

## **Literature review summaries**

**A: Public policy practice**

**B: Service delivery systems**

**C: Resource allocation**

**D: Effectiveness of AOD interventions**



# **A: Public policy practice**

## **Introduction**

This literature review on public policy practice was undertaken as part of the approved methodology for evaluation the NDS as a policy framework (Component 1). It provides an important step for assessing the appropriateness, effectiveness and efficiency of the NDS policy framework.

First, this review defines policy and describes the context of contemporary public policy making. The policy cycle proposed by Bridgman and Davis (2004) is then outlined in conjunction with relevant literature to illustrate key components of the policy process and the challenges and characteristics associated with effective policy process. Finally, this review presents a series of questions that have been constructed around each stage of the policy cycle to facilitate evaluation of the NDS policy framework through analyses of relevant documentation and stakeholder consultations.

## **Defining policy**

While there are numerous definitions of policy to reflect the wide range of contexts in which it is used and the increasing complexity and continuing evolution of policy processes, in general, policy is construed as both actions (decisions) and inactions (indecisions) of the government (for a review of policy definitions, see Birkland 2001; Bridgman & Davis 2004; Colebatch 2002; 2006; Parsons 1995). Policies may or may not be formalised and may be partially or fully developed. The focus on solely government in policy processes, however, has diminished in more recent times as public policy move towards the processes of governance (eg Dror 1994; Parsons 2004).

## **Context of contemporary public policy: Governance**

Rather than a top-down process, whereby policy development and decisions are government driven, contemporary policy processes involve not only multiple levels of government across multiple sectors, but also external stakeholder groups in both the private and public arenas (eg non-government organisations, interest groups). In this context, the processes of governance provide an inclusive policy making environment. However, developing policy in this governing framework is also highly complex. The meeting of aspirations and perspectives of a diverse range of groups creates tensions and challenges for reaching agreement on policy positions. Thus, managing and negotiating the relationships between the government and external stakeholder groups are a critical part of the policy process. Making policy processes effective and efficient in this contemporary public policy context is challenging and requires methods of analysis and tools to facilitate the negotiation of issues and relationships among stakeholders.

## **The policy cycle**

The policy cycle conceptualises the policy process as a cycle of stages and provides a rational structure for thinking about the policy process in a systematic way. In general, policy cycle models include stages that progress from problem or issue identification and definition, goal-setting, generation of policy options, policy decision making, policy implementation and policy evaluation (for reviews, see Bridgman & Davis 2004; Colebatch 2002; Kay 2006; Neilson 2001; Parsons 1995). Although the policy cycle has been criticised for its failure to reflect the complexities of policy making in the real world, it provides a useful framework for analysing the policy process (eg see Bridgman & Davis 2004; Deleon 1999; Colebatch 2006; Parsons 1995; Sabatier & Jenkins-Smith 1993).

The policy cycle proposed by Bridgman and Davis (2004, see also Althaus, Bridgman & Davis, 2007) provide a foundation for identifying elements of good public policy practice and understanding and assessing the NDS as a policy framework. Bridgman and Davis specified eight stages in the policy cycle: (1) issue identification, (2) policy analysis, (3) policy instrument development, (4) consultation, (5) coordination, (6) decision, (7) implementation and (8) evaluation. While these stages are represented in a linear manner, in reality, they interact with one another in complex ways and are not mutually exclusive.

### **Issue identification**

Issue identification involves understanding the issue or problem that requires the attention of the government and the community at large and a policy response. Issues may be identified through needs analyses or research evidence. Specific issues can also become salient as a result of lobbying by interest groups, media campaigns, opinion polls, failure of existing programs, as well as changes in government ideology, economy, population demographics and international relations (Bridgman & Davis 2004).

To facilitate the development of appropriate policy options, having a comprehensive understanding of the issue and the context in which it exists and clear goals are critical (eg Althaus *et al* 2007; Bridgman & Davis 2004; Colebatch 2002; Curtain 2000; Howlett 2007). Given that policy development and implementation require the cooperation and collaboration of multiple stakeholder groups, including the general public, it is essential that stakeholders develop a shared understanding of the issue and goals from the outset to increase likelihood of achieving desired policy outcomes.

### **Policy analysis**

Policy analysis involves generating and assessing the impact of policy alternatives.

The use of best evidence is identified as an important part of this process. Apart from the need to incorporate scientific evidence in policy formulation and decision making, increasingly, experience based knowledge has been recognised as an important source of policy information (eg Curtain 2000; Parsons 2004). Research on evidence based policy has identified a range of barriers to the use, as well as strategies for increasing the uptake, of evidence in policy making processes (eg see Landry *et al* 2003; Lomas 2000; Nutley 2003; Sanderson 2002; Stone, Maxwell & Keating 2001). There is, however, continuing debate on the type of evidence required and the extent to which evidence is necessary in the policy process.

There is also a growing demand for the need to engage the community in the policy development process through discursive practices (eg Bell 2004; Curtain, 2004; Parsons 2002, 2004). Community participation in the policy processes helps to legitimise and achieve support for the policy process, which subsequently enhances the effectiveness and efficiency of policy implementation and achievement of outcomes (eg Bell 2004; Bridgman & Davis 2004). However, factors relating to the feasibility, perceived necessity and effectiveness of public consultation should be considered (eg Bridgman & Davis 2004; Curtain 2000, 2004; Jordan 2007).

More recently, Head (2008) argued that policy decisions are derived from politics, judgement and debate, and that policy debate and analysis are influenced by interplay among facts, norms and desired actions. Rather than a single empirical evidence base for policy, there are multiple evidence bases linked to multiple stakeholder groups. In identifying three 'lenses' or evidence bases for policy analysis – political know-how, rigorous scientific and technical analysis, and practical and professional field experience – he also highlighted the challenges of integrating multiple sources of information to inform and influence policy. The link between evidence and policy is therefore complex and a range of factors influence the nature and level of evidence used in policy decision making (for a review, see Nutley *et al* 2007).

As issues and problems affecting the general public become increasingly complex, unpredictable, ambiguous, interdependent and non-linear, there is a need to identify or develop

policy options that are creative, innovative, flexible and have a long-term focus (eg Abram & Cowell 2004; Curtain 2000; Parsons 2002, 2004; Howlett 2007). Given the inclusive nature of governance in contemporary public policy, it is critical to have policies that incorporate intersectoral and multi-level collaborations to ensure consistency and coherence in efforts to maximise the likelihood of achieving the intended policy outcomes (eg Leat, Seltzer & Stoker 1999; Colebatch 2002; Curtain 2000; Francesco 2001; Parsons 2004). In developing policy options, it is also important to learn from the experiences of other countries (ie having an outward-looking orientation, see Curtain 2000; Parsons 2002, 2004).

### **Policy instrument development**

Policy instruments represent the tools for achieving the intended policy outcomes. They may include legislations, education resources or infrastructures.

### **Consultation**

Consultation provides participation in the policy process and should be incorporated at each stage of the policy cycle to facilitate issue identification, the development and assessment of policy options, policy decisions, and the implementation and evaluation of policy. Consultation should involve independent sources and a variety of methods to seek input from a wider range of stakeholders, including those involved in implementing the policy, external stakeholders and end-users, and a large cross-section of ordinary citizens (eg Curtain 2000; Howlett 2007).

### **Coordination**

Coordination refers to communication within the government (eg across departments, sectors, levels of government) and between the government and external stakeholder groups to ensure consistency in policy positions and activities. It forms a critical part of the policy analysis and implementation processes.

### **Decision**

Policy decision involves choosing a policy option that is most likely to achieve the established policy goals based on the assessment of available policy options. A cost-benefit analysis or risk assessment of policy options and their associated instruments should be undertaken to identify the best policy option (Colebatch 2002; see also Curtain 2000; Howlett 2007).

### **Implementation**

Policy implementation refers to processes involved in the translation of policy into practice. It involves actions of, and interactions among, internal and external organisations of the government as well as service users and the general community. The extent to which policy is implemented accurately (ie as intended) and effectively is complexly determined by a range of factors such as the level of detail provided on policy delivery mechanisms, availability of resources, establishment of linkages and communication networks between the government and relevant stakeholders, levels of program intensity and capacity of personnel to implement policy (eg Althaus *et al* 2007, Bridgman & Davis 2004; Colebatch 2002; Howlett 2007; Parsons 1995). The consistency and coherence of actions across stakeholder groups are critical for effective policy implementation and the achievement of intended policy outcomes.

### **Evaluation**

Policy evaluation provides a means of refining and building capacity at each stage of the policy cycle – whether in identifying the issue for which a policy response is needed, developing policy options or implementing the policy (Bridgman & Davis 2004; Curtain 2000; Howlett 2007; Parsons 1995; Sanderson 2002).

### **Summary**

In summary, public policy involves a wide range of government and non-government actors in multiple processes within the complex architecture of governments.

Policy processes are not only influenced by the values and interests of a diverse range of government and non-government stakeholders, but they are further complicated by a multitude of internal and external factors. As problems that affect the general public become increasingly complex, unpredictable and ambiguous in nature, policy processes also have to evolve to more adequately address these problems.

Although the achievement of intended policy outcomes is complexly determined, based on current literature on public policy practice, characteristics associated with good public policy practice can be identified. These characteristics include a clear understanding of the issue or problem; goals that can be evaluated; an inclusive and highly participatory consultation process; the use of best evidence; provision of sufficient detail to enable implementation; good partnerships and communication networks; policy options that are innovative, creative, flexible, coherent and forward- and outward-looking; risk assessments of policy options; and policy evaluation.

## **B: Service delivery systems**

In formulating our findings, conclusions and recommendations about drug prevention and treatment programs, we draw on relevant principles, outcomes and success factors from the literature on drug service delivery and resource allocation. Given the balance of investment in NDS programs towards illicit drugs and law enforcement interventions, this review highlights concepts of particular interest to this evaluation, including best practice, comprehensive models of care, evidence informed services, access, equity and resource allocation and accountability. Contextual issues such as the concept of ‘drug-related harm’ are also explicated. This section reviews the following literature:

- Victoria’s AOD treatment framework for service delivery
- The UK National Treatment Agency for Substance Misuse’s models of care for developing local systems of effective drug misuse treatment
- The Australian National Council on Drugs’ research paper on Indigenous AOD projects and elements of best practice
- Recent literature on resource allocation, including extracts from an earlier review by Siggins Miller for the ANCD; and a case study on resource allocation in Australian Aboriginal health care

No literature exists to answer the question, ‘What is the optimal AOD service system?’ Issues covered in the literature contribute to thinking about AOD service systems and models of care), and draw attention to issues specific to the NDS programs and their implementation.

### **Victoria’s Drug and Alcohol Treatment Services: The framework for service delivery**

*Victoria’s Drug and Alcohol Treatment Services: The framework for service delivery* describes the elements of the specialist AOD service system in Victoria and the context in which services are delivered (Victorian DHS 1996). It outlines the purpose and objectives of the service, and key specifications for each component of the service.

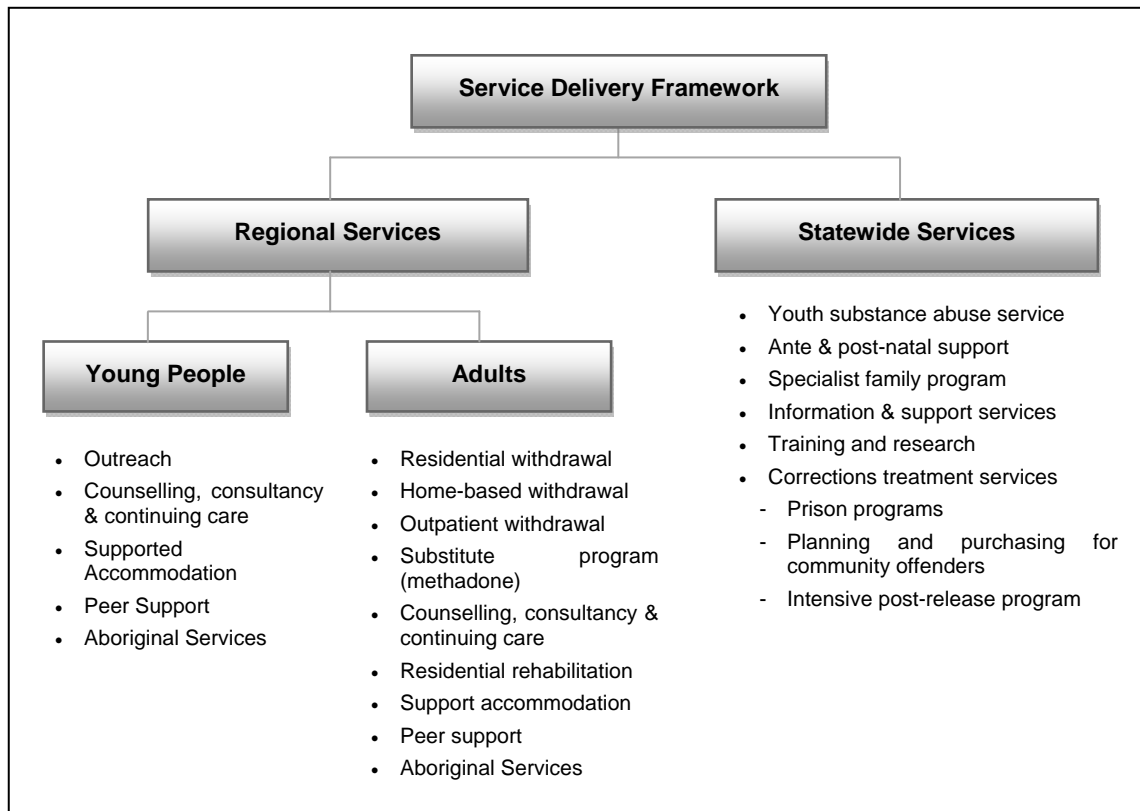
From 1996, new treatment services in Victoria included specialist services for young people, strengthening community-based treatment services, training for health professionals, and a community education and information strategy.

The aim was to ensure one coherent service system and a consistent standard of service delivery of specialist drug and alcohol services. Integration of service delivery would ensure continuity of care, with coordination at two levels: first, the service system perspective - appropriate deployment of a region’s drug and alcohol budget; second, the client perspective - the need for case management where each person could access the services they needed when they need them, one clinician accountable for ensuring (but not necessarily providing) their proper treatment and support.

The Victorian Government emphasised four principles on which health and community services were to be based: to put people rather than institutions or systems first, to ensure a fairer distribution of limited resources, to obtain value for taxpayers’ funds, and to provide a better health status and outcome for all Victorians.

These priorities underpin the framework. Services must provide adequate standards and conditions of care and treatment for persons who suffer harm from use of drugs; be comprehensive, accessible and acceptable; take into account the religious, cultural and language needs of people with alcohol and drug abuse problems; reduce the incidence of drug-related harm in the community; and support the client in the community and coordinate with other community services.

**Figure 1: Victoria's Framework for Service Delivery**



Service elements for the general population who have problems with alcohol and other drug use should be available or accessible from each region. There are ten elements: residential withdrawal; rural withdrawal support; home-based withdrawal; outpatient withdrawal; substitute pharmacotherapy: specialist methadone services; counselling, consultancy and continuing care; residential rehabilitation; supported accommodation; peer support; and Aboriginal services.

All types of service should meet the following general requirements: services must be targeted primarily to people with serious problems resulting from their use of alcohol or other drugs; the principle of harm minimisation is fundamental to the approach of funded drug treatment services; services must ensure continuity of care for clients through an appropriate case-management process; where services are offered to young people, agencies should ensure that programs are tailored to their needs, are accessible, have flexible hours, work closely with the young person's family group and build strong links with other relevant agencies; services will provide education and information on alcohol and drug issues that will enhance prevention and harm minimisation; they will facilitate arrangements for the care of client's children while their parents are in the program; and they will operate under age, gender and culturally sensitive protocols in relation to client care.

**Workforce and resource allocation**

The framework also specifies the need for the workforce to have a mix of skills and health professionals with appropriate training. In allocating public resources for drug treatment services the framework suggests: priority be given to services addressing issues identified as part of the *Turning the Tide* policy response to recommendations of the Premier's Drug Advisory Council; resources be directed with the goal of dedicating a minimum of 15% to young people's services and about 5% to Koori services, and a maximum of 35% will be devoted to residential rehabilitation services; resources will be reallocated to promote more equitable access to services across different geographic regions and needs groups; allocations will be targeted to

meet community needs; and efficiency will be encouraged so that the available drug treatment service funding will provide the maximum quantity of high quality services.

### **System capacity building**

Finally, the report recommends three strategies: community education and information, a needle and syringe exchange program, and continuing research. Future initiatives will develop service standards for each service type; case management (a treatment service approach to coordinated care); key performance indicators (refined output and outcome-based performance measures, with emphasis on client satisfaction and quality of care); continuity of care to improve treatment across service systems for clients with dual disability or multiple problems; improved access (innovative solutions to facilitate access to services by people with language and cultural difficulties, and by women); and better purchasing (refining unit costs through work on episodes of care, rationalising fee policies for non residential services, and financial incentives such as quality bonuses).

### **American Society of Addiction Medicine's Patient Placement Criteria**

The American Society of Addiction Medicine's well known 'levels of care' are at the core of its patient placement criteria (American Society of Addiction Medicine 2007):

- Level 0.5: early intervention
- Level 1: outpatient treatment
- Level 2: intensive outpatient/partial hospitalisation
- Level 3: residential/inpatient treatment
- Level 4: medically-managed intensive hospital treatment

This taxonomy is useful but not comprehensive with respect to treatment as it omits services such as therapeutic communities and half-way houses.

### **UK National Treatment Agency's Models of Care**

In contrast, the National Treatment Agency for Substance Misuse *Models of Care for treatment of adult drug misusers: Framework for developing local systems of effective drug misuse treatment in England* comprises a four-tiered structure addressing the continuum of treatment services, integrated care pathways, care planning and co-ordination and monitoring, which are designed to ensure equity, parity and consistency in the commissioning and provision of substance misuse treatment and care (National Treatment Agency for Substance Misuse 2002). While the model of care has been developed in relation to treatment for users of illicit drugs, it uses a systems approach that links and co-ordinates drug and alcohol treatment services to other generic health, social care and criminal justice services. The UK model of care is a framework based on current evidence, guidance, quality standards and good practice in drug treatment.

As illustrated in Figure 2, the UK model of care groups treatment services into four tiers. Importantly, there is a need to ensure that service users have access to the full range of Tiers 1 to 4 services and to the various types of generic and drug treatment modalities. Furthermore, local drug treatment services and their delivery mechanisms should be tailored to fit the needs of the local population to enable equitable access to drug treatment services nationally.

The concept behind the UK model of care is that local Commissioners should seek to develop an integrated systems approach to meeting the multiple needs of drug users in their area - not just a series of separate services - and have explicit links to other health, social care and criminal justice services. Drug users in all local areas should have access to the full range of services in four tiers: (1) non-substance misuse specific services requiring interface with AOD treatment (2) open access AOD treatment services (3) structured community-based drug treatment services (4) residential services for AOD treatment.

In addition to a full range of tiers 1 to 4 services, users should also have access to a full range of evidence-based treatment modalities within these tiers which include open access services, advice and information services, needle exchange facilities, care planned counselling, structured day programs, community prescribing, inpatient drug use treatment, and residential rehabilitation.

A continuum of services can also be conceived of in terms of those with a focus on abstinence from all or certain drug use through to those that seek to minimise the harm that use causes to the user, their families and communities. An example of the former is the traditional, long-term 12 step residential treatment programs such as Mancare, and of the latter Needle and Syringe Programs (NSP) and out-patient counselling.

**Figure 2. The four tiers in the UK Models of Care framework**

Tier no	Tier title	Service modality	Commissioning level
1	Non-substance misuse (SM) specific services	For example: Personal/general medical services (primary care) Non-DM specific social services including children and family services; non-DM specific assessment and care management Housing specific probation services Vaccination/communicable diseases Sexual health/health promotion Accident and emergency services General psychiatric services Vocational services	Local DAT/PCT/PCG
2	Open access drug misuse services	Drug-related advice and information Open access or drop-in services Motivational interviewing/brief interventions Needle exchange (pharmacy/service/outreach) Outreach services (detached/domiciliary/peripatetic) Low-threshold prescribing Liaison with drug misuse services for acute medical and psychiatric sector DM specific assessment and care management	Local DAT/PCT/PCG
3	Structured community-based specialist drug misuse (DM) services	Drug specialist care planning and co-ordination Structure care planned counselling and therapy options Structured day programmes (urban and semi-urban) Community-based detoxification services Community-based prescribing stabilisation and maintenance prescribing Community-based drug treatment for offenders on DTTOs Other structured community-based drug treatment services targeting specific groups Structured aftercare programmes Liaison with drug treatment services	Local DAT/multi-DAT
4a	Residential substance misuse specific services	Inpatient drug detoxification and stabilisation services Drug and alcohol residential rehabilitation services Residential drug and alcohol crisis centres Residential co-morbidity services Specialist drug and alcohol residential units targeting specific groups, eg mother and child units services	Multi-DAT/regional/national
4b	Highly specialist non-substance misuse specific services	For example: Young people's hospital and residential services providing drug and alcohol treatment services (16 to 21 years) Specialist liver disease units Forensic services Specialist psychiatric units including: personality disorder units; eating disorders units Terminal care services HIV specialist units	Regional/national

While it sets out a national framework for the commissioning of adult treatment for drug misuse in England, the UK models of care can also be effectively applied as a guide for the development of comprehensive drug and alcohol treatment services in the Australian context. In particular, the four-tiered structure of treatment services provides a useful framework for mapping the capacity of existing AOD treatment services and identifying service needs, gaps and priorities in the AOD service system at regional, state and territory, and national levels.

### **Integrated care pathways**

In the UK models of care, the main modalities of treatment that should be provided for people with AOD problems include advice and information, care planned counselling, structured day programs, community prescribing, inpatient drug treatment, residential rehabilitation services.

An integrated care pathway (ICP) describes the nature and anticipated course of treatment for a particular client and a predetermined plan of treatment. ICPs are known by various names, including 'critical care pathways', 'treatment protocols', 'anticipated recovery pathways' and 'treatment algorithms'. They should be developed for people with AOD problems for the following reasons:

- People with AOD problems often have multiple problems which require effective co-ordination of treatment
- Several specialist and generic service providers may be involved in the care of a person with AOD problems simultaneously or consecutively
- A person with AOD problems may have continuing and evolving care needs requiring referral to different tiers of service over time
- ICPs ensure consistency and parity of approach nationally (ie a person accessing a particular treatment modality should receive the same response wherever they access care)
- ICPs ensure that access to care is not based on individual clinical decisions or historical arrangements

In order to provide clarity as to the type of client the AOD treatment modality caters for, what the client can expect the agency to provide, and the roles and responsibilities of the modality/program within the integrated care system and towards the individual client, it is recommended that ICPs have the following elements:

- A definition of the treatment modality provided
- Aims and objectives of the treatment modality
- Definition of the client group served
- Eligibility criteria (including priority groups)
- Exclusions criteria or contraindications
- Referral pathway
- Screening and assessment processes
- Development of agreed treatment goals
- Description of the treatment process or phases
- Care coordination
- Departure planning, aftercare and support
- Onward referral pathways
- Services with which the modality interfaces

### **Care coordination and monitoring**

The UK model of care argues that all service users should have access to appropriate and effective assessment, care planning and care coordination. The aims of care planning and care coordination are to:

- Develop, manage and review documented care plans
- Ensure that people with AOD problems have access to a comprehensive range of services across the four tiers of local AOD treatment systems
- Ensure the coordination of care across all agencies involved with the service user
- Ensure continuity of care and that clients are followed throughout their contact with the treatment system
- Maximise the retention of clients within the treatment system and minimise the risk of clients losing contact with the treatment and care services
- Re-engage clients who have dropped out of the treatment system
- Avoid duplication of assessment and interventions
- Prevent clients falling between services

The level and intensity of care coordination will depend on the complexity of individual need. This requires two levels of care coordination: standard care coordination and enhanced care coordination. Standard care coordination includes the following elements:

- Systematic and ongoing assessment of the health and social care needs of those presenting to AOD services
- Care planning which identifies health and social care needs and responds to these
- Identification of a named care coordinator to organise care across health and social agencies and maintain contact with the person with AOD problems
- Regular reviews of the plan of care (care plan)

Enhanced care coordination applies to those clients with severe mental health problems and mental health comorbidity. In most cases, the client will be under the care of a community mental health team, which will often be caring jointly with a drug and alcohol misuse service. Commissioners should also ensure local protocols are in place to ensure adequate transfer of care coordination where appropriate.

The UK model of care describes the increasing imperative to monitor the activity, cost and outcomes of AOD treatment services. This reflects a desire to gauge the return on local and national investment and to ensure that resources are directed to treatment that is effective.

## C: Resource allocation

Knowledge of the aetiology of drug-related harm and the social determinants of problematic drug use help inform decisions about the allocation of resources to programs. Evidence-informed resource allocation (evidence about problems and the most effective ways to deal with them and understanding reasons for the possible success or failure of strategies) implies knowledge of links between outcomes, research, priority setting and resource allocation to reduce risk and increase resilience by addressing the social, economic and physical factors that lead to drug use.

In an attempt to provide services to meet the needs of communities, policy makers and researchers have sometimes employed measures of service use (eg number of occupied bed days) and previous spending as direct indicators of the level of need. However, the validity of these measures as indicators of need has been questioned.

Service usage is not necessarily an indicator of underlying need. For example, people needing a service may not be in a position to gain access to that service, as it may not be available in their local region. On the other hand, people with relatively low levels of need may be able to access a service easily when there is an over-supply in the local area. A range of factors may impact on the relationship between need for services and use of services, including:

- Relative supply of services in the local region (Carr-Hill *et al* 1994)
- Lines and means of transport (Sherman *et al* 1996)
- Barriers to seeking treatment such as interpretations of own need for care and pressure exerted by services operating in free-market systems to increase demand so as to increase profit (Regier *et al* 1984). There are also barriers specific to subgroups discussed difficulties experienced by subgroups such as migrants and unemployed youth in accessing a range of interventions available to control the use of tobacco (Richmond 1993)
- Higher levels of health literacy in more advantaged members of the community – in particular, it is argued that the effects of poverty on service usage tends to be underestimated as middle classes have greater understanding of and are more skilled in accessing health services (Sheldon 1997)
- Local policies involving more or less aggressive approaches to identifying specific health conditions (eg notifications of communicable diseases).

These issues may be particularly problematic for programs where there is significant unmet need and inappropriate distribution of services. The use of services in one program may be influenced by relative access to services in another program. For example, relative availability of ambulatory or primary care services has been shown to influence the use of hospitals. Judge and Mays (1994) argue that one problem with using measures such as past use of hospital beds is the availability of other services within the region. As an example, they refer to the widely varying availability of family health services at a local level in the UK, and argue the demand for hospital services will vary inversely according to the numbers of general practitioners per 10,000 patients in each region.

Nevertheless, there is a degree of relationship between need and service use as Kessler *et al* (1999) demonstrate. Data from the National Comorbidity Survey showed that, for clients already in treatment, those with more serious and complex problems were more likely to use services and receive specialty treatment. Furthermore, in many situations, only the use of services can be observed empirically, whereas ‘need’ can be inferred only indirectly.

Any formula for determining the allocation of resources needs take into account the size of the population, the relative level of need across different regions, and the relative cost of providing services to different regions. As Hindle (2002) has argued, while the allocation of funds to regions should be based on relative need, the allocation of funds within regions should be output-based – that is, providers within the region are funded on the basis of what they achieve or are expected to achieve (for example, a specific number of consumers treated within a given year). A general shift has occurred in Australia away from specifying in

contracts the outcomes that funded services should deliver, towards specifying the activities that agencies are funded to undertake. This is problematic when there is no sound evidence base for the activities. There are many examples of agencies using low cost-effectiveness interventions (eg long term residential, 12 step programs) and evidence-free interventions where it is difficult to demonstrate the causal links between the activities and the outcomes. Significant accountability issues are found here.

In line with current literature on resource allocation, there is also a need to identify which services are optimally physically located in metropolitan hub and/or regional population centres, to which residents of smaller centres could reasonably be expected to travel. Actions such as establishing explicit links to other health social care and criminal justice services, shared care and in-reach to primary care services in areas that lack AOD-specific services, and strategic interstate alliances around the National Drug Research Centres of Excellence and other leading research institutions acknowledges that we cannot expect to have such resources located in every jurisdiction.

### **Indigenous drug and alcohol projects: elements of best practice**

*Indigenous drug and alcohol projects: elements of best practice* is number 8 in a series of research papers published by the ANCD (Strepel *et al* 2003). It builds on a mapping of the location of projects directly targeting the AOD use among Indigenous Australians.

Of the 277 intervention projects identified, the majority (177) were conducted by Indigenous community controlled organisations. The paper gives five case studies of projects exemplifying best practice in Indigenous substance misuse interventions, as potential models for developing similar projects by other Aboriginal and Torres Strait Islander communities. The report identifies factors contributing to the effectiveness of these projects and describes the specific combinations of factors that led to the formation and sustainability of each service, and the issues involved in delivering services in the context of resource and staffing limitations. However, because the local cultures, histories and present circumstances of Indigenous communities are extremely diverse, projects that are effective in one community may not be effective in another.

Based on the literature and the experience of the researchers, the following general criteria for best practice were established:

- Indigenous community control
- Clearly defined management structures and procedures
- Trained staff and effective staff programs
- Multi-strategy and collaborative approaches and
- Adequate funding
- Clearly defined realistic objectives aimed at the provision of appropriate services that address community needs.

The paper adds to the growing body of case studies and evaluations of Aboriginal and Torres Strait Islander health services that describe factors contributing to success. A number of key success factors are highlighted through these case studies:

- Unique histories and contribution of individual service
- Leadership by individuals
- Appropriate staff conditions, training and development
- Cross-sectoral collaboration, particularly at the local level
- Social accountability to the broader Aboriginal and Torres Strait Islander community
- Multi-service operation
- Sustainability of services and programs
- Allowing Aboriginal and Torres Strait Islander perspectives to direct services

## **Resource allocation in Aboriginal health care**

*Staking a claim for claims: A case study of resource allocation in Australian Aboriginal health care* addresses the issue of equity in Aboriginal health services and discusses ways in which these standards can be applied to allocating resources in Aboriginal health (Mooney *et al* 2002).

The authors make suggestions about procedural versus distributive justice, horizontal versus vertical equity, and equal access for equal need. They note that when dealing with different cultures in which the constructs of health and health gain differ, distributive justice may not be feasible, as it requires that outputs be fairly distributed. In procedural justice however, the driving force is to get the procedures or processes fair and it allows for the promotion of autonomy and self-determination in decision-making (these 'instrumental' goals cannot be underestimated).

Mooney *et al* (2002) also pointed out that the notion of horizontal equity ('the equal treatment of equals') has limited application in the context of the very substantial differences in health status between Indigenous and non-Indigenous Australians. They argue that vertical equity ('the unequal but fair treatment of unequals') can better address the relative needs of Aboriginal and Torres Strait Islander persons versus non-Aboriginal and Torres Strait Islander persons (eg by establishing a positive resource weighting for Aboriginality in resource allocation formulae). In addition, community involvement in the decision-making process (in promoting access and meeting needs) is important for a balanced approach that recognises preferences may be greatly influenced by local norms and expectations.

## **D: Key findings of research into the effectiveness and cost-effectiveness of alcohol, tobacco and other drug interventions**

The following is an overview of the various drug policy interventions for which there is reasonably sound evidence for efficacy, effectiveness and cost-effectiveness. Often, the absence of evidence in these domains reflects an absence of sound research evidence rather than the fact that particular interventions are not efficacious, effective or cost-effective. This is particularly the case with regard to law enforcement interventions, preventive interventions and some harm reduction interventions.

One of the achievements of the NDS has been the facilitation of research into 'what works' in drug policy interventions. Australian scholars, operating within the framework of the NDS, have produced valuable summaries which form the basis of some of the following listings.

### **Taxonomies of drug interventions**

Many taxonomies of drug interventions exist. McDonald (2004) has documented 21 of them and Ritter & McDonald (2005) have selected ten that are particularly useful owing to their comprehensive and overarching approach. The most useful taxonomies for our purposes are:

- The four pillars approach: law enforcement, prevention, treatment and harm reduction.
- The IOM spectrum for mental health disorders: universal prevention, selective prevention, indicated prevention, case identification, standard treatment for defined disorders, compliance with long-term treatment and after care.
- The Australian NDS approach: demand reduction, supply reduction and harm reduction.
- The allocating government responsibilities approach: the education sector, the health and welfare sector and the criminal justice/law enforcement sector.
- The public health approach: primary prevention, secondary prevention and tertiary prevention.

Here, we adopt the four pillars approach of law enforcement, prevention, treatment and harm reduction, as it aligns most readily with the scientific literature concerning good practice and cost-effectiveness. It is also the taxonomy used, with respect to illicit drugs, in the Drug Policy Modelling Program (DPMP). We acknowledge, however, that the approach is not considered useful by those who argue that aspects of law enforcement, treatment and harm reduction can be considered 'prevention.' Ritter & McDonald (2005, 10) have characterised these issues as '...particular quirks of the Australian policy environment where labelling [diverse] interventions as prevention has become very popular'.

### **Drug law enforcement**

Drug law enforcement interventions have recently been reviewed by DPMP researchers (Mazerolle *et al* 2007). Their emphasis was on drug law enforcement concerning illicit drugs. The researchers undertook a systematic review of drug law enforcement evaluations and presented their results in five main categories:

- international/national interventions (eg interdiction and drug seizure)
- reactive/directed interventions (eg crackdowns, raids, buy-busts, saturation patrol)
- proactive/partnership interventions (eg third-party policing, problem-oriented policing, community policing, drug nuisance abatement,
- individualised interventions (eg arrest referral and diversion)
- interventions that used a combination of reactive/directed and proactive/partnership strategies.

They concluded that (paraphrased from pp. 136-8):

- Evaluations of interventions that aim to reduce supply at a national or international level reveal little empirical evidence on which to base an overall assessment. Moreover, the evidence that does exist fails to support interdiction or crop eradication strategies.
- Law enforcement interventions that target drug-involved individuals offer some promise: arrest referrals and other diversionary tactics may aid in reducing drug use.
- Over all, interventions shown to be effective included problem-oriented policing (proactive), drug nuisance abatement, third-party policing, civil remedies, some tactics of community policing, crime prevention through environmental design (CPTED), combining CPTED and drug nuisance abatement strategies, search and seizure (of clandestine labs), arrest referral, diversion, and some combinations of reactive/directed and proactive/partnership strategies.
- Interventions with mixed findings of effectiveness include crackdowns (effectiveness appears to be contingent on a number of factors), raids (immediate but short-term impact only), and multi-jurisdictional taskforces (MJTFs) (outputs and communication improved but little evidence of effect on outcomes).
- Interventions that do not seem to be effective include drug seizures, crop eradication, undercover operations (when used in isolation of other tactics), intensive policing (when undirected and used in isolation of other tactics), and drug-free zones (DFZs) (very limited literature).

## **Prevention**

Prevention continues to be an area of drug policy with a patchy evidence base. One challenge is the lack of agreement on the definition and scope of 'prevention'. The Commonwealth Government's National Preventative Health Task Force, for example, takes a broad approach that encompass within prevention interventions that others would characterise as treatment.

The first point to make is that prevention works. The evidence for this has been summarised by the National Preventative Health Task Force who wrote:

### **Prevention – a great investment**

A study commissioned by the Department of Health and Ageing in 2003 showed quite spectacular long-term returns on investment and cost savings through the preventative action of tobacco control programs, road safety programs and programs preventing cardiovascular diseases, measles and HIV/AIDS...

For example this report estimated that the 30% decline of smoking between 1975 and 1995 had prevented over 400,000 premature deaths...and saved costs of over \$8.4b, more than 50 times greater than the amount spent on anti-smoking campaigns over that period.

The recent US study Prevention for a Healthier America shows that for every US\$1 invested in proven community-based disease prevention programs (increasing physical activity, improving nutrition and reducing smoking levels), the return on investment over and above the cost of the program would be US\$5.60 within five years... (National Preventative Health Taskforce 2008, p. xi).

Particular preventive interventions, especially those reasonably proximate to the loci of harm, have been thoroughly researched as to efficacy, effectiveness and cost-effectiveness, as have some up-stream interventions that address the deeper social determinants of health and well-being (Marmot & Wilkinson 2006; Spooner & Hetherington 2005; WHO Commission 2008). The evidence base is strong enough to support action on a number of fields.

## Alcohol

Probably the most authoritative international review is that of the Alcohol & Public Policy Group, published in 2003. It concluded:

The following...policy options stand out as 'best practices': minimum legal purchase age, government monopoly of retail sales, restrictions on hours or days of sale, outlet density restrictions, alcohol taxes, sobriety check-points,<sup>17</sup> lowered BAC limits, administrative licence suspension, [and] graduated licensing for novice drivers... (Alcohol & Public Policy Group 2003, 1349).

The National Preventative Health Task Force has also reviewed the evidence about alcohol, and presented the following recommendations for action, based on evidence as to what works:

The Taskforce believes that, in order to reduce the prevalence of harmful drinking for all Australians by 30%, the major actions are:

Reshape consumer demand towards safer drinking through:

- Managing both physical availability (access) and economic availability (price). The high accessibility of alcohol – in terms of outlet opening hours, density of alcohol outlets and discounting of alcohol products – is an issue in many Australian communities. If managed well, this leads to reduction in alcohol-related violence, injury, hospitalisation and death.
- Addressing the cultural place of alcohol. Social marketing and public education are required, and will be more effective if the marketing of alcoholic beverages is restricted, including curbing advertising and sponsorship of cultural and sporting events.

Reshape supply towards lower-risk products through:

- Changes to the current taxation regime that stimulate the production and consumption of low-alcohol products.
- Improved enforcement of current legislative and regulatory measures (such as Responsible Serving of Alcohol or bans on serving intoxicated persons and minors, or continuing to lower blood alcohol content in drink-driving laws).
- Removal of tax deductibility for advertising and development of staged approach to restrict alcohol advertising.

Strengthen, skill and support primary health care to help people make healthy choices:

- Support brief interventions as part of routine practice by health professionals and other health workers in primary health care settings to assist changes in drinking behaviour and attitudes to alcohol consumption (National Preventative Health Taskforce 2008, xiii).

### Limiting the availability of alcohol as a preventive intervention

National Drug Research Institute researchers have prepared an authoritative overview of evidence concerning restrictions on the sale and supply of alcohol (NDRI 2007). They classified the interventions as (1) having strong evidence for positive outcomes including substantial and/or compelling concurring evidence of effectiveness in an Australian context; (2) having evidence for positive outcomes, may need ongoing substantial functional support; (3) current evidence unclear or insufficient to conclude causality, requires and warrants further investigation and (4) evidence repeatedly indicates absence of reliable positive effect of restriction on alcohol consumption and/or alcohol-related harms; in some instances, there

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<sup>17</sup> 'Sobriety check-points' are places where police stop motor vehicles and breath test drivers whom they believe are intoxicated. This approach is to be contrast to with what Australians incorrectly refer to as 'random breath testing', whereby the driver of every vehicle that is stopped by police is breath tested. In fact, the evidence is that the RBT approach is more effective as a general deterrent because it significantly increases the perception of and reality of likelihood of detection, compared with the use of sobriety check-points.

may be evidence of counter-productive outcomes. Using this scale, three interventions were classified as having strong evidence for positive outcomes:

- Restrictions on the economic availability of alcohol: taxation and pricing.
- Restrictions on hours and days of sale for licensed premises.
- Restrictions on legal drinking age for purchase or consumption of alcohol.

Seven interventions were classified as having evidence for positive outcomes but may need ongoing substantial functional support:

- Restrictions on access to high risk alcoholic beverages.
- Restrictions on the outlet density of licensed premises.
- Restrictions on ownership of private liquor licenses: direct government control of liquor outlets.
- Restricting service to intoxicated patrons in licensed premises: responsible beverage service practices with enforcement.
- Restrictions implemented via liquor accords and community based programs with enforcement.
- Mandatory packages of restrictions for remote and regional communities.
- Dry community declarations.

One intervention, restrictions on entry and re-entry for nightclub patrons ('lockout' provisions) was classified as having current evidence that is unclear or insufficient to conclude causality.

Three interventions were classified as having evidence that repeatedly indicates absence of reliable positive effect of restriction on alcohol consumption and/or alcohol-related harms and, in some instances, evidence of counter-productive outcomes:

- Restricting service to intoxicated patrons in licensed premises: responsible beverage service practices without enforcement.
- Restrictions implemented via liquor accords and community based programs without enforcement.
- Local 'dry area' alcohol bans.

#### **The cost-effectiveness of interventions to reduce the burden of harm associated with an alcohol**

The cost-effectiveness of interventions to reduce the burden of harm associated with an alcohol in Australia has been assessed. Some of its findings challenge contemporary policy thinking relating to alcohol:

Two interventions stand out as being most effective and cost-effective: changes to the way taxes are imposed and advertising bans...Increasing the minimum legal drinking age to 21 years is also dominant, although the potential health gains are small given the target range is persons aged 18 – 20 years. All other interventions [assessed] have a high or very high probability of being under the \$50,000 per DALY cost-effectiveness threshold. The exception is residential treatment for alcohol dependence (with or without naltrexone) which is not cost-effective...

In terms of the most cost-effective package of interventions, the expansion path includes (in order of incremental cost-effectiveness): volumetric taxation, advertising bans, increase in minimum legal drinking age to 21 years, brief intervention, licensing controls, drink driving mass media campaign, random breath testing and then residential treatment + naltrexone...

The key findings from [the study] suggest that all the prevention interventions modelled are more cost-effective in reducing alcohol-related harm than those that treat alcohol dependence. When taken as a package of interventions, all interventions modelled with the exception of residential treatment would result in a cost-effective investment

portfolio... Changes to volumetric taxation and banning of alcohol advertising should be a high priority for investment due to the high probability of cost-savings. Increasing the minimum legal drinking age to 21 years, brief interventions in general practice, increased licensing controls, drink driving [mass media] campaigns and random breath testing are also likely to be cost-effective...Only residential treatment for alcohol dependence (with or without naltrexone) is not cost-effective by this standard...

The results suggest that although random breath testing is cost-effective and is already being implemented in Australia, the same amount of \$71 million that is currently spent on random breath testing would, if invested in more cost-effective interventions, achieve over ten times the amount of health gain (Doran *et al* 2008, 4-6).

## **Tobacco**

The National Preventative Health Task Force has also reviewed the evidence relating to tobacco and has presented the following recommendations for action, based on the evidence as to what works:

The Taskforce believes that in order to reduce the prevalence of daily smoking to 9% or less, Australia needs to:

- Ensure that cigarettes become significantly more expensive, and that efforts to achieve this through increases in excise and customs duty are not undermined by the increasing availability of products on which these duties have been evaded.
- Further regulate the tobacco industry with measures such as ending all forms of promotion including point-of-sale displays and mandating plain packaging of tobacco products.
- Increase the frequency, reach and intensity of education campaigns that personalise the health risks of tobacco and increase a sense of urgency about quitting among people in all social groups.
- Ensure that all smokers in contact with any single part of the Australian health care system are identified and given the strongest and most effective encouragement and support to quit.
- Ensure access to information, treatment and services for people in highly disadvantaged groups who suffer a disproportionate level of tobacco-related harm.
- Increase understanding about how being a non-smoker and smoking cessation can become more 'contagious' – so that these processes can be accelerated among less well-educated groups and among disadvantaged communities (National Preventative Health Taskforce 2008, xiii).

### **Mass-media tobacco campaigns**

The effectiveness and cost-effectiveness of the first phase of the Australian National Tobacco Campaign (NTC), which ran from June to November 1997, have been assessed. It was found to have cost around \$9 million and to have reduced smoking prevalence by 1.4%. The campaign avoided over 32,000 cases of chronic obstructive pulmonary disease, 11,000 cases of acute myocardial infarction, 10,000 cases of lung cancer, and 2,500 cases of stroke. Furthermore, some 55,000 deaths, gains of 323,000 life-years and 407,000 quality-adjusted life years, and health care cost savings of \$741 million were saved. The NTC was therefore both cost saving and effective. 'As well as reducing smoking prevalence, the NTC was unequivocally cost-effective' (Hurley & Matthews 2008).

## **Illicit drugs**

### **School-based drug use prevention**

DPMP researchers have recently conducted a quantitative and narrative meta-evaluation of school-based programs aimed at preventing illicit drug use. They have concluded as follows:

Consistent with prior research regarding the impact of SBDP [school-based drug prevention] programs on licit substance use, our review found that interactive programs adopting either social influence or competency enhancement components appear to be the most effective approach to school-based drug prevention. Further, more intensive programs appear to increase program effectiveness, and universal programs may be slightly more effective. However, this research does little to resolve the debate regarding the most appropriate program provider.

...our study suggests that policy makers should focus their school-based drug prevention initiatives around interactive programs that are delivered during the middle school years. Our review also highlights the importance of policymakers developing programs that specifically target illicit drug use (as opposed to those programs that together focus on licit and illicit drug use). This may be especially important given the small, yet significant growth in young people experimenting with illicit substances. Our study also suggests that there is probably no additional benefit in funding multifaceted programs or booster sessions. These two strategies may be more effective for preventing licit drug use, but may be of limited benefit in preventing illicit drug use. Finally, in terms of what not to recommend: our findings suggest that SBDP programs that lack interactivity and are aimed at children outside of the middle school years are unlikely to yield many benefits. Policy makers should take general note of the ongoing importance of funding scientifically rigorous evaluations of drug prevention programs (Soole *et al* 2008, 280).

## Harm reduction

DPMP researchers have reviewed the efficacy and effectiveness of harm reduction strategies for alcohol, tobacco and illicit drugs, concluding:

For alcohol, current harm reduction efforts of known efficacy and effectiveness are those that reduce drink driving (RBT and interventions for drink drive offenders). The evidence in relation to interventions that reduce injury and violence is growing but not yet strong.

For tobacco, new products that reduce the emission of toxicants and low combustion cigarette-like products are being developed and tested. However, there is scepticism and reluctance among the tobacco control community to embrace such harm reduction strategies.

Injecting drug use has seen the strongest growth of harm reduction interventions complemented by strong evidence to support efficacy and effectiveness and cost-savings for NSP and outreach. There are equivocal findings for brief interventions, education and HIV testing. NIROA [non-injecting routes of administration], naloxone distribution and SIF [supervised injecting facilities] are interventions for which there is emerging positive evidence (Ritter & Cameron 2006, 619).

The NDS prevention monograph reviewed *alcohol harm reduction* interventions (Loxley *et al* 2004). Those classified as having evidence for implementation, evidence for outcome effectiveness or evidence for effective dissemination are as follows:

- lower blood alcohol concentration limits for young drivers
- random breath testing
- ignition interlocks
- designated driver schemes
- thiamine supplementation
- licensing codes of conduct
- staggered closing times
- plastic (or tempered) glasses
- food service
- harm reduction educational approaches.

Of these, only one (random breath testing) has evidence for effective dissemination and only two have evidence for outcome effectiveness (ignition interlocks and thiamine supplementation).

Economic evaluations have been undertaken of Australia's national HIV/AIDS (Applied Economics 2003), hepatitis C (Applied Economics 2005) and needle/syringe exchange programs (Health Outcomes International 2002). All have been found to be effective and highly cost-effective.

## **Treatment**

Over all, treatment of substance abuse problems is effective, certainly as effective as treatments provided for other chronic health conditions.

### **Alcohol**

The National Drug Strategy has published a review of the treatment of alcohol problems (Shand *et al* 2003). Among its core findings are the following:

- Treatment has a role in reducing social and economic harm. It offers scope to reduce the burden of harm and subsequent health care costs of inappropriate alcohol use. In terms of treatment options: day hospital or outpatient management services are cost-effective alternatives to inpatient management for many alcohol dependent clients; brief motivational counselling may be as effective and is less costly than some other psychological interventions; the use of pharmacotherapies in conjunction with psychological interventions is a cost-effective treatment option.
- Instruments for the screening and detection of risky drinkers are readily available and effective; these include AUDIT, MAST and the SDS. A variety of screening instruments are also available for assessing mental health disorders among people with alcohol problems.
- Little progress has been made in matching patients to different types of treatment according to individual patient characteristics. Furthermore, little evidence exists indicating that individual patient characteristics influence treatment outcomes.
- Alcohol withdrawal can be managed in a variety of clinical and community settings, depending on the individual's needs, circumstances, health risks and the severity of their alcohol withdrawal syndrome. The settings include home-based, outpatient and in-patient withdrawal management settings. Home-based and outpatient withdrawal management are appropriate for many patients provided a range of supports is available. Inpatient withdrawal management (medicated or non-medicated) is necessary for people who have a history of severe alcohol withdrawal complications, a known coexisting medical, psychiatric or social and environmental problems. People at risk of suffering alcohol withdrawal complications need a supervised medicated withdrawal management setting.
- With regard to post-withdrawal treatment settings, treatment variables such as client motivation, treatment modality, amount and duration of treatment, and therapist variables appear to have more impact on treatment outcomes than treatment setting. Residential treatment may be the best option for some patients, such as more severe or dual-diagnosis patients, chronic relapsers or those with limited social supports.
- Brief interventions—both opportunistic brief interventions and brief treatments—offer an important addition to more intensive treatment strategies. The effectiveness of brief treatments in treatment seeking populations appears to be comparable to that of other active treatments.
- Psychosocial interventions, including motivational interviewing and cognitive behavioural interventions, are effective in treating alcohol problems.
- Psychosocial relapse prevention interventions appear to be effective relative to no treatment control groups and equally effective when compared to other active treatments. They can be used successfully with a variety of clients in very different contexts, including residential and outpatient settings.

- A number of effective pharmacotherapies exist for relapse prevention; they are probably most effective used in conjunction with psychosocial therapies.
- Long-term recovery depends on treatment retention, social support networks and assertive after-care and follow-up. Given the chronic nature of alcohol dependence, the drinkers should return for follow-up appointments whatever their drinking status.
- While voluntary participation in Alcoholics Anonymous (AA) meetings may assist clients to maintain abstinence or reduce alcohol intake, conventional AA meetings alone should not be viewed as treatment for alcohol dependence. Coerced attendance at AA meetings is counter-productive and not recommended.

### **Opioid dependence**

With the support of the NDS, a major Australian investigation of treatment for opioid dependence – NEPOD: the National Evaluation of Pharmacotherapies for Opioid Dependence – was undertaken, with its findings being published in 2004 (Mattick *et al* 2004). The treatment categories investigated were methadone maintenance, buprenorphine maintenance, LAAM maintenance, naltrexone treatment, rapid opioid detoxification with anaesthesia or sedation, outpatient detoxification using buprenorphine, conventional inpatient detoxification and conventional outpatient detoxification. The key findings were as follows:

- Methadone maintenance, buprenorphine maintenance, LAAM maintenance and naltrexone treatment all produced substantial reductions in heroin use and criminal activity *while patients remained in treatment*.
- A key challenge is to improve patient retention in all pharmacotherapies, because a substantial proportion of patients dropped-out of treatment.
- The agonist maintenance treatments of LAAM, methadone and buprenorphine retained significantly more Heroin Users than naltrexone treatment.
- Rapid opioid detoxification under anaesthesia or sedation was a significantly more effective method for achieving short-term abstinence compared to conventional detoxification and detoxification using buprenorphine. Rapid detoxification under anaesthesia had no advantage over rapid detoxification with sedation. Both procedures were significantly more effective than conventional detoxification.
- The trials of methadone, buprenorphine and LAAM maintenance...produced similar results for patients remaining in treatment, although LAAM was superior to methadone and buprenorphine in achieving additional heroin-free days and abstinence at six months when a conservative approach to data analysis was taken.
- Naltrexone treatment after conventional inpatient detoxification (using clonidine and symptomatic medications) for heroin users had poor results.
- Heroin users' average monthly expenditure on heroin decreased from \$2,611 at baseline to \$572 at three-month follow-up, consistent with the decreases in heroin use.
- Methadone maintenance is the most cost-effective treatment currently available in Australia for the management of opioid dependence. Methadone maintenance also achieved one of the highest rates of retention among the four pharmacotherapies examined.
- Naltrexone treatment appears to be the least cost-effective pharmacotherapy compared with methadone, LAAM and buprenorphine.
- Across treatment modalities, treatment in the GP setting appears to be more cost-effective than the clinic setting at both three and six months.

### **Other illicit drugs**

The evidence supporting treatment interventions for illicit drug use generally was summarised in an ANCD monograph (Gowing *et al* 2001). With regard to the treatment of opioid dependence, its findings are consistent with those documented above from the NEPOD trial. Additional insights include the following:

- Detoxification from dependence on psychostimulants is generally not problematic owing to the low intensity of withdrawal symptoms. As a result, medication is generally considered to be of secondary importance compared with supportive care. The same applies to detoxification from cannabis dependence.
- Little evidence exists supporting the use of pharmacological interventions for managing the symptoms of psychostimulant dependence. For some individual patients, however, this may be a viable option.
- Prescription of oral amphetamines as a form of substitution treatment is of potential value for dependent, injecting amphetamine users.
- No effective pharmacological treatments are available for cannabis dependence.
- Psychosocial therapies add to the effectiveness of methadone maintenance treatment for people dependent on opioids.
- Psychosocial therapies, including cognitive behavioural therapy, are effective among some people dependent upon psychostimulants including amphetamines and cocaine.
- Psychosocial therapies can be effective in the treatment of cannabis dependence and in relapse prevention.
- Residential rehabilitation and therapeutic communities are an important component of the treatment mix. Rates of dropout from therapeutic communities are very high in the early stages of treatment but rates of attrition and then decline. At least three months treatment is required to achieve change. Treatment progress, not just time in treatment, is predictive of good outcomes.
- Twelve-step (self-help) approaches such as Narcotics Anonymous may be effective in preventing relapse. Participation in self-help group meetings (not just attendance) is important in determining outcomes. Evidence suggests that attendance at such meetings should not be mandatory.

### **Tobacco**

In support of a USA National Institutes of Health State of the Science Conference on Tobacco Use: Prevention, Cessation, and Control, the USA Agency for Healthcare Research and Quality reviewed the global scientific evidence in this area (Ranney *et al* 2006, 54-68). With regard to the effectiveness of treatment for tobacco—nicotine—dependence, it found strong evidence supporting therapeutic interventions for nicotine dependence.

- Self-help is of marginal efficacy. Little evidence supports the view that providing multiple types of self-help, when offered without any person-to-person intervention, significantly enhances treatment outcomes
- Individual counselling for smoking cessation is more effective than no treatment at all. No evidence exists that group therapy is more effective than a similar intensity of individual counselling.
- Brief interventions can increase abstinence rates.
- Only limited evidence exists suggesting that adding group therapy to other forms of treatment such as advice from a health professional or nicotine replacement produces extra benefits.
- Pharmacotherapies such as bupropion sustained release or nicotine replacement therapies (e.g., nicotine gum, nicotine inhaler, nicotine patch, nicotine nasal spray) consistently increase abstinence rates.

Cost-effectiveness has also been assessed, with researchers concluding that:

From the population perspective, telephone counselling appeared to be the most cost-effective intervention. Adding proactive forms of telephone counselling increased the effectiveness of pharmacotherapies at a low incremental cost and, therefore, this could be a highly cost-effective strategy. Bupropion appeared to be more cost effective than nicotine replacement therapy (NRT). Combined bupropion and NRT did not appear to be cost effective (Shearer & Shanahan 2006, 428).

### **Illicit drug treatment in prisons**

Australian researchers have reviewed evidence for four interventions for drug-dependent prisoners: detoxification, drug-free units, therapeutic communities, and opioid substitution treatment (Larney *et al* 2007). They found that:

None of these treatment options have been thoroughly studied in the prison context, although the evidence base is increasing in the cases of therapeutic communities and opioid substitution treatment. On current evidence, methadone maintenance treatment is the most effective treatment for reducing drug use and criminal recidivism. It may also assist in reducing HIV and other blood borne virus transmission. However, this treatment is suitable only for opioid-dependent populations; users of psychostimulants and other non-opioid drugs remain poorly served by current treatment approaches, both in the community and in prison (25).

### **Comparing the cost-effectiveness of prison, pharmacotherapy maintenance or residential rehabilitation for dependent heroin users**

A study assessing the relative cost-effectiveness of interventions for heroin dependent people has been undertaken under the DPMP. The scenario was characterised thus: ‘A dependent heroin user has come to the attention of authorities in a form that allows a one-year prison term, a course of pharmacotherapy maintenance or a stay in a residential rehabilitation to be pursued (eg the individual has been arrested). How would each perform in terms of both program cost and reduction in drug use? The analysis used Australian data, and found that pharmacotherapy maintenance was by far the most cost-effective, with residential rehabilitation costing twice as much to achieve the same outcome and prison costing seven times as much:

The post-program effects are the abstinence rates at the end of one year (64% for residential rehabilitation; 57% for pharmacotherapy maintenance; 44.9% for prison) less those achieved by a no-treatment control group (25%). The cost-effectiveness given these post-program effects if we assume the effects last two years are: \$7,700 for pharmacotherapy maintenance, \$14,000 for residential rehabilitation and \$57,000 for prison. There is insufficient information to know with any certainty how long post-program effects would last for (Moore *et al* 2005, 1).

