The Social and Economic Benefits of Improving Mental Health

5 April 2019

1   Contents

Response to The Social and Economic Benefits of Improving Mental Health

2   The Alcohol and Drug Foundation

Founded in 1959, the Alcohol and Drug Foundation (ADF) has contributed 60 years of continuous service to communities across Australia. Our focus is on prevention and early intervention and our strategies include community action, health promotion, education, information, policy, advocacy, and research.

Note: The Alcohol and Drug Foundation is a partner on the joint submission *Focusing on Prevention* by a consortium led by VicHealth. This submission should be understood as additional to that submission.

3   Introduction

Our submission focusses on the reciprocal nature of the relationship between psychoactive drug use and mental health problems and the need for improved identification and treatment of both conditions. We have also pointed toward effective strategies to reduce the risk factors that are common to both alcohol and other drug problems and adverse mental health conditions. In that context we think the following statement in the Issues Paper (p5) is instructive:

"To give the inquiry focus, we intend to give consideration to where there are the largest potential improvements in population mental health, participation and contribution over the long term. From the Commission's initial consultations, this seems likely to include:

- People with a mild or moderate mental illness (such as anxiety and depressive disorders) because they account for the vast majority of Australians with a mental disorder

- Young people, because mental illness at a young age can affect schooling and other factors which influence opportunities over a person's lifetime—moreover, most mental illnesses experienced in adult life have their onset in childhood or adolescence

- Disadvantaged groups, such as individuals from very low socioeconomic backgrounds and people residing in remote areas because they may have more difficulty in accessing services which could improve their mental health

- Suicide prevention because the years of additional life lived, and associated social and economic participation and productivity years into the future, can be significant."

4   Summary of Recommendations

Recommendation 1: That the Productivity Commission identify the important role of alcohol and other drugs in the development and exacerbation of mental health problems.

Recommendation 2: That the Productivity Commission report on the reciprocal nature of alcohol and other drug and mental health conditions and notes that without appropriate treatment for co-occurring problems, the individual is less likely to make a full recovery from either condition.

Recommendation 3: That the Productivity Commission recommend that the Australian government develop a campaign in concert with the health sector to combat stigma for people with alcohol and drug and mental health conditions.

Recommendation 4: That the Productivity Commission recommend the integration of care for people with co-occurring mental health and alcohol and other drug problem to ensure they receive the most effective care for a full recovery from both conditions.

Recommendation 5: That That the Productivity Commission recommend that all mental health services and alcohol and other drug services are required to ensure their staff have the capability to identify and assess all patients and clients for mental health and alcohol and drug problems.

Recommendation 6: That the Productivity Commission recommend the routine screening of all clients for co-occurring mental health and alcohol and other drug conditions should be adopted by general practitioners and mental health and alcohol and other drug services.

Recommendation 7: That the Productivity Commission recommend higher levels of funding of research into the etiology and treatment of co-occurring alcohol and other drug problems and mental health conditions.

Recommendation 8: That the Productivity Commission recognise that the reduction of early alcohol and other drug use by young people will lower the incidence of alcohol and other drug problems and adverse mental health states.

Recommendation 9: That the Productivity Commission recommend the Australian Government ensure Aboriginal and Torres Strait Islander people and communities have access to extensive prevention and treatment for alcohol and other drug and mental health disorders.

Recommendation 10: That the Productivity Commission recommend the Australian Government ensure alcohol and other drug and mental health programs for Aboriginal and Torres Strait Islander populations are developed and delivered with the support and participation of Aboriginal and Torres Strait Islander people.

Recommendation 11: That the Productivity Commission recommend the department of education in each jurisdiction invest in the training of teachers for the delivery of effective drug education and ensure that all schools are resourced to provide pastoral care services that will assist all students to complete secondary schooling.

Recommendation 12: That the Productivity Commission recommend government support for evidence-informed, community-based prevention programs that address risk and protective factors to influence the prevalence of alcohol and other drug and mental health problems and note the extensive delivery of current programs across the country.

5   The Burden of Disease

In its report on the Burden of Disease in 2011, the Australian Institute of Health and Welfare found the combination of mental health and substance abuse was the third most important disease group and responsible for 12% of the total burden of disease [1]. Alcohol and illicit drug use in Australia were jointly responsible for 4.5% of all deaths (6,660 deaths) in 2011 and 6.7% of the total burden of all disease and injuries in Australia in 2011 (9.1% for males and 3.8% for females). Mental health and substance use disorders and injuries were the largest contributors in young people [1]. This confirmed the World Health Organization's (WHO) Global Burden of Disease study which reported the biggest contributors to the burden of disease in young people aged 10–24 years are mental health disorders and substance use disorders, which represented 19 per cent of disability adjusted life years [2]. As indicated in the Issues Paper, mental illness imposes sizeable costs on the economy, the most significant of which is attributable to loss of productivity [3]. WHO estimated the economic cost of mental illness to be between 3 and 4% of GNP per year for developed countries, with around half of the cost attributed to lost productivity [4].

An estimation of the financial cost of alcohol in Australia for 2010 found the loss of productivity, valued at over $6 billion, was the largest component and responsible for 42.1% of the total cost [5].

6   Reciprocity of drug use and mental health conditions

The relationship between problematic drug use and mental health conditions is reciprocal [6]. The consumption of one or more psychoactive drugs, either episodically or over an extended period, can generate and/or exacerbate a mental health disorder (e.g. anxiety, depression, psychosis) and people with a mental disorder can turn to drug use as a coping strategy in response to the symptoms of their underlying mental condition [6]. In each case the result can be a co-occurring drug problem and mental health condition which creates a worse impairment and worse prospects for recovery than people with either condition alone [7]. People with those dual problems face higher rates of relapse and subsequent hospital visits, incarceration, unemployment, and family difficulties [8]. Additionally, stigma is attached to both conditions and is responsible for further marginalisation of individuals as they can be inhibited from seeking treatment for substance use problems and mental health conditions alike. Common factors which may precipitate problematic drug use and mental health problems include genetic factors, personality, biology, and social and environmental characteristics [7].

Co-occurrence of mental health disorders in people who are substance dependent is an enduring concern. Epidemiological studies have indicated that at least 55 per cent of people with a substance disorder have a co-occurring mental health disorder and 60 per cent of people with a mental health disorder have a co-occurring substance dependency [9]. For some conditions, including alcohol dependence and depression, the co-morbidity of mental health and drug disorders is bi-directional: alcohol dependence can arise from self-medication for depression while depression can be an outcome of alcohol dependence [10]. Co-occurrence of mental health and drug problems creates more substantial problems [9]. People with conjoint substance use disorders and severe mental health conditions such as schizophrenia, bipolar affective disorder and antisocial personality disorder are less likely to be have their substance use issues successfully treated; they are more likely to be arrested and incarcerated and to spend more time imprisoned, than those with a substance use problem alone [9].

An Australian study of 10,000 people reported a higher prevalence of mental health conditions among people who were current and past users of cannabis compared to people those who had not used cannabis; the risk diminished after cannabis use ceased, for 'past users' had a lower prevalence of mental illness than 'current users' [3]. This study estimated that 2.4% of males who use cannabis weekly or more often will experience severe mental health problems compared with 1.5% of males who use monthly, 1.4% of males who are past users and 0.9% of males who have never used cannabis. For females the overall result was similar, but the impact was felt not at weekly use but for a few times over several months, consistent with the higher rate of mental ill-health in females [3].

6.1   PROBLEMATIC DRUG USE AND PERSONALITY DISORDERS

A personality disorder is an enduring pattern of inner experience and behaviour that is inflexible and leads to clinically significant impairment or distress in social, occupational or other significant domains of life [11]. Personality disorders are common among people engaged in problematic drug use: up to 50 per cent of drug clients meet the criteria for at least one personality disorder, at a rate equivalent to the psychiatric population and four times that of the general population [11]. Anti-social and border line personality disorders are the most common types found among clients of drug treatment services. Investigation of the source of comorbidity between people who share a personality disorder and drug

dependence suggest the personality disorder is primary and predisposes the individual to problematic use of drugs. Effective treatment of these co-morbidities must address both conditions and is typically a slow and complicated process. [11]

6.2 THE IMPACT OF ALCOHOL AND DRUG USE ON ANXIETY

- Anxiety and anxiety disorders (including panic attacks, social phobias and post-traumatic stress disorder) manifest in symptoms including agitation, increased heart rate and respiration, increased blood pressure, nausea, excessive sweating. Treatment of these conditions often includes the prescription of central nervous system (CNS) depressants such as barbiturates, benzodiazepines and opioids to reduce tension. As alcohol is a CND depressant, people with anxiety often 'self-medicate' with alcohol, or other CNS depressants, and can develop a dependency on that substance [12].

- A drug dependency occurs due to repeated use of a psychoactive substance such that the individual feels compelled to consume the substance and has trouble in ceasing or modifying their consumption [13]. Typically, the person who is drug dependent will experience tolerance to the drug and a withdrawal syndrome when use of the substance is interrupted or ceased [13].

- Co-occurring anxiety and problematic alcohol use are relatively common in the population and is responsible for a large proportion of illness [12]. An Australian National Survey of Mental Health and Wellbeing found 16 per cent of people with an anxiety disorder also had an alcohol disorder; of the people with an alcohol disorder, 20 per cent also met the criteria for a panic disorder, 13 per cent for agoraphobia, 17 per cent for social phobia, 15 per cent for obsessive compulsive disorder, 24 per cent for post-traumatic stress disorder and 17 per cent for general anxiety disorder [12].

- Co-occurring alcohol and anxiety problems are reinforcing as alcohol can induce anxiety as well as reduce it, and symptoms associated with withdrawal from alcohol mimic the symptoms of anxiety. Similarly, anxiety symptoms mimic the state of withdrawal from alcohol and other drugs.

- The nexus between anxiety and drug use is accentuated by the effects of other psychoactive substances, such as benzodiazepines, cannabis, cocaine, amphetamines and opioids which also mimic some symptoms of anxiety which can confuse a person into thinking they are suffering the effects of anxiety, which can stimulate further drug use to ameliorate or control those symptoms [12].

- A person with the co-occurring conditions of an anxiety disorder and an alcohol or other drug dependency can be locked in a 'catch-22' like state where a resolution seems impossible: consequently the treatment of both disorders is required or the one condition will undermine attempts to treat the second condition [12]. This underlines the need for treatment for both conditions to be integrated rather than taking place in 'silos' independent of each other.

6.3 THE IMPACT OF ALCOHOL AND DRUG USE ON PSYCHOSIS

- Many psychoactive licit and illicit drugs taken by large numbers of Australians are implicated in the development and exacerbation of psychotic episodes and longer-term experience of psychosis. The drugs include alcohol, cannabis, meth/amphetamine, cocaine, psychedelic drugs and the class of illicit drugs known as 'new psychoactive substances'. While 4-7 per cent of the general population is estimated at having a current or lifetime (non-alcohol) drug use disorder, estimates of drug disorders among people with a lifetime diagnosis of schizophrenia run

between 15-28 per cent [14]. A study of nearly 800 people aged 15-30 years admitted to the Early Psychosis Prevention and Intervention Centre in Melbourne, 74 per cent had a lifetime substance use disorder and 66 per cent had a current substance use disorder. Cannabis was the main drug reported by that cohort and polydrug use was common [14].

- An association between psychotic illnesses, such as schizophrenia, is established and it is accepted that cannabis is a causal factor that can precipitate the onset of schizophrenia [15]. Degenhardt and Hall report meta-analyses of prospective population studies find, after accounting for confounders, that regular cannabis use doubles the risk of psychotic outcomes and that schizophrenia appears 2.7 years earlier among cannabis users who develop the disorder [16].

- Cohort studies and studies of general populations have found those who had used cannabis had between two and three times the incidence of psychotic symptoms in the follow up period [15]. Most people who use cannabis do not develop psychosis but, for a minority, the use of cannabis appears to be the 'tripping point' or 'cumulative causal factor', alongside genetic and environmental causes, which led to schizophrenia [15]. A longitudinal study in Dunedin, New Zealand found intensive cannabis users who possessed a common variation in the COMT gene were five times more likely to develop a psychosis than intensive cannabis users who lacked that gene variation [14]. This finding might explain why the more prevalent use of cannabis in recent decades has not been accompanied by a corresponding rise in schizophrenia [3].

- Mental health problems associated with use of meth/amphetamine include psychosis as well as anxiety, panic attacks, paranoia, mood swings, hallucinations, and suicidal thoughts [17]. Many of these effects occur during meth/amphetamine intoxication and occasional users are at high risk of harm. Some of those effects can resolve after use ceases; however, adverse mental states may last for weeks or months [18] [19]. The prevalence of psychotic symptoms among methamphetamine users was reported in one study as 11-12 times that seen among the general Australian population [20]. Within the past year 23 per cent of users had experienced clinically significant psychotic symptoms of suspiciousness, hallucinations or delusions, and people who were dependent on methamphetamine were three times more likely than their non-dependent peers to have experienced psychotic symptoms [20]. In 2010 one fifth (20.8 per cent) of recent methamphetamine users reported high or very high levels of psychological distress, and one quarter (25.6 per cent) reported being diagnosed or treated for a mental illness within the previous 12 months [21].

6.4   THE IMPACT OF ALCOHOL AND OTHER DRUG USE ON DEPRESSION AND SUICIDE

- Suicide has been described as the hidden issue of drug use and the dimension of the problems is such that one-third of those who enter drug treatment will have attempted suicide over their lifetime and one in ten will have done so within the previous twelve months [22]. Different rates of suicide apply for people who are dependent on different drugs, but they are always at rates far higher than the general population: dependency on benzodiazepines multiplies the risk of suicide 45 times; for opioid dependence 14 times; for alcohol six times and for cannabis dependence four times [22]. The vulnerability to suicide of people who use drugs excessively is amplified because factors that predict a higher risk of suicide independently predict a higher risk of drug dependence: these include psycho-pathology; personality disorder; family dysfunction; social isolation [22] [10].

- Longitudinal studies have generated strong evidence to indicate alcohol is a causal factor in depressive disorders [16] [10]. A recent primary care international study across 14 countries found that excessive consumption of alcohol is associated with an elevated risk of a new depressive episode [23]. The World Health Organisation Global Status Report 2018 states alcohol intoxication can intensify suicidal ideation and that the risk of a suicide attempt rises seven-fold after drinking and 37-fold after heavy drinking [24]. An 'alcohol use disorder' doubles the risk of depression, suicidal ideation, suicidal attempts and completed suicides [24].

Recommendation 1: That the Productivity Commission identify the important role of alcohol and other drugs in the development and exacerbation of mental health disorders.

Recommendation 2: That the Productivity Commission report on the reciprocal nature of alcohol and other drug and mental health conditions and note that without appropriate treatment for co-occurring problems, the individual is less likely to make a full recovery from either condition.

7   Treatment of alcohol and drug and mental health problems

According to Australia's National Drug Strategy (p27): "Given the strong relationship between mental health and alcohol, tobacco and other drugs, it is imperative to improve the collaboration and coordination between services to ensure that the most appropriate treatment and supports is being made available to the individual." [25].

A recent WHO Mental Health Survey reported substance related problems are responsible for 11 per cent of the global burden of disease and, within a twelve-month period, an estimated ten per cent of people with a substance use disorder in high income countries similar to Australia receive treatment [26]. The evident lack of treatment for people with substance use disorders is attributable partly to stigmatisation because drug dependency is regarded normatively as a consequence of "personal choice or moral failure" [27]. The World Health Organisation rates illegal drug dependence as the most stigmatised health condition and lists alcohol dependence as the fourth most stigmatised [28]. Reducing the stigma around alcohol and other drug dependency is important if those in need are to gain help as early as possible. Medical professionals who provide mental health and alcohol and other drug services have an important role in changing public discourse so that drug dependency is viewed as a health issue and not a moral failure.

People with a co-occurring problem have worse impairment, a more trying course of illness and are more difficult to treat than people with a singular problem [10]. Co-morbid patients and clients usually have their health problems dealt with singly which often results in one condition going untreated which places their recovery from the treated condition in jeopardy. When one co-occurring condition is unrecognized, the misdiagnosis will confuse and frustrate the clinician and patient alike. For example, the treatment of psychosis is often overlooked because the onset of psychosis and the onset of drug use typically occurs during adolescence and early adulthood [14]. Conversely, the psychomimetic qualities of many drugs can result in a person being wrongly diagnosed for a drug-induced psychosis when they present for the first time [14]. Misdiagnosis delays proper treatment with adverse consequences for the eventual outcome [14].

Contemporaneous treatment of anxiety and substance use problems is difficult, and some experts advise it may be efficacious to treat the substance problems first, as anxiety symptoms

often cease or reduce markedly when problematic drug use is discontinued [29]. However, this presents a challenge for clinical staff as some patients in psychiatric services prefer their anxiety and depression is treated without addressing their substance use [29]. Mattock and O'Brien, who advocate for psychiatric staff and drug services staff to exchange knowledge and skills, point out that motivational counselling techniques employed by drug clinicians to persuade clients of the value of addressing problematic drug use could be usefully adopted by psychiatric services [12].

Staff involved in treating drug dependency need to include treatment of psychiatric disorders for co-morbid clients and psychiatric staff similarly require the capacity to introduce substance treatments into mental health service programs [29]. Treatment of people with co-occurring problems will require the training of general practitioners and staff in alcohol and other drug services and in mental health services. Mattock and O'Brien emphasise that clinical tools for screening, assessing and responding to presentations for mental health issues and alcohol and drug problems are already available [12]. Proudfoot and Treason suggest standardised and manualised treatment packages for the range of co-occurring drug and mental health conditions in primary care and specialised service settings would expedite those developments [29]. Nevertheless, as little research has been conducted into treating co-morbid conditions there is a dearth of evidence about effective treatment interventions [29].

To enable the development of tested models of treatment for co-occurring conditions, treatment programs need to be defined rigorously and implemented faithfully to allow for robust evaluations. This will help future treatment of co-morbidities to proceed with confidence [29]. The most effective and cost-effective approach may be to improve the understanding and skills of staff in drug treatment and mental health services so that they can address both adverse health conditions.

Recommendation 3: That the Productivity Commission recommend the Australian government develop a campaign in concert with the health sector to combat stigma for people with alcohol and drug and mental health conditions.

Recommendation 4: That the Productivity Commission recommend the integration of care for people with co-occurring mental health and alcohol and other drug problems, to ensure they receive the most effective care for a full recovery from both conditions.

Recommendation 5: That the Productivity Commission recommend that all mental health services and alcohol and other drug services are required to ensure their staff have the capability to identify and assess all patients and clients for mental health and alcohol and drug problems.

Recommendation 6: That the Productivity Commission recommend the routine screening of all clients for co-occurring mental health and alcohol and other drug conditions should be adopted by general practitioners and mental health and alcohol and other drug services.

Recommendation 7: That the Productivity Commission recommend higher levels of funding of research into the etiology and treatment of co-occurring alcohol and other drug problems and mental health conditions.

8 Vulnerable Populations

Alcohol and other drug and mental health problems are not distributed equally throughout the population. Those at most risk of problematic alcohol and other drug use are those who experience a severe difficulty or trauma in their life or face chronic personal, social, or economic problems. This includes mental illness, poverty, unemployment, isolation, dispossession and stigmatisation [30]. Often people in these conditions use a drug to cope with, avoid or mask a problem. Many people are vulnerable due to genetic, environmental, social or biological factors over which they have little control. These can include:

- People who are emotionally distressed, disengaged and disconnected from society through lack of employment or mental health problems.
- People who grow up with or live with drug use within their family or peer settings.
- Young people who are disengaged from the school system – children with learning difficulties, or from dysfunctional families.

Understanding the social determinants of drug use and mental health indicates primary prevention can moderate the incidence of both problems by strengthening individuals' resilience, fostering healthy connections between people, and building cohesive communities which offer support to troubled people. By strengthening our communities, we reduce the prevalence of personal and social problems, including those related to drug use and mental ill-health, and the various associated costs.

8.1 YOUNG PEOPLE

Early use of psychoactive drugs produces a heavier history of substance use and problems and increasing risks of early drug dependence and self-harm [10]. Heavy episodic drinking by adolescents has been shown to increase the risk of suicide after controlling for depressive symptoms and the risk of self-harm is elevated using any drug [31]. In addition to anxiety and suicide, heavy drinking during adolescence is associated with other psychiatric co-morbidities including bipolar disorder, conduct disorder, and attention deficit hyperactivity disorder [32]. An example of the early impact of drug use is found in an Australian study of the relationship of cannabis use to mental health in adolescents: daily use of cannabis by females resulted in a five-fold increase in depression and anxiety after controlling for effects of other substances; weekly use of cannabis in females predicted a subsequent two-fold increase in depression and anxiety in early adulthood, after controlling for baseline mental health status and other confounders. Notably, symptoms of depression and anxiety in adolescence did not significantly predict cannabis use [33].

Recommendation 8: That the Productivity Commission recognise that the reduction of early alcohol and other drug use by young people will lower the incidence of alcohol and other drug problems and adverse mental health states.

8.2 ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLE

The impact of alcohol upon Aboriginal and Torres Strait Islander populations has been documented many times: excessive consumption of alcohol is directly and indirectly responsible for high rates of mortality and morbidity. It is implicated in a multitude of acute harms such as injury, motor vehicle accidents, and antisocial behaviors including assault, street violence,

domestic violence, homicide and suicide and contributes to family breakdown [34]. Aboriginal and Torres Strait Islander people are four times more likely to be hospitalised for alcohol use and alcohol is the fifth leading cause of disease among Aboriginal and Torres Strait Islanders [34].

'Injury, mental disorders and cancer' are chief contributors to the burden of disease among Aboriginal and Torres Strait Islander peoples [35]. Excessive acute or chronic alcohol use is implicated in each one of those factors. The gap in life expectancy between Aboriginal and Torres Strait Islander people and non-Aboriginal and Torres Strait Islander people highlights the inequity of health outcomes in Australia. Aboriginal and Torres Strait Islander men born between 2015-17 can expect to live for 71.6 years and Aboriginal and Torres Strait Islander women for 75.6 years, which respectively, is 8.6 years and 7.8 years less than non-Aboriginal and Torres Strait Islander Australian men and women [36]. The impact of alcohol on the Aboriginal and Torres Strait Islander populations is indicated by the relative alcohol-related mortality rate: between 2013-2017 it was five times the rate as among the non-Aboriginal and Torres Strait Islander population [37]. According to Pearson, the high rate of alcohol (and other drug) dependence within Aboriginal and Torres Strait Islander communities is doubly disabling because it prevents Aboriginal people from acting to improve themselves and their community, and to organize themselves politically [38]. Pearson described alcohol dependence as 'a psychosocially contagious epidemic' which draws in functional Aboriginal people due to traditional kinship obligations. In his view alcohol is the most pressing issue facing Aboriginal communities because the prevalence of alcohol and other drug dependency destroys Aboriginal values and stands in the way of Aboriginal progress [38].

Aboriginal and Torres Strait Islander people need access to a full range of culturally appropriate interventions which enable individuals, families and communities to address harmful alcohol use. Further, it is important that Aboriginal and Torres Strait Islander people have the capacity to take control of their own needs. Aboriginal and Torres Strait Islander organisations and communities have unique knowledge and expertise to contribute to holistic and culturally appropriate AOD services [39]. Aboriginal and Torres Strait Islander communities are diverse, and their needs vary greatly across the country. Accordingly, generic solutions that do not account for that diversity will often be ineffectual, whereas Aboriginal and Torres Strait Islander community ownership supports place-based solutions, and locally designed initiatives have a greater likelihood of success.

Alcohol treatment interventions that are effective in non-Aboriginal and Torres Strait Islander populations may not be culturally appropriate for Aboriginal and Torres Strait Islander people. Adapting strategies to the cultural needs of Aboriginal and Torres Strait Islander people is important given differences of worldview, literacy and language [40]. A reputable study in the Northern Territory found an approach known as Motivational Care Planning was found to be effective in addressing alcohol use, mental health and comorbidity. Motivational Care Planning was developed with the support of Aboriginal Mental Health Workers in three separate communities and utilises an approach, tools and metaphors that resonate with Aboriginal and Torres Strait Islander people [40]. However, it may not be suitable for Aboriginal communities in other locations.

Recommendation 9: That the Productivity Commission recommend the Australian Government ensure Aboriginal and Torres Strait Islander people and communities have access to extensive prevention and treatment for alcohol and other drug and mental health disorders.

Recommendation 10: That the Productivity Commission recommend the Australian Government ensure alcohol and other drug and mental health programs for Aboriginal and Torres Strait Islander populations are developed and delivered with the support and participation of Aboriginal and Torres Strait Islander people.

9   Prevention of alcohol and drug and mental health problems

Assisting Australians to avoid early or excessive alcohol and other drug use will reduce personal and social dysfunction, the incidence of mental and physical health problem and the need for complex interventions through the health system, law enforcement and the justice system.

Primary prevention strategies aim to shift the focus "upstream" by working to help people to avoid, reduce or modify drug use, rather than reacting to a subsequent "downstream" problem that requires acute treatment, often in addition to an emergency response. By strengthening and supporting personal and social protective factors the likelihood that young people will engage in problematic AOD use is reduced, thus promoting mental and physical health and improving their life chances [41]. Those factors include young people maintaining positive relations with parents and other family members; enjoying school, completing school or leaving to take up employment pathways; having firm attachment to adult role models outside the home such as teachers, sporting coaches and/or youth leaders; developing future-oriented recreational pursuits; and living in communities with lower levels of drug use.

Families that face the most severe problems require more urgent help. A Victorian government report on the health of children determined that early negative experiences can compromise a child's long-term neurological development, with devastating effects on learning and physical and mental health [42]. Children in abusive families are five times more likely than other children to exhibit behavioural or emotional problems which can compromise their psychosocial development, cognitive capacity and educational development, as measured by a lower attainment in NAPLAN testing in year 3 [42]. A child who witnesses family violence is on the highest rating of vulnerability and equal to a child who is abused [42]. Involvement in traumatic family events has long term consequences for children who are likely to experience depression, anxiety, low self-esteem and impaired cognitive functioning. Serious family conflict, abuse or violence is a vital public health issue as it has a cascading, intergenerational impact on health and wellbeing and disposes victims and spectators to lifelong physical and mental health problems [42].

Schools promote protective factors and reduce risk factors for young people through their curriculum, and health promotion and pastoral care programs. Effective drug education provides accurate information about drugs, has a focus on social norms, and takes an interactive approach which assists students to develop interpersonal skills. A Cochrane Review found the most effective programs teach social and coping skills to deal with drug taking issues and have a substantial duration of between 10– 20 sessions [43]. Care is needed because education programs have sometimes been followed by increased drug use, possibly because students rejected exaggerated claims of risk as uninformed, and risk-taking students acted out rebellion [44]. Programs that simply provide information on drugs are not effective [43] and neither are presentations by people with drug dependence experience [45]. Australian programs such as the School Health and Alcohol Harm Reduction Project (SHAHRP) and the CLIMATE program have reported reducing drug use and related harm. Students who participated in SHAHRP were 23 per cent less likely to experience alcohol-related harm [46]. The Climate Schools program reduced student binge drinking and cannabis use after 12 months [47]. Schools have access to on-line training and the SHAHRP and Climate resources via the internet through the Positive Choices website directed by the National Drug and Alcohol Research Centre (NDARC).

Schools can provide pastoral care for young people who face difficulties in their personal lives because family dysfunction is a major risk factor. In 2013, one in twelve families with young children (8 per cent) showed signs of unhealthy family functioning [42]. Children in this situation face vulnerability to drug use and drug problems as well as a range of other mental health problems, including developmental delays and restricted educational engagement and achievement. Schools provide a setting and a framework for interventions with those children that can improve mental health and reduce the likelihood of alcohol and other drug involvement, thereby improving their social and educational prospects.

Recommendation 11: That the Productivity Commission recommend the department of education in each jurisdiction invest in the training of teachers for the delivery of effective drug education and ensure that all schools are resourced to provide pastoral care services that will assist all students to complete secondary schooling.

9.1 THE ICELAND MODEL

The value of community-led prevention initiatives for alcohol and drugs is highlighted by the experience of Iceland over the past two decades where it has combined community action with policy changes to drive down adolescent substance use of all types. Iceland's approach brings together parents, schools and local agencies to build a social environment high in protective factors and low in risk factors for substance use. Young people are actively supported to participate in organised extracurricular and recreational activities and in supervised work alongside a responsible adult, while parents are encouraged to provide spend substantial time with their adolescent children, to provide emotional support and reasonable levels of monitoring, and to participate in school, social and community events [48]. The focus on changing the social environment is accompanied by legislative and regulatory changes to lessen access to substances by young people. The model has contributed to an impressive reduction in adolescent use of tobacco, alcohol and cannabis while resulting in improved relationships between parents and children and the development of community social capital [49]

The Iceland model emphasises families, community-based sporting clubs and schools as key settings for the prevention of alcohol and drug problems and wider health promotion activities.
Parents are an important influence on the alcohol and other drug use, and general physical and mental health of their children. Parents' can lower the prospect of AOD use in their children via role modelling of good behaviour, general discipline, establishing good parent-child relationships, and positive involvement in their children's lives [41]. Parenting programs can help parents improve their skills and relationships with each other and their children. A successful program is the Triple P Positive Parenting Program which has five levels of intervention to accommodate the various needs of families whose function is disrupted, or whose children have behavioural problems at varying levels of severity [50]. Another program is the Resilient Families program which combined school and family interventions, and when trialled in Melbourne schools led to reductions in adolescent drinking in comparison to adolescents in the control schools [51].

9.2 CURRENT AUSTRALIAN COMMUNITY PREVENTION PROGRAMS

Community led prevention is emerging as a critical tool in both reducing the burgeoning cost associated with acute treatment services as well as increasing community strength and protective factors. The National Ice Taskforce Report recommended the prioritisation of investment in working with local communities, families and workers to respond to people affected by drugs such as crystal methamphetamine [52]. Australia has three community-based prevention programs that engage the

community in alcohol and drug prevention which, by implication, also address risk and protective factors for mental health conditions.

9.2.1 LOCAL DRUG ACTION TEAMS

The Local Drug Action Team (LDAT) program mobilises local groups to form partnerships and respond to alcohol and other drug issues within their community with planned programs and activities based on evidence of effectiveness. LDATs are made up of organisations including schools, local government, local businesses, health services, alcohol and other drug services, youth services among others. LDATs receive an initial grant of $10,000 and develop Community Action Plans which outline evidence-based activities to address alcohol and other drug related issues. Activities delivered by LDATs reduce risk factors and increase protective factors such as connection to community, school and local sport and recreational clubs; creating a sense of belonging; developing skills and employment opportunities and building resilience in individuals and communities. Those risk and protective factors influence mental health and alcohol and other drug behaviour alike. Specific initiatives and programs include peer support, mentoring, education in schools, supporting teenagers and parents. Over 240 LDATs are currently operating and more are expected to be registered [53]. Local Drug Action Teams provide community prevention initiatives in rural and remote areas that often lack access to programs and services that are available to people in metropolitan areas. Over half of all the LDATs are working in regional and rural communities across Australia. Fifty LDATs consider Aboriginal and Torres Strait Islanders as a priority population and have identified either their lead or partner organisations as an Aboriginal and Torres Strait Islander organisation. The Local Drug Action Team program is funded by the Australian Government and managed by the Alcohol and Drug Foundation.

9.2.2 GOOD SPORTS

Good Sports offers sporting clubs free tools, resources and practical support to implement policies for reducing and controlling the role of alcohol, and promoting healthy behaviours, in community sports clubs. It is Australia's largest preventative health initiative in community sport and is adopted in more than 9,000 clubs. A randomised controlled trial found Good Sports reduced risky drinking at participating clubs by 37% and alcohol-related accidents among Good Sports club members and supporters by 42% (compared to players and supporters of clubs that did not participate in the program) [54]. Good Sports clubs are also supported to address illegal drug issues through the GS Tackling Illegal Drugs program by employing practices and policies to prevent drug use and to manage incidents should they occur. In addition to reducing harmful drinking and rejecting illegal drug use, Good Sports clubs facilitate social bonding and engagement as well governed cubs attract and keep members. Good Sports clubs have seen membership increases of 12 per cent [55]. Regular participation in sport provides physical and mental health benefits for players, non-players and spectators by providing spaces for regular social contact by people of all ages, genders and social classes, including people who might otherwise endure isolation and loneliness [56]. In many small towns across Australia, the local sports club is the social glue that maintains relationships and identity and protects the wellbeing of the whole community.

9.2.3 COMMUNITIES THAT CARE

The Communities that Care program aims to reduce alcohol and substance use and antisocial and violent behaviour and, at the same time, improve students' academic performance. Evaluation of this program has shown substantial differences on those core outcomes between communities participating in Communities that Care and non-participating communities [57] [58]. The benefits of community-led approaches were also demonstrated in physical health as research by the Global Obesity Centre at Deakin University showed community mobilisation initiatives can reduce obesity among children. Most interestingly, the results included reductions in the prevalence of depressive symptoms [59]. This confirms

the value of working on shared protective and risk factors as it can lead to improvements across multiple physical and mental health conditions.

Recommendation 12: That the Productivity Commission recommend government support for evidence-informed, community-based prevention programs that address risk and protective factors to influence the prevalence of alcohol and other drug and mental health problems and note the extensive delivery of current programs across the country.

10 Works Cited

[1] Australian Institute of Health and Welfare, "Australian Burden of Disease Study: Impact and causes of illness and death in Australia 2011. Australian Burden of Disease Study series no. 3. BOD 4.," AIHW, Canberra, 2016.

[2] L. Degenhardt, E. Stockings, G. Patton, W. D. Hall and M. Lynskey, "The increasing global health priority substance use in young people," *The Lancet Psychiatry,* no. 3, pp. 251-264, 2016.

[3] J. C. van Ours and J. Willams, "Cannabis use and mental health problems. Discussion Paper No.2009-60.," CentER, Tilburg University, Tilberg, 2009.

[4] World Health Organization, "Investing in Mental Health," WHO, Geneva, 2003.

[5] M. Manning, C. Smith and P. Mazerolle, "The societal costs of alcohol abuse in Australia," Australian Institute of Criminology, Canberra, 2013.

[6] W. Liang, S. Lenton, S. Allsop and T. Chikritzhs, "Does availability of illicit drugs mediate the association between mental illness and substance use?," Vols. 46: 1304-1308, 2011.

[7] S. Allsop, "Mental Health and Drug Problems: What is the Issue?," in *Drug Use and Mental Health*, Melbourne, IP Communications, 2008, pp. 1-10.

[8] K. S. Mortlock, F. P. Deane and T. P. Crowe, "Screening for mental disorder comorbidity in Australian alcohol and other drug residential treatment settings," *Journal of Substance Abuse Treatment ,* vol. 40, pp. 397-404, 2011.

[9] A. Jaffe, D. Jiang and D. Huang, "Drug-abusing offenders with co-morbid disorders: Problem severity, treatment participation, and recidivism," *Journal of Substance Abuse Treatment,* vol. 43, pp. 244-250, 2012.

[10] W. Hall, L. Degenhardt and M. Teesson, "Understanding comorbidity between substance use, anxiety and affective disorders: Broadening the research base," vol. 34, 2009.

[11] A. Marsh, "Co-occurring drug and personality disorder," in *Drug Use and Mental Health ,* Melbourne, IP Communications, 2009, pp. 150-164.

[12] R. P. Mattick and S. O'Brien, "Alcohol drug use disorders and the anxiety disorders," in *Drug Use and Mental Health ,* Melbourne, IP Communications, 2008, pp. 121-129.

[13] P. G. Miller, J. Strang and P. M. Miller, "Introduction," in *Addiction Research Methods ,* UK, Wiley-Blackwell, 2010.

[14] M. Hinton, J. Edwards, K. Elkins and D. Wade, "Problematic drug use in young people with first episode psychosis," in *Drug Use and Mental Health*, Melbourne, IP Communications, 2009, pp. 165-178.

[15] D. Castle and M. J. Cole, "Cannabis and Psychosis: What is the association and what can be done about it?," in *Drug Use and Mental Health* , Melbourne, IP Communications, 2009, pp. 236-247.

[16] L. Degenhardt and W. Hall, "Extent of illicit drug use and dependence, and their contribution to the global burden of disease," *Lancet,* vol. 379, p. 55–70, 2012.

[17] R. McKetin, K. Hickey, K. Devlin and K. Lawrence, "The risk of psychotic symptoms associated with recreational methamphetamine use," *Drug & Alcohol Review,* vol. 29, pp. 358-63, 2010.

[18] L. Jenner and N. Lee, "Treatment approaches for users of methamphetamine: A practical guide for front line workers," Australian Government Department of Health and Ageing, Canberra, 2008.

[19] N. Lee, L. Johns, R. Jenkinson, J. Johnston, K. Connolly, K. Hall and R. Cash, "Clinical Treatment Guidelines for Alcohol and Drug Clinicians No 14: Methamphetamine Dependence and Treatment," Turning Point Alcohol and Drug Centre Inc, Fitzroy, Victoria, 2007.

[20] R. McKetin, J. McLaren and E. Kelly, "The Sydney methamphetamine market: patterns of supply, use, personal harms and social consequences," National Drug and Alcohol Research Centre, Sydney, 2005.

[21] Australian Institute of Health and Welfare, "2010 National Drug Strategy Household Survey Report," AIHW, Canberra, 2011.

[22] S. Darke, "Suicide: The hidden issue," in *Drug Use and Mental Health* , Melbourne, IP Communications, 2009, pp. 143-149.

[23] S. Bellos, P. Skapinakis, D. Rai, P. Zitko, R. Araya, G. Lewis, C. Lionis and V. Mavreas, "Longitudinal association between different levels of alcohol consumption and a new onset of depression and generalized anxiety disorder: Results from an international study in primary care," *Psychiatric Research,* vol. 243, pp. 30-34, 2016.

[24] World Health Organization, "Global Status Report on Alcohol and Health 2018," WHO, Geneva, 2018.

[25] Department of Health, "National Drug Strategy 2017-26," Commonwealth of Australia, Canberra, 2017.

[26] L. Degenhardt, M. Glantz, S. Evans-Lacko, E. Sadikova, N. Sampson and G. Thornicroft, "Estimating treatment coverage for people with substance use disorders: an analysis of data from the World Mental health Surveys," *World Psychiatry ,* vol. 16, no. 3, pp. 299-307, 2017.

[27] E. M. Adlaf, H. A. Hamilton, F. Wu and S. Noh, "Adolescent stigma towards drug addiction: Effects of age and drug use behaviour," *Addictive Behaviours,* vol. 34, no. 4, pp. 360-364, 2009.

[28] J. F. Kelly and C. M. Westerhoff, "Does it matter how we refer to individuals with substance related conditions?," *International Journal of Drug Policy,* vol. 21, no. 3, pp. 202-207, 2010.

[29] H. Proudfoot and M. Teesson, "Challenges posed by co-occurring disorders in the clinical and service systems," in *Drug Use and Mental Health*, Melbourne, IP Communications, 2009, pp. 65-77.

[30] B. K. Alexander, "Addiction Research," *The Globalisation of Addiction. A study in poverty of the spirit.,* vol. 8, no. 6, pp. 501-526, 2000.

[31] K. Hawton, K. E. Saunders and R. C. O'Connor, "Self-harm and suicide in adolescents," *Lancet,* vol. 379, pp. 2373-82, 2012.

[32] National Health and Medical Research Council , "Australian Guidelines to Reduce Health Risks from Drinking Alcohol," Commonwealth of Australia, Canberra, 2009.

[33] G. Patton, C. Coffey, J. B. Carlin, L. Degenhardt, M. Lynskey and W. Hall, "Cannabis use and mental health," *British Medical Journal,* vol. 325, pp. 1195-1198, 2002.

[34] Department of Health and Ageing, "Aboriginal and Torres Strait Islander Health performance Framework 2012 Report," Commonwealth of Australia, Canberra, 2012.

[35] A. McRae, N. Thomson, J. Burns , M. Catto, C. Gray and L. Levitan, "Overview of Australian Aboriginal and Torres Strail Islander Health Status, 2012," 2013. [Online]. Available: www.healthinfonet.ecu.edu.au/health-facts/overviews.

[36] Commonwealth ofAustralia. Department of Prime Minister and Cabinet, "Closing the Gap Report 2019," Commonwealth of Australia, Canberra, 2019.

[37] Australian Indigenous Health InfoNet, "Summary of Aboriginal and Torres Strait Islander Health 2018," Australian Indigenous Health InfoNet, Perth W.A., 2019.

[38] N. Pearson, "On the human right to misery, mass incarceration and early death," *Arena,* vol. 56, pp. 23-31, 2002.

[39] Australian Intergovernmental Committee on Drugs, "Aboriginal and Torres Strait Islander Peoples' Drug Strategy 2014-2019," Canberra, 2013.

[40] R. Jayaraj, M. Thomas, V. Thomson , G. Griffin, L. Mayo, M. Whitty, P. d'Abbs and T. Nagel, "High risk alcohol trauma among the Aboriginal and Torres Strait Islanders in the Northern Territory," *Substance Abuse Treatment, Prevention, and Policy,* 2012.

[41] J. Hawkins, R. Catalano and J. Miller, "Risk and protective factors for alcohol and drug problems in adolescence and early adulthood: implications for substance abuse prevention," *Psychological Bulletin,* vol. 112, no. 1, pp. 64-105, 1992.

[42] Department of Education and Training, "The State of Victoria's Children," State of Victoria , Melbourne, 2015.

[43] F. Faggiano, F. D. Vignato-Taglianto and E. Versino, "School based prevention for illicit drugs," The Cochrane Database of Systematic Reviews, 2005.

[44] S. Hopfer, D. David and J. A. Kam, "A Review of elementay school-based substance use prevention programs," *J Drug Education,* pp. 11-36, 2010.

[45] M. Ashton, "Boomerang Ads," *Drug Alcohol Findings,* 2005.

[46] N. McBride, F. Farrington, R. Midford, L. Meulners and M. Phillips, "Harm minimization in school drug education: final results of the School Health and Alcohol Harm Reduction Program," *Addiction,* vol. 99, no. 3, pp. 278-291, 2004.

[47] N. Lee, J. Carman, S. Battams and A. Roche, "Alcohol education for Australian schools: What are the most effective programs?," National Centre for Education and Training in Addictions, Adelaide, 2014.

[48] D. Sigfusdottir, A. L. Kristjansonn, M. L. Gudmundsdottir and J. P. Allegrante, "Substance use prevention through schools and community based health promotion: a transdisciplinary approach from Iceland," *Global Health Promotion,* vol. 18, no. 3, pp. 23-26, 2011.

[49] A. L. Kristjansonn, D. Sigfusdottir, T. Thorlindsson, M. J. Mann, J. Sigfusson and J. P. Allegrante, "Population trends in smoking, alcohol use and primary preventon variables among adolescents in Iceland," *Addiction,* vol. 111, no. 4, pp. 645-652, 2016.

[50] A. Ralph and M. Sanders, "The 'Teen Triple P' positive parenting program: a preliminary evaluation," Australian Institute of Criminology, Canberra, 2004.

[51] J. Toumbourou, M. Gregg, A. Shortt, D. Hutchinson and T. Slaviero, "Reduction of adolescent alcohol use through family-school intervention: a randomized trial," *Journal of Adolescent Health,* 2013.

[52] Commonwealth of Australia, Department of Prime Minister and Cabinet, "Final Report of the National Ice Taskforce," 2015.

[53] Alcohol and Drug Foundation, "Media Release. 244 Local drug action teams across Australia," 28 February 2019. [Online]. Available: https://adf.org.au/about/media/.

[54] M. Kingsland, L. Wolfenden, J. Tindall, B. Rowland, C. Lecathelinais, K. Gilham, P. Dodds, M. Sidey, J. Rogerson, P. McElduff, I. Crundall and J. H. Wiggers, "Tackling risky alcohol consumption in sport: a cluster randomised controlled trial of an alcohol management intervention with community football clubs," *Journal of Epidemiological Community Health,* pp. 10.1136/jech-2014-204984, 2015.

[55] I. Crundall, "Alcohol management in community sports clubs: impact on viability and participation.," *Health Promotion Journal of Australia,* vol. 23, no. 2, pp. 97-100, 2012.

[56] M. Kingsland, L. Wolfenden, B. Rowland, K. Gillham, V. Kennedy, R. Ramsden, R. Colbran, S. Weir and J. Wiggers, "Alcohol consumption and sport: a cross-sectional study of alcohol management practices associated with at-risk alcohol consumption at community football clubs," *BMC Public Health,* vol. 13, 2013.

[57] S. Oesterle, M. R. Kuklinski, J. D. Hawkins, M. L. Skinner, K. Guttmannova and I. C. Rhew, "Long-term effects of the Communities that Care trial on substance use, antisocial behavior and violence through age 21 years," *American Journal of Public Health ,* vol. 108, no. 5, pp. 659-665, 2018.

[58] A. A. Fagan, A. Hawkins, J. D. Farrington and R. F. Catalano, Communities that Care: building community engagement and capacity to prevent youth behavior problems, New York: Oxford University Press, 2018.

[59] E. Hoare, M. Fuller-Tyszkiewicz, H. Skouteris, L. Millar , M. Nichols and S. Allender, "Systematic review of mental health and well-being outcomes following community-based obesity prevention interventions among adolescents," *BMJ Open,* vol. 5, no. 1, 2015.