosphere in which parents could observe and exchange good parenting skills, learn about the prevention of blood-borne viruses, and access mainstream services, including medical services, accommodation services, legal services and services dealing with issues such as

domestic violence. Services provided at the playgroup were a community nurse, a childcare worker and a peer worker. A review of this program (Byrne et al. 2000) indicated that it was a successful intervention, which supplied valuable health care and social support to drug-using parents, generally improving their ability to meet their family needs at minimal financial cost.

#### The Parents Under Pressure Program

The Parents Under Pressure Program was designed to improve child behaviour, decrease parental stress and improve family functioning for parents on methadone maintenance. The program focuses on mood regulation, the prevention of relapse into substance abuse and improving parenting practices using behavioural family therapy techniques. The program consists of an initial assessment, 12 one and a half hour sessions with a therapist, and a three month follow-up assessment. A study of the effectiveness of this program showed that there were significant improvements on all measures of parental functioning. Parental stress, dissatisfaction with the parental role and child behaviour problems were all shown to have reduced at the three month follow-up period. The relationships between the parents and their children also improved significantly (Dawe et al. 2003). This evidence suggests that the Parents Under Pressure Program was a successful means of improving parental functioning, and thereby strengthening families with a member(s) on methadone maintenance.

#### The Behavioural Exchange Systems Training (BEST) Program

The BEST program is an eight week parent training program designed to support parents coping with youth substance abuse. This program provides support for parents dealing with depression as a result of their child(ren) using illicit drugs. It was not designed to target adolescent drug-taking behaviour, or reduce adolescent drug using. The first four weeks of the BEST program aim to improve parent emotional stability by addressing issues of responsibility and shame. The program attempts to address parental depression by reducing parental attention on adolescent misdemeanours and by challenging the belief that the parent bears the primary responsibility for the adolescent(s) behaviour problems. The final four weeks of the BEST program is based on behavioural

intervention and aims to increase parental responses likely to minimise youth drug related harm. A review of this program (Toumbourou et al. 2001) indicated that it was successful in reducing levels of parental blame. It was also found that participation in the BEST program encouraged parents to make contact for further support and assistance.

#### Parents Prepared Program

The Parents Prepared Program is a peer education program offered through the Manly Drug Education and Counselling Centre in NSW which provides parents with up-to-date information about alcohol and other drugs, and the appropriate skills to communicate about these issues with young people, their family and others in the community. The program also addresses some of the myths and misinformation about drugs and drug use. Interactive information sessions cover such topics as how drugs work, why people use drugs, drug use and adolescence, and talking to your teenager about drugs. Parents also receive a comprehensive resource folder and are encouraged to share information learnt at the program with their friends and local communities. This program is currently being evaluated (<http://www.mdecc.org.au/programs.htm>).

#### Other services for families

In addition to the programs described above, a number of services exist in Australia to assist both individuals and families with drug issues through support and assistance. Family Drug Support, is a national organisation formed in 1997 after its founder Tony Trimingham lost his son to a heroin overdose. This service is offered through a seven day, 24 hour telephone line Australia-wide, manned by volunteers offering help to diffuse crises and provide strategies for coping and information. The organisation also produces and disseminates resources about drug use and crisis management strategies (<http://www.fds.org.au/about.html>). Other telephone support services for general drug issues are described below;

Telephone lines for assistance with drug problems: There are initiatives in each state where people can ring for information and advice, including referrals to relevant agencies.

NSW:	Alcohol and Drug Information Service (ADIS) (02) 9361 8000 or 1 800 422 599 (toll free) NSW Users and AIDS Association (NUAA) (02) 8354 7300 or 1 800 644 413 (toll free)
Victoria:	Directline (03) 9416 1818 or 1 800 136 385 (toll free) Victorian Drug User Group/VIVAIDS (03) 9329 1500
South Australia:	Alcohol and Drug Information Service (ADIS) 1 300 13 13 40  SAVIVE 8362 9299 (direct 9.30 - 5.30 weekdays) or 8362 1611 (switchboard 9.00 - 5.00 weekdays)
Western Australia:	Alcohol and Drug Information Service (ADIS) (08) 9442 5000 or 1 800 198 024 (toll free) WA Substance Users Association (WASUA) (08) 9227 7866 Parent Drug Information Service (08) 9442 5050 or 1 800 653 203 (toll free)
Queensland:	Alcohol and Drug Information Service (ADIS) (07) 3236 2414 or 1 800 177 833 (toll free)  Queensland Intravenous AIDS Association (QuIVAA) (07) 3252 5390 or 1 800 172 076 (toll free)

Tasmania:	Alcohol and Drug Information Service (ADIS) (03) 6222 7511 or 1 800 811 994 (toll free) Tasmania Users Health & Support League (TUSSEL) (03) 6234 1242
Northern Territory:	Alcohol and Drug Information Services (ADIS) 1800 131 350 (toll free) Northern Territory AIDS Council (08) 8941 1711 or 1 800 880 899 (toll free)
ACT:	Alcohol and Drug Information Service (ADIS) (02) 6205 4545; c/o Australian IV League (02) 6281 7851

#### 4. Recommendations

To improve knowledge in these identified areas more Australian research is needed, particularly longitudinal research. Three valuable ways forward are recommended:

1. A short-term way forward is to utilise data collected as part of existing Australian cohort studies to examine some of the identified issues. While this approach will provide short-term advances, it is important to acknowledge that neither the existing cohort data, nor those data currently being collected, will provide sufficiently detailed information to answer the more complex questions raised (i.e. few cohort studies have comprehensive data on parent and child illicit drug use patterns and disorders in addition to adequate measures of family and child functioning).
2. For this reason, a longer-term investment is also recommended. This would involve the establishment of a cohort of Australian parents to determine the impact of substance use on family functioning and children across time, including the role of mental health, psychosocial and protective factors. To explore these issues pilot work, involving a collaboration between the National Drug and Alcohol Research Centre and Royal Prince Alfred Hospital in NSW, is currently underway to establish a longitudinal birth cohort of substance abusing women and their children. We also have a larger application with our colleagues at the National Drug Research Institute for an NHMRC funded project to look at a longitudinal study of babies of substance-using parents to examine the impact on



milestones, health effects, later substance use and family functioning. There is an urgent need for large-scale research of this kind to guide preventative interventions, treatment and policy in Australia. This was recently acknowledged at the House of Representatives Standing Committee on Family and Human Services hearing held in Perth on March 14, 2007.

3. Third, greater research investment into the development and scientific evaluation of prevention and treatment interventions for families affected by illicit drug use is needed to identify which interventions and strategies are most effective. Greater investment in this area is critical as interventions which appear to have good face validity do not necessarily result in positive changes for individuals and families. Research should be directed toward interventions which target: (a) the individual (i.e. the parent or adolescent) and/or the family unit; and (b) drug use specifically and/or the compounding risks frequently associated with drug use.

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## Appendix A.

### Key publications on drug use and associated harms

- HIV and Hepatitis C: Annual reports from the National Centre in HIV Epidemiology and Clinical Research on human immunodeficiency virus (HIV) and Hepatitis C surveillance among injecting drugs users (Attachment G; <http://web.med.unsw.edu.au/nchechr/>).
- Methadone maintenance therapy: References arising from the National Evaluation of Pharmacotherapies for Opioid Dependence (NEPOD), a three-year project completed in 2001 that aimed to develop and implement a range of effective, evidence-based, best practice treatment options for people who are opioid dependent (Attachment H; <http://notes.med.unsw.edu.au/ndarcweb.nsf/website/Research.completed.cmp13>).
- Emerging trends in the use, price, purity and availability of heroin, methamphetamine, cocaine, cannabis, ecstasy (MDMA) and other related drugs such as methamphetamine, cocaine, GHB and ketamine: The National Drug and Alcohol Research Centre co-ordinates the monitoring of trends in the use of these drug through the Illicit (IDRS) and Ecstasy (EDRS) Related Drugs Reporting Systems. These initiatives are funded by the Australian Government Department of Health and Ageing (Appendices I and J; <http://ndarc.med.unsw.edu.au/NDARCWeb.nsf/page/National>).
- Australian secondary school students use of over-the-counter and illicit drugs: This report describes the results of the eighth statewide survey on the use of tobacco, alcohol and other drugs by Australian secondary school students. The survey was conducted in 2005 and involved the collaboration of the Victorian Department of Human Services, the Cancer Council Victoria and the Commonwealth Department of Health and Ageing. A representative sample of secondary schools (including government, Catholic and independent) was selected for surveying, and from each school up to 80 students were surveyed. A total of 69 secondary schools participated in the study. The 2005 report is based on data collected from 4552 male and female students aged 12 to 17 years. (Appendix K;

<http://www.nationaldrugstrategy.gov.au/internet/drugstrategy/publishing.nsf/Content/mono60>).

- **Drug treatment:** National data about drug treatment services including information about the type of drug problems seen in treatment settings and the treatment services provided, is collected through the National Minimum Data Set of Alcohol and other treatment services in Australia and collated by the Australian Institute of Health and Welfare (Appendix L; <http://www.aihw.gov.au/publications/hse/aodts04-05/aodts04-05-c01.pdf>).
- **Treatment of heroin dependence:** The Australian Treatment Outcome Study (ATOS) is the first large-scale longitudinal study of treatment outcome for heroin dependence to be conducted in Australia. This project was undertaken through the National Drug and Alcohol Research Centre and described the treatment received, treatment outcomes (drug use, criminal behaviour and mental health) and associated costs of treatment of 745 individuals entering treatment (methadone/buprenorphine maintenance therapy, detoxification and residential rehabilitation). (Appendix M; <http://notes.med.unsw.edu.au/ndarcweb.nsf/page/Completed%20Project%20T7%20ATOS>).
- **National Clinical Guidelines for the Management of Drug Use During Pregnancy, Birth and the Early Development Years of the Newborn:** The guidelines are intended to support a range of health care workers who care for women with drug and alcohol use issues, and their infants and families. The drugs covered include: opioids, alcohol, tobacco, cannabis, amphetamines, cocaine, benzodiazepines and inhalants. Other topics covered are: breastfeeding, vertical transmission of blood-borne viruses, psychosocial aspects, obstetric implications, pain management in labour and early childhood development. Aboriginal and Torres Strait Islander issues are also addressed; Appendix N; [http://www.health.nsw.gov.au/pubs/2006/pdf/ncg\\_druguse.pdf](http://www.health.nsw.gov.au/pubs/2006/pdf/ncg_druguse.pdf)).

### **Indicators of drug use**

Opioid intoxication and withdrawal. Opioid intoxication, including heroin (actually diacetylmorphine) and methadone injection, shows itself as a virtually immediate state of intoxication which is associated with an obvious initial euphoria followed by apathy, dysphoria, agitation or slowed actions, impaired judgement and impaired functioning. During or shortly after heroin use there is also evidence of very marked pupil constriction ('pinpoint' pupils), slurred speech, drowsiness ('being on the nod' where the users will literally nod-off in front of the observer) and impaired attention or memory so that the person will have difficulty interacting coherently. These signs are quite distinct and obvious to an alert observer, although they may be only perceived as a state of drowsiness or tiredness to the less aware observer. Patients in a prescribed methadone or buprenorphine maintenance treatment will not normally be observed to be obviously affected by these medications as stable regular dosing with these drugs overcomes intoxication or withdrawal effects.

Heroin withdrawal and other opioid withdrawal (from methadone) are also associated with distinct withdrawal signs, which are dependent on the half-life of the drug, but are observable. Cessation or reduction in use will be associated with nausea, vomiting, runny nose or tear production (an influenza like phenomenon), marked pupillary dilatation, goose bumps (hence the term 'cold turkey' with reference to sudden cessation), yawning and dysphoria, and there are marked complaints of muscle aches and insomnia.

Sedative intoxication and withdrawal. Sedative use is prevalent among injecting drug users to offset the effects of stimulant withdrawal and opioid withdrawal. Excessive use leads to diminished motor coordination, slurred speech and unsteady gait. Withdrawal is associated with sweating and increased pulse rate and blood pressure, tremor, complaints of insomnia, agitation, anxiety and in some rare cases epileptic seizure and hallucinations.

Cannabis intoxication and withdrawal. Cannabis use is quite prevalent among marginalised and younger groups in Australia. Use to a level of intoxication is associated with diminished motor coordination, euphoria, impaired judgement and social withdrawal that develop in an obvious fashion during and shortly after use. Later there can be obvious increased appetite ('the munchies'), dry mouth and tachycardia. There is a less marked and less easily observable withdrawal syndrome, apart from irritability, making cessation of recent use less easy to identify.

Cocaine and other psychostimulant intoxication and withdrawal. Cocaine and amphetamines have become frequently used drugs in Sydney and regional NSW respectively. They often produce similar effects soon after use including a sense of confidence and euphoria, with evidence of increased sociability or talkativeness, a hypervigilant state, with increased interpersonal sensitivity, sometimes evidence of anxiety/tension or anger, agitation or restlessness, as well as markedly impaired judgement or social/occupational functioning. Changes in heart rate, pupillary dilatation, changes in blood pressure, perspiration or chills, nausea or vomiting, evidence of weight loss and loss of appetite, and more serious health effects may be observed, although some of these latter changes will be less obvious to the observer. Withdrawal from cocaine use shows as a period of marked fatigue and slowed psychomotor activity, although agitation can occur. Sleep disturbance (hypersomnia or insomnia) also is a feature of withdrawal along with vivid dreams, with a dysphoric state.

Injecting drug use. 'Track marks', or evidence of recent injection, is observable by looking for puncture marks or scars and may indicate the person is currently injecting. Injection equipment (needles and syringes, spoons, filters, etc.) can be observed in the homes of regular users.

Abuse and dependence. The distinction between use, abuse and dependence should be made and again is a clinically useful tool in the observation of users. The DSM-IV (American Psychiatric Association 2000) is the preferred diagnostic tool by most clinicians in determining the type of drug misuse. Subtle indicators such as specific

health problems or impaired social functioning may suggest the presence of parental substance abuse and may be easily overlooked when using a general risk assessment (Dore et al.1995. Therefore where there is an index of suspicion, a full assessment should be made. Clinical indicators and assessment tools may assist in deciding which treatment option best suits the client, assist in providing feedback to client about his/her own drug use and for referral to appropriate treatment.