

Background paper



National Action Plan on Illicit Drugs

2001 to 2002-03



endorsed by the

Ministerial Council on Drug Strategy

July 2001

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Contents

National Action Plan on Illicit Drugs	1
Australia’s approach to illicit drugs	1
The extent and nature of illicit drug-related harm	3
The prevalence of use of illicit drugs in Australia	4
Comparative international prevalence rates of illicit drug use	8
The risks of drug-related harm in Australia	10
Summary	13
1 Demand reduction	15
Drug education in schools	15
Social marketing	16
Protective and risk factors	17
Investing in the health of future generations	18
Links with the determinants of criminal behaviour	19
Maximising prevention as a demand reduction strategy	21
Summary	22
2 Supply reduction	23
Prohibition and social norms—their impacts on drug use	24
Drug seizures, cost, fear of trouble with police, and their impacts on drug use	24
Interdiction at the border or on the street	25
Balancing direct and induced harms	25
Diversion to treatment	26
International drug control framework	30
3 Treatment	33
The goals and outcomes of drug treatment	33
Cost-effectiveness of drug treatment	33
Methadone	34
Access to treatment options	35
Treatment plays a key role as a crime prevention initiative	36
Meeting the needs of high-risk populations	37
Coexistence of significant psychiatric morbidity with drug dependence	37

4 Reducing drug-related harms	39
Reducing drug-related overdose deaths	40
Community partnerships	41
Prisons	41
5 Workforce development	43
6 Research	45
7 Monitoring illicit drug trends	47
References	49
Tables	
Table 1: Prevalence (per cent) of substance use according to rural-urban status	7
Table 2: Summary of drug use, Aboriginal and Torres Strait Islander peoples, Australia, 1998	7

National Action Plan on Illicit Drugs

The National Drug Strategic Framework 1998-99 to 2002-03 sets out broad principles, policies and priority areas for reducing the harm caused by drugs in the Australian community. The National Action Plan on Illicit Drugs offers guidance in setting priorities for action under the Framework.

This background paper is intended to be read in conjunction with the Action Plan. It outlines the epidemiological data and expert opinion that informed the strategies and actions described, provides detailed references to these sources, and expands the brief introductory discussions contained in the Plan.

The Action Plan identifies seven key strategy areas. Each area 1–6 has a set of objectives (what is to be achieved), a set of areas for action, and a set of examples of actions to address the identified objectives set out in table form. Area 7 includes a set of performance measures, including baseline data, where available, to measure trends in illicit drug use and harm over time.

The first four are content areas:

1. Demand reduction: promotion of opportunities, settings and values that promote resilience and reduce the uptake and use of drugs and the risks of drug use.
2. Supply reduction: interventions to reduce availability and supply.
3. Treatment.
4. Harm reduction.

The final three are critical areas of investment to sustain the strategies throughout the life of the Plan:

5. Workforce development.
6. Research.
7. Performance measurement.

Australia's approach to illicit drugs

Australia's approach to illicit drugs has been acknowledged internationally for its comprehensiveness, its promotion and maintenance of partnerships among health, education, and law enforcement sectors, its practical harm-reduction strategy, and its successful contribution to containing the spread of HIV in the injecting drug user population, and thence to the broader community.¹ This uniquely Australian approach has provided leadership in the region and globally.

Nevertheless, illicit drug use and related problems remain a significant community concern. Australia has to consider strategies that may not be relevant for large, densely populated cities with deep social divisions, or for geographically more compact countries. Australia's great distances and the isolation of rural and remote communities require tailored strategies. The Plan recognises

the varied demographic and socio-economic context of Australian society. In recognition of the special challenges faced by Aboriginal and Torres Strait Islander peoples, a National Drug Strategic Plan for Aboriginal and Torres Strait Islander substance misuse is to be developed to complement all other National Action Plans spanning all substances, including inhalants and kava. This complementary strategy will:

- specify priorities for reducing harm arising from the use of licit and illicit drugs in Aboriginal and Torres Strait Islander peoples;
- develop strategies for taking action on these priorities; and
- develop measurable performance indicators which are meaningful for Aboriginal and Torres Strait Islander peoples.

The National Action Plan on Illicit Drugs encompasses several substances, and therefore has greater complexity than other, single-substance action plans. Different drugs require different combinations of policies. The particular combination should reflect how widely a drug is used and the seriousness of the harms it causes to users and the community. The Action Plan emphasises that policies and interventions should be based on knowledge of what approaches are and are not successful.²

All strategies have costs for the community, and opportunity costs. Methods for implementing some strategies can cancel or impair the potential benefits of others. The Plan tries to ensure that the potential for synergies across strategies is maximised, and unintended negative consequences of one strategy for another are minimised.

Combinations of policies and interventions are needed to reduce drug use and harm. They include programs that aim to prevent drug use, programs that treat drug users, and law enforcement to deter and disrupt drug markets and enforce drug laws to protect the community. Reduction in use and harm also requires broader social policies in education, employment and welfare to lessen the conditions that make drug use attractive to young people, such as unemployment, commercial promotion of unhealthy products, values and lifestyles, and obstacles to education.

Drug interventions need continual protection. Experience suggests that even well run, effective services can lose profile and then funding as changes in patterns of use or harm arouse a new round of community concern. Many things a country needs to do to protect the lives of its young people, the community and future generations from harmful drug use are counter-intuitive for some people. Sometimes the evidence for what is effective may challenge current ideologies. An informed community leads to informed policy and informed resource allocation. The government and the scientific community must keep the community informed about the evidence for what works and what does not work. They must be responsive to all forms of misinformation that finds its way into the public arena. Without such continuous community education, Australia cannot expect to maintain the gains it has made in the past, or to make the changes it needs to make over time.

This mixture of strategies is based on the best available evidence, but there are gaps in the evidence in health, education, welfare, corrections and law enforcement. There is a need to strengthen the links among demand and supply reduction, harm reduction and treatment interventions, and to ensure they are firmly founded on and responsive to the findings of research, monitoring and evaluation. A truly intersectoral and interdisciplinary research agenda has not yet been developed for Australia. Substantial community investment is needed in a research agenda to describe the

place of drugs in Australian society, and to understand the conditions that place people at risk of drug-related harm, build resilience or protect individuals and the community in the face of hazardous drug use.

This Action Plan underscores the need for effective partnerships that help make best use of scarce resources, working across levels of government, portfolios, and with industry and communities to maximise the impact of government investment. Building economic capital can be done in a sustainable way only if it is accompanied by an equally robust emphasis on building social capacity, and constant checking by all areas of government, the community, and industry whether effort in one area undermines effort in another.³ A key aspect of Australia's drug strategy has been to bring together government agencies across traditional boundaries. New evidence requires even broader thinking, and existing partnerships to be extended to alliances with local government, business, industry, the community and families, who can harness the current level of community concern into evidence-based action.

Local government's role in the illicit drug area is limited by its place in Australia's legislative and policy-making framework, but its role is still important. In view of its urban management functions, local government sees the results of drug activity as it occurs. It is ideally placed to coordinate and facilitate local responses that reflect the diversity of local needs. The focus on place management has led to innovative research methods and paradigms applied to the study of drug use and harm in specific localities.⁴ Capital city councils⁵ and some suburban councils⁶ have developed drug-specific action plans, or incorporated drug and alcohol issues into general safety and security plans. The recently established Local Government Advisory Committee to the Intergovernmental Committee on Drugs has strengthened the potential for Australia to explore the synergies between national, State, Territory and local government effort.

The National Action Plan on Illicit Drugs incorporates evidence that problems with a common set of causes require integrated and coordinated responses. Mental health promotion, youth suicide and crime prevention, supply reduction, broad public health initiatives aimed at infectious diseases such as HIV and HCV, and employment, education, and other social capacity-building policy initiatives are all key parts of Australia's illicit drug strategy. In turn, the illicit drug strategy should be part of each of these initiatives.

The extent and nature of illicit drug-related harm

Several general observations can be made about the nature, level and context of drug use and related harms in Australia:

- Only a small minority of Australian people use illicit drugs other than cannabis. However, there are substantial burdens of harm among those who do, including overdose-related death, involvement in crime and the transmission of HIV/AIDS and other blood-borne diseases.
- Initiation to drug use appears to be occurring at a younger age.
- More females are using drugs than ever, and the gender gap in incidence and prevalence of use is closing.
- There are generational differences in the types and patterns of drug use.
- There is increased availability of a range of illicit drugs, with variations across jurisdictions.

- There is an expanded base of people using illicit drugs—a wider range of illicit drugs are being introduced and used in the Australian community. This is being fuelled by global trends and the globalisation of all forms of trade, communication and travel.
- Multiple drug use has become an established norm among people who use illicit drugs.
- There is evidence of increased drug-related health and social harm, globally and in Australia, particularly but not only among young people. The most important is heroin-related overdose deaths.
- An increasing proportion of drug-related deaths is occurring among users at a younger age.
- Many drug-related harms have more to do with the manner and context in which drugs are being used rather than a feature of their properties.
- Younger people have less capacity to manage the patterns and consequences of drug use in a way that can reduce their risk of serious harm.

There is widespread community concern in Australia about heroin and its adverse effects, but the basis of drug-related harm is much more far-reaching and complex than is commonly appreciated.

The prevalence of use of illicit drugs in Australia

In the 1998 National Drug Strategy Household Survey,⁷ 22 per cent of Australians aged 14 years or older used illicit drugs in the 12 months preceding the survey. Less than 1 per cent of Australians injected illicit substances. Cannabis was the most used illicit drug, followed by amphetamines and ecstasy, then hallucinogens.

The Survey covered lifetime (ever used) and recent (used in the 12 months preceding the survey) use of drugs. It is estimated that in 1998 there were more than 3.3 million recent illicit drug users aged 14 years and over in Australia. There were more male (1.8 million) than female (1.5 million) illicit drug users. The age group with the highest numbers of recent illicit drug users was 20-29 years, with over 200,000 more males (690,000) than females (485,000) recently using.

Increases in recent illicit drug use were generally consistent for all age groups and between males and females. The proportion of teenagers recently using illicit drugs increased from 32 per cent in 1995 to 38 per cent in 1998. There was little change in the average age of initiation to use of illicit drugs overall (18.9 years in 1995 compared with 18.8 years in 1998), though there were changes in both directions for different illicit drugs. Using data from the 1998 NDS Household Survey, researchers from the National Drug and Alcohol Research Centre conducted a birth cohort analysis for a range of illicit drugs in nine five-year cohorts among people born between 1940 and 1984. These analyses provide a long-term view of age of initiation and identified a decrease in the age of initiation.⁸

Cannabis

The illicit drug most widely used in Australia is cannabis or marijuana, which has been used by just under 40 per cent of Australian adults in their lifetime. Almost two-thirds of people aged 20-29 have used cannabis at some point in their lives, and well over one-third have used it in the past year. The Household Survey found that cannabis had been used by two in every five Australians aged 14 years or older in 1998, an increase of 8 per cent over rates in 1995. The Survey also asked about drug use during the previous 12 months, and found that 18 per cent of people aged 14 years

and over used cannabis in the year before the survey, compared with 13 per cent in 1995. Twenty-one per cent of males and 15 per cent of females aged 14 or older used cannabis in the year preceding the Survey. Thirty-four per cent of people aged 14 to 19 years used cannabis in the year preceding the Survey. Females were 6 per cent more likely than males to have done so, but boys recently surveyed in NSW report higher lifetime and regular rates of cannabis use than girls. Preliminary results from the 1996 NSW secondary school survey suggest further increases in cannabis use.⁹ About 10 per cent of those who use cannabis, and 20 to 33 per cent of those who have used cannabis daily for weeks, will become dependent.¹⁰

Amphetamines

Amphetamines remain the second most popular illicit drug and the most commonly injected drug in Australia: 6-8 per cent of the general population have used it at some time in their lives, several times higher than the proportion who have ever used cocaine (2-3 per cent) or heroin (1-2 per cent).¹¹ Lifetime use of amphetamines increased by more than 50 per cent from slightly less than 6 per cent in 1995 to just over 9 per cent in 1998. There is evidence that lifetime prevalence of amphetamine use has increased since the late 1980s.¹² Recent use of amphetamines (that is, in the 12 months preceding the Survey) rose from 2 per cent to just under 4 per cent between 1995 and 1998.

Synthetic drugs

Lifetime use of ecstasy (or other designer drugs) doubled in 1998 (5 per cent) compared with 1995 (2 per cent). Recent use increased from 1 per cent to 2 per cent between 1995 and 1998. A survey in three States suggests that patterns of ecstasy use may be changing.¹³ Ecstasy users were young, relatively well educated and mostly employed or students.¹⁴ Extensive polydrug use was the norm, and substantial minorities reported injecting ecstasy.

Heroin

Lifetime use of heroin rose from 1.4 per cent to 2.2 per cent, and recent use also increased from 0.4 per cent to 0.7 per cent. Lifetime use of heroin in the 20 to 29-year-old age group is about 5 per cent, with about 2 per cent of this group using in the year preceding the survey¹⁵. It is estimated that there are about 74,000 dependent heroin users in Australia¹⁶. US research suggests that around one in four people who ever use heroin become dependent on it.¹⁷ Heroin is the second most commonly injected drug in Australia.¹⁸ The median age of first injection is 18 years.¹⁹ Research collected by the Illicit Drug Reporting System suggests an increase in the use of opioids among young people.²⁰ It noted a lower mean age of heroin injectors and more young heroin users entering the Sydney market during 1995-97, patterns confirmed by quantitative and qualitative research methods. A substantial amount of regular heroin use among adolescents entering treatment (mean age 16 years) has also recently been noted.²¹ Patterns of heroin use have changed over the past three years or so, largely because of:

- the increased availability of cheap and pure heroin;
- an increase in the numbers and amounts of heroin seized by customs and police;
- an increase in demand for methadone maintenance and other forms of treatment for heroin dependence; and
- a six-fold increase in the rate of fatal heroin overdose since 1979, suggesting a growth in heroin use in Australia.²²

Cocaine

Lifetime use of cocaine increased from 3.4 per cent to 4.3 per cent between 1995 and 1998, and recent use increased from 1.0 per cent to 1.4 per cent.

Hallucinogens

Lifetime use of hallucinogens increased from 5.5 per cent to 10.0 per cent. Hallucinogen use, in the 12 months preceding the survey, increased from 2 per cent in 1995 to 3 per cent in 1998. Significant increases were noted in hallucinogen use among boys.

Injecting drug use

The proportion of Australians aged 14 years and over that had ever injected illicit drugs increased between 1995 and 1998 from 1.3 per cent to 2.1 per cent. The National Survey of Mental Health and Well-Being also found that 1 per cent of adults reported injecting drugs in the previous year.²³ One per cent of males and 0.4 per cent of females aged 14 years or older injected illicit drugs in the 12 months preceding the NDS Household Survey. Of these, 28 per cent reported overdosing at least once after injecting heroin in that period. One per cent of young people aged 14 to 19 injected illicit drugs in the year preceding the survey. Of these, 25 per cent reported overdosing at least once. Estimates placed the number of injecting drug users in 1997 at 100,000 regular and 175,000 occasional users.²⁴ A review of all studies of injecting drug users up to 1994 found that the level of syringe sharing decreased from 90 per cent to 15 per cent over the previous 10 years.²⁵ Since then, the level has remained at around 15 per cent.²⁶

Other substances

The proportion of people ever trying tranquillisers or sleeping pills for non-medical purposes rose from 3 per cent in 1995 to 6 per cent in 1998. Inhalant use also rose, and was more prevalent among younger students of both sexes. There are indications that anabolic-androgenic steroids (AAS) and other drugs with real or purported anabolic activity are being used in Australia, as is the case overseas.²⁷ These substances include human growth hormone (HGH), erythropoietin (EPO), GHB, human chorionic gonadotrophin (HCG) and insulin. There is insufficient evidence at present to derive estimates of the population-attributable risks associated with their use, but anecdotal evidence suggests they may be associated with considerable acute and chronic health and other harms.

Rural versus urban populations

The best data on rates of drug use in urban and rural areas comes from the National Survey of Mental Health and Well-being.²⁸ As Table 1 shows, there are differences in patterns of licit and illicit drug use between Australians who live in major urban centres and those who live in rural centres and other rural areas. Residents of rural areas are a little more likely than urban residents to smoke tobacco, drink alcohol and drink alcohol daily, but they are a little less likely to use cannabis and other illicit drugs. The rates of injecting drug use are too low to be confident about differences, but suggest lower rates of injecting drug use in rural populations.

Table 1: Prevalence (per cent) of substance use according to rural-urban status

	Capital city and metro	Rural centres	Other rural areas
Regular tobacco use	22.7	26.3	23.4
Alcohol use	73.0	74.9	74.9
Daily alcohol use	18.6	20.6	23.4
Cannabis use	7.4	6.3	6.4
Other drug use	3.8	3.0	2.9
Any injecting drug use	0.5	0.3	0.3

Illicit drug use among Aboriginal and Torres Strait Islander peoples

An Aboriginal supplement to the NDS Household survey in 1994²⁹ found a higher prevalence of lifetime and past-year illicit drug use among urban Aboriginals compared with the general population (lifetime: 50 per cent versus 38 per cent; recent: 24 per cent versus 15 per cent). This was largely cannabis use (lifetime: 48 per cent; recent 22 per cent). Similar figures were noted in a probability sample in NSW.³⁰ Twenty-eight per cent of Aboriginal and Torres Strait Islander peoples used cannabis in the 12 months preceding the NDS Household Survey: males were 1.9 times more likely than females to have done so. The proportion of Aboriginal and Torres Strait Islander peoples who injected illicit drugs in the year preceding the Survey could not be estimated reliably. Shoobridge found that less than half the Aboriginal injecting drug users (IDUs) participating in her study always used new injecting equipment, concluding that this reflected cultural beliefs and pressures on needle-sharing practices.³¹

The number of Aboriginal and Torres Strait Islander peoples surveyed in the 1998 NDS Household Survey was small (just over 200), and therefore prevalence estimates should be treated with caution.³² Better national estimates of drug use can be obtained from the 1994 NDSHS Urban Aboriginal and Torres Strait Islander Peoples Supplement,³³ and for tobacco and alcohol from the 1994 National Aboriginal and Torres Strait Islander Survey.³⁴

The 1998 NDS Household Survey indicates that more than half the Aboriginal and Torres Strait Islander peoples (14 years and over) surveyed had ever tried cannabis, compared with 41 per cent of those who were not of Aboriginal or Torres Strait Islander descent.³⁵ About 59 per cent of Aboriginal and Torres Strait Islander peoples had tried at least one illicit drug, and 23 per cent had used one in the 12 months preceding the interview.

Table 2: Summary of drug use, Aboriginal and Torres Strait Islander peoples, Australia, 1998²⁷

Substance	Ever used (per cent)	Used in the past 12 months (per cent)
Alcohol	94	81
Tobacco/cigarettes	77	50
Cannabis	55	22
Any illicit drug	59	23

Drug use in prisons

The Australian prison population doubled over the previous 10 years to 19,000 inmates in 1998, and annual throughput is almost twice that figure. A survey of a random sample of 800 inmates in NSW in 1996 found that a third of female inmates and a fifth of male inmates reported injecting while in prison, 69 per cent of whom reported sharing syringes. One third of prisoners have HCV.³⁶ One third of prisoners in NSW reported being under the influence of a drug at the time of their offence,³⁷ and 20 per cent reported experiencing withdrawal symptoms on reception to prison.³⁸ Half the prisoners reported committing an offence to support their drug dependence, while three-quarters reported a drug or alcohol problem before incarceration. This suggests that up to a third developed a drug or alcohol problem while in prison. Although women constitute a relatively small segment of prison populations, proportionately more women than men have a drug problem.³⁹

Pathways to drugs use

The link between licit and illicit drug use is well recognised in research but not as well understood in the community. Early use of tobacco is not directly predictive of cannabis use, and cannabis use cannot be said to be predictive of the use of other illicit drugs. Yet it appears that a young person who smokes tobacco at an early age is more likely to use cannabis, and a cannabis user is more likely to use heroin or amphetamine. Hazardous, harmful and unsanctioned use of alcohol may also play a role in pathways to illicit drug use. However, there are many confounding factors and forms of research bias that must be considered when examining these relationships. Effective prevention policies and strategies must take these potential links and pathways into account. Tobacco and alcohol policies are an important part of any illicit drug strategy. So too are policies and strategies aimed at preventing or minimising unsanctioned use of pharmaceuticals.

Comparative international prevalence rates of illicit drug use

It is difficult to compare data on illicit drug use between countries in light of different definitions, methods and survey dates. The 1998 overview of trends, patterns and prevalence by the European Monitoring Centre for Drugs and Drug Addiction described the situation in the European Union as follows:⁴⁰

Cannabis

Cannabis is the most commonly used illicit drug across the EU, having been tried by between 5 and 20 to 30 per cent of the total population and up to 40 per cent of younger adults. Recent use is less frequent: 1 to 9 per cent of the adult population and up to 20 per cent of young adults have used cannabis in the past 12 months. After rapid increases between 1985 and 1994, quantities seized have recently stabilised. As use is most often intermittent, cannabis is not often the primary drug problem (accounting for 2 to 16 per cent of treatment admissions).

Synthetic drugs

Amphetamine is the second most used illegal drug in most countries (tried by 1 per cent to 9 per cent of the adult population and up to 16 per cent of young adults), while ecstasy has been used by 0.5 per cent to 3.0 per cent of the adult population, with moderate increases over time reported

in both substances in school and population surveys. Fatalities from synthetic drugs are rare, and treatment is infrequently sought. However, amphetamine problems are more frequently encountered in Finland, Sweden, Belgium and the United Kingdom, and are most common among those whose use is chronic, and among injectors.

Cocaine

Quantities of cocaine seized increased sharply in 1996, although this does not appear to have influenced price or availability. Between 1 and 3 per cent of adults have tried cocaine, with use lower among school-age children. Frequent problematic use is not common and cocaine is usually mentioned as the primary drug in less than 5 per cent of treatment admissions, while the misuse of crack, primarily in opiate misusing groups, remains a limited phenomenon.

Heroin and other opiates

Trends in supply, use and dependence appear relatively constant, although there is some evidence of a new generation of young heroin smokers. Between 0.2 and 0.3 per cent of the EU population are addicted to opiates, lower than many other illicit drugs but responsible for disproportionate social costs in terms of criminal justice, health, social welfare and mortality. There is some evidence that heroin is diffusing geographically (from cities to rural areas) and socio-culturally. Opiates are the primary problem drug in most treatment centres, and are associated with most acute drug-related deaths.

Other substances

Solvents are often the second most abused substances by adolescents. Misuse by adults of medicines such as benzodiazepines, often in combination with alcohol, is reported to be increasing.

Drugs and health

The strongest link between illicit use and health damage is among injectors. Drug injectors are significantly more likely to contract blood-borne diseases (AIDS, hepatitis). Though rates of AIDS have levelled, the extreme levels of hepatitis C may have serious public health implications.

A comparative review by the Victorian Premier's Drug Advisory Council in 1996⁴¹ observed that cannabis was by far the most widely used illicit drug in the sites examined, though reported rates in the UK were significantly lower than in other countries (only 14 per cent of those surveyed in the UK in 1994 had ever used cannabis). Amphetamines are the second most used illicit drug in Australia and the UK, and cocaine is the second most used illicit drug in Amsterdam and the US. Use of cocaine is far more prevalent in the US than in Australia, the UK or Amsterdam. The proportion of people who report ever having tried amphetamines or hallucinogens is lower in Amsterdam than in Australia. In all countries examined, less than 1 per cent of those surveyed reported using heroin in the last year. Lifetime use of heroin in Australia is twice that reported in the US and Amsterdam. The same proportion of Americans and Australians report ever having tried cannabis. Australians are more likely to have tried ecstasy both ever and in the past year compared with the UK and Amsterdam.

The risks of drug-related harm in Australia

The risks of drug-related harm are related not only to the fact of drug use or to its level and frequency, though these factors are important. Drug-related harm may often be more closely related to the patterns and contexts of their use. For example, occasional but heavy use of a drug may present greater hazard than regular but low-level use of some drugs, as does use at any time while pregnant, driving a motor vehicle or at work. Alcohol, or benzodiazepines such as diazepam, in combination with heroin is likely to increase substantially the risk of heroin overdose and death. The legitimate use of some medically prescribed drugs may act in combination with illicit drugs and lead to adverse outcomes.

Rising heroin overdose mortality

Opioid overdoses are now an important cause of premature death among young Australian adults, accounting for up to 1 in 8 deaths among Australian males (12 per cent) and females (13 per cent) aged 15 to 24 years.⁴² It is estimated that in 1996, 739 people died from conditions associated with illicit drug use.⁴³ In 1997, 831 people died from illicit drug-related causes, and there were more than 11,000 hospitalisations.⁴⁴ Although the use of heroin is lowest among any of the illicit drugs, its use is associated with the highest rates of mortality and the most severe problems for users. A major public health impact is the large number of deaths from fatal overdose, which has grown from 6 in 1964 to 958 in 1999. The rate of opioid overdose deaths among Australian adults increased from 1.3 per million adults aged 15–44 in 1964 to 112.8 per million in 1999.⁴⁵ Victoria has the highest overdose rate in Australia, with a rate of 163.9 per million people. This is a 65 per cent increase compared with the rate in 1998 (99.6). The increase in the NSW rate was more modest—12 per cent, from 126.4 per million persons in 1998 to 141.0 in 1999. Western Australia (85.0) and South Australia (80.9) had the next highest rates.⁴⁶

Increased heroin use in each successive birth cohort is likely to be a substantial reason for the 56-fold increase in the rate of opioid overdose deaths between 1964 and 1997, but it is unlikely to be the sole explanation. Other factors that may have contributed to the increase include:

- the possibility of increased polydrug use among heroin users, especially the use of other central nervous system depressant drugs in combination with opiates;
- a substantial increase in heroin purity that may have contributed to the big increase in opioid overdose deaths since 1993; and
- adoption of riskier patterns of drug use, such as street-based injecting, among more recent initiates to heroin use.⁴⁷

An under-appreciated risk associated with the use of opioids is depression and suicide, which occur with fairly high frequency among opioid users.

Cannabis-related harm

Hall and Solowij⁴⁸ summarised the international literature on the adverse health and psychological effects of cannabis, updating an extensive earlier review of the area.⁴⁹ They note acute symptoms which include:

- anxiety and panic, especially in naive users;
- impaired attention and memory and psychomotor performance while intoxicated;

- possibly an increased risk of accident if a person drives a motor vehicle while intoxicated with cannabis, especially if cannabis is used in combination with alcohol; and
- an increased risk of psychotic symptoms among those who are vulnerable because of personal or family history of psychosis.

A recent study concluded that the rise in youth suicide in the recent past was associated with secular trends in the use of alcohol and other drugs in the same period.⁵⁰ The drugs most commonly associated with suicide in the 15-24 years age group were alcohol and cannabis. Cannabis was detected in 20 per cent of males and 11 per cent of females. The most probable mechanism of this association is that the short-term effects of intoxication increase the likelihood of impulsive suicide. More indirectly, the longer-term impact of use or dependency usually means a person has accumulated significant stressors or exacerbated existing mental health disorders.

The most probable chronic effects include:

- chronic bronchitis and histo-pathological changes that may be precursors to the development of malignancy caused by smoking cannabis;
- a cannabis dependence syndrome characterised by an inability to abstain from or control cannabis use; and
- subtle impairments of attention and memory that persist while the user remains intoxicated, and may not be reversible after prolonged abstinence.

Possible adverse effects that remain to be confirmed include:

- an increased risk of cancers of the oral cavity, pharynx and oesophagus;
- an increased risk of leukemia among offspring exposed while *in utero*; and
- impaired educational attainment in adolescents and under-achievement in adults in occupations requiring high-level cognitive skills.

Groups at higher risk of experiencing these adverse effects include:

- adolescents with a history of poor school performance, who initiate cannabis use in the early teens, are at increased risk of using other illicit drugs and of becoming dependent on cannabis;
- women who continue to smoke cannabis during pregnancy, who may increase their risk of having a low birth weight baby; and
- people with asthma, bronchitis, emphysema, schizophrenia, and alcohol and other drug dependence, whose illnesses may be exacerbated by cannabis use.

Hall⁵¹ notes that in Australia, the most significant public health risks of cannabis use are likely to be the acute effects, since these may be experienced by the larger numbers of cannabis users who use the drug on a small number of occasions before discontinuing. Acute effects of most concern include a higher risk of adverse psychological experiences and probably a higher risk of motor vehicle accidents. The major public health risks of regular cannabis use (in probable order of magnitude) are dependence, respiratory disease, precipitation or exacerbation of psychoses, low-birth-weight babies, and cognitive impairment. At a population level, though the incidence of health risks from cannabis is low—because the prevalence of use is so high—a large number of people will experience cannabis-related harm in one form or another.

Psychostimulant-related harm

The use of psychostimulants such as amphetamine, MDMA, ecstasy, and to a lesser extent cocaine, has increased substantially in Australia during the past 10 years or more, in parallel with similar increases globally. Amphetamines, cocaine and ecstasy are associated with direct harms including toxic reactions that can injure the brain and prove fatal in rare cases (four deaths in 1997).⁵² McKetin reviews the literature on the pathophysiological effects of psychostimulants:⁵³ the available evidence suggests amphetamine has a neurotoxic effect on dopamine terminals in the caudate nucleus, and may impair serotonergic functioning in several other brain regions.⁵⁴ This evidence is principally based on animal research. Only a small number of studies to date have demonstrated amphetamine neurotoxicity with human cells, for example, Simantov and Tauber showed amphetamine was neurotoxic to human serotonergic cells.⁵⁵

Some observed neural abnormalities might be secondary to hyperthermia or vasculitis, rather than a direct neurotoxic effect of amphetamine. Amphetamine users are also at risk of suffering from hypoxia (insufficient oxygen) or anoxia (absence of oxygen) as a secondary result of acute cardiac crisis.⁵⁶ Myocardial arrhythmia, tachycardia and angina pectoris are established side effects of amphetamine,⁵⁷ and there have been published reports of myocardial infarction following intravenous or intranasal amphetamine use.⁵⁸

Cocaine users have been found to suffer from a range of cognitive deficits, including impairment in learning and memory, attention, mental flexibility, and reduced speed of mental processing.⁵⁹ It is not clear whether the cognitive impairments found among cocaine users result from vascular perfusion deficits, premorbid personality characteristics, or striatal dopamine dysfunction, and therefore the type of cognitive deficits that may arise from striatal dopamine neurotoxicity cannot confidently be inferred from the cognitive deficits found in cocaine users.

Designer drugs

Harm associated with several so-called designer drugs such as gamma hydroxybutyrate (GHB), fentanyl, ketamine and analogues of amphetamine appears uncommon, but when it does occur, it is often serious. Many of these drugs are synthetic or semi-synthetic, and recipes for their manufacture may often be found on the Internet.

Averting an injecting drug use-related HIV epidemic

So far, Australia has averted an epidemic of HIV infection among injecting drug users (IDUs),⁶⁰ and HIV prevalence has remained below 5 per cent. In 1997, there were only nine new cases of HIV infection related to drug injecting diagnosed in the country.⁶¹ In 1991, an estimated 3,000 cases of HIV infection were avoided through the operation of needle and syringe programs.⁶²

Containing an epidemic of hepatitis C infection

Of the 110,000 cases of HCV infection reported in Australia, about 80 per cent have been attributed to drug injection. It is estimated that about 190,000 people are infected with HCV (range 140,000-240,000). Among IDUs, HCV prevalence has been between 50 and 70 per cent since the early 1970s. HCV incidence is estimated at around 15 per cent per year or 11,000 new infections. The incidence of HCV in prison (38 per cent) is thought to be more than double that in the community (18 per cent).⁶³ Needle and syringe programs have been slower to reduce transmission of HCV, which is more common and more readily transmitted than HIV, but have begun to do so.⁶⁴

Hepatitis B prevention among IDUs

Hepatitis B receives scant attention, though there is a vaccine for this infection. Between 30 per cent and 60 per cent of IDUs have antibodies to HBV, while about 5 per cent are currently infectious.⁶⁵

Drugs and driving

In 1995, the Road Safety Committee of the Victorian Parliament published its first report on the effects of drugs other than alcohol on road safety, and in 1996 tabled a final report.⁶⁶ In summary, it found there were no internationally agreed testing procedures for measuring impairment, and research had not confidently established the point at which any particular drug other than alcohol made a driver unsafe on the road. More recently, a paper presented to the 1999 Road Safety Research, Policing and Education Conference on the risk of being killed when driving impaired by cannabis said there was a high risk of death while impaired by Delta-9-THC.⁶⁷ Tests for impairment and issues involved in the detection of the presence of drugs other than alcohol mean that, though there is a significant level of concern about drugs and driving, there is some way to go before effective and reliable measures could be put in place to enforce laws routinely and prosecute offenders.

Summary

Though the use of some illicit drugs such as cannabis is relatively common, regular and harmful use of other illicit drugs remains uncommon but growing. One of the most serious harms associated with drug use—an HIV epidemic—has been averted in Australia because of the harm-reduction policies that have formed the basis of the National Drug Strategy. On the other hand, the preventable loss of young life by heroin overdose is a major community concern, and one requiring urgent and humane responses. More attention also needs to be paid to the less recognised hepatitis C epidemic.



1 Demand reduction

Promotion of opportunities, settings and values that promote resilience and reduce the uptake and use of drugs and the risks of drug use

A self-evident way to reduce drug-related harm is to reduce the demand for illicit drugs. The better the full range of antecedents of illicit drug use is understood, the more the need for more sophisticated, multi-dimensional interventions, delivered in a range of settings, is recognised.

Most recent literature points to the need for comprehensive demand-reduction strategies that:

- seek to strengthen resilience among young people whether in or out of school by fostering stable relationships with family and adults, especially in the early years, enhancing their sense of belonging to family or social group or locality, and increasing their education and training opportunities and employment prospects;
- productively influence youth culture;
- seek to increase the community's understanding of the antecedents of drug use and effective interventions to reduce harm;
- link drug-specific interventions with interventions in related areas such as youth crime prevention and mental health promotion strategies, employment and educational strategies; and
- maximise the effectiveness of school-based programs through efforts to keep young people engaged in school as long as is appropriate, and the identification and provision of support for at-risk children, management of drug-related incidents, and a broad-based quality curriculum.

The challenge facing governments that adopt a broader-based and interactive model of intervention is its high cost. However, if the determinants of drug use and other forms of risk behaviour at an early age have multiple consequences later in life, successful intervention early in life is a cost-effective preventive strategy—a generic form of early intervention.⁶⁸

Drug education in schools

There is limited evidence to support traditional school drug education on its own as a lead strategy in reducing demand for drugs. It seems unrealistic to believe it could succeed in the absence of other supportive environments.⁶⁹ For example, school education on smoking prevention has had only temporary effects in initially reducing smoking.

Reviews of the literature on drug education by Dorn and Murji⁷⁰ and Spooner⁷¹ lead them to conclude that there is no evidence that information-type drug education programs (whether ‘scare’ or ‘balanced’) can delay or reduce initial use. Spooner further observes that information-based educational approaches could be more effective in achieving other harm-reduction objectives if they were part of a comprehensive strategy.

School education authorities have made considerable progress in recent times. Those involved in school drug education programs are making strong efforts to form community partnerships in recognition that schools cannot operate effectively in isolation from the community. There is a growing body of research on the types of programs that work best and these findings are influencing the design and implementation of drug education in schools. The funding that has become available under the Commonwealth’s National School Drug Education Strategy and the Council of Australian Governments (COAG)-agreed ‘Tough on Drugs in Schools’ measures has made a significant contribution to promoting and enhancing good practice in school drug education.

Other forms of including children in partnerships for intervention and information dissemination show promise in the licit and illicit drug area and in the HIV area of prevention—particularly peer-led strategies.⁷² A wider model of preventive intervention broadens the focus from individual children and their families to the functioning of local community institutions, and aspects of social organisation that affect the development of children. The general aim is a supportive, friendly and inclusive environment for children, young people and families that promotes healthy, pro-social development.⁷³

Social marketing

Miller and Ware (1989)⁷⁴, Donovan (1991)⁷⁵, Egger *et al* (1990)⁷⁶ and Carroll (1998)⁷⁷ review the literature on the role of mass media social marketing efforts (television, radio, print material) in influencing drug-use behaviours. They conclude that though many evaluations of early efforts in the use of mass media public education campaigns produced findings that suggest the campaigns evaluated were ineffective and in some cases counterproductive, they do have the potential to play an important role if specific and realistic outcomes are identified, and if they follow certain best-practice principles. On current knowledge, there is potential for mass media to be used effectively as part of comprehensive social marketing campaigns in prevention of drug use and related harm. Specifically, Miller and Ware (1989) found that:

- Media can stimulate learning and generate often dramatic changes in behaviour where a level of pre-motivation exists. In many cases, however, mass media alone is insufficient for behaviour change and the mass media should be combined with personalised health education.
- The agenda-setting role of mass media produces its most pervasive impact.
- In the short term, the influence of mass media by itself tends to be towards reinforcing existing beliefs and opinions, and crystallising attitudes rather than changing them.
- Mass media bestows ‘prestige’ to a message, interpersonal communication bestows ‘faith’; when the two are combined, the chances of action are increased.
- Community development and interpersonal contact are important components reinforcing, and being reinforced by, rigorously developed electronic media messages and supporting printed materials.

- Through repetition, the electronic media may produce long-term benefits by creating a climate of opinion or setting the agenda for public discussion.
- The persuasive model of mass media influence has been replaced by a more socially oriented approach, where the mass media is viewed as one of many possible sources of information in society. Mass media sources cannot be discussed in isolation from personal information sources—including families and friends—that may support or contradict mass media messages.
- The impact of a mass media message can no longer be determined by its content alone. Members of the audience are now regarded as active participants in the communication process, and pre-existing beliefs, attitudes, experiences and knowledge affect if and how they notice, interpret and accept the messages.

In light of this literature and the experience of Australian drug prevention campaigns over the 1980s and 1990s, Carroll (1998) recommends that the potential effectiveness of social marketing campaigns can be maximised through the application of a planned process incorporating:

- environmental and stakeholder analysis;
- audience segmentation and analysis;
- channel analysis;
- strategic planning and formulation of the social marketing mix (within the broader context of the National Drug Strategy);
- a thorough commitment to formative research in the development of communication concepts and materials; and
- careful process and summative evaluation of campaign impact.

Protective and risk factors

There is growing pressure to expand methods and approaches to reducing the demand for illicit drugs. Recent years have seen a growing body of knowledge about the factors that either create risk or increase protection for children's well-being, which in turn is predictive of later mental health problems, criminality and harmful drug use. The guidance from this literature is:

There is a need to increase social cohesion and build capacity in communities to increase the factors that protect the general health and well-being of all citizens, and decrease risk factors.

Kickbusch says changing patterns of morbidity and mortality, and the increasing scientific evidence for the strong influence of social factors on health, means society will focus its efforts on fostering positive and supportive living and working conditions, and supporting all individuals to develop capacities and skills to meet life's challenges.⁷⁸

Problems with a common aetiology require integrated and complementary strategies or solutions.⁷⁹ There is increasing evidence of the links between low socioeconomic status and low social integration on one hand, and illicit drug use, juvenile crime, suicide and mental illness on the other. Those links mean that coming to grips with poverty, poor housing, access to educational opportunities, supportive environments for early parenting, and employment prospects all have a role to play in preventing and managing drug use and drug-related harm, as well as effective drug-specific prevention and treatment strategies.

The finding that social exclusion can be both a cause and an effect of ill health is highly relevant to decisions on how to invest in the illicit drugs area. If people are too ill to work or participate in everyday social life, and are isolated from mainstream opportunities by illness or disability, they become socially excluded. If they are not in society's mainstream, they are more likely to damage their health by smoking, or seek comfort in illegal drug taking, and so damage their health.

For those already involved in harmful drug use, there is a need to strengthen personal and environmental factors that can protect them in the face of continued drug use, and offer them accessible and attractive pathways out of drug dependence.

People who suffer ill health are also often impaired in their decision-making capacity and suffer economically as a consequence.⁸⁰ Increasingly, countries are recognising that, to succeed in the modern world economy, their workforce must be healthy as well as highly skilled. Keeping drug users safe from preventable death and morbidity also contributes to greater productivity in the workforce and decreased risks for the broader community.

Building resilience to drug problems requires attention to structural and environmental factors as well as individual factors—research into how social, economic, commercial and public policy environments shape health-related and social behaviours, including drug-use behaviour and crime. Evidence-based strategies and interventions are needed to enhance resilience and reduce vulnerability to environmental and personal factors that encourage or facilitate harmful drug use.

Investing in the health of future generations

At the broad public policy level, Keating and Hertzberg (1999) conclude that the following principles should guide government investment in the health of future generations:⁸¹

Healthy human development and economic growth are fundamentally interdependent in producing the innovation that is the major predictor of sustainable economic prosperity in the information age. Investment in the core infrastructure of a society includes investing in economic development and human development. Investment in human development is a benefit not only to the individual but also to the society and its economic prosperity. Government concentration is therefore called for on economic and social policies, supported by the best available evidence about the determinants of health in general, and the antecedents of illicit drug use and crime in particular.

To be sustainable, investment must make best use of available and potential resources through networks that cross traditional bureaucratic, professional, industry and government boundaries, and apply them to specific social problems.

Health, competence, and coping skills reduce the prospect of exploitation by increasing opportunities for and awareness of choice about drug use and other unhealthy behaviours. Supports for safe development of children are a basic human right, and a key to an individual's productive engagement in society and its economy. Investment in children and families is investment in long-term economic sustainability as well as an investment in drug use prevention.

Investment in human development must be targeted on the basis of the best available evidence on core dynamics in human development. Keating and Hertzberg say the crucial points for intervention are in the first few years of life, at school entry, at the transition to adolescence and at the transition to adulthood. Early development is the most critical phase, and the least supported.

Links with the determinants of criminal behaviour

Though it would oversimplify to bracket the determinants of unsanctioned or illicit drug use with criminal behaviour *per se*, the overlaps must be considered in any demand-reduction strategy. Homel *et al*⁸² say the roots of criminal offending are complex and cumulative, and embedded in social as well as personal histories. They make a case against simplistic correlations between criminal offending and presumed causal factors. Instead, they propose a multi-factorial and interactive developmental model. The way forward in preventing or reducing crime is through equally complex, interactive and appropriately timed interventions involving the community as well as the individual. Neither the problems nor the solutions are seen as belonging solely to an individual. They identify four alternative approaches to crime prevention:

- criminal-justice approaches that emphasise deterrence and incapacitation, with the visible presence of police as a critical element;
- situational approaches that attempt to manipulate the immediate physical or social environment to reduce the opportunities for offending;
- community approaches that focus on larger environments such as neighbourhoods or schools and seek to address some of the social and organisational factors linked to crime; and
- developmental approaches that emphasise intervening early in pathways that lead to antisocial or offending behaviour.

They express their support for the fourth approach, and suggest that ‘early intervention’ means intervention early in the pathway (not necessarily early in life). From the developmental perspective, the nature and timing of intervention depends not just on the individual’s age, but on the identified pathways to offending, and the critical transition points that characterise those pathways. The first offence—the first contact with the criminal-justice system—is one of those critical transition points in a person’s life. This perspective pays attention to the loss of options in later life, and second-generation effects. Homel *et al* argue that targeting substance abuse, vehicle theft or vandalism, for example, makes little sense in the preschool years, but considerable sense at a stage of development where onset of these behaviours is more likely, and later in the form of reinforcement or booster interventions aimed at reducing general susceptibility.⁸³

Farrington defines developmental prevention as ‘interventions designed to inhibit the development of criminal potential in individuals’.⁸⁴ Tremblay and Craig expand on that definition: “Developmental prevention refers to interventions aiming to reduce risk factors and increase protective factors that are hypothesised to have a significant effect on an individual’s adjustment at later points of development”.⁸⁵

Conditions strongly related to juvenile participation in crime include poverty, sole-parent families and crowded dwellings. By itself, child neglect explains 57 per cent of the variation in juvenile participation in crime, 58 per cent of the variation in property crime and 49 per cent of the participation in violent crime.⁸⁶ The same factors are likely to increase vulnerability to illicit drug use among children and adolescents. It should be noted that family structure is not correlated with youth substance use nor delinquency when factors such as family adjustment and socioeconomic status are accounted for.

Policies designed to reduce the level of economic stress or attenuate its effects, and early intervention programs designed to reduce the risk of child neglect, have an important role to play in long-term crime prevention.⁸⁷ They may also be important in reducing vulnerability and increasing resistance to unsanctioned and hazardous use of alcohol and tobacco and illicit drug use.

Early intervention requires an understanding of developmental pathways and transitions, particularly in early childhood. Hertzman describes two competing explanatory models of the developmental process:⁸⁸

- the *latency* model: psychosocial and socioeconomic conditions very early in life strongly affect later life, independent of intervening experience; and
- the *pathways* model: life events have a cumulative effect, and psychosocial and socioeconomic circumstances throughout life reinforce these effects.

Social circumstances systematically affect these developments, and can embed themselves in human biology. The process of ‘biological embedding’ then affects well-being throughout the life cycle. Biological embedding does not imply that there is no developmental flexibility after the early development stage, but ‘negative effects are harder to redirect later in development than they would have been to prevent earlier in development’.⁸⁹

There are critical periods in early development when an individual’s experiences will be encoded in the neural system. Before and after these critical periods, the same experiences will have little or no effect on the developing organism.⁹⁰ Evidence suggests there is close interaction between biology and experience. For example, hyperactive rhesus monkeys usually die early and do not reproduce or become leaders. But hyperactive monkeys raised by nurturing mothers are more likely than average to become leaders.⁹¹

There are also developmentally sensitive periods in human cognitive, social, and emotional systems, but are less crucial than critical periods.⁹² For example, continuous attentive emotional and social relationships from the first year of life affect the ability to exercise cognitive and behavioural skills in the first year of school.⁹³

The National Crime Prevention report, *Pathways to prevention*, used a developmental perspective to formulate recommendations for crime prevention.⁹⁴ It is relevant for drug prevention because illicit drug use is a ‘crime’ covered by the report, and because of the overlapping aetiology of crime and drug abuse.⁹⁵ Consistent with Keating and Hertzman, Homel *et al* describe how life is a series of phases linked by a series of transitions. The ability to negotiate a transition successfully is important for coping with the next stage of a person’s life. Failure to cope with a transition can create a pattern of cumulative risk factors. Interventions can occur most effectively at these transition points. This is when individuals tend to be open to the advice, support and opportunities for learning that will help them progress healthily through life.

Social contexts can facilitate or obstruct successful transitions, and for those who have not successfully coped with a transition, some environments facilitate adjustment and recovery better than others. For example, an inflexible school structure makes it more difficult for students to cope successfully with transitions. Children and adolescents need support at all levels, in the family and in the community, to negotiate these transitions successfully, or to recover from less successful transitions. In particular, a shift in public spending to support the crucial period of early childhood has been recommended.⁹⁶

Though early childhood is the significant time for neurological programming, adolescence is the period when most drug use begins; therefore the transition from adolescent to adult roles is important. The timing of this transition has changed over the past century: adolescence is prolonged, the period spent with peers as students is longer, and entry to adult work settings is delayed.⁹⁷ Eckersley has argued that changes in adolescent transitions contributed to the increase in psychosocial disorders among young people in the 20th century. The emergence of a youth culture increasingly influenced by the media and commercial pressures has increased tensions between dependence and autonomy that should be resolved during adolescence.⁹⁸

A 1999 study by Schneider using ABS data found a substantial increase in economic dependency on parents since the 1960s, with particularly large increases for young people aged 15–20 in the 1980s and early 1990s.⁹⁹ These changes were mainly the result of increased participation in education, lower employee incomes and alterations in government income support. Greater dependency could have an adverse effect on young people, their families and the community if they led to lower living standards, family conflict, homelessness, crime and political cynicism.

Maximising prevention as a demand reduction strategy

To evaluate the role of a prevention strategy in reducing demand, Everingham, Rydell and Caulkins modelled strategies to control the cocaine epidemic in the US.¹⁰⁰ They argued:

- Light users increase initiation to drug use by acting as role models and creating a market.
- Heavy users (current and former heavy users) decrease initiation by revealing the dangers of cocaine use.
- Prevention and treatment directly affect consumption by reducing the number of users, and reducing the consumption of existing users, during and after treatment.
- Supply-control programs affect consumption only indirectly by seizing product and assets, and sending dealers to prison.
- An increase in prices from enforcement first causes a short-term reduction in consumption by light and heavy users by cutting back current consumption, then a longer-term reduction by decreasing flows into use and increasing flows out of use, thus reducing the number of future users.
- Enforcement is more cost-effective at the start of the epidemic than later in the epidemic, since the drug market is small at first, and it is easier to target enforcement resources. More important, price increases at the start of the epidemic discourage initiation.
- Best-practice school-based prevention has only modest results in reducing initiation to cocaine use.
- In the early stages there are few heavy users to dampen enthusiasm for initiation, but there is a feedback effect where initiation increases light users and light users increase initiation: this amplifies the apparent effects of a prevention program. As a result, at the start of the US epidemic, prevention was by far the most cost-effective program. In their model, it dominated treatment and enforcement for almost the entire first half of the epidemic, and dominated enforcement until the last stages of the epidemic. At this late stage of the cocaine epidemic, prevention has little to offer (only a 2 per cent reduction in consumption from the base case). The reason is that consumption in the last half of the epidemic is driven largely by the build-up of heavy users, and it is too late for prevention to affect that build-up. The findings of this US research must be reviewed for its relevance to an Australian setting.

Summary

The determinants of illicit drug use are multiple, interactive and complex. It follows that effective policies and strategies to prevent or reduce illicit drug use and to minimise personal, social and economic harm must match this complexity.

2 Supply reduction

Interventions to reduce availability and supply

Historically, law enforcement and interdiction have formed strategic planks of drug-control effort, based on several premises:

- They reduce the physical availability of illicit drugs.
- They reduce drug use through the deterrent effects of a perceived high risk of being caught and punished.
- They stem, suppress and disrupt the flow of trafficked drugs, sending a deterrent message to drug traffickers, making it difficult for them to engage in their business, and to a lesser extent unpleasant for users on the street.
- They reduce demand by driving up the price of drugs.
- They reflect what is acceptable as a social norm and send a message to the community about it.
- They punish those who offend against the law and against prevailing moral values in the community.

As with demand reduction and treatment strategies, traditional law enforcement and interdiction strategies have limited success on their own. Efforts to interdict illicit drug supplies at the border will continue to be important, as will activities to disrupt illegal drug production, supply and distribution networks. A principal role of the police is to dissipate the influence of criminal groups. Law enforcement plays a key role in protecting the community while minimising drug-related harm for users. These goals are interlinked, and community policing can play a central role in finding a balance between interventions aimed at minimising harm for the individual and protecting public health and safety.

Legal deterrence can work if the threat of legal punishments is communicated effectively, if the emphasis is on risks of apprehension rather than the severity of penalties, and if formal legal sanctions reinforce informal sanctions already operating in the community. (An example is the deterrent effect of random breath testing on drink driving.¹⁰¹) The severity of a penalty is of little consequence as a deterrent if there is an associated perception of low risk of being intercepted and convicted. Makkai says comparative studies show Australia has one of the highest rates of residential burglary among the industrialised nations,¹⁰² and in the late 1990s national rates of reported property and violent crime in Australia have been growing.¹⁰³ In planning responses to reduce crime, it is necessary to understand the factors that motivate people to commit property crimes. If the crimes are largely motivated by addiction, intervention may be more successful if it is designed to address the factors that precede commission of an offence.¹⁰⁴

Deterrence approaches seem to work best when they are low key and respect human rights. The criminal justice system contributes to a reduction in crime not only by reactive policies of detection and punishment of offenders, but also by preventive policing policies in partnership with community groups and other agencies.¹⁰⁵

Prohibition and social norms—their impacts on drug use

The effects of prohibition remain the subject of debate and uncertainty. Prohibition does deter many people from trying illicit drugs, but many other people are not dissuaded by the illegal status of drugs such as cannabis (some are actually attracted by the idea of trying something forbidden). Opinions differ among criminologists and others whether deterrence is a result of social norms that avoid drug use, the fear of being caught and punished that visible law enforcement creates, or the risk of incurring other health harms such as overdose, viral hepatitis or HIV/AIDS.

Kalant says general social disapproval of the use of hard drugs has a stronger effect than local differences in policy, legal status, economic situation or international issues.¹⁰⁶ Reuband believes informal social controls and socio-cultural norms may be more important than formal controls and drug availability in influencing prevalence levels, and prohibition policy has greater effects in physical complications and patterns of use than in levels of use.¹⁰⁷ Their views suggest that general social norms and beliefs, rather than prohibition, contribute to the lack of social support for drug use.

Drug seizures, cost, fear of trouble with police, and their impacts on drug use

Some research suggests that the average amount of heroin seized and the rate of arrest for heroin use or possession do not exert any material effect on the price, purity or availability of heroin at street-level. Nor do they influence the rate at which heroin users seek methadone treatment.¹⁰⁸ However, there are differences between what research on correlation between treatment-seeking and law enforcement levels shows and what users report when asked.

Weatherburn says that heroin users seeking methadone treatment often cite the price of heroin and police activity as determining factors in their decision to seek treatment. Others express a wish to reduce involvement in crime (65 per cent say this is important or very important) and avoiding more trouble with police and the courts (about 70 per cent). This research also found that those who had been stopped by police, arrested or imprisoned were more likely to want to enter treatment than those who had not been stopped, arrested or imprisoned.¹⁰⁹

In a study of Sydney dealers by Dobinson and Poletti, only 1 per cent cited ‘unable to score’ as a reason for seeking treatment.¹¹⁰ However, 67 per cent cited the cost of heroin as a reason, and 30 per cent cited ‘trouble with the police’. Ninety-seven per cent cited ‘tired of the lifestyle’. The authors added that they did not know what percentage of the general population of users their sample comprised. Stockwell reports little evidence of deterrence from enforcing the cannabis laws, observing that people convicted of such offences have shown little inclination to stop using cannabis afterwards.¹¹¹

Weatherburn and Lind conclude that, although variations in the quantity of heroin seized appear to exert no impact on its street-level price, the risks created for heroin importers and distributors by supply-side law enforcement are probable determining factors in its high price. To the extent that the demand for illicit drugs is inelastic (that is, unresponsive or only weakly responsive to price increases), supply-side enforcement will increase the price of heroin, and increase the crime committed to pay for it.¹¹²

Polich *et al* use drug market modelling techniques to argue that supply-side policies exert little general effect on drug prices at street level. The costs imposed on dealers and traffickers by supply-side drug law enforcement are passed on and diluted at each level of the distribution chain.¹¹³

Other researchers have found a different relationship, and the question remains to be settled empirically.¹⁴

Different benchmarks have been suggested for judging the general success of supply-reduction strategies.¹¹⁵ Weatherburn and Lind estimate the amount of heroin seized in Australia ranges from 3.7 per cent and 17.2 per cent of heroin consumed.¹¹⁶ Global seizures of opium are thought to account for only 10-15 per cent of the total destined for production of heroin.¹¹⁷ Wardlaw says the most one can reasonably expect of supply-reduction strategies is a holding function—containing the problem at present levels until more-effective demand-reduction strategies are developed, or preventing the situation from getting worse.¹¹⁸

Interdiction at the border or on the street

Falco reports that US interdiction and drug-eradication efforts are far less effective in achieving an increase in the price than enforcement directed at street markets.¹¹⁹ He observes that increasing the ‘hassle’ factor that drug dealers and buyers face will have a more substantial effect in discouraging domestic drug abuse, which will in turn lead to a reduction in drug-related crime. On the other hand, Palmer observes that one 300 gram block of heroin can be broken down into about 6,000 ‘hits’, and argues that intercepting heroin at the international transport level, before it is broken down and sold, is likely to be far more effective in reducing supply than street-level policing.¹²⁰ This Plan supports research to explore the relative cost-effectiveness of different interdiction strategies.

Balancing direct and induced harms

Drug-related harm may arise in several ways:

- *direct* harms (those arising in the user as a consequence of the actions of the drug on the body—drug overdose or neurotoxicity, for example);
- *indirect* harms (harms that occur to others as a consequence of the use of a drug—for example, lung cancer from environmental tobacco smoke, or being run over by a drunken driver);
- *intrinsic* harms (attributable to the toxic effects of the drug itself); and
- *extrinsic* harms (attributable to the circumstances of use of the drug but not inherent in the properties of the drug itself—for example, HIV infection from the use of contaminated injection equipment, higher property crime rates, corruption and organised crime). Extrinsic harms are sometimes also described as *induced* harms—the ‘man-made’ harms of drug policy arising from the prohibited status of some drugs and efforts to control, regulate or reduce their use.

One of the challenges lies in predicting the full range of benefits and harms that might arise from the current set of policy options. The following examples demonstrate the difficult choices that face policy decision-makers:

- A higher unit cost for illegal drugs acts as a strong incentive for the user to inject rather than smoke or swallow them because this is more cost-effective. This poses additional risks to the user and to the community in the spread of blood-borne diseases.
- Though supply-reduction strategies such as intercepting drug supplies and arresting drug users may sometimes be associated with substantial induced harm (eg drug users decide not

to carry clean needles and syringes to avoid being identified and scrutinised by police), it is also the case that policies and strategies aimed at minimising induced harm can lead to increased harm, particularly direct and intrinsic harm. This might be the case if harm reduction policies lead to a substantial increase in the incidence and prevalence of use of drugs that are intrinsically toxic.

- A substantial increase in the use of cocaine or amphetamine-type stimulants could result in big increases in some forms of drug-related morbidity and mortality.

Weatherburn suggests that though drug law enforcement limits the amount of direct harm caused by heroin, it increases the crime associated with its procurement.¹²¹ Users typically resort to drug dealing, property crime and prostitution (in that order) to fund their addiction. Many heroin users are involved in criminal activity before they become addicted, but the effect of drug-law enforcement is to increase greatly the amount of crime they commit. Law enforcement can sometimes make it more difficult for drug users to get access to sterile injecting equipment, increasing their risk of infection with HIV/AIDS and other blood-borne diseases. This is the rationale behind policy that encourages police to refrain from confiscating or destroying injection equipment and removes criminal sanctions for self-administration of heroin.

Weatherburn says lowering the cost of heroin and other illicit drugs entails a risk of increasing their direct harm, but more needs to be done to reduce the collateral damage of law enforcement. He believes the balance between drug treatment and law enforcement is wrong, and more should be done to offer drug users a way out of the market. The option of treatment can make law enforcement more effective, but only a minority of people with drug problems are in treatment.

Broader frames of reference and better evidence are needed to guide decisions about allocation of resources to different law enforcement interventions, and between law enforcement and other arms of government strategy. The question of marginal cost-benefit is important for any mixture of approaches to drug problems—finding the point where further investment in a particular intervention begins to yield progressively less benefit, and where the additional resources might better be invested in other interventions. There is growing interest in testing different balances of investment.¹²²

New approaches in law enforcement practice might include:

- a trial of formal warnings rather than arrest for possession of small quantities of drugs in certain pre-defined circumstances;
- linking such warning interventions with employment schemes and diversion from the criminal justice system into drug treatment and contact with harm-reduction programs;
- educating the community about the importance of these strategies and seeking its support; and
- targeting more police resources to disrupting major crime syndicates, regardless of commodity. The same organisational networks involved in drug trafficking engage in other forms of illegal activity. Furthermore, intervention that lowers several forms of crime rather than only one is more likely to be cost effective.

Diversion to treatment

Diversion involves a graduated series of interventions that are appropriate and proportionate to the seriousness and circumstances of the offence, and the personal circumstances of the offender.

Diversion is not appropriate for trafficking in drugs, but interventions aim to prevent new offenders from entering the criminal justice system and to divert offenders with drug problems into appropriate treatment. Linkages between the justice and treatment systems can occur at many points. Drug-involved offenders can be cautioned on the streets and provided with treatment referral information if their offence is possession of a small quantity of drugs. They can be sent for assessment or directly to treatment rather than prison, as long as the offence they have committed is not serious and they are not thought to pose a threat to society. Diversion programs such as these are often referred to as ‘mandatory’, ‘compulsory’, ‘coerced’, ‘constrained choice’, ‘involuntary’ or ‘required’ treatment. Courts and correctional systems can use commitment or referral to community-based treatment programs as an adjunct to probation or conditional release (parole) from prison. There is also treatment within correctional facilities and corrections-operated or -funded therapeutic communities and halfway houses.¹²³ In summary, diversion can occur in the following circumstances:

- pre-arrest: when an offence is first detected, before a charge is laid;
- post-arrest: when a charge is made but before the matter is heard in court;
- pre-sentence: before sentencing;
- post-sentence: as part of sentencing; or
- pre-release: before release from detention, on parole.

Important conclusions can be drawn from the available evidence about the relationship between drug use and crime. Though the two are linked, drug use does not necessarily *cause* offending. Not all crime is drug-related, and many drug users commit no other crime than use of an illicit drug. Violent crime, in particular, requires a predisposition to violence rather than drug use.¹²⁴ A sample of drug users in prison found that nearly three quarters of heroin users had committed a property crime *before* using illicit drugs.¹²⁵ Although alcohol and other drug use is not necessarily responsible for initiation to criminal behaviour, it can influence the maintenance and frequency of offending.¹²⁶ The Drug Use Monitoring in Australia project (2000) shows that illicit drug use is widespread among people in police custody. For those who provided a urine sample to the project, 75.1 per cent tested positive to at least one drug, with cannabis and opiates the most commonly used substances.¹²⁷ From these observations, it is argued that addressing drug use is likely to reduce but not eliminate crime levels and criminal recidivism.

A review of international literature by the Australian Institute of Criminology disclosed that treatment is associated with small to moderate reductions in recidivism, and criminal-justice sanctions are associated with negligible or no changes.¹²⁸ The authors conclude that criminal sanctions can reduce recidivism only when provided in association with treatment. They also conclude that programs delivered in community settings produce better outcomes than those delivered in institutions.

Detention can also aggravate rather than reduce problems. For example, offenders can be coopted into an offending subculture where they feel alienated, stigmatised, angry and powerless.¹²⁹ Prison is a high-risk area for transmissible diseases.¹³⁰ Rates of HIV and viral hepatitis are significantly higher among prison populations, injecting drug use and penetrative sex are practised in prisons, and facilities for preventing transmission (eg condoms and safe injecting equipment) are unavailable or less available in prison than they are in the community.¹³¹ Studies on the prevalence of hepatitis C in Australian prison populations suggest that the prevalence of

HCV in prison populations is about one third of prisoners and up to 80 per cent of all injecting drug user prisoners in two States.²

Incarceration of otherwise law-abiding citizens for possession or use of cannabis can criminalise them and have unnecessarily harmful consequences, particularly if the offender has children. They and their families can lose respect for the law (and law enforcers) if the legal system appears inappropriately harsh and out of step with community values.¹³³

As a general principle, detention is to be avoided whenever possible; it is expensive and can prove counter-productive for individuals and the community alike. Where the seriousness of an offence or other circumstances make detention unavoidable, there is a need to make better use of evidence-based therapeutic interventions within the detention system.

There is considerable evidence that drug treatment can reduce the frequency with which drug users commit crimes.¹³⁴ From his review of the literature, Hall concluded that treatment effectiveness is not diminished by coercion to treatment, if the treatment type and intensity are appropriate for the type and level of abuse or dependence. Diversion to a single ‘one size fits all’ intervention is not likely to be effective.¹³⁵ From a review of the literature, Makkai concluded that treatment is even more effective when combined with criminal-justice sanctions.¹³⁶

Diversionary programs and cost-effectiveness studies have not often been evaluated rigorously.¹³⁷ Until recently, evaluation appears to have been non-existent in Australia.¹³⁸ With increased investment by Government in diversion programs, there has been commensurate greater investment in evaluation at national, State and project levels. It has been reported that, while the concept of diversion to treatment seems sound and plausible, there is little evaluative information to inform magistrates, judges, police and others about the effectiveness of these options, and this reduces the confidence of magistrates and others to make referrals.¹³⁹ This information gap is beginning to be closed by publication of studies such as the evaluation of the Victorian drug diversion pilot program.¹⁴⁰ This early process evaluation establishes that it is possible to implement diversion effectively in Australia in line with principles of best practice, and that as a modality it has proved acceptable to law enforcement personnel, the judiciary and treatment providers.

One important argument in favour of diversion to treatment is that it can improve retention in treatment, and in this way improve treatment outcomes, because effectiveness of treatment is associated with retention in treatment.¹⁴¹ A risk associated with court-imposed diversionary treatment programs is that someone could sustain a more severe consequence than the criminal justice system may have imposed with all its checks and balances to ensure procedural justice. As a principle, diversion programs should not make a person do or suffer more than they would if their case were processed through the usual criminal justice system.

US research on recidivism statistics strongly suggest that longer rather than shorter incarceration—at least within the range generally incurred in US prisons—does not necessarily reduce the probability of re-arrest after release, though longer imprisonment keeps criminals isolated from the community for longer periods.¹⁴² Beck and Shipley found the rate of re-arrest within three years of release was virtually the same for individuals serving six months as it was for those serving five years.¹⁴³

A committee of the US Institute of Medicine reviewed the effectiveness of prison and diversionary treatment programs and drew these conclusions:¹⁴⁴

- Most prison drug-treatment programs that have been studied, including specialised ‘boot camp’ or ‘shock incarceration’ facilities, have not been shown to reduce the high post-release rates of recidivism to drug seeking and other criminal behaviour that occur among untreated prisoners.
- However, a small number of well-designed controlled studies, involving prison therapeutic communities and residential programs that have strong linkages to community-based supervision and/or treatment programs, indicate that prison-initiated treatment can reduce the treated group’s rate of re-arrest by one quarter to one half.
- A clear correlation can be observed between positive outcome rates and length of time in treatment, as in studies of community-based modalities.
- The results have anomalies, and there have been difficulties in sustaining the integrity of prison-based treatment programs, but the results argue that these programs should be carefully encouraged.

The Institute of Medicine Committee concluded: ‘The most important reason to consider these or related schemes to force more criminal-justice clients into drug treatment is not that coercion may improve the results of treatment but that treatment may improve the poor record of plain coercion, particularly imprisonment, in reducing the level of intensively criminal, antisocial, and drug-dependent behaviour that ensues when the coercive grip is relaxed.’ It further concluded that the diversion of more drug-related offenders into treatment could improve the results of criminal justice sanctions even if it actually diminished the average effectiveness of treatment. The committee observed that criminal justice pressure did not seem to reduce treatment effectiveness, and probably improved retention.

The public views the link between crime and drug use as one of the most important and worrying costs of illicit drug use. Given the evidence in support of drug treatment, and the lack of clear evidence that imprisonment reduces levels of drug use and drug-related crime, governments are understandably interested in testing alternative models of response based on diversion to treatment. The high cost of imprisonment and increasing overcrowding of correctional facilities add to the attractiveness of these alternatives. Increasing treatment capacity and improving the quality of treatment programs may respond to the needs of drug users and at the same time prevent an already overcrowded justice system situation from deteriorating further.

In June 1999, Commonwealth, State and Territory health and law enforcement Ministers¹⁴⁵ agreed on a national approach to the development of the drug diversion initiative previously agreed by the Council of Australian Governments.¹⁴⁶ This will facilitate early implementation of the diversion approach that will result in:

- people being given early incentives to address their drug-use problem, in many cases before incurring a criminal record;
- an increase in the number of illicit drug users diverted into drug education, assessment and treatment; and
- a reduction in the number of people appearing before the courts for use or possession of small quantities of illicit drugs.

If users do not participate in the program, they risk being returned to the criminal justice system which includes the possibility of gaol.

A key question for consideration will be how to strike a balance in the investment in diversionary treatment services in comparison with enhancing evidence-based voluntary treatment. This balance is particularly important, as there is evidence that diversion to treatment of people who are not ready to attempt change may reduce the effectiveness of existing services.¹⁴⁷

International drug control framework

Australia recognises that drug abuse is an international problem and that it shares a responsibility with other countries to address its causes and its impact. International cooperation in tackling drug problems is vital not only for the effectiveness of Australia's national drugs strategies to protect the community, but also to enhance the well-being of the international community, to advance international development and ultimately to bolster regional and global security.

International concern about drug problems is manifest in drug treaties, conventions and global programs of action formulated to address drug-related issues in a concerted and cooperative manner.

Australia is party to the:

- Single Convention on Narcotic Drugs 1961 and the 1972 Protocol;
- Convention on Psychotropic Substances 1971; and
- Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, 1988.

The main aim of the conventions is to restrict the use of drugs to medical and scientific purposes. The conventions require parties to exercise certain controls over the import, export, manufacture and use of the substances listed in the schedules or tables to the conventions. The controls are implemented by a combination of laws at Commonwealth, State and Territory levels.

In June 1998, the United Nations General Assembly Special Session on the World Drug Problem focused attention on the global problem of drugs and reaffirmed a commitment to overcoming the world drug problem through domestic and international strategies to reduce the illicit supply of and demand for drugs. At the Special Session, nations declared that demand reduction was an 'indispensable pillar' in the global approach to countering the world drug problem. The shift in emphasis was realised through the adoption by the Special Session of the Declaration on the Guiding Principles of Demand Reduction. Through the Declaration, member states are committed to investing in demand-reduction programs that will help reduce public health problems and improve individual health and well-being. The Declaration was developed in response to the need for an international instrument on the adoption of effective measures to reduce the demand for drugs. The Declaration, and other measures endorsed by the Special Session, enhance and expand the international framework for drug control.

The United Nations International Drug Control Program (UNDCP), is the central policy-making body within the UN system for dealing with all aspects of drug policy. UNDCP addresses:

- demand reduction, comprising prevention, treatment and rehabilitation;
- supply reduction, including alternative development and law enforcement; and
- legislative and institutional advisory services to enhance government's capacity to implement the international drug control framework.

UNDCP became the seventh co-sponsor of UNAIDS in 1999. UNDCP is active in supporting HIV/AIDS prevention in programs to reduce the demand for drugs. Youth and high-risk groups are particularly targeted. Coordination with the UN system will allow more-effective programming response to drug use and the AIDS epidemic in several countries.

Australia's international approach to drug issues complements and supports its national strategies. Australia's efforts in the international drugs arena are coordinated by the Standing Interdepartmental Committee on International Drugs Issues, which comprises representatives of all Commonwealth agencies with an interest in international drug matters. Several members of the Standing Interdepartmental Committee are also members of the Intergovernmental Committee on Drugs.



3 Treatment

The goals and outcomes of drug treatment

Treatment is central to any policy mixture of responses to drug problems. It can offer a pathway out of drug dependence, prevent, reduce or mitigate ill health and other harms associated with use, reduce demand, and have flow-on effects on the health and well-being of users' families, others in the community with drug problems, and the next generation through improved parenting of recovering and recovered drug dependent people.

Drug treatment covers a variety of approaches: different populations have different drug problems, goals, needs, preferences, social supports and capacities to respond. Response to treatment is not all or nothing—complete success or total failure—but degrees of improvement. The public often misunderstands this reality, and may think treatment has failed if it does not produce complete and permanent cessation of drug use. Perfect outcomes are not always possible or expected in mainstream health services and social intervention, and drug treatment is no different.

By present estimates, at best only 30 per cent of all illicit opioid users are in treatment.¹⁴⁸ Many more would enter treatment if it were more attractive and accessible. Managed drug withdrawal, residential and opioid substitution programs often have long waiting lists, and in many rural and regional centres there are few if any drug treatment services.

Treatment is one of the most effective strategies for preventing drug use, crime and the next generation of problems.¹⁴⁹ People need reliable access to a comprehensive range of the treatment options they may need at different stages of their drug use. The quality of services depends on several critical factors: evidence, expertise, institutional policy support and a well trained and supported workforce.

Cost-effectiveness of drug treatment

People with drug problems should be encouraged and helped to enter drug treatment at every opportunity, given the benefits that can accrue for them as individuals and for the community generally. Drug treatment is cost effective when evaluated by a range of criteria including health, social well-being, economic prosperity and incidence of crime; and some forms of treatment are more cost effective than others.¹⁵⁰

For example, projections and evaluations of the cost effectiveness of methadone maintenance treatment range from Maidlow and Berman's estimate of 26:1¹⁵¹ to Rufener's figure of 4.4:1 over a short time, and close to Maidlow and Berman's estimate in the longer term.¹⁵² The most comprehensive examination of the economic benefits and costs of drug treatment was performed with data from the Treatment Outcome Prospective Study [TOPS].¹⁵³ They estimated the benefit–cost ratio to be 4:1. A much more conservative model, which valued only limited increases in employment rather than the much larger reductions in goods stolen, found a cost–benefit ratio of about 1:1. Using either model, the authors concluded that methadone maintenance pays for itself on the day it is delivered, and post-treatment effects are an economic bonus.¹⁵⁴

It is important to ensure that treatment is delivered at a consistently high standard, and in a way that ensures people are most likely to benefit. This requires development of evidence-based policies, protocols, competency-based training, and clinical supervision of inexperienced staff by senior clinicians. Quality assurance mechanisms are needed to raise the standard of treatment services, and to monitor how effectively they attain outcomes such as the proportion of patients retained in treatment, the level of continuing unsanctioned heroin or other drug use, changes in social adjustment and functioning, and changes in psychological well-being.

Of the four major modalities, methadone maintenance has been studied most extensively, drawing on all of the main forms of treatment evaluation research techniques. Therapeutic communities have received the next most extensive assessment. Outpatient non-methadone treatments have been evaluated at a somewhat lower level. Traditional 12-step abstinence-based treatment has the least extensive useful body of knowledge about its effectiveness.

Nationally, demand for treatment is outstripping the availability and capacity of treatment services to respond effectively and appropriately. There is therefore a need for more services for which evidence of effectiveness exists. More attention needs to be paid to assertive follow-up of people lost to treatment, and to support for development and operation of mutual self-aid or self-help organisations and services.

Methadone

Methadone maintenance has not only been the most rigorously studied treatment modality—it has yielded the most incontrovertibly positive results. However, it also continues to be the most controversial treatment, largely on the grounds that methadone clients have ‘merely’ switched their dependence from heroin to a legal opioid, and some clients continue to take heroin and other drugs intermittently and to commit crimes, including the sale of take-home methadone (the proportion varies from program to program, but they are usually a small minority in programs evidence-based in design and delivery). The Institute of Medicine expert committee concluded that these controversies and reservations are ‘neither trivial nor compelling’. Most important, methadone clinics have significantly higher retention rates among opiate-dependent populations than other treatment modalities for similar clients.¹⁵⁵

Ward, Mattick and Hall have reviewed the international and Australian literature on methadone maintenance treatment.¹⁵⁶ It was the earliest form of opioid replacement therapy in Australia, and continues to be the most widely used. Controlled trials and large observational studies show that it is effective in retaining clients in treatment, in reducing opioid use and in reducing crime, compared with no treatment. Comparative observational studies show that programs with higher doses, a maintenance goal and ancillary services have better outcomes.

More than 30,000 people are in methadone maintenance treatment in Australia.¹⁵⁷ Based on the weight of evidence available in support of its effectiveness, access to this important treatment mode needs to be improved, alongside alternative promising forms of opioid substitution pharmacotherapies. A review of public and private sector methadone treatment in Australia in 1995 found the average cost of methadone maintenance treatment was about \$2,250 a person a year if two jurisdictions with substantially higher program costs (related to policy differences and small program sizes) were excluded, and \$2,662 if they were included.¹⁵⁸ This is inexpensive when one considers the benefits, and even more so when compared with the costs of incarceration.

Diversion of methadone into the illicit market is sometimes driven by difficulties experienced by users in getting heroin, or may occur because heroin users cannot gain access to treatment, including methadone maintenance treatment.¹⁵⁹

Methadone maintenance treatment continues to be poorly understood and supported in the Australian community despite the weight of scientific evidence for its effectiveness in reducing drug use, improving health, improving social adjustment and functioning, reducing drug injection and the transmission of HIV/AIDS, reducing premature death from overdose and other causes, and reducing involvement in crime. Improving access to this important treatment modality will require strategies to inform the community better, and to train health-care personnel.¹⁶⁰

Access to treatment options

Every effort must be made to ensure that treatment is attractive, accessible and affordable to all who need and can benefit from it. The range of treatment options also needs to be increased. For example, in the treatment of opioid dependence, people's preferences will often influence compliance and responsiveness to treatment.

The current emphasis on trialling an expanded range of pharmacotherapies shows great promise in increasing the number of people who enter and remain in treatment. This is expected to improve treatment outcomes because retention in treatment has been shown to be a key predictor of treatment outcome. All pharmacotherapies for heroin, amphetamine and other drugs need to be scientifically trialled and people carefully monitored before making decisions to support their widespread use in treatment.

For example, amphetamine substitution therapy has been used for several years in the UK.¹⁶¹ Initial research reported associated adverse effects, including frequent psychotic episodes, malnutrition, weight loss, sleep disturbance and dependence. These results led to a lack of support for this approach over the next 20 years. More recent interest in amphetamine prescribing in the UK stems from the popularity of injecting amphetamines and the desire to reduce the spread of blood-borne viruses through unsafe injecting practices.

Mattick and Darke¹⁶² suggest amphetamine substitution may be appropriate where amphetamine use is frequent, dependence is evident, lifestyle is severely and adversely affected, and maintenance is associated with fewer harms than illicit drug use. However, they note risks associated with such therapy, including the potential for increased drug use and psychiatric and neurotoxic effects from prolonged use. They say studies in the area are of poor quality, and controlled studies are needed before firm conclusions can be drawn about the efficacy of such programs. A community survey of amphetamine users in Sydney found some demand for this treatment modality (by 18 per cent of subjects), suggesting it may warrant further research in Australia.¹⁶³ A pilot randomised control study of urinary isomer monitoring of dexamphetamine prescribing in Sydney is examining the feasibility of this treatment for amphetamine dependence.

Mattick and Hall¹⁶⁴ review the literature on therapeutic communities and conclude they are an effective form of treatment for a small number of drug users who find them acceptable, with longer treatment retention and program completion predicting successful outcomes. In one of the few Australian studies in this area,¹⁶⁵ program graduates were found to sustain improvements in employment, drug use and crime. However, caution is required about residential communities, many of which offer a substantial proportion of their treatment slots to people referred from the

courts with long-established drug use and criminal records. They have a high drop-out rate in early weeks. In a careful study of a large service of this kind in 1993, the proportion staying long enough to benefit was around 20 per cent, and the proportion completing the full program less than 10 per cent. The proportion staying for at least three months in such institutions in a more recent national survey was 31 per cent (Hando, Hall, Rutter and Dolan, 1999).⁶

Treatment plays a key role as a crime prevention initiative

In a detailed and careful study of the economics of cocaine use and preventive strategies in 1994,¹⁶⁷ the Rand Corporation studied the relative return on investment of different strategies at different stages of an epidemic of cocaine use. They estimated that every additional dollar spent on treatment of a cocaine user would lead to societal savings of \$7.48. These results were replicated in 1996.¹⁶⁸ The results show the way a country or location may make judgments about the relative balance of investment in reducing drug-related harm for a particular drug and at a particular point in an epidemic of use and harm. They support other work that suggests that a comprehensive strategy will encompass a mix of investments and that those responsible for determining the relative investments must not apply blanket solutions to all drugs and patterns of use. There have been no large-scale comparative studies of treatment outcomes for illicit drug problems in Australia.

There is ample evidence that treatment plays a key role as a crime-prevention initiative. For example, the Drug Abuse Treatment Outcome Study¹⁶⁹ examined four major treatment modalities: outpatient methadone maintenance, long-term residential treatment, outpatient drug-free treatment and private/public short-term inpatient treatment. It found major reductions in most types of drug use across all treatments. After controlling for other factors, it also found reduced crime and increased employment associated with greater length of stay in the long-term residential treatment group.

The Treatment Outcome Prospective Study (TOPS)¹⁷⁰ was a prospective study of more than 11,000 illicit drug users who applied for treatment in 41 programs in the US. Methadone treatment had the best retention rates of the three treatment modalities in TOPS. Patients in methadone maintenance treatment were less likely to drop out of treatment than those in drug-free outpatient and therapeutic communities. Patients in methadone maintenance substantially reduced their heroin use while in treatment, with less than 10 per cent regularly using heroin (weekly or daily) after three months. Criminal activity was assessed by self-reported predatory crimes such as breaking and entering and robbery. Among patients in methadone maintenance, one third reported committing a predatory crime in the year before treatment. This dropped to 10 per cent during the first month of treatment. Significant reductions in self-reported predatory crime were observed only while patients remained in methadone maintenance. Post-treatment criminal activity was predicted by level of pre-treatment involvement in crime, but was unrelated to treatment. Methadone treatment was thus associated with a reduction in criminal activity during treatment, but did not permanently change the behaviour of the more criminally involved patients in the post-treatment period.

The results of the study suggest that participating in methadone maintenance treatment is associated with marked and enduring reductions in heroin use and reduced criminal activity while in treatment. Hall¹⁷¹ found that methadone maintenance treatment reduces rates of property offending from 0.75 a year to 0.22 a year. These findings are based on people attending treatment outside the prison system. There is a need to evaluate the effectiveness of prison-based methadone

maintenance treatment, with follow-up of a sample of prisoners on release from prison to measure rates of relapse to drug use and criminal recidivism.

Meeting the needs of high-risk populations

It is necessary to devise strategies aimed at the general population, and others that are tailored to meet the needs of those at higher risk. Some sub-populations are at high risk because of the settings in which they use drugs, their culture, or the particular drugs they use, and they experience higher rates of uptake of drugs, limited or no access to protective factors, and high personal vulnerability. Examples include prisoners, very young people (particularly young females), Aboriginal and Torres Strait Islander peoples, and people from linguistic and culturally diverse backgrounds. The risks faced by these sub-populations vary across jurisdictions. Their access to effective and acceptable treatment options is a priority for governments.

A relatively new area of attention is the effectiveness of programs for drug-using prisoners that help them in the transition from prison to the community and try to prevent relapse and overdose on release. Several UK studies demonstrate that ‘transition’ and post-release programs have significant impact on drug use and functioning after release. They report significant decreases in post-release drug use, the amount spent on drugs, and corresponding falls in the level of offending to finance drug use. Significantly, it was noted that unless treatment was maintained in the community, offenders were likely to relapse and return to crime and prison. Treatment strategies with prisoners also play a key role in decreasing overdose deaths and increasing the effectiveness of investments in HIV and hepatitis C prevention efforts in prison and with prisoners.¹⁷²

Coexistence of significant psychiatric morbidity with drug dependence

Psychiatric health comorbidity is over-represented among people with alcohol and other drug problems. Depression is by far the most commonly and consistently reported example of elevated psychiatric comorbidity among opioid users: up to half the patients in opioid replacement therapy may have suffered a major depressive episode at some time in their lives.¹⁷³

A diagnosis of depression has been found to predict poorer psychosocial functioning and to increase the risk of relapse to heroin use in the event of life crises among methadone maintenance patients,¹⁷⁴ suggesting that they may benefit from special attention. However, even the stabilisation that methadone maintenance brings to a person’s life may sometimes be enough to eliminate depressive disorders which are reactions to stressful situations associated with a heroin-using lifestyle (eg housing, legal or relationship problems). Those who remain depressed after stabilisation on methadone may need specialist treatment.¹⁷⁵

Several studies report elevated rates for anxiety disorders: the Epidemiological Catchment Area (ECA) study,¹⁷⁶ two studies in the Netherlands¹⁷⁷ and one in Australia.¹⁷⁸ In the ECA study, individuals diagnosed with an opioid-use disorder were 24 times more likely to be diagnosed with anti-social personality disorder than their non-opioid-using counterparts, and opioid users were 13 times more likely to be diagnosed with an alcohol-use disorder as well.¹⁷⁹

There is some data on comorbidity in treatment samples, but until recently Australia relied on the US for epidemiological data on population prevalence of mental health, substance-use disorders and comorbidity. In 1997, the Australian Bureau of Statistics was funded by the Commonwealth Department of Health and Aged Care to undertake the National Survey of Mental Health and Well-being. The survey provided the first national data on the prevalence and patterns of mental

disorder among Australian men and women, highlighting the extent of comorbidity in the general population.

Results of the survey show a considerable degree of comorbidity in substance-use and other mental health disorders. About one in four people with an anxiety, affective or substance-use disorder also had at least one other mental disorder. This meant that they had two or more different classes of disorder, such as an anxiety and affective disorder, or an anxiety and a substance-use disorder. A small proportion of men (0.8 per cent) and women (0.8 per cent) had all three types of disorder (that is, an anxiety, affective and substance use disorder).

Among people with mental disorders, marginally more women than men had at least one other comorbid mental disorder (28 per cent as against 24 per cent of men with any of these mental disorders). The patterns of comorbidity differed between men and women. Among women, affective and anxiety disorders most often occurred together, accounting for three quarters of women who had more than one mental disorder. Among men, comorbid disorders more often involved an anxiety or an affective disorder in combination with a substance-use disorder. These combinations affected two thirds of men who had more than one mental disorder.

The high rates of comorbidity have several implications for treatment and management. Mental disorders complicated by alcohol and other drug use disorders, and vice versa, have been recognised as having a poorer prognosis than those without such comorbid disorders. They are also more likely to become chronic and disabling, and result in greater service utilisation¹⁸⁰.

4 Reducing drug-related harms

Harm minimisation has been the cornerstone of Australia's National Drug Strategy (NDS) since its inception in 1985. Australia has received international recognition for the leading-edge policies, programs and services it has developed with the aim of preventing or minimising drug-related harm. Nowhere has this policy been more important than in the illicit drugs area, where special priority has been given to pragmatic measures that can prevent or minimise the transmission of HIV/AIDS and other blood-borne diseases. Because of these measures, Australia has avoided an HIV epidemic and all of the public health, social and economic harms that accompany such epidemics.

Harm-reduction policy is aimed at protecting individuals who, despite all efforts to help them, continue to use drugs in hazardous ways. It also aims to protect the community in which they live. More specifically, the mission of the NDS is to improve health, social and economic outcomes by preventing the uptake of harmful drug use and reducing the harmful effects of licit and illicit drugs in Australian society.

Harmful drug use has many social, health and economic impacts. Major areas of drug-related harm to be addressed by the National Drug Strategy are:

- illness and disease;
- injury;
- economic costs and workplace concerns;
- violence and crime; and
- families and relationships.

Licit and illicit drugs are the focus of Australia's harm-reduction strategy. Harm reduction includes preventing expected harm as well as reducing actual harm. It aims to improve health, social and economic outcomes for the community and the individual and encompasses a wide range of approaches, including abstinence-oriented strategies. Harm reduction is therefore consistent with a comprehensive approach to drug-related harm, involving a balance between demand-reduction, supply-reduction and harm-reduction strategies.

A comprehensive harm-reduction approach must take into account three interacting components:

- the individuals and communities involved;
- their social, cultural, physical and economic environment; and
- the drug itself.

Approaches will vary according to population group, time and locality. Among the most important harm-reduction strategies are programs that provide access to sterile injection equipment and condoms, opioid substitution programs such as methadone maintenance treatment, outreach and peer education programs that pay particular attention to informing people how they may reduce their health risks when using drugs, and confidential and voluntary HIV and HCV testing in association with quality pre- and post-test counselling, care and support. Peer education and support have been seen as particularly important in programs targeting young people.¹⁸¹

Key lessons about the characteristics of effective harm reduction have been learned from implementation of strategies in Australia's and other countries' drug and HIV/AIDS strategies. Leschner lists these lessons as follows:¹⁸²

- the need to implement multiple interventions and intervention strategies at multiple levels (legal, institutional, community, network, individual);
- the need to implement interventions in multiple settings;
- the need to target multiple risk behaviours;
- the need to provide access to multiple means for behaviour change; and
- the importance of recognising that populations at risk of drug-related harm are in various stages of readiness to engage in interventions, and creating opportunities for repeated exposures that match this varying readiness for change.

A wide range of additional or related factors have been identified as relevant to the nature, level and patterning of drug use and associated risk in any community. These factors include:

- the physical and social setting in which drug use occurs;
- social relationships and social networks;
- whether drug-use social networks are open and welcome newcomers or closed and exclusionary. This refers to the concept of 'population mixing', which has the potential to increase the rate of spread of blood-borne diseases such as HIV;¹⁸³
- peer group and sub-cultural norms; and
- the wider social, economic and policy environment—for example, shifts in trade, communication links and migration; unemployment; increased inequity in income; poverty, transfer of knowledge about techniques of drug administration, and the disintegration as well as formation of social networks (social network disintegration can hinder prevention responses). Though poverty is often associated with drug use, increased income can create new opportunities to experiment with drugs.

A great deal of drug use and HIV-prevention effort is aimed at the level of individual behavioural choice, and pays insufficient attention to the broader environmental or systemic determinants of behaviour.

Reducing drug-related overdose deaths

Reduction of drug-overdose mortality in Australia is a major goal of this National Action Plan on Illicit Drugs. Hall, Degenhardt and Lynskey¹⁸⁴ reviewed opioid-related overdose mortality trends in Australia among different birth cohorts. They concluded that those born between 1975 and 1979 are at highest risk of recruitment to heroin use, and overdose mortality is unlikely to decrease in the near future but may continue to increase. They emphasised the importance of the following measures to prevent opioid overdose deaths within an action research framework:

- increasing access to evidence-based treatment such as methadone maintenance, given that research has consistently shown that the risk of overdose death is substantially reduced among individuals enrolled in treatment;
- interventions that increase awareness among injecting drug users about the increased risk of opioid overdose when heroin is used in combination or proximity in time with other central nervous system depressant drugs, particularly benzodiazepines and alcohol;

- peer education that increases awareness among injecting drug users about the risks of polydrug use and overdose when resuming drug use after periods of abstinence, for example, among those leaving a drug-free treatment program or among soon-to-be-released prisoners;
- discouraging injecting drug users from injecting alone, which decreases the chances of resuscitation if an overdose occurs;
- appropriate law enforcement policies on drug overdose incidents;
- encouraging those who witness an opioid overdose to seek urgent medical assistance for the victim and improving users' knowledge and skills to assist their peers when they overdose;
- training drug users in cardio-pulmonary resuscitation; and
- designing and managing public spaces so that people are less likely to overdose in isolated places.

Community partnerships

To be far-reaching and effective, the actions in this Plan need a multitude of partnerships throughout the community, including local government, the police, health professionals such as doctors and pharmacists, and a wide range of others. Local government is a key partner in successful action because of its responsibility for the design, management and maintenance of public areas, its influence on the use of private space and design through town planning controls, and its capacity to maximise the local impact of State, Territory and national programs in drug education. Local government has a key role in reducing the inappropriate disposal of needles and syringes and managing contested public space created by the pressures of urban renewal.

In partnership with local communities, police can have a significant role in reducing specific drug-related harms such as overdose, and in increasing community amenity and perception of public safety. This Action Plan recognises the difficulties faced by operational police in implementing police practices that contribute to harm-reduction outcomes. This difficulty arises out of concerns that they might be seen not to be doing their job in a way that traditionally has been common practice. It suggests steps to support police officers, and to close the gaps between community expectations and community policing practices in the interests of reducing drug-related harm. It supports a harmonised approach to active involvement of street-level policing in preventing drug-related harm, and provision of information to communities about the most effective methods police and health care workers can adopt in reducing harm such as overdose deaths.

Prisons

The prison environment contributes to drug-related overdose and spread of blood-borne diseases. In light of the high identified rates of drug use and injection, the absence of access to sterile injection equipment, and the rapid throughput of people through Australian prisons, there is an urgent need to build on current initiatives such as:

- the randomised controlled trial of the NSW prison methadone program;
- plans to introduce prison methadone maintenance programs in two other Australian States; and
- the bleach and condom programs as evaluated in NSW prisons.

In addition, the Department of Corrective Services in South Australia is trialling graduated penalties for possession of illicit drugs in prison. This will result in a lesser penalty for possession of cannabis, as opposed to other illicit drugs. The rationale for this trial is that users of cannabis will be less attracted to initiation of injecting drug use, as heavier penalties will apply to possession of other illicit drugs, such as heroin. The Plan supports the careful trial of harm-reduction strategies in prisons.

The Council of Australian Governments noted at its meeting of 9 April 1999 that drug use in prisons is common, and a large proportion of prisoners are incarcerated for drug-related crime. To prevent re-offending and to promote public health, States and Territories (which have primary responsibility for prisons) agreed to develop and fund programs to:

- intercept the supply of drugs to prisons and be tough on dealers within prisons; and
- develop and trial diversionary treatment programs within the gaol system so that dependent users can break their addiction.

Drug and alcohol counselling is the most common form of treatment offered to prison inmates, but there have been no controlled studies of it.¹⁸⁵

5 Workforce development

Drug problems are manifest in a variety of human service settings, including health, law enforcement, community services and the education system. Strengthening existing partnerships and building new partnerships to reduce drug-related harm require a shared understanding of drug issues and effective responses. Increasing access to a greater range of high-quality prevention and treatment services means expanding the number of available skilled staff.

Staff in the various sectors need to be equipped to respond effectively to drug-related harm. Effective interventions will include strategies to prevent and respond to drug-related harm in the relevant setting, and strategies to refer to drug specialist services when indicated. Facilitating responses in these domains has been demonstrated to reduce drug-related harm and increase the overall efficiency of these services (eg reducing police workload, reducing recidivism rates in corrective services and reducing hospital readmission rates).

As well as enhancing the capacity of general human services, there is a need to improve the capacity of the drug specialist workforce. It is important to have drug specialist staff who can support general health, welfare, police and education staff, develop and trial new interventions, and manage and/or share the care of complex cases.

Effective interventions in prevention and treatment require staff who have role legitimacy (the perception that responding to drug related harm is a legitimate component of the individual's role), and the relevant skills, values, and confidence to intervene in drug related harm. Workforce development therefore needs to address these issues. In recent years, it has become clear that the demand for a specialised drug and alcohol workforce has outstripped supply in some places. Workforce development will be a focus of effort in strategies to recruit and retain expert workers.

Education and training can contribute to the relevant knowledge, skills, values and confidence required for an effective workforce. To address the varying needs of different target groups, and to be consistent with general workforce development, training will have to be delivered at several levels, including pre-service education, post-basic training and in-service programs.

There is a need to ensure a variety of modes of delivery of education and training. For example, those who work in rural locations may require more-flexible modes of delivery. Different learning pathways may be required for different professional groups or people with different learning styles. Advances in information technology need to be incorporated into more flexible modes of education and training delivery. A need for improved program design has also been identified, incorporating clear learning objectives, links to standards and evidence-based practice, and clear assessment protocols.¹⁸⁶

As in other areas of the strategy, it is important to address priority target groups. There is a need to enhance access to workforce development for specific target groups—for example, those responding to populations in rural and remote areas and Aboriginal and Torres Strait Islander peoples.

To ensure the development and delivery of quality education and training, there is a need to ensure availability of professionals who are able to provide this service. This will include educators who

can translate research into practical strategies for the broad range of professionals who respond to drug-related harms (including community staff, police, health staff and education staff). They will also have to address the relevant knowledge, skills and values that can affect the quality and nature of responses to drug harms.

Role legitimacy can be enhanced through education and training but will require organisational and structural supports. These will include policies, guidelines and management support and supervision that legitimise and value a role and skills in drug harm reduction. Thus, workforce development includes addressing structural factors at organisational and discipline levels. Staff who work in an environment that does not legitimise or value drug harm reduction are unlikely to maintain involvement.

Education and training must be sustained through the development of tailored policies, protocols, post-training support, supervision, practice and career support (eg pathways, incentives). Management tools such as staff contracts, performance indicators and monitoring tools can facilitate the implementation of newly learned skills that are consistent with drug harm reduction.¹⁸⁷

To achieve a workforce that can effectively prevent and respond to drug-related harm, several steps are needed. These will include:

- translation of research findings into practical strategies that can be implemented by the workforce;
- strategies to encourage the adoption of evidence-based practice among the workforce;
- identification, development and dissemination of standards of practice and/or competencies consistent with efforts to reduce the harm caused by illicit drug use for a range of groups including health, law enforcement, drug specialist staff, welfare and education staff;
- identification and evaluation of models of practice change that can readily be applied in workplace settings;
- development and implementation of quality education and training programs and resources (for example, through train-the-trainer approaches and consultancy support);
- identification and implementation of strategies to support staff and management in the application of strategies to reduce the harm caused by illicit drug use; and
- development of expertise to foster and disseminate models of practice change and education and training programs.

6 Research

Australia cannot hope to match the level of investment in research on drug problems in the US, where 85 per cent of the world's research budget arises. However, measured by the rate of publication in the journal *Addiction*, and by involvement of Australian researchers in WHO committees on illicit drug epidemiology, treatment and policy, its output is higher than its small population and modest investment would predict.¹⁸⁸

Australian research has paid much attention to practical matters that can inform interventions to reduce drug-related harm, for example:

- the role of injecting drug use in transmission of infectious diseases;
- the epidemiology of injecting drug use, and illicit drug use more generally;
- epidemiological analyses of mortality and morbidity attributable to illicit drug use;
- evaluation of the effectiveness of different models of delivery of methadone maintenance treatment; and
- comparisons with alternative pharmacotherapies.

Australia has no agreed intersectoral research agenda in illicit drugs. There is little data that describes the place of drugs in Australian society, or helps us to understand conditions that place people at risk of harm and those that build resilience. More information is needed about how best to provide health protection to individuals and the community in a range of contexts where hazardous drug use commonly occurs.

The Action Plan notes the work of the National Health and Medical Research Council on research priorities for the health sector, but recognises that Australia has not yet developed an interdisciplinary and intersectoral research agenda on illicit drug use. Research has benefits above and beyond the generation of knowledge. There are good reasons for fostering research into the political and administrative benefits of illicit drug strategies, health-sector benefits, cost reduction, quality improvement, greater equity, and improved capacity of interventions to contribute to social goals of decreased crime and improved quality of life.

Most pressing for Australia are social, cultural and geographic distinctions that can be understood only through local research.¹⁸⁸ Potentially important qualitative and quantitative indicators could be collected locally and used to direct local efforts in supply reduction, demand reduction and harm minimisation. Greater attention is also needed to understand how the broader social, cultural, economic, commercial and policy environments influence individual vulnerability to illicit-drug-related problems. These include criminal behaviour, illicit drug use, factors that build resilience, how to identify critical points in a person's development that may increase their vulnerability, and interventions delivered to promote more-favourable outcomes (Homel *et al* 1999).¹⁸⁹

Such priorities must be identified and placed on the research agenda in ways that ensure their adequate funding. Australia has a strong research record of accomplishment, but the base of research capacity across the country should be broadened. Research expertise in the drug and

alcohol field is concentrated in too few places, geographically and institutionally. A research workforce development strategy is needed to improve training in research methodology with special application to the drug and alcohol field, at undergraduate, postgraduate, and in-service levels. It is important to strike a balance between locally identified research priorities and commissioned research founded on national priorities that fills identified research gaps.

An important challenge for researchers working in the alcohol and other drugs area is to find ways of disseminating and implementing the findings of research more effectively to all relevant personnel including policy decision-makers, planners and clinicians, and in a timely manner. This will require information systems for wide dissemination of information, and mechanisms to advise decision-makers about the findings of research and their implications for practical application.

Increasingly, governments and other funding institutions are placing importance on health services being evidence-based in their style and content. Clinical services in the illicit drug area should also be expected to comply with this standard. This will require the systematic review of current research evidence, and commissioning of further investigations in areas where insufficient evidence of efficacy exists.

7 Monitoring illicit drug trends

Performance measurement

Monitoring, evaluation and reformulation are important in any strategic approach, but particularly important in an area of endeavour where there are more questions than answers to a set of human problems. Only through monitoring and evaluation can a program's implementation, effects and outcomes be measured against pre-defined objectives and adjusted in accordance with findings. In the illicit drugs field, there is insufficient evidence on which to base many decisions about the allocation of resources to alternative options, based on their net impact on drug-related harm.¹⁹⁰

In particular, a lack of Australian studies mean evaluations undertaken in different socio-cultural settings may yield results that are not or only partially generalisable to Australia's context. Australia's capacity to prevent or minimise drug-related harm will grow only through continuous attention to monitoring, evaluation and reformulation of effort.

Reporting on implementation and effects of the National Action Plan for Illicit Drugs (NAPID) will be conducted at State/Territory and national levels. Reports on the progress of the national drug action plans is part of a broader monitoring and evaluation framework, implemented under the auspices of the Intergovernmental Committee on Drugs (IGCD), for the whole of the National Drug Strategic Framework. The purpose of this monitoring and evaluation strategy is to inform the IGCD and the Ministerial Council on Drug Strategy (MCDS) on progress of the National Drug Strategy towards agreed national objectives, and in doing so to provide a more informed basis for policy and program development. All jurisdictions will provide the MCDS with an annual report on progress. National illicit drug trends will also be monitored.

For this purpose, measures of illicit drug trends have been identified that meet the following criteria:

- They are part of an existing data collection.
- They are collected regularly and are likely to continue to be collected during the life of the NDS.
- They are collected nationally.
- They relate to the four content areas identified as key strategy areas in the NAPID.

There has also been an effort to choose measures that are reliable and valid, are likely to show statistically significant changes during the life of the NDS, and will provide useful information for stakeholders.

The limitations of the measures should be recognised. For example, their reliability and validity are variable. Price and purity data are particularly problematic. Moreover, changes in indicators cannot be unquestioningly attributed to the NDS or the NAPID. Trends are likely to be the result of a range of factors inside and outside Australia. In addition, jurisdictional differences will not be evident in national statistics. However, the measures provide one source of information on changes in key variables that the NDS or the NAPID aims to affect.

Other qualitative and quantitative information will be used to help interpret trends. For example, as part of the monitoring and evaluation of the NDS, an annual forum of key stakeholders will provide information relevant to the NDS as a whole, as well as to the implementation and outcomes of each drug action plan, including the NAPID.

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