National Centre for Education and Training on Addiction

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Submission to

The House of Representatives
Standing Committee on
Family and Community Affairs
Inquiry Into
Substance Abuse in Australian Communities

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Preamble

This document presents an overview of key issues and recommendations pertaining to the area of workforce development in relation to alcohol and drug issues in the Australian community. The submission does not attempt to document the incidence and prevalence of alcohol and drug related problems. Nor does it review current and emerging trends in policy, treatment and prevention strategies. It is assumed that these latter issues will be adequately addressed by other submissions made to the Inquiry.

What is detailed in the present document are issues pertaining to the question of workforce development and related matters that impact on the ability of the professional workforce to appropriately deal with the growing concerns around licit and illicit drug use in Australia. [In the present context, the terms licit drugs refer to alcohol, tobacco, over-the-counter and prescribed drugs and illicit includes a wide range of psychoactive substances such as heroin (and other opioids), amphetamines, ecstasy and marijuana.]

Problems relating to alcohol and drug use have been an area of growing concern in Australia for some time. Over the past one to two decades specific efforts have been developed to strategically target alcohol and drug problems. These efforts have largely focussed on a number of select areas of attention including demand and supply control and treatment and more recently, but to a considerably lesser extent, prevention. Efforts to up-skill the diverse workforces that are directly and/or indirectly involved with the management or containment of alcohol and drug related problems have been less prominent. Overall, the area of workforce development has received considerably less systematic attention than most other areas intended to impact on the alcohol and drug 'problem'.

This submission addresses the efforts that have been directed at improving the nature and quality of education and training in this area. It attempts to delineate some of the more evident efforts that have been undertaken and in so doing identifies strengths and weaknesses with various approaches, and notes emerging directions for the future. Successful models are identified together with some major overarching issues that are essential to address within the context of drug and alcohol education and training. At the most fundamental level, the question is raised regarding whether the concept of education and training is broad enough to achieve what it is intended to and whether the traditional conceptualisation of education and training is, in fact, one of the greatest constraining factors with which we are faced.

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April, 2001

SECTION I.

Introduction

Alcohol and drug problems remain a prominent feature of the Australian social and political landscape. As in many other developed and developing countries, the 21st century sees us struggling to address AOD problems that are diversifying if not escalating. Drug use is an area of particular concern in Australia. A concern held not just by the general community but also by many members of the health and human services professions. The strategies and technologies available to prevent and manage AOD-related problems are increasing in sophistication and over the past one to two decades there has been considerable progress in the development of effective treatments and interventions for substance abuse disorders. Such changes particularly include a significant expansion in the knowledge base of the field and warrant a concomitant shift to evidence-based practice.

These changes have important implications on several fronts but especially in regard to issues surrounding professional practice, workforce development and information and skills transfer. For some time now, there have been concerted efforts to upskill frontline workers, and education and training programs (usually of short duration) have been the principal strategy employed. In recent times, increased attention has been directed to the need to upskill the health and human services workforce to respond to AOD problems. The traditional response was to expand the education and training options. Australia has made some significant advances in this regard. This response will be reviewed. And in this context, questions are raised regarding whether this approach is sufficient, and if not why not, and what else should be considered.

Calls for Enhanced Training

Considerable effort has been directed at identifying efficacious interventions to modify lifestyle behaviours (especially those that relate to drug use). Far less attention has been focussed on disseminating these findings to front line service-deliverers and trainers. It has been further argued that methods to train health care professionals in the most effective approaches to facilitate behaviour change are not well developed, some notable progress in the 1900's notwithstanding (eg. Sallis et al., 1990; Rollnick et al., 1993; Sanson-Fisher et al., 1991; Schofield et al., 1994). Recent reviews of the impact of education on professional practice behaviour have often been disappointing (Ashenden et al., 1997; Davis, 1992; 1996; 1999). It is unclear whether this is a weakness in the interventions or a failure to accurately disseminate the interventions and adequately train the intervention agents or a problem at the implementation phase.

Nonetheless, strong calls have been made for more and better education and training opportunities. Single and Rohl (1997), in undertaking the evaluation of the National Drug Strategy 1993-1997 made a total of seven specific recommendations. Of these seven recommendations, the following had clear and direct implications for workforce development:

> ***Recommendation #3***
> ***Train mainstream health, law enforcement and community officials to effectively minimise drug-related harm.***
>
> *For doctors, nurses, psychiatric workers, prison officials, social workers, pharmacists and law enforcement personnel to effectively deal with the problems of substance misuse, special training programs should be*

developed or enhanced. Medical schools, nursing schools and other professional education institutions should give greater attention to specialised education and training in alcohol, tobacco and illicit drugs.

Recommendation #5
Improve the ability to monitor the performance of the NDS and make new developments in prevention, treatment and research more readily available to health care practitioners, law enforcement officers and the public at large.

In order to improve the utilisation of research and successful NDS programming, it is recommended that an Australian National Clearinghouse on drugs be created. The clearinghouse would create an inventory of drug programs and develop an electronic network of key resource centres for front-line professionals. It would develop a website on the Internet and present information in a non-technical fashion on recent developments in prevention, treatment, research and policy targeted at doctors, other health workers, social workers, law enforcement officers and government policy makers. Strong consideration should be given to locating the operational management of a national non-governmental organisation…

(Single and Rohl, 1997, pp 83-85)

Under each of the above recommendations, the Single and Rohl report made a further series of specific recommendations addressing each of the above specific areas. The relevant sections of the Single and Rohl report are appended at the end of this document (see Appendix I).

Single and Rohl (1997) also stated that…

The development of education and training initiatives was limited in the early phases of the Strategy by the paucity of research and well-trained professionals in the field of substance abuse. Now the NDS has developed a critical mass of talented and highly qualified specialists and contributed to the development of a much improved knowledge base.

Having reached this more mature state, it would seem appropriate that education and training be given more emphasis in the next phase of the NDS.

Single and Rohl recognised that a significant investment in workforce development is a necessary and crucial element in improving outcomes and quality in Australia's response to drug problems. A similar recognition lies at the heart of the new Directions in Australasian Policing (Australasian Police Ministers' Council,1999). Three key directions are outlined in that document, the second of which emphasises strategies for professionalism and accountability in police. This direction incorporates a goal relating to education and training which enhances "employee competence and performance and on-going career development", while this and other goals incorporate an emphasis on the development of best practice policies and guidelines for police.

The Importance Of Investing In The Workforce

There is broad recognition of the key role of workforce development in improving the performance of human service systems and outcomes for the population. The World Health Organization (2000) focussed its World Health Report 2000 on strategies to improve health systems. A major emphasis in achieving this is the investment in the workforce: resource generation must be as much about capital investment in new skills and a trained workforce as in buildings and equipment.

> *Human capital can be treated conceptually in the same way as physical capital, with education and training as the key investment tools to adjust the human capital stock and determine the available knowledge and skills[1]. Unlike material capital, knowledge does not deteriorate with use. But, like equipment, old skills become obsolete with the advent of new technologies, and human capital needs to be maintained too. Continuing education and on-the-job training are required to keep existing skills in line with technological progress and new knowledge. Human capital is also lost through the retirement and death of individuals.*
>
> (World Health Organization, 2000, p. 76)

This emphasis on workforce development strategies is echoed also in Australia. The National Expert Advisory Group on Safety and Quality in Australian Health Care (July, 1999) recommended to Australian Health Ministers that education and training of the workforce, strategies for fostering best clinical practice, and developing information systems to support quality were three of the six key strategies for improving quality in Australian health care. Similarly, the establishment of the Public Health Education and Research Program in 1986 emerged from a recognition that the quality of the health system depended in a significant way on ensuring the knowledge and skills base of the workforce is maintained against a background of constantly emerging new knowledge in treatment, prevention, causes of disease, costs and benefits of new approaches (Queensland University of Technology, 1999).

Strategies For Investing In The Workforce And Fostering Evidence-Based Practice

There is also broad recognition that strategies for workforce development and supporting good work practice are not limited to education and training. Knowledge and skills development needs to be supported by a range of strategies at both macro and micro levels.

The World Health Organization (2000) emphasised the range of strategies that affect the capacity of the workforce to deliver quality services. Education and training is highlighted, but so too are work incentives and information tools recognised as powerful tools to improve performance.

The Australian National Expert Advisory Group on Safety and Quality in Australian Health Care (July, 1999) recognised the need to take a systemic approach to improving quality in Australian health care. Key strategies for supporting quality practice in health care are highlighted in that group's final report to Health Ministers, including the development of information systems to support quality, the need for national coordination of quality improvement strategies and the provision of

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education and training as a key national action for quality enhancement in health care.

The Cochrane Effective Practice and Organisation of Care Group (EPOC – see below) reviews interventions designed to improve professional practice and the delivery of effective health services, including various forms of continuing education, quality assurance, informatics, and financial, organisational and regulatory interventions that can affect the ability of health care professionals to deliver services more effectively or efficiently. Examples of relevant organisational interventions include case management, revision of professional roles, use of multi-disciplinary teams, formularies and changes in medical records systems. Examples of relevant financial interventions include changes in how professionals are reimbursed, incentives and penalties. Examples of relevant regulatory interventions include changes in medical liability, management of patient complaints, peer review and licensure.

Thus, the emphasis on workforce development which previously translated to an exclusive focus on education and training must now be understood in broader terms, incorporating the full range of strategies required to enhance a workforce's capacity to deliver an outcome. As such, strategies may include the following.

The Development Of Policy Frameworks For The Desired Work Practice (E.G. What Work Is Valued And Why, What Standard Of Performance Is Expected And/Or Required?)

Policy frameworks are a key part of determining work practice. Responding to alcohol and other drugs will not be a priority concern of a worker unless that work is clearly valued by their profession, industry and/or organisation. Similarly, expected standards of practice will more likely be met by a workforce where these are set out clearly in a policy framework. Standards of practice also enable a clear link to be made between industry expectations and curricula for pre-service and in-service education and training.

Within Australia, the development of the National Methadone Guidelines has been the only area where a clear policy framework has been given to guide work practice. Many States and Territories have developed their own Methadone clinical guidelines in the context of the national policy.

Other initiatives, while falling short of policy frameworks, have nevertheless been valuable in providing guidelines for good practice in the area. For example, the "Quality Assurance in the Treatment of Drug Dependence Project" directed by the National Drug and Alcohol Research Centre and the three National Drug Strategy monographs that resulted from the project have been valuable.

The Efficacy of Training

Although greater emphasis has been placed on the need for health professionals to develop proficiency in areas such as behaviour change techniques, there still remains little published information about the effectiveness of various training programs undertaken to achieve this end. Until very recently, much of the literature provided little more than a rationale and description of the training program offered (e.g. Sallis et al., 1990; Ockene et al., 1990; Brown, 2000). Many of the studies which might be able to inform us about the effectiveness of educational programs in influencing subsequent clinical or practice behaviours are insufficiently rigorous in design or execution to be of value in drawing conclusions about causal relationships

(Gorman, 1993). Crosswaite and Curtice (1994) argue that the potential for the transfer of skills and knowledge in research generally is very underdeveloped. There is also increasing recognition that the process of communicating information about disease prevention and health promotion to health care professionals is not just a matter of disseminating printed materials (Brown, 2000). Moreover, there is a growing awareness that the type of dissemination strategy will effect uptake and sustained use (Salkeld et al., 1996).

The Training Impetus

There is growing appreciation of the need for health professionals to be well trained in the area of drug use and particularly illicit drug use, and evidence indicates that *well* trained practitioners can identify problems at an earlier stage and intervene more effectively. To-date, however, efforts to train health and human services professionals in the complex area of illicit drug use have been largely under-developed, or sporadic at best. Some would argue that training of health care professionals, and other human service workers, has not kept pace with the advances experienced in the field over the past 10-15 years (Roche, 1998; Keller and Dermatis, 1999). While clearly there has been some considerable progress in this area, critics maintain that the advancements achieved fall far short of what is required to make substantial in-roads in this complex area of human behaviour.

Moreover, it is further argued that for significant change to occur in the AOD and related fields involved in addressing alcohol and drug problems, vastly more complex and diverse strategies than merely the provision of training courses and the passive distribution of research literature are required (Brown, 2000; Roche and Cormack, 2000). At one level, there is a case to be made for a major conceptual shift away from the traditional and narrow confines of 'education and training' to a broader more widely encompassing notion of 'workforce development'. A workforce development perspective allows for consideration of many of the boundaries and barriers that are frequently encountered by those instigating education and training initiatives. These issues are explored more fully below in the context of the changes that have occurred in Australia over the past decade.

SECTION II.

Wider Perceptions of 'Training'

Australia has long been perceived as being 'anti-education'. Until relatively recently, Australia had a relatively low school retention rate and similarly low tertiary level (at least in terms of university level) participation rates. Important structural changes have brought about significant shifts in thinking about education and training. Some hold that '*the turning point was when we had the National Training Levy …employers got into the habit of training and they saw a result*' (Jasper cited in Laing, 2001). Laing argues that the tide has now turned and that there is increasing recognition on the part of employers that '*we live in a changing environment that if individuals don't join in ongoing training, they will paint themselves into a corner and risk becoming unemployable*.'

It is therefore relevant to see the changes occurring within the alcohol and drug field in terms of education and training in the context of these broader cultural shifts in perception about the value and location of training in one's professional life.

Proliferation of Courses and Training Options

Over the past decade there has been a substantial expansion in both the nature and quantity of AOD education and training opportunities available. This expansion has taken various forms:

1. University graduate level training: most states now offer some form of university level specialised training in AOD. Such courses are usually intended for those currently engaged in the field in some capacity or other, ie they are in the form of ongoing professional training, and not usually offered as basic (eg pre-registration) training.
2. TAFE sector training, developed around specified competencies designated for various levels of performance, and often then used as an entry point to the above courses.
3. Short courses, which can vary from a semester in length and be either accredited or not through to very short courses (ie half to 2-3 days in duration). These can be offered by a wide variety of educational providers.
4. Integrated components within existing courses (eg subjects of parts thereof within standard undergraduate qualifying courses)
5. In-house, on-site training. This is increasingly common in areas such as police, correctional services and perhaps to a lesser extent teacher training.

The array of training providers has also changed considerably. No longer are universities the principal providers at the tertiary level. The Australian National Training Authority (ANTA) initiated a number of reforms and a structure known as the National Training Framework. Three key features of the National Training Framework are 1) development of training packages, 2) national assessment arrangements and the 3) Australian Recognition Framework. The training packages are the most tangible and practical of the products. They are intended to be developed by industry and to incorporate standards and assessment guidelines endorsed within the Australian Qualifications Framework. They provide a model for the assessment of workers against the competency standards and the granting of a qualification at the appropriate level of skill. In many ways this contrasts with the traditional educational approach taken at university level. These changed perspectives are captured in Appendix II. 'Traditional and Non-Traditional University Level Providers'.

On-line Education and New Technologies

It has been suggested that at the present time a real breach of borders is occurring between universities and corporations, between training and education, between universities and vocational colleges, between on-campus and off-campus learning experiences (Higher Education Series, 2000). One of the big shifts in the educational business world is towards corporate, virtual and for-profit universities especially in the USA. Many such institutions have capacity to expand their education and training activities globally, and hence enter the domestic markets of other countries. This is of critical importance to Australia at the present point in time as government funding to universities has significantly declined over the past three to five years. University revenue is increasingly dependent on domestic fee-paying courses and international students, who may be tempted to stay in-country and gain their education through on-line courses. Relatively new courses, such as those offered in Addiction Studies or other forms of alcohol and drug programs, are particularly vulnerable in the current tertiary sector climate. Increasingly high university fees also place workers in the alcohol and drug field at great disadvantage. These workers often come from positions which do not pay especially well and for these workers high university fees are increasingly prohibitive.

For some, the overly heavy emphasis on *training packages* is also not the most appropriate way to tackle education and training in the alcohol and drug field. While attempting to standardise content, reflect industry needs and ensure minimum competencies there is the problem that a package is only as good as the writer and the teacher who finally delivers it – potentially a major stumbling block. Moreover, difficulties have been reported in the conversion of curricula concepts into the final packages. A critical review of this approach is required to determine whether this is a satisfactory way to develop and deliver training.

In reviewing the advances made and barriers to further progress it is essential to keep in mind the diverse nature of the recipients for whom education and training programs are intended. They include (to mention but a few):

- Protective care workers
- Juvenile justice workers
- Supported accommodation and assistance program workers
- Youth outreach workers
- Correctional service workers
- Mental health services workers
- General practitioners
- Nurses
- Teachers
- Student welfare coordinators

As detailed elsewhere (Roche, 1998), it is not only the professional role or disciplines that need to be considered. It is also the level of specialised or generalist interest of a given individual that determines their training needs. For instance, workers can be categorised as:

Group A:

a1. Non-AOD health professionals (eg GPs, nurses, social workers)

a2. AOD-specialist health professionals (AOD counsellors)

Group B:

b1. Alcohol and drug workers (usually not formally qualified)

Group C:

c1. Non-health professionals (eg police, corrections officers)

c2. Non-health AOD specialists (AOD youth worker)

Group D:

d1. Volunteers (variable backgrounds, qualifications and skill levels)

Hence, the training responses required to appropriately cater for the above range of groups, and the contexts within which they work, are extremely diverse. (For an example of the special considerations that apply to just one of these groups (ie GPs) see Appendix III). Nonetheless, there has until relatively recently been a tendency towards the production of training programs and packages that are generic in nature. While many have wide scale suitability and applicability, not all are readily transferable to other settings.

The Commonwealth's Frontline Professionals Training Response

The emergence of frontline training initiatives supported by the Commonwealth Department of Health and Aged Care provides a much needed alternative to generic training. These responses came about in large part as a result of the series of four reports commissioned by the then Commonwealth Department of Health and Family Services and produced by the National Centre for Education and Training on Addiction (1998). The four reports are:

1. **Education and Training Programs for Frontline Professionals Responding to Drug Problems in Australia. Summary Report.**
2. **Education and Training Programs for Frontline Professionals Responding to Drug Problems in Australia. A literature Review.**
3. **Education and Training Programs for Frontline Professionals Responding to Drug Problems in Australia. Survey of Key Informants.**
4. **Education and Training Programs for Frontline Professionals Responding to Drug Problems in Australia. Workshop of Key Stakeholders.**

These reports provide the most up-to-date examination of who comprises front-line professionals, training and education programs (at the time that the reports were prepared), an assessment of education and raining needs, identification of gaps, and assessment of quality control mechanisms. The above reports have had a substantial impact on the resourcing and overall direction of education and training initiatives in the alcohol and drug field in recent years.

While these reports constitute an important contribution to education and training as it pertains to the alcohol and drug field in Australia, they are also limited in their scope. The reports were produced within the terms of reference set down for them. Their focus was overly narrow and was limited to the traditional notion of 'training' being the focal point from which substantial change could be derived.

Outlined below is a critique of this position. It is argued here that what is required to achieve substantial and sustainable changes in responses to alcohol and drug problems is not merely 'training', but rather a comprehensive approach to workforce development. A wider systemic response to workforce development would include a comprehensive and co-ordinated approach, with attention to the following features:

- training programs
- materials
- staff training needs and related issues
- infrastructure and organisational support
- accreditation
- continuity and sustainability (eg post service training)

- compatibility with other existing programs (at various levels)
- industry needs

Lack of Co-ordination

As noted above, there has been a substantial increase in the provision of AOD training over the past 10 years at the tertiary provider level. Although, in having stated this, there is little definitive documentation of this significant development. Lack of documentation in itself is an important consideration. Without an adequate record of advances and progress made to-date it is difficult to plan appropriately for the future, monitor and assess the progress to date, and ensure that new ground is being broken rather than duplication continually occurring.

Within Australia, no overarching mechanism has been developed to monitor and guide advances in AOD education and training. Such a mechanism, however, is currently under development by NCETA. To-date, the various jurisdictions around Australia have largely relied on their own internal resources and networks or the informal exchanges that occur through pre-exiting collegial relationships. While not wishing to diminish the importance of the latter, it is stressed that this is insufficient in and of itself to adequately advance the field.

What is pressingly needed is a system whereby programs, courses, resources etc that are developed, implemented and evaluated in various locations in Australia can be centrally recorded and appropriate information about the same be forwarded to interested parties. Such a mechanism would serve several functions. Firstly, it would minimise duplication and maximise the efficient use of the limited resources that exist in this field. Secondly, it would offer a device to assess needs (rather than individual jurisdictions having to repeatedly undertake training needs assessments). Thirdly, it would provide an accountability mechanism through which the number of courses, the nature of their content and level of delivery could be monitored.

Silos and Silences

A further challenge increasingly articulated is not so much the need for more information, or new strategies or better clinical techniques – rather, the determination of the most effective means of utilising that which we already have available that is of known efficacy (Roche and Cormack, 2000). Pushing back the frontiers of knowledge has proved less difficult than disseminating the existing wealth of information at our fingertips (Roche, 1995). A task made more difficult, some would argue, by the atomisation of much of our knowledge base (Wilson, 1998) – or in current parlance ‘silos’. Not only are our administrative and functional responses to AOD issues constrained by ‘silo-like’ structures, so too are the knowledge and scientific bases which underpin these responses also contained within silos – albeit, discipline silos. Hence, it is not only integration of services that is often sought but also a better integration of knowledge domains. The alcohol and drug field is especially affected by the siloed structures of our systems and services, as this field is characterised by its multidisciplinary nature. Alcohol and drug problems are complex, and require comprehensive, multi-sectoral responses. Hence, a shared knowledge and skill base is more pertinent here than perhaps in many other areas. A comprehensive understanding of these phenomena requires high level integration and synthesis.

Evidence-based Promotion of Best Practice

Beyond the current emphasis on evidence-based practice is the concomitant need for an evidence-base to underpin promotion of knowledge uptake and best practice. Bero et al (1998) highlights how there are many different types of interventions that

can be used to promote behavioural change among (healthcare) professionals and implementation of research findings, but that there are very few good studies to guide decision making in this area. Bero and colleagues identified only 18 reviews when they undertook a systematic review of the literature, and no reviews were identified that had been published prior to 1988. Thus, seeking the evidence-base for ways to best disseminate current research findings and improve workforce practice is indeed a challenging task.

Bero et al's (1998) review also indicated that most researchers in this area fail to attempt to link their findings to theories of behaviour change. This deficit has been highlighted previously by Davis et al (1995) who noted that there was no consistent theory, or set of behaviour change theories supported. Rather, findings were consistent with several different theories. Clearly, there is potentially a wide range of theoretical perspectives from which practice behaviour change can be studied, and to-date no single theoretical perspective has been adequately validated by research to inform the choice of implementation strategies. Possible perspectives include: diffusion of innovations; education theory; social influence theory; management theory; marketing; and a rational (or epidemiological) approach. Thus far, there has been little articulation of the differing theoretical perspectives from which the area can be investigated. This remains largely untapped territory, and warrants future research endeavours. Without a clearer theoretical base from which to development our professional education and training programs, and overall workforce development responses, we are essentially just making stabs in the dark – eg 'let's try this because it looks good, feels right, or has always been done'.

Organising, Synthesising and Critiquing Information

Although there is a poorly established evidence base for workforce development, there remains a challenge for today's practitioner to manage the growing and often conflicting information available. A situation exacerbated by the electronic ease with which one can now access information. Various strategies have emerged around the world in response to the exponential growth in information and the flood-gate opening created by the inter-Net. We have seen the emergence of Clearinghouses. While not a new concept, Clearinghouses, have proved to be increasingly valuable in the AOD field. For example, the Canadian Centre on Substance Abuse recently established their 'Virtual Clearinghouse on Alcohol, Tobacco and Other Drugs' (www.atod.org). The inter-Net-based virtual clearinghouse evolved out of the expressed needs of substance abuse professionals for access to high quality information about the nature, extent and consequences of alcohol, tobacco and other drug abuse.

Similarly, a new journal has recently been produced in Britain called Drug and Alcohol Findings. The journal was first published in June 1999. Its development is predicated on the view that *"the real difficulty is helping those at the local level, translate the information on what works from findings into day-to-day practice."* The journal offers information that is *"already prospected, mined, refined, polished and set in context"* (Ashton, 1999). Ashton (1999) argues that *"it takes an experienced and knowledgeable practitioner to weigh up the implications, consider ethics and practicality, and assess them in the light of other guidance and policy priorities."*

In the USA, AMERSA is the principal national organisation with a major focus on health professional faculty development in substance abuse. It is currently developing a strategic planning document to guide the improvement of health professional education on substance abuse, and is implementing a national faculty development program. The targeted professionals include allopathic and osteopathic physicians (particularly family physicians, general internists, and general

pediatricians), chiropractors, dentists, nurses, nurse midwives, nurse practitioners, pharmacists, physician assistants, psychologists, public health professionals, social workers, and other allied health professionals.

Hence, there is a burgeoning growth in these types of more formalised, systematic responses to AOD workforce development, but none has yet emerged of this type in Australia. The field is moving well beyond the notion of the simple provision of short, or even more comprehensive, training programs. The organisation of information and the development of systematic strategies for workforce development are altering the face of our responses in this field. A principal area of interest is what is often described as 'technology transfer'.

Technology Transfer

We know very little about the technology transfer process (Keller and Dermatis, 1999). The term 'technology' in this context is not limited to the use of computers and the like. Technology here is used in a broader, more traditional sense and is defined as thus:

> *"Technology: the science of the application of practical purposes; the application of scientific knowledge to practical purposes in a particular field (Keller and Dermatis, 1999)."*

In the USA, a systematic response has been developed to address this deficit. The Center for Substance Abuse Treatment, SAMSHA, established the Addiction Technology Transfer Center (ATTC) National Network to improve understanding about how valuable effective technology transfer is to our field. There are now 13 ATTC's across the USA and their vision statement is *"Unifying research, education, and practice to transform lives."*

The preface to their recently released book, The Change Book: A Blueprint for Technology Transfer (ATTC, 2000), states:

> *"Although occasionally we like to try the new and different, on the whole, we humans resist change. We find comfort and a sense of confidence in the tried-and-true, in doing things the way we've always done them. Resistance to change is not just unique to the individual. The groups, institutions and disciplines that we are part of also resist change. They often create barriers, sometimes inadvertently, for those within their ranks willing to embrace change. Change is often seen as a threat to stability (ATTC, 2000, p1)."*

Technology therefore, by definition, deals with the application of 'scientific knowledge' to practical purposes in a particular field. In other words the ATTC's argue, technology deals with how we use the tools of our trade to do our job and it is the job of research to constantly examine and evaluate these tools and any innovations or additions that occur over time. And, since technology changes over time, we depend on research to continually examine and evaluate technology changes for us. The technology available in the AOD field allows us to ask and answer questions such as "how can we prevent or better treat clients?" or "is the outcome of this intervention better than another?" and so on.

Technology Transfer versus Training

Technology transfer, however, is not simply passing on 'how to' information to others – that is training! While training is one of the essential tools in the technology transfer armamentarium, it is not the only tool and not necessarily the most important. Although it is one area where there is an accepted set of precepts (see Appendix IV).

In a recent review of interventions which promote the implementation of research findings by frontline workers, the Cochrane Effective Practice and Organisation of Care Review Group found that passive dissemination of information is generally ineffective in changing workplace practice (Bero et al., 1998). Most of the reviews indicated that only modest improvements in performance were achieved after interventions, and passive dissemination of information was generally ineffective in altering practices no matter how important the issues or how valid the assessment methods. The review found that multifaceted strategies were more effective than single strategies, and that effective interventions for promoting behavioural change among health professionals included educational outreach visits, interactive educational meetings (i.e. workshops involving discussion and practice) and reminders or prompts for behaviour change (manual or computerised). Strategies using audit and feedback techniques, key practitioners as opinion leaders and local consensus processes, were found to be effective if used in concert with other strategies.

The importance of focusing on strategies for improved dissemination is highlighted by Silver, who illustrates this point through inviting consideration of the delays in the dissemination of new scientific knowledge in the health field:

> *"History shows several puzzling instances of failure to adopt procedures that were more directly important to human life than the cost of laboratory tests.* [for instance] *...in the Franco-Prussian War of 1870, amputations without anaesthesia were still the rule, despite use of ether for that purpose by Long in 1842, and Morton in 1846. The value of citrus in prevention, amelioration, and treatment of scurvy was established experimentally by Captain James Lancaster of the British navy in 1601. Feeding citrus to sailors did not follow. Captain James Lind ...repeated the demonstration 150 years later, but it was [another] 50 years before the navy introduced citrus into the daily diet of sailors and another 70 before the merchant navy followed suit. ...For those who seek to modify behaviour by education, the essential quality is patience (Silver, 1991)."*

Although Stephen Jay Gould maintains that "*the eureka or a-ha moment is the form of learning most personally exciting to intellectuals – that inverts an old way of seeing and renders both clear and coordinated something that had been muddy, inchoate, or unformulated before (Gould, 1992,* p1),*"* it is unfortunately a less common experience than might be hoped for. Sustained and intense effort supported by structural change is usually required to bring about significant changes in professional understandings and practice behaviours.

Some educationalists have also changed their position in recent years in regard to the potency of education. Fullan (1992) for example argues that approaches that focus on implementation only and record change as an 'event' not a 'process', are in themselves, limited. He further maintains that establishing an ongoing 'climate of change' is important. In the context of higher education teaching, Prideaux and Lyons-Reid (2000) hold that those who wish to promote change either from the top-down or bottom-up, would be well advised to provide the staff development and teacher maintenance required for ongoing acceptance and valuing of change, rather than marshalling forces for a single event – as change is a long term process. The advice here is equally applicable to AOD workforce development.

Prideaux and Lyons-Reid (2000) further hold that what constitutes a 'culture change' is not clear, and that within educational settings there are few studies of culture change. They further argue that while educator maintenance and staff development can be put forward as the key to establishing a change culture, it is the nature of

such maintenance and staff development that is really important. They recommend that it should be focussed on at least three major areas:

1. Staff should be able to understand the nature of specific changes and their relationship to wider developments and be able to gain insight into the role of staff in effecting change;
2. Staff should be able to gain new skills they will need to carry out the changes, being assured that their existing skills and strengths are valued and can contribute to the new developments as appropriate and;
3. Finally, staff development should be oriented to an understanding of the findings on innovation in higher education.

Principles of Effective Technology Transfer

Studies of technology transfer in other disciplines and settings have identified a number of key principles associated with success in the adoption of change (Rogers, 1995). Successful change initiatives are held to be one's that are:

- *Relevant*

The technology in question must have obvious, practical application. The greater the relevance of research findings or technology to be transferred to the mission and goals of an organisation, the more likely it is that those findings or technologies will be employed or adopted.

- *Timely*

The technology must have a temporal meaning for the recipients, either now or in the immediate future.

- *Clear*

The language and process used to transfer the technology must be easily understood by the target audience. This is critical to an effective transfer process.

- *Credible*

The proponents and/or sources of the technology must have the confidence of the target audience.

- *Multifaceted*

Technology transfer requires a variety of 'activities' and formats. Such activities and formats need to be varied to suit the different audiences for which it is intended. Further, strategies that are active rather than passive are likely to be more effective.

- *Continuous*

New behaviours must be continually reinforced at all levels until it becomes standard and is then maintained as such.

- *Involve Bi-directional Communication*

From the outset of the change initiative, individuals and organisations targeted for change need to be given opportunities to communicate directly with plan implementers. This decreases resistance and increases ownership of the change process.

Many of our current efforts to enhance the capacity of the AOD and general human services workforce would contain elements of the principles outlined above for effective technology transfer, but few would contain all of these characteristics. In particular, the 'continuous reinforcement of new behaviour' is most likely to be absent from most approaches. This often entails factors that are less to do with the individual than with structural issues.

Beyond the Individual: Organisational and Cultural Change

There has been a major shift in focus away from an exclusive concentration on achieving change in practice behaviour at the individual level, to recognition of also achieving change at the organisational level. For example Schlebecker (1977),

drawing upon agricultural history, has described four essential elements which are required before a technological invention can occur:

1. Accumulated knowledge;
2. Evident need;
3. Economic possibility, and;
4. Cultural and social acceptability.

The broader level issues incorporated at levels three and four of Schlebecker's model, highlight the importance of cultural and contextual factors. A whole different set of issues arise as a result of this change in perspective. Cornerstone change strategies advocated at the individual level have also recently been transposed to the organisational level. For example, the very well known Stages of Change model has recently been applied to structures and systems.

Capacity Building

An important and fundamental component in the shift away from education and training as the mainstay strategy for workforce development is an appreciation of wider level approaches, such as those entailed in capacity building. As in other critical areas of concern, such as youth suicide, the importance of fundamental structural reform in building the capacity of systems to respond to priorities has been strongly affirmed. It has been argued, that just as interventions need to be multidimensional, so to do capacity building efforts. One-dimensional activities aimed at increasing the knowledge and skills of service providers, such as provision of information and education and training, are insufficient, as is the mere generation of more evidence about risk factors or efficacious interventions. Capacity building interventions need to be designed with an awareness of all the forces that operate within systems to facilitate or inhibit the changes that are desired, and should address as many of these as possible in a comprehensive fashion (Mitchell, 2000). To achieve this, Mitchell (2000) argues genuine collaboration between organisations is necessary, and active support from senior management is essential.

Monitoring the AOD Workforce

At a structural level some fundamental concerns exist. Information about the number and qualifications of workers in the specialist alcohol and other drug field or the generalist response to alcohol and other drugs in Australia is lacking. This compromises the ability to plan the efficient and most effective use of workforce development strategies. To date, most of the alcohol and other drug resources available for workforce development have been invested in the medical and nursing professions, and to a lesser extent in police and the VET sector. There has been no analysis of whether this distribution of resources reflects the values and priorities of Australia's drug policy, a public health understanding of drugs, the mix of skills required for implementing the most effective responses to drug issues, the numbers or influence of the professions currently responding to drug problems or the numbers or influence of professions that are best qualified to respond to drug problems. The collection of basic workforce statistics in the drug field is essential to the planning and evaluation of effective workforce development strategies.

To determine the workforce who requires support and input, in terms of dealing with AOD issues, an adequate database is essential. In Australia, virtually no information exists on the size of the specialist or generalist AOD workforce. Keller and Dermatis (1999) have reported the numbers of professionals identified as engaged in the AOD workforce in the USA, or those who are at least qualified to be so (see Table 1).

Table 1. Total Number of US Practitioners and Number of Certified Addiction Specialists by Health Care Discipline

Discipline	WORKFORCE	ADDICTION SPECIALIST CERTIFIED
Primary care	700,000	2,790 ASAM certified
Psychiatry	30,000	1,067 addiction psychiatrists
Clinical psychology	69,800	950 APA substance abuse certified
Social work	300,000	29,400[a]
Nursing	2,200,000	4,100 [a]
Physician assistant	27,500	185 [a]
Marriage/family therapy	50,000	2,500 [a]

[a] Self-described addictions specialist

It would not be possible however to produce a comparable set of figures for Australia. This deficit exists for several reasons:

1. The essential data are lacking - we have no mechanisms for retrieving such information from the current workforce;
2. There exist no formal 'addictions' accreditation system as has been established in the USA in (only) relatively recent years, and;
3. Harm minimisation, the formal basis of Australia's national drug strategy[2], involves a very broad spectrum of workers, and monitoring the generalist workforce in relation to level of skill and degree of involvement is challenging.

In the future, for Australia to be able to evaluate and monitor progress in AOD workforce development, it is imperative that we move towards such fundamental tools for assessing the state-of-the-art.

An essential aspect of improving health outcomes is planning to ensure a suitably qualified workforce is available to deliver quality services and interventions. This entails making clear judgements about the professional mix required for delivering the best services, the key elements of their education that will qualify them for working in the area of alcohol and other drugs, and the number of graduates in various area the system needs to recruit each year. Little work has been done in this area in Australia within the drug field.

Personnel Practice And Job Definition, Including Strategies For The Recruitment And Retention Of Trained Workers

Personnel practice has a significant impact on the focus of work in the workplace and on the recruitment and retention of a skilled workforce. Job definition serves to define the organisation's expectations of workers' roles and hence establishes the role legitimacy of workers responding to alcohol and other drug issues amongst their client group. Personnel practices that value work practices desired by an organisation need to be defined. Examples of this include:

- Staff appraisal systems which clearly measure performance in desired outcome areas (e.g. responding to drug issues)
- Recruitment practices that accurately identify requisite skills and recruit approriately
- Promotion based on performance in desired outcome areas
- Financial and other incentives for workers (see below)
- Staff development programs which focus on relevant skills

[2] No negative connation is implied here with respect to harm minimisation or the National Drug Strategy.

- Induction programs which reinforce organisational expectations
- Resources allocated to recruitment and staff development in valued areas
- Supervision procedures which focus on valued work practices
- Management which is knowledgeable and competent in the core valued areas.

Section III

NCETA's Mission and Principal Roles

It was within the context of the bubbling ferment of change sketched out above that NCETA revised its role and directions. The question was raised regarding the extent to which it was actively addressing some of the seminal issues identified as crucial for workforce development. A period of reflection ensued, and substantial changes resulted as highlighted below.

The mission of NCETA is to advance the capacity of the Australian workforce to respond to alcohol and other drug problems. A key element of the Centre's strategic work plan is disseminating and conducting quality research on effective practice in responding to drug problems in the health, welfare and law enforcement sectors. This includes investigations of informational, educational, organisational, regulatory and other interventions on work practice.

NCETA's position is that high quality, evidence-based drug programs, require the range of relevant community and policing agencies to have the knowledge-base and skills to prevent and reduce drug related harm. This requires a timely and coordinated process of translation of the latest information and research into practice.

NCETA now recognises that a critical component for achieving best practice in responding to drug problems is development of mechanisms to translate the latest research findings and innovative developments into practical strategies for the enormous range of frontline workers in this area. Such mechanisms are essential if Australia is to have the best outcome for its enormous investment in health, welfare, education and law enforcement systems. But more importantly, it is now maintained that this translation process is insufficient to achieve change by itself; it must be augmented by other strategies which focus on encouraging the adoption of evidence-based practice in the workplace.

The multifaceted and staged processes involved in translating research into practice behaviour are outlined in Figure 1 below. It is important to note that education and training comprise only a part of this model, taking equal place with 'support strategies' and 'workplace structure and policy'.

Figure 1. From Research to Practice: A Model of Change

The dissemination of evidence-based practice has therefore become the central tenet of NCETA of NCETA's Strategic Plan (see Appendix V for a copy of the Strategic Plan).

The challenges are:

- To translate the latest research findings emerging, into practical responses which can be implemented by frontline workers, and;
- To disseminate those research findings and the evidence-based practice which is informed by them, in ways that are accessible to, and encourage adoption by, frontline workers and policy makers (who have limited opportunities to access and read the academic literature or reflect on how those findings may inform practice).

The process of dissemination is therefore a two-fold one, focusing on the *translation* of evidence into practical responses for frontline workers, and the *adoption* of new practices in the workplace. The process of achieving adoption is by far the most difficult.

In addition to education and training strategies and skills and knowledge support strategies, workplace structures and policies have a significant impact on the likelihood that responding to drug issues will be practised in the workplace. Factors such as resource allocation, management priorities, policies and guidelines, work incentives (including pay levels), performance monitoring systems and job specifications, are legitimate and necessary targets for those engaged in effecting work practice change.

The work of NCETA must therefore focus on the range of factors which affect work practice, including:

- Education, training and workforce development strategies which address knowledge, attitudes and skills;

- Support strategies for skills and knowledge (e.g. information systems, mentoring, discussion opportunities, research), and;
- Strategies to effect workplace structure and policy (e.g. incentives, performance monitoring systems, job specifications, resource allocation, management priorities).

Research Based upon Sound Theoretical Models

NCETA will conduct research based on sound theoretical models to promote effective practice in responding to alcohol and other drug related harm. Appropriate theoretical bases for work practice may be derived from a variety of academic disciplines such as education, medicine, psychology, nursing and social work. The research conducted by NCETA will ascertain the applicability to the alcohol and other drug workforce of relevant theoretical models developed within mainstream academic disciplines.

NCETA will develop and conduct quality research programs that aim to refine and develop theoretical approaches to work based practice. Specifically NCETA will:

- Determine the applicability of existing theoretical models to alcohol and other drug work based practice;
- Promote research design appropriate to the testing of hypotheses, and;
- Discuss the implications of research findings for the relevant theory.