BEST PRACTICE GUIDELINES WORLWIDE FOR INFORMATION SERVICES CONCERNED WITH SAFE DRINKING

A report prepared for the Alcohol Advisory Council of New Zealand

by

Victoria University of Wellington, School of Communications and Information Management

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KAUNIHERA WHAKATUPATO WAIPIRO O AOTEAROA

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School of Communications and information Management

Victoria University of Wellington

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Executive Summary

Part One: The Challenges of Changing Behaviour

The latter part of the 20th century has seen increasing emphasis put on health education, reflecting growing recognition within the health professions that lifestyle and behaviour can be as important in good health as freedom from infection. This area of study encompasses a range of disciplines, including learning theories from the behavioural sciences, marketing theories from the world of commerce, and, latterly, theories relating to the dissemination of information developed in the area of communications studies.

Changing health behaviour is, however, a far from simple process. The original health education campaigns concentrated on trying to change and individual's behaviour. That approach is now being superceded as health educators realise that powerful social and cultural forces may make lifestyle changes at best difficult, and at worst, impossible.

Health educators in the field of alcohol face some special difficulties. Excessive alcohol use damages health, being implicated in liver disease, hypertension, coronary heart disease, stroke, cancer, and damaging the immune system and the reproductive system. It is also a prime cause of accidental death and injury. Alcohol intake during pregnancy has been found to cause birth defects in the foetus. On the other hand, moderate alcohol use has now been shown to offer some health benefits, including providing protection against heart attacks and certain forms of strokes, meaning the messages regarding alcohol use are not as clear cut as they may have been in the past.

The "health benefits" of alcohol are now being recognised in public policies. The 1995 United States Federal Dietary Guidelines moved from its 1990 position—"drinking [alcohol] has no net health benefit" to state "moderate drinking is associated with a lower risk of coronary heart disease." Instead of suggesting that "consumption is not recommended", the guidelines say that "alcoholic beverages have been used to enhance the enjoyment of meals by many societies through human history." It does, however, list groups who should not drink alcohol, including pregnant women, children and adolescents, and anyone planning to drive.

Despite greater acceptance that limited alcohol consumption does not prejudice health, there is, however, strong resistance in some quarters to softening the message regarding alcohol's potential for harm. There are those, for example, who argue that the health benefits are negligible for some sectors of the community. Young men, some commentators point out, are more likely to die from an alcohol-related accident than from a heart attack. Others argue that the negative effects of alcohol outweigh the positives, no matter what the circumstances. It is a debate that poses a quandary for alcohol educators as they debate what message to put across.

Nevertheless, in response to the research showing health benefits from alcohol, a number of countries have produced general guidelines for consumers on the levels of drinking that are compatible with good health. This, too, is an area of contention and confusion. First, there is argument over how this level of drinking should be defined. Should it be safe drinking, moderate drinking, sensible drinking or low-risk drinking? There are those who argue, for example, that safe drinking and sensible drinking may send the wrong message to consumers, encouraging them to think that level of drinking is safe, even though they may come under one of the "at-risk" categories. Then, the recommended levels vary from country to country, and while most guidelines talk about "standard drinks", what constitutes a "standard drink" varies widely. Furthermore, while the guidelines may be easily followed in the formal setting of a bar—where measures are uniform—it is more difficult for consumers to relate the guidelines to their drinking at home or at a party. The lack of uniformity is not just a problem for drinkers. It also makes it difficult for researchers to compare and apply data across nations.

Another major difficulty for a study of best practice in information services is the considerable debate surrounding the standards of evaluation of alcohol education and prevention programmes. Reviews of evaluations highlight how few meet rigorous research criteria, in scope, design, and methodology. Some commentators challenge this, suggesting that the qualitative methods used are not suitable for programme evaluation. The result, however, is confusion as to whether or not individual programmes are effective.

Also pertinent, in drawing up best practice guidelines, is the fact that most of the evaluation research has been done in the United States, where the "culture" of alcohol education is totally different to that pertaining in countries like New Zealand.

Whereas our emphasis is on moderation, the U.S. emphasis is on abstention, leading some commentators to suggest that any data is not transferable to other jurisdictions.

Despite these problems, there is a wide range of research that alcohol educators can draw on in planning more effective campaigns. These relate to planning education campaigns and programmes to effectively meet the target audience, the way information is presented, and the channels used to disseminate such information.

Part Two: Intervention and Programmes: What works

Chapter 5: Youth Intervention: School-based Programmes

The school classroom is a major focus for efforts in alcohol education. The first programmes, in the 1960s and 1970s concentrated on providing information on the subject, but latterly this form of education has been extended to cover a wider range of topics, including beliefs, values, and resistance skills.

The question of what makes an effective school-based alcohol education programme is problematic. Firstly, there are the problems associated with evaluation—with various research studies showing the same programme to be effective, ineffective, or even harmful in that it appears to increase intake, and a lack of analysis of what components in particular may be particularly significant in changing behaviour. Secondly, most of the research is from the U.S., and therefore may not be relevant in the New Zealand setting, and, thirdly, alcohol is often included in education programmes dealing with a range of illicit drugs, but the evaluations seldom look at the impacts on individual substance use. The result is that while some commentators believe education programmes in schools can be effective, and should be persevered with, others condemn them as a waste of money.

Nevertheless, several key components have been identified that may count towards making alcohol education programmes more effective in changing attitudes and behaviour. These are:

- Programme components that provide information, but also focus on "social influence" approaches, including beliefs about alcohol use, resistance to peer pressure, self-esteem, and stress management.

- Teaching that is carried out by carefully selected peers—in other words instructors who have credibility, and with whom the audience can identify.
- Learning that is interactive, encouraging students to teach each other, rather than being taught by an authority figure.

It must be stressed, however, that there is considerable skepticism about the real effectiveness of school-based programmes in influencing substance use and abuse.

Chapter 6: Mass Interventions

Health education using the mass media of radio and television, print, and "small" media (billboards, posters, pamphlets, videos and comic books) has been particularly popular because of the ability of these media to provide information to vast numbers of people across many sectors of society. In the area of alcohol education, campaigns initially focused on providing information, but latterly they have become more sophisticated, drawing on learning theories such as Bandura's Social Learning theory, and the Health Belief Model of behaviour change in programme design.

One problem facing educators, however, is that their message is not the only one the public receives. Alcohol is widely advertised, and those advertisements emphasise a variety of benefits. Alcohol also appears in the course of dramas and soap operas on television, and the portrayal is not always what alcohol educators would like to see. The extent to which this exposure has an impact on consumption is the subject of lively debate.

Traditionally, alcohol educators have countered these other influences with their own messages, especially on television and often using free time donated by broadcasters. Recent changes in viewing habits, as well as the time constraints of these messages, and the high costs involved in producing quality material have, however, prompted educators to look at other means of getting their message across. They are increasingly using drama or soap opera (edutainment or enter-education) to get their message across, or what is known as media advocacy—tapping in to the news media's ability to set agendas, and influence the issues under public debate.

There are major problems in trying to ascertain whether or not mass interventions change behaviour. It is difficult for researchers to isolate the mass media impact from all the other processes involved. It is generally accepted though,

that the dissemination of health messages through the mass media, while not effective in changing individual behaviour, is useful in bringing a health issue to public attention. Hence, it should be used as part of a wider strategy which includes community initiatives, direct services such as telephone hot lines and support services, and legislative initiatives.

Furthermore, for their programmes to have any impact, even within these limits, educators needs to plan their campaign carefully to ensure the information is accessible to its target audience, and takes into account the lifestyles and priorities of that group.

Chapter 7: The Environmental Approach

As health educators have come to recognise the role the wider social and cultural environment can play in promoting healthy behaviours, more emphasis has been placed on influencing these in tackling health issues. In the field of alcohol, there are two distinct approaches.

First, social control measures. These include economic disincentives to consumption (e.g. taxes), and limits on the availability (restrictions on when and where alcohol is sold, and limits on the age of those who can buy it). Studies have shown these to have an impact on consumption, and hence on the incidence of road crashes and crime involving alcohol. They can sometimes have unfortunate consequences, such as fostering illegal sales. The message is that such measures should not be seen as “restrictiveness for restriction’s sake” but as part of an overall policy on alcohol.

The other approach is known as harm reduction. First introduced to try to reduce the spread of the HIV virus that can cause AIDS among intravenous drug users, harm reduction is now becoming a popular policy in the alcohol area too. This approach stresses limits on the amount an individual drinks. It also includes such initiatives as free public transport on occasions when large amounts of alcohol are consumed, design features to reduce the danger of injury in drinking establishments, and training programmes for serving staff to recognise the signs of a problem drinker, and stop serving that person. While evaluations have shown harm reduction measures to be effective in the field of AIDS prevention, there are no evaluations to date as to its effectiveness in the alcohol area.

The balance between these two approaches is particularly relevant in New Zealand at the moment as the debate continues about further changes to the liquor licensing laws in this country. Until the 1970s, this emphasis of this country's alcohol policies was on restricting the availability of alcohol through limits on where, and in what quantities it could be sold, and on the hours during which it could be sold. Supporters of a more liberal approach argue that the lifting of these restrictions has had a beneficial effect on alcohol problems by encouraging a more responsible attitude to drinking, and harm reduction forms of the basis of present-day legislation. On the other hand, the debate over proposals to lower the legal minimum drinking age from age 21 to 18 shows that, in particular, is evidence that this remains a contentious policy area.

Chapter 8: Drink-driving

Prompted by concern at the large proportion of traffic fatalities and injuries involving alcohol, a wide range of measures have been used to try to reduce the incidence of driving while under the influence of drinking (DUI). Since the focus went on to this area, there have been marked declines in traffic fatalities in some countries, particularly the United States, and while researchers urge caution due to the difficulties of finding direct co-relations, they suggest that anti drink-driving measures have played a role.

From U.S. research, three strategies seem to be key ones here. They are:

- Deterrence through enforcement, licence revocation, and lower allowable blood alcohol levels. It is emphasised too, that enforcement is a more effective deterrent if it is highly visible through measures such as random breath testing at road checkpoints.
- Raising the drinking age to 21.
- Increased public awareness and activism by groups such as MADD (Mothers against Drunk Driving) and SADD (Students against Drunk Driving).

Research also recommends that laws need to be well publicised if they are to deter drinking and driving. That publicity is more likely to have an impact in changing behaviour if enforcement of the law is visible and seen to be effective. In this, as with any mass media campaign, the messages need to be well-designed for the

target audience. Research stresses, though, that publicity should avoid graphic depictions of crashes, and their consequences—so-called fear appeals—as the audience simply "turns off" and the message is lost.

The designated driver approach—in which one person in a group volunteers to be the driver for the evening, and so abstains from alcohol—has been one high-profile approach to the problem of drinking and driving. This approach has been criticised on a variety of fronts, including the fact that it may encourage those who are not driving to drink more. Its supporters, however, credit it with promoting a new attitude that drinking under the influence of alcohol is deviant, rather than normative behaviour.

Another area of emphasis is on the treatment and rehabilitation of those convicted of DUI. Research stresses that education can be effective when it is combined with deterrents such as licence revocation. Follow-up monitoring and after-care have also been found to be important to rehabilitation of offenders. It is stressed, however, that neither deterrents, nor education can work alone, and the more effective strategies are a mix of the two.

Chapter 9: Workplace Programmes

As the business world has recognised the economic impact of the abuse of drugs, both legal and illegal, interest has grown in introducing programmes to combat substance use and abuse. Unfortunately, research into the effectiveness of programmes, and particular programme components, remains limited. What research there is suggests that authoritarian measures such as drug testing do not ensure a drug-free workplace. Instead, programmes that use elements of the Employees Assistance Programme (EAP) model seem to be most effective, and this approach has been adapted to the school environment through Student Assistance Programmes (SAPs).

Chapter 10: Alcohol Intervention in Primary Health Care

Primary health, as the most accessible sector of the health system, is increasingly seen as an important resource for the early identification and treatment of those who have, or may develop, an alcohol problem. At present, there are several barriers to alcohol detection and treatment at this level. GPs and nurses lack training for health promotion in general. Primary health professionals may not feel

comfortable raising this issue with a patient because of the social stigma attached to alcohol problems. As well, communication patterns between physician and patient may also be a deterrent, especially where doctors are used to using medical jargon, or a patient is concerned at the reaction they will get from their GP.

The Stages of Change theory is increasingly seen as an important tool for primary health professionals in changing patient behaviour. It allows a health professional to identify whether or not a patient is ready to change their behaviour, and then work with them accordingly. Used initially in smoking cessation programmes, research suggests the Stages of Change approach shows promise in other areas, including alcohol, although much more research is needed before that promise can be confirmed. Some researchers warn, however, that while the principles of the Stages of Change Theory may seem simple and straightforward, practitioners need intensive training if they are to effectively put the theory to practice.

Chapter 11: Treatments

There has, in recent years, been considerable progress in the diagnosis, assessment and treatment of alcoholism and problem drinking. Patient assessment for factors such as their willingness to change, expectancies as to the effects of alcohol, social functioning, social support, and subjective well-being is now used to determine what treatment is best for an individual, what the outcome is likely to be, and whether that individual may be prone to relapse. A major United States study, Project Match - which aimed to show that certain individuals would do better under certain treatment regimes - has raised questionmarks about this approach, with all three treatments tested shown to be effective. The research has its critics, but has raised considerable debate as to the contribution to the process of well-qualified, highly motivated therapists, and programmes delivered under strict quality control conditions.

As noted in the previous section, more attention is also being paid to identifying potential problem drinkers before physical dependence. This has shifted the focus to the primary health care professionals as the most appropriate people to identify, and counsel individuals at this early stage - an approach known as brief intervention. Some research has found that it shows potential, being most successful with those who have only a brief history of problem drinking, are socially stable, do not suffer depression, and see benefit in altering their drinking behaviour. The

concept also received a boost in the findings of the large-scale Project Match research programme (see above). That found that this approach was as effective as other more intensive treatments in turning around the behaviour of problem drinkers.

While treatment initially focused on abstinence, the mid-1970s saw the development of treatments that sought to control drinking. This treatment - because it strives to set limits for drinking - is controversial in some countries, in particular the United States, and parts of Asia. In others, such as Australia, New Zealand and Europe, its use is accepted, and treatments based on controlling, rather than banning drinking, are widely practiced. Research shows that it can be successful depending on the severity of dependence and the extent of an individual's drinking history. The controlled drinking approach is seen as particularly useful for treating younger people with drinking problems since they are resistent to the idea of abstinence, and do not have a long drinking history.

Chapter 12: New Technology

There is much interest in the potential of new technologies such as CD-ROM, computer-assisted instruction (CAI), e-mail, and the Internet for health education and promotion. These technologies allow interactive learning, where the "student" dictates the timing, and direction, of study. The Internet, in particular, carries the advantages of the mass media—in that it can reach a huge audience—with the qualities of interpersonal communication. Reviews of trials of interactive computerised patient education in the surgery waiting room found this method of instruction popular with users. What is more, patients interviewed by computer reported significantly higher levels of alcohol consumption, suggesting they felt more comfortable with the non-judgmental computer than in a face-to-face interview with their GP.

The Internet, with its ability to communicate globally, holds promise in linking individuals with similar problems and concerns, and for disseminating research and other information in the alcohol field. Users need to be wary, however, since there is no guarantee that the information contained on any site is genuine or accurate.

Educators also need to bear in mind that, while the new technologies have the potential to make communication easier, they cannot compensate for a badly-designed

message. The message content, in other words, remains paramount for effective communication.

Recommendations

- Some consistency is needed in guidelines on moderate drinking, and those guidelines need to relate drinking levels to the realities of day-to-day drinking in an informal setting.
- Organistions need to practice caution in adopting alcohol education programmes for schools, in particular, bearing in the mind the difficulties of ascertaining whether or not particular programmes are effective.
- School programmes need to be implemented at an early age, before students have begun drinking alcohol.
- The programmes also need to be intensive.
- Caution needs to be exercised in importing programmes from other countries, since what works in one culture may not work in another.
- Because of the above, there is a strong case for research to be done within New Zealand on programme effectiveness, rather than relying on evaluations from other jurisdictions.
- Mass media campaigns are not effective in isolation and so need to be linked to direct services, and to other activities within the community.
- Training for primary health care professionals in the early detection and treatment of alcohol problems is essential. Professionals in this sector should be encouraged to improve their communication skills. GPs and nurses could be trained in Stages of Change Theory in view of the promise it shows in encouraging behaviour change.
- Consideration should be given to a guide to alcohol sites on the Internet to ensure that the public, in particular, gets its information from quality sites. At the same time, it must be recognised that even authoritative web sites providing quality information may confuse the public because of the mixed messages being circulated, particularly regarding areas such as drinking guidelines.

A constant theme of this document is the need for a great deal research across a range of areas. These include:

- Research into the effectiveness of each of the various components of alcohol education programmes, rather than of the programme as a whole.
- Evaluation of the Stages of Change theory in real-life situations such as the GPs surgery.
- The effectiveness of computer-assisted instruction for alcohol education.
- The Internet's potential for use as a support for people with alcohol problems.

Research findings on specific programmes need to be disseminated to the practitioners in the field of alcohol education. This includes research in the area of health communication in general to ensure effective education campaigns.

Introduction

The amount of research and literature on all aspects of alcohol consumption is vast. The research varies in quality. The research ranges from anecdotal evidence to data from controlled trials. The survey has concentrated upon research and writing based upon accepted scientific and social scientific methodology.

Research and writing about the communication of information on drinking is spread across many countries, and institutions. The review focuses on English language material, and therefore contains a preponderance of material from North America, UK, Australia, and New Zealand. In the preparation of worldwide reviews there is always a language problem. There is certain to be important research and writing about alcohol in many languages other than English. Universities, governments, government related bodies, private institutions, social and community groups, religious groups, educational bodies, and health services all support and carry out research about all aspects of alcohol, including the communication of messages about drinking. The review contains a sample of the literature that comes from all these sources.

Part 1 of the review focuses upon the challenges of changing behaviour. The communication of information about drinking, drinking and health, and drinking and driving is to change behaviour to drink in moderation and safely, and to educate by sending strong messages about the damaging effects of excessive alcohol consumption, both in terms of health, andaccidental death and injury. A major difficulty in arriving at best practice for information services related to alcohol is the debate surrounding the standard of evaluation of alcohol education and excessive drinking prevention programmes. Reviews of evaluations highlight how few meet rigorous research criteria in terms of scope, design, and research methodology. The result is confusion as to whether or not individual education and communication programmes are effected. However, despite these problems, there is a wide range of research that can be drawn upon for planning for effective communication and educational programmes.

The second part of the review deals with intervention programmes, and particularly considers what works and what does not work. The major conclusion is that this is an area of research and writing in which there is relatively low consensus, considerable debate, and conflicting and mixed messages. Part 11 deals with youth programmes, mass interventions using the mass media of radio and television, print, and the (so-called:) small media (billboards, posters pamphlets, videos, and comic books). Part H provides a review of the environmental approach, which includes social control measures such as economic disincentives to consumption, and limits on the availability of alcohol. The other approach, in the context of the environmental approach, relates to harm reduction. This approach stresses the limits on the amount individuals can drink, and includes such initiatives as free public transport, design features to reduce physical injury, and training programmes for staff serving alcohol. Part 11 continues with a review of the literature on drink, drinking and driving, the nature of workplace programmes, alcohol intervention in primary healthcare and the area now known as brief interventions and controlled drinking. Part 11 is completed by a short section on the new technology, and in particular the potential of the new technology such as CD-Rom, computer assisted instruction, email, web sites and the intemet for health education and promotion of safe drinking.

Part One - Challenges of Changing Behaviour

Chapter 1: Health Education and Promotion - An Introduction

The roots of the specialist areas of health education and health promotion within the wider area of public health are generally held to date from the years following the Second World War, when the behavioural aspects of health came under scrutiny (Finnegan & Viswanath, 1990). This change in attitude is linked to various factors, notable among them an epidemiological change that had occurred gradually over the previous decades (McLeroy & Crump, 1994). Social, cultural, and environmental changes had led to a decrease in infectious diseases as 19th century health professionals recognised the links between poverty, poor sanitation, and disease.

As a result, life expectancy rose, but so did the incidence of chronic disease—the result of aging and of lifestyle factors (McLeroy & Crump, 1994). As early as the 1920s, leading health figures were calling for a change in the approach to health research, practice, and policy in view of this (Fox, 1989). Specialist institutions began to be formed to deal with some of these chronic diseases, including—in the United States—the National Cancer Institute (1937) and the National Heart, Lung and Blood Institute (1948). It was about this time that major research reports began highlighting the relationships between certain specific behaviours and chronic disease. For example, the Framingham study—begun in 1948 - showed that the development of cardiovascular disease was linked to smoking, obesity, and hypertension (Dawber, 1980). It was in the 1970s, however, that health promotion became enshrined in health policies. A major Canadian government study of the period, the Lalonde Report of 1974 (Lalonde, 1974), stated that, historically, too much emphasis had been placed on health care delivery to the neglect of the equally important factors for a healthy life, namely human biology, lifestyle behaviours (such as smoking and eating habits), and the environment (Terris, 1992). In the same year (1974), the United States passed its Health Information and Health Promotion Act, while in 1978 the World Health Organization (WHO) and the United Nations International Children's Education Fund (UNICEF) issued a joint statement (the Alma-Ata Declaration) which included education as one of the key elements in its programme for health for all by the year 2000.

By the end of the 1970s, United States health authorities had begun to pay attention to the country's diet and in 1979, a publication called *Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention* put the case for a "second public health revolution." The document suggested that 50 percent of mortality could be related to lifestyle behaviours and listed five priority areas for health promotion work: smoking, high blood pressure, alcohol consumption, nutrition, and physical activity (McLeroy & Crump, 1994). In 1986, 38 countries represented at an International Conference on Health Promotion adopted the Ottawa Charter for Health Promotion, and as a result the concept began its spread across different nations and different cultures. It defined health promotion as "the process of enabling people to increase control over, and to improve their health" (Ottawa Charter for Health Promotion, 1986).

The challenge, however, was, and still is, how to achieve the ultimate goal in health education and health promotion—to improve people's health by increasing their knowledge and hence changing attitudes and above all behaviour (Steckler et al., 1995).

The earliest programmes aimed at changing the behaviour of a community were the Stanford Heart Disease Prevention Programme (SHDPP) in the United States, which was initiated in three communities in 1971, and the North Karelia programme in Finland, which began a year later. Both were aimed at tackling risk factors for coronary heart disease—specifically blood pressure, diet and serum cholesterol levels, and smoking. The programmes included a variety of approaches including:

- education through mass media;
- meetings and campaigns at work sites and schools;
- training of health professionals, teachers, and volunteers;
- strengthening the role of existing health services by training personnel and setting up support services such as smoking cessation clinics; and
- improved patient data and follow-up (McLeroy & Crump, 1994).

In the intervening years, the health promotion/health education field has expanded to encompass knowledge and expertise from a wide range of disciplines. For example, from behavioural science it borrows concepts such as Bandura's social cognitive theory and Prochaska and DiClemente's Stages of Change model; from the

world of commerce comes social marketing; and from communication studies come such concepts as agenda-setting and diffusion of innovations. Those working in the field also stress the holistic aspect of health promotion, emphasising that it is "not the business of any single group or sector—not health professionals, politicians, educators, journalists, government officials, environmentalists or public or private enterprises—but everyone's business" (Alleyne, 1996, p. vii).

Communication is central to the health promotion process (Finnegan & Viswanath, 1990). Rogers (1994) cites the Stanford programme as the beginning of a new discipline, health communication, in which communication scholars work with health professionals to draw up and evaluate health promotion campaigns. This specialised field of communication received a major boost in the United States in the 1980s through the increase in drug abuse prevention programmes in response to the Federal Government's War on Drugs campaign, which saw major funding available for health education in this area. Also in the 1980s, the discipline received further impetus from the AIDS epidemic (Rogers, 1994). This remains a disease for which there is no known cure. Hence, prevention has been the only avenue open to health authorities to halt the spread of the disease, and the key question—how to effectively disseminate information and so change at-risk behaviour—gained heightened importance.

The initial emphasis of health education and health promotion programmes put the responsibility for change on the individual who is responsible for his or her own health (Buck, 1985, p.10; Downie, Tannahill, & Tannahill, 1996). The implication is that failure to make lifestyle changes—and subsequent ill health—are the individual's own fault (Le Fanu, 1994, p. 91). This approach has increasingly come under criticism. Critics argue that it may increase the alienation of people already on the fringes of society who, because of their circumstances, may be powerless to act (Buck, 1985, p.10). Latterly, there has been increasing recognition of other factors—social, economic, and environmental—that influence behaviour and may have a bearing on an individual's ability to change.

Thus, health promotion professionals now recognise that it takes more than information to change an individual's behaviour; factors such as health beliefs, readiness to change, and ways of coping with challenges and stresses must be tackled as well (Glanz, 1996). The result is programmes that take a more holistic view,

incorporating physical, mental, and social aspects (Downie et al., 1996). Green (1984, p. 186) sees this aspect as marking out health education (defined as "the voluntary participation of individuals in determining their own health practices") from health promotion ("any combination of health education and related organizational, economic and environmental supports for behavior conducive to health"). For Green, then, health promotion is a "broader enterprise" affecting antecedent social and cultural conditions that spawn individuals' risky behaviour (Green, 1984). There are, however, those who argue that the distinction is an artificial one and that health education and health promotion in reality go hand in hand (Nutbeam, Smith, & Catford, 1990).

This holistic approach to prevention has seen a move to community-centred programmes that recognise the powerful social and cultural forces influencing individual behaviour. If there is to be behavioural change, the communities themselves must be mobilised into action (Blum, 1981). The "massive, well-funded" projects, such as the extended Stanford Five-City Project initiated in 1978, are seen as forerunners of this "ecological" approach (Steckler et al., 1995) in the way the community was encouraged to "take ownership" of the campaign (Pancer & Nelson, 1990). As a result of this shift, health education, to use Green's (1984) distinctions, has become health promotion—and moved from simply providing messages to providing a raft of other measures aimed at changing the wider social and even physical environment.

Aspects of the community approach have their critics. While designed to "empower" people, this approach has been criticised because the "healthy living ideas" being promoted are those of the educated middle class and above. These critics ask whether communities subject to poverty, homelessness, and low educational levels are going to initiate such activity. Furthermore, if leadership comes from outside, can it be said to be true community health promotion (Guldan, 1996)?

Others have highlighted the ethical issues involved in health promotion campaigns. As Witte (1994) points out, the ultimate goal of what health communication researchers and practitioners prefer to call "public health campaigns" or "health education interventions" is the "manipulation" of people into practising healthy behaviours. Among the ethical reservations are, as mentioned above, the way

campaigns may provoke guilt among those who cannot change their behaviour while at the same time favouring other groups because of the middle-class values they are based on. The programmes are also charged with depriving some groups (especially those who are economically disadvantaged) of inexpensive but risky pleasures. As Strasser, Jeanneret, and Raymond (1987) point out: "Highly saturated food, smoking and drinking are traditional accompaniments, even mediators, of conviviality and an imposed change in this behavior may be perceived as a serious loss, unless substituted by other pleasures of life." These same authors go further and suggest that the quality of life of the less advantaged may actually suffer from what they call "forceful, evangelistic health propaganda" (Strasser at al., 1987, p. 190).

A constant in discussions of health education is the difficulties involved in achieving behaviour change (Donohew & Berlin Ray, 1990). Le Fanu (1994), reviewing the question "does health education work?", highlights the difficulty. Scientific attempts to evaluate programmes have shown that it is very difficult to change people's behaviour. On the other hand, spectacular achievements in public health, such as an almost 50 percent decline in premature death from health disease in the United States, have been claimed as evidence of the efficacy of health education in persuading people to change their lifestyles. Both claims cannot, as Le Fanu points out, be right. It is a timely reminder that the area of health education and promotion is a very complex field; a field in which there are neither easy answers nor cut and dried rules.

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Chapter 2: Alcohol Consumption - Causes and Effects

Given that health messages regarding alcohol are part of a wider picture, several aspects of the latest research into the causes and effects of problem drinking are relevant to this discussion.

The causes of alcohol abuse

First, let us consider the factors that suggest some people may be more susceptible to alcohol abuse and dependence than others.

The latest research shows that the factors that influence drinking behaviour are diverse and complex. Genetics appears to play a part. Drinking problems run in families, and current research in this area has been focused on what is called 'positional cloning'—trying to identify where the genes contributing to alcoholism are located. Another, related, area of study is exploring why some people are more sensitive to alcohol than others. This is again an inherited condition and one that shows up in particular in Asian populations. Research in this field concentrates on locating the genes that affect the elimination of alcohol from the body; research of significance, given the fact that people who are less sensitive to the effects of alcohol may be at "relatively high risk for alcoholism" because they lack effective feedback mechanisms that warn of over-consumption (Wolfgan, 1997). Still other research is trying to find biochemical markers that might predict a tendency towards alcoholism.

Personality is also implicated as a risk factor for alcohol abuse or dependence, and studies here have suggested two broad personality types that might be more at risk. The first of these is what is known as behavioural undercontrol, behavioural disinhibition or deviance proneness—in which the subject's behaviour is unconventional, over-active, aggressive, and impulsive. The second personality type is known as negative emotionality, and is characterised by anxiety and depression.

Researchers in the field have also looked at cognitive factors which they believe may influence alcohol use. This field of study has focused on the effects on alcohol use of alcohol expectancies—in other words, on what exactly a person believes will be the result of their use of alcohol. Here, differences in expectations have been noted in alcoholics and non-alcoholics; these can be correlated with current

and future drinking, since the alcohol expectancies appear to develop before exposure to alcohol.

Finally, environmental factors have also been found to play a role. The cultural milieu affects personal attitudes about the propriety of drinking, and quantities and occasions on which alcohol is drunk, while parental attitudes, along with the drinking habits of family and friends, are also significant. The extent to which a person is experiencing, or has experienced, psychological stress is also a factor (Wolfgan, 1997).

Effects on health of alcohol consumption

1. Negative effects

The damage to health as a result of excessive alcohol consumption is well documented. As the liver is the organ where alcohol metabolises, it is also the primary site of damage. Free radicals produced as a result of metabolism can cause damage to liver cells and the consequence can be fibrosis and cirrhosis. Furthermore, heavy drinking is implicated in other health problems, including high blood pressure—which increases the risk of coronary heart disease and stroke—and a range of neuropsychological disorders. Abusive or chronic alcohol use depresses the immune system; exposure to alcohol in the womb, or soon after birth, can also disrupt the development of the immune system, increasing susceptibility to bacterial and other infections as well as to cancer. Heavy alcohol use can also disrupt the endocrine system, leading to sexual and fertility problems (Wolfgan, 1997). Alcohol increases oestrogen levels, and studies have found a link between alcohol intake and an increased risk of breast cancer—the risk increasing linearly with increasing intake (Smith-Warner et al., 1998). Alcohol use and abuse also has other serious consequences in terms of accidental death and injury (traffic accidents, drownings, falls), violence (family and marital violence, murder, and assault) and high-risk sexual behaviour. It has been calculated that each year in New Zealand alcohol-related illnesses and injuries account for 1.4% of all male admissions to hospital and 3.17% of al male deaths. The corresponding figures for women are 0.4% and 1.41% (ALAC on alcohol, 1999).

While the effects noted may be well-documented, not so clear cut is the research on the impacts of alcohol on the unborn baby. Alcohol has been shown to

have harmful effects on the developing foetus, leading to birth defects, mental impairment, and cognitive and behavioural dysfunction. In their worst form, the birth defects are known as Foetal Alcohol Syndrome (FAS). A lesser condition—known as 'alcohol-related birth defects' (ARBD) - is also recognised. In this, a child may exhibit some of the attributes of FAS but not fulfil all the diagnostic criteria (Wolfgan, 1997). There is debate, however, as to whether the link between alcohol and FAS has been oversimplified. Abel (1998) points out that nearly all cases of the syndrome identified have been as a result of epidemiological studies in the United States—a country where per capita alcohol consumption is relatively low. As explanations of what he terms the 'American Paradox', Abel suggests factors could range from the type of drink chosen, the drinking occasion, and even "more aggressive" diagnosis among American clinicians. He concludes, however, that social and economic status may be the key to explaining the disparity. Abel (1998) points out that in the U. S., socio-economic status (SES) is closely related to race, and he cites figures for FAS that show a low incidence (0.26/1000) among middle-class and Caucasian populations, but high incidence rates (2.26/1000) where the population is primarily of low SES, and is African-American (p. 200).

In the light of the controversy, education agencies may choose to caution women against consuming any alcohol. As the Australian Drug Foundation's guidelines puts it ("How drugs", 1998): "It is not known exactly how much alcohol will affect the unborn child, so it is safest not to drink at all if you are pregnant or planning to get pregnant". In New Zealand, the ALAC guide for responsible drinking for the public, notes that "the risk of birth defects is greater if pregnant women drink more than one or two standard drinks a week, especially in the first eight to twelve weeks of pregnancy." It also goes on to suggest that "during pregnancy, it is better not to drink any alcohol at all" ("Upper limits", 1998).

2. The health benefits of alcohol

Recent studies have shown that light to moderate alcohol use may offer some protection against certain diseases. Numerous studies have found that alcohol decreases the stickiness of platelets in the blood, so reducing the risk of the blood clots that cause heart attacks and strokes. It also increases levels of high-density lipoproteins, or 'good cholesterol', which help prevent arterial disease (Dufour, 1996; Hopkins, 1998).

There is some controversy surrounding the research. For example, critics have pointed out that no distinction has been made as to the drinking history of abstainers, and included in the samples may be former heavy drinkers, or people whose ill health has prevented them from ever drinking alcohol. One recent study at the University of California San Francisco scrutinised data from 10 mortality follow-up studies and found that, when these factors were accounted for, abstainers were not at higher risk for premature death than light drinkers ("Study: Nondrinkers," 1998). Another study—reported in *The Lancet* ("U-shaped Relation," 1998) - looked at the effects of drinking on younger people. It incorporated checks to ensure that the poorer health of abstainers was due neither to past heavy drinkers giving up alcohol, nor to the abstainers' never having drunk because of ill health. This study found that teetotalers were about twice as likely to suffer from ill health and psychological problems as were moderate drinkers, and concluded that moderate drinking may have a protective effect on health. This research suggests that abstainers and heavy drinkers may share other common risk factors to good health, such as unemployment and financial hardship. Others point out that the gains in protection need to be seen in terms of age (Jackson, 1998), and that, in the case of young people, the danger of death or injury as a result of alcohol use will be far more significant than any protection it gives from heart disease or stroke (Dufour, 1996). Still other critics believe that the negative effects of alcohol outweigh the positives, no matter what the circumstances (Hopkins, 1998).

Alcohol & health—Mixed messages?

Despite such reservations, it is now recognised that there may be some health benefits from light to moderate alcohol intake, and this is now taken into consideration in policies on alcohol. In 1995, the United States Federal Dietary Guidelines—the policy document for health promotion—for the first time reflected this fact. "Drinking has no net health benefit" in the 1990 guidelines becomes "moderate drinking is associated with a lower risk of coronary heart disease," while the phrase "consumption is not recommended" becomes "alcoholic beverages have been used to enhance the enjoyment of meals by many societies throughout human history" (Nestle, 1997). Nevertheless, the U. S. guidelines still recommend that certain groups not drink alcoholic beverages at all, including

- children and adolescents;
- those who are unable to restrict their drinking to moderate levels;
- pregnant women or women trying to conceive;
- anyone planning to drive or take part in activities that require attention or skill; and
- people on medication (Parry & Bennetts, 1998).

Other countries, however, do not go so far as to promote total abstinence. In New Zealand, for example, guidelines on responsible drinking point out that for certain groups of people, and in certain circumstances, the upper limits may be too high. The Australian Drug Foundation web site on alcohol[1] talks simply of low risk drinking, although it emphasises the different impact alcohol has on women, compared with men, and hence health authorities' recommendations that women should drink less than men.

As Nestle (1997) points out, the wine industry in particular has used the research on the health benefits of alcohol to market and promote its product, because early studies suggested that red wine in particular was beneficial—the so-called "French Paradox." In New Zealand, two wineries have placed messages on their labels highlighting the research findings that moderate wine consumption can be beneficial to health (Moore, 1998). The subject has received wide coverage in the news media and has also been brought into the argument opposing the application of public policies aimed at curbing total consumption (Casswell, 1993).

Although the research on the health benefits of alcohol was first made public in the United States in 1991 in a *60 Minutes* television current affairs programme, epidemiologists had recognised the role alcohol could play in protecting against certain diseases long before then. Given the negatives of alcohol misuse, however, there was a reluctance to disseminate the findings among the general public for fear they might lead to heavier drinking among drinkers and encourage those who had previously abstained to take up alcohol (Ellison, 1998; Peele, 1993). Hawks (1994) says that this attitude has been particularly prevalent in countries with a strong temperance tradition, where officials were sensitive to anything that might increase per capita consumption. It is an argument that is, not surprisingly, still being debated

now that the research showing that a light-to-moderate alcohol intake carries some health benefits is so firmly in the public domain. How GPs should handle this information is a topic of debate, as witnessed in the letter columns of the *Journal of the American Medical Association (JAMA)* ("Should Physicians," 1995). It also raises important issues for health educators regarding how to define what levels of alcohol consumption are safe, and how to communicate this information to the population at large.

Several authors point to the factors that must be taken into account in deciding what level of alcohol consumption is acceptable. These include

- gender (women metabolise alcohol less efficiently than men);
- age (the elderly may be more susceptible to harm because they are more likely to be taking medication, and have lower volumes of body water);
- pregnancy;
- history of alcoholism or genetic propensity to alcoholism;
- pre-existing psychological disturbance or physical conditions (hypertension, liver disease);
- nutrition and body weight;
- smoking history; and
- intention to drive or operate machinery (Hawks, 1994; Parry & Bennetts, 1998, p. 141).

The circumstances of consumption may also have a bearing on whether or not the consumption of alcohol is appropriate. There is general agreement about the danger of "binge-drinking"—in which large amounts of alcohol are consumed at one sitting (Hawks, 1994; Parry & Bennetts, 1998, p. 141). Peele (1993) also includes style, mood, and setting, suggesting that these have as much influence on the health consequences of drinking as does the amount of alcohol consumed.

Hawks, in his 1994 review of current guidelines on moderate drinking, cites estimations that at any one time as many as 31 percent of the population may come under one or more of the exclusions listed above. In the light of this, he questions the usefulness of general guidelines on what constitutes a safe level of drinking. On the other hand, other research suggests that guidelines may be a useful tool for preventing alcohol problems. Lloyd (1996) cites research (Black & Weare, 1989; Sandberg,

[1] http://www.adf.org.au/drughit/hday/hdayal.html

1990) indicating that many young people, while aware of the health risks of alcohol, over-estimate how much they can drink without coming to any harm, or labour under the belief that alcohol is only dangerous if the drinker becomes dependent (Sandberg, 1990). The research suggests they are also familiar with the concept of sensible drinking, but have no idea what that means in practice. In New Zealand, a telephone survey of 249 Christchurch people found that:

- none could quote the ALAC guidelines either drinks per week, or drinks per occasion;
- less than a third (27%) had heard of them; and
- young men in the 18-24 year age group were more likely to think that more than six drinks at one sitting was safe (Sellman & Ariell,1996).

Guidelines for alcohol consumption

In the face of findings such as these, government and other agencies around the world have published guidelines for alcohol consumption, and such guidelines, based on the concept of a standard drink, have been a focus of alcohol education campaigns, especially in English-speaking countries (International Center for Alcohol Policies [ICAP], 1998). While the idea of a standard drink appears straightforward, a recent report by ICAP (1998) stresses the confusion surrounding "the manner in which standard drinks are applied" (p. 1). A standard drink is generally calculated according to the amount of alcohol—or ethanol—in a particular drink. Beer, wine, and distilled spirits all contain differing amounts of alcohol. The amount of alcohol deemed to constitute a standard drink varies widely from country to country, however. It ranges from 6 grams of ethanol in Austria, to 19.75 grams in a Japanese standard drink. Within that range are the U. K. at 8 grams, New Zealand, Australia, Italy, Spain and the Netherlands at around 10 grams, and Canada with a standard drink representing 13.5 grams of ethanol.

There are other variations as well. Standard serving sizes may vary according to the beverage being served. The ICAP report (1998) gives the example of Austria, where although a standard drink for spirits is 6 grams, a standard drink of beer or wine equals 12 grams of ethanol. In China, the litre has been introduced as a standard measure for beer, but when the beer being drunk is a full-strength one, the drinker would be consuming 40 grams of ethanol in that single serving. What is more, the

ICAP report points out how this lack of uniformity is further complicated by the fact that the actual measurement systems also vary. For example, some countries measure alcohol content in grams, others in ounces, and others again show alcohol content as a percentage of volume. Hence, standard serving sizes in the United States are 12 ounces of beer, 5 ounces of wine, and 1.5 ounces of spirits—which are all officially defined as containing the equivalent of 14 grams of ethanol. In New Zealand, the equivalent measures of a standard drink are one 300 ml glass of ordinary-strength beer, 1 pub (or bar) measure of spirits, and one glass of table or fortified wine, with no specification of size ("Upper limits", 1998). Even the measure of ounces will vary, depending on whether or not it is the American or British measurement system being used (ICAP, 1998). This lack of agreement on what constitutes a standard drink also has connotations when it comes to defining what level of drinking may be harmful to health and well-being. The ICAP points out the wide range of variations here. Using one definition of binge drinking (common in North America) - the consumption of five or more drinks at one sitting—a binge drinker in Ireland would consume the equivalent of 40 grams of alcohol, while in Hungary binge drinkers would be consuming 85 grams. Moreover, taking the definition of harmful drinking to be 9 or more drinks would see a Japanese drinker consuming the equivalent of 178 grams of ethanol, while an Austrian drinker would be consuming 54 grams. Even within a single country there may be discrepancies. In Australia, a 285 ml container of regular beer (defined by the Australian Drug Foundation as a standard drink) is known variously as a pot in the states of Victoria, Queensland, and Tasmania, as a middy in New South Wales, the Australian Capital Territory, and West Australia, a schooner in South Australia, and a handle in Northern Territories ("How drugs", 1998).

If countries disagree on what constitutes a standard drink, they also have varying guidelines as to how many standard drinks constitute a safe, or low-risk, level of drinking. Dillner et al. (1996) highlight this point in regard to new (at that stage) British guidelines specifying daily limits. These replaced the suggested weekly limits on drinking that have lost favour because they are not specific enough to give a clear message about the need to avoid binge-drinking. The British guidelines recommend a limit of between three to four standard units per day for men, and two to three for women—an announcement which, Dillner et al. note, attracted widespread criticism. Under the guidelines, a standard unit is 8 grams of alcohol, equivalent to half a pint of

beer or cider, or a standard glass of wine, sherry, or spirits. The Australian guidelines suggest men should not exceed four standard drinks a day, and women two, with a standard drink being 10 grams (Dillner et al., 1996). New Zealand chooses to give recommended limits for drinking on a weekly basis, as well as stipulating drink limits for each "drinking occasion". Where, again, a standard drink contains 10 grams of ethanol, the weekly limits are 21 standard drinks for men, and 14 for women. On any one occasion, it is recommended that men drink no more than six standard drinks and women, four standard drinks ("Upper limits", 1998). Australia's guidelines for low-risk drinking are no more than four standard drinks per day for men, and two for women. It is also suggested that drinkers have at least two alcohol free days a week ("How drugs", 1998).

The United States guidelines remain lower—no more than one drink a day for women and two for men, with a drink defined as 340 ml of beer, 42.6 ml of spirits, or 132 ml of wine. The countries that have no guidelines are France and Germany, but France has been publicising the motto: "One glass is OK. Two glasses is too much. Three glasses spells trouble" (Dillner et al., 1996). In South Africa, the guidelines recommended are of two to three drinks per day (Parry & Bennetts, 1998), but they do not take account of the gender differences in alcohol tolerance, and the links between alcohol and breast cancer (Edwards et al., 1994) by specifying lesser amounts for women.

Whatever the guidelines might be, Hawks (1994) highlights the problems the general public faces in translating the guidelines into the sort of information they can use in their own day-to-day drinking experience. First, there is the problem of trying to relate those standard units or drinks "with any degree of accuracy" to what is on the beverage label, especially with new drinks being introduced, such as low-alcohol beers, wines, and coolers. Since Hawks wrote, the market has seen a new product aimed at young people—alco-pops. Furthermore, while licensed premises the drinks served are standard measures, allowing drinkers to accurately chart their intake, alcohol is increasingly being consumed outside that setting. It is harder for drinkers to keep track of the amounts they consume in a setting where people pour their own drinks, or have drinks poured for them in whatever size of glass is available—drinks that are highly likely to be larger than the "standard measure" (Hawks, 1994; ICAP, 1998). In New Zealand, research has shown that more than half the alcohol drunk is consumed in private homes, especially in the case of women drinkers (Wyllie, Millard

and Fang Zhang, 1996). The problems drinkers face in trying to relate alcohol content to their drinking is highlighted by a survey of New Zealanders as part of research into alcohol labelling. While a majority of those questioned appeared to understand what was meant by alcohol content as displayed as a percentage figure on the bottle, most of the sample did not relate this to their understanding of what constitutes a 'standard drink'. Instead they used very broad definitions such as a glass or a bottle of beer or wine when asked for a definition (AC Nielsen, 1998). Incidentally, the research found that women (29%) were more likely to use a broad definition such as 'a glass of wine" than men were (20%).

There is also another issue: how to describe limits for drinking that carries no risk to health. There are various definitions, among the most common being sensible drinking, moderate drinking, safe drinking, and responsible drinking. Parry and Bennetts (1998, p. 140) opt for the term “low-risk drinking” rather than “sensible” drinking as used in many education programmes, suggesting that the latter carries a “prescriptive connotation.”

The variations in guidelines aimed at helping people control their drinking are problematic not only for individual drinkers. As ICAP (1998) points out, the lack of standardisation also has implications for researchers. As things stand, researchers are hampered in trying to compare, and apply data across, countries because there is no agreement on a uniform standard drink. The ICAP’s conclusion is that, for research purposes, greater harmonisation is needed in the way the concept of a standard drink is used. For education of the public, however, the ICAP suggests sensible drinking guidelines are better to reflect local drinking practices and drinking cultures.

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Chapter 3: The Problems of Evaluation

Any discussion of what works in terms of alcohol education and prevention must address the considerable debate over the problems of measuring the effectiveness or otherwise of the various approaches. Nutbeam (1998) sums it up when he concludes that the evaluation of health promotion in general is "a difficult enterprise" which is often "poorly" done. He points out that, in the early years of health education and promotion, interventions were set up on the basis of limited research, and with little thought given to the need to assess their success or otherwise. This has gradually changed over the past two decades, but even the latest reviews of programme efficacy highlight the need for more rigorous evaluation.

Foxcroft, Lister-Sharpe, and Lowe—in a 1997 review of evaluations of programmes aimed at countering alcohol misuse among young people—found a total of 155 papers that met their initial minimum criteria for relevance, design, and outcome, but in the end considered that only 33 studies merited inclusion. The authors stress the poor quality of much of the research into programme effectiveness, and their specific reservations include:

- lack of suitable control groups (non-random allocation or non-equivalent design);
- lack of pre-test information;
- high levels of attrition; and
- poor quality presentation of results, often in well-respected peer-reviewed journals (Foxcroft et al., 1997).

The authors call for more emphasis on the scientific evaluation of programme effectiveness with regard to both process and outcomes, but especially outcomes.

This variable quality of programme evaluations is also commented on by other authors. Dusenbury, Falco, and Lake (1997) - in a review of drug (including alcohol) abuse programmes in United States schools—found that some evaluations had dubious research designs or major methodological flaws. Some studies were simply process evaluations, in which teachers or students might be asked to comment on curriculum materials or activities; others assessed knowledge or attitudes, but did not explore the effects of these on drug use behaviour. Some evaluations reviewed by

Dusenbury et al. did meet rigorous standards, using large longitudinal studies to measure the outcomes of the programmes under scrutiny, but these appear to have been in the minority. Of the 47 drug abuse programmes identified, only 10 (20%) were judged to have been adequately evaluated. From this the authors conclude that "most of the money [in the U.S.] is not spent on curricula proven to work, but on aggressively marketed programmes that have not been evaluated, or worse, have been shown not to work" (Dusenbury et al., 1997). These concerns echoed by other authors in other countries as well (Midford, McBride, & Munro, 1998; Wallace & Staiger, 1998).

White and Pitts (1998) also note that "not all evaluations are conducted with equal methodological rigour." Again, in reviewing programmes aimed at educating young people about drugs—including alcohol—the authors found that only a few evaluations were without flaws. They considered half the programme evaluations they studied to be of "sufficient methodological merit" to be included in their review, but even these had weaknesses, and out of a total of 1486, only 20 were considered to be "sound." The authors are particularly concerned that many evaluations consider only blanket "drug use, rather than the use of specific substances," in assessing effectiveness. Other factors they identify as compromising evaluation results include:

- failure to ensure a programme has been implemented faithfully;
- the inclusion in the sample of those who have not attended the whole programme—meaning that some students might have missed vital elements in the programme;
- over-reliance on self-report data in determining impacts on use (White & Pitts, 1998).

Furthermore, White and Pitts suggest that, in order to be of use, evaluations should seek to analyse the critical elements of programmes rather than evaluating the curricula as a whole.

A New Zealand study voices methodological concerns in a critical appraisal of the literature on the effectiveness of adolescent treatment programmes for serious alcohol and drug problems (New Zealand Health Technology Assessment [NZHTA] Clearing House, 1998). Among the common problems it highlights are:

- study designs that do not control for changes in outcome with time; and
- studies that rely on self-report data.

The NZHTA Clearing House study emphasises another pertinent point in relation to evaluations of programme effectiveness: The literature reviewing evaluations leans heavily towards the United States, reflecting the fact that this is where the majority of the research is being done. In view of this, the NZHTA Clearing House study highlights the problems involved in trying to relate U.S. programmes, and evaluations, to New Zealand, which has a completely different cultural and health care setting.

Alcohol prevention programmes used in the U.S. are particularly problematic because of the different philosophy underlying them. While, in the United States, the focus is on abstention, in other countries—including New Zealand—the emphasis is on "sensible" drinking (Foxcroft et al., 1997; Murphy, 1994; Newth, 1998). Bagnall and Fossey (1996, p. 252), speaking from a United Kingdom viewpoint in which the emphasis is on sensible drinking, go so far as to suggest that reviews for best practice in the U.S. may, as a result, have little relevance for alcohol education, policy, and practice in the U.K, and Midford, McBride, & Munro (1998) make a similar point about their applicability to school-based education programmes in Australia. Critics also point to the lack of independent evaluation of programme effectiveness, charging that in most cases programmes are developed, implemented, evaluated, and marketed by the same group of people (Gorman, 1997).

The result of the variability of evaluations is confusion about programme effectiveness, as evidenced by the controversy surrounding the most prevalent drug education programme in the United States—the Drug Abuse Resistance Education (DARE) programme (Coggans & Watson, 1995). This programme has been greeted enthusiastically by parents, teachers, and school administrations and has been rated "popular" by the students who have been through it (Wallace & Staiger, 1998). The evaluations of its effectiveness in terms of drug usage are, however, mixed. While some evaluations have found no impact on drug use attitudes (Clayton, Cattarello, & Johnstone, 1996; Rosenbaum, Flewelling, & Bailey, 1994; Wysong, Aniskiewicz, & Wright, 1994), others have found evidence of lower usage (DeJong, 1987; Harmon, 1993; Hecht, Corman, & Miller-Rassulo, 1993). The result is that the programme continues to be used in some areas, but has been rejected out of hand in others ("Drug Education Programme," 1996; "Wis. County," 1998).

Others argue that the criticisms neglect to take into account the special nature of health education programmes. Guldan (1996) suggests that the evaluation of health promotion is problematic because of the long duration of many programmes, and because health outcomes elude quantitative measurement. Nutbeam (1998) is also critical of the emphasis in health promotion evaluation on "experimental research designs which have been developed for medical research." These, he contends, are not suitable for evaluating the "complex and multi-dimensional activities" of health promotion, and have tended to eclipse the "value and relevance" of other research methods, and in particular, qualitative methods (p. 41). Rather, he suggests that the following outcome targets are most appropriate for evaluating interventions.

- Programme reach: did the programme reach all the target population?
- Programme acceptability: is the programme acceptable to the target population?
- Programme integrity: was the programme implemented as planned? (Nutbeam, 1998, pp. 39-40)

It is a standpoint echoed in part by Coggans (1998) in a paper looking back over 30 years of drug education. He suggests that the emphasis on primary prevention in assessing whether or not programmes have been successful is misplaced. Instead, he argues, the emphasis should be on how effectively information on drugs has been communicated, on the grounds that people cannot be expected to make informed decisions about whether or not to use drugs, and if they do, how to minimise the risks, unless they have accurate information. Furthermore, Munro (1997) points to what he calls the "absurdity of the traditional method of evaluation" in that "drug education is classified as a failure every time an adolescent accepts a glass of alcohol from their parent".

Hansen (1993) suggests that methodological difficulties may have attracted undue attention in evaluation reviews, and as a result, evidence of "promise" in alcohol education programmes may have been overlooked. It is an argument that looks set to continue for some time yet as researchers try to answer the question once and for all: Do health interventions work in their ultimate goal, changing behaviour?

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Chapter 4: Message Reception and Comprehension

With communication at the heart of the health education/promotion process, considerable research has been carried out on how individuals process information and what messages make the most impact in which circumstances.

Message content and design is an important focus in research. Witte (1994) analyses the impact of information selection on audience perception, identifying three important factors:

1. The amount of information given, which is in turn governed by the limits of time and/or space. For example, a physician may have a limited amount of time he or she is able to spend with a patient, and a health educator using television may have no longer than 30 seconds to one minute to put across a message. Educators must therefore decide the key question - which pieces of information to include in the interests of promoting good health, and which to exclude.
2. The choice of words used. The injudicious use of a word may actually produce a harmful outcome. Witte gives as an example the promotion of condoms as a safeguard against the HIV virus that can lead to AIDS; condoms may work most of the time to prevent HIV infection, or fail some of the time. Other authors point out that the framing of health messages is especially influential when new information is disseminated, as "subtle changes in the way that risks are expressed can have a major impact on perceptions and decisions" (Slovic, Fischoff, & Lichtenstein, 1984, p. 184). The importance of choice of words is also highlighted in other literature dealing with physician/patient communication. Norton, Schwartzbaum, and Wheat (1990) studied the way physicians used language in relation to AIDS and found that the choice of words often reflected discrimination or disapproval.
3. The order in which the information is given. This has implications for what is remembered of a message. Research suggests that when a health topic is important and/or relevant, people will recall details given at the beginning of a presentation and forget information at the end of the message - what is known as the "primacy effect" (Bettinghaus & Cody, 1994; Bostrom, 1983). The opposite has been found to apply if an individual perceives the topic to be irrelevant or not very important. In that case, they will have better recall of the information given last - the "recency effect" (Bettinghaus, 1980; Bostrom, 1983). The order in which

information is given is also important when that information may arouse strong fears or emotions. When that is the case, it has been found that people simply stop listening and shut out the message (Witte, 1994).

Others have studied how an individual's attitudes will affect message reception and comprehension. Stiff, McCormack, Zook, Stein, and Henry (1990) found that students with extreme positive attitudes towards gay men and lesbians learned more about AIDS than those with extreme negative attitudes. Attitude appeared to play no part in learning about HIV transmission, however, and the authors suggest this may be because the audience for the message felt this information was of personal importance to them.

In a similar vein, and also in the area of AIDS education, Flora and Maibach (1990) surveyed the reactions of 30 18-to-25 year olds to public service announcements that were of either rational or emotive content. The research found that emotional messages were more memorable than rational ones, and were more likely to lead to the target audience seeking further information. The authors suggest, as a result of this research, that emotional messages can be used in health campaigns to motivate those who feel the issue does not have significant consequences for them personally. With the interest of the target audience awakened, rational messages can then be used to "create more lasting knowledge and attitudinal changes." The researchers note, however, that their study appeared to show that these announcements had no effect on participants' plans to change behaviour - the ultimate goal of any campaign.

A number of studies (Andrucci, Archer, Pancoast, & Gordon, 1989; Donohew, Helm, Lawrence, & Shatzer, 1990; Forsythe & Hundleby, 1987; Teichman, Barnea, & Rahav, 1989) have highlighted a possible link between adolescents who are "high-sensation seekers" and drug use. One study (Donohew et al., 1990) suggests that these young people were two to seven times more likely to report using drugs (from alcohol to cocaine) than those less inclined to need "varied, novel and complex sensations and experiences," and less willing to "take physical and social risks for the sake of such experience" (Zuckerman, 1979, p. 10). In the light of this information, Donohew and colleagues initiated a series of studies of how best to target drug prevention messages, including alcohol education, to this high-risk group. The team prepared and tested video materials designed especially to attract and hold the

attention of this audience and identified a number of elements that appeared to make the messages attractive. The successful videos were:

- novel;
- creative or unusual;
- complex;
- visually and aurally intense;
- physically arousing - i.e. exciting and stimulating;
- emotionally strong;
- graphic or explicit;
- ambiguous;
- unconventional;
- fast-paced; and,
- contained elements of suspense (Donohew, Palmgreen, & Pugzles Lorch, 1994).

Some studies have looked at message design in specific areas of health education and promotion. Pamphlets are a popular means of disseminating information, but the mismatch between the level of information presentation and patient understanding has been commented on in a number of papers (Boyd & Citro, 1983; Davis, Crouch, Wills, Miller & Abdehou, 1990; Leichter et al., 1981; Meade & Byrd, 1989; Michielutte et al., 1990; Richwald, Wamsley, Coulson, & Morisky, 1988; Streiff, 1986; Zion & Aiman, 1989). Building on this research, Plimpton and Root (1994) reviewed material produced in the United States over a 20-year period and found "few easy to read materials." Most was written for a reading level beyond the 10th grade, and since, the authors say, between 30 and 50 percent of the target audience for health information cannot read at this level, they do not understand the messages. As well, the material may go unread or be poorly comprehended by those who do have the required levels of literacy. In such cases, lack of time or interest may mean the material goes unread, and attention and comprehension may be compromised when an individual is under stress because of illness or some other reason (Plimpton & Root, 1994). The authors detailed a number of factors which they considered detracted from the impact of health information. As regards content, the faults they found included:

- information overload;

- the core message was unclear, and desired behaviours were not emphasised;
- too many long words and complex sentences;
- technical language or jargon, or both;
- an uninviting tone; and
- the material was inappropriate for the target audience as regards either culture or language.
- Another area of difficulty identified by Plimpton and Root (1994) was in the use of graphics. The problems here included:
- solid print and no illustrations;
- the page was cluttered with too many graphic devices;
- organisation of content was not clarified with titles and subtitles;
- print was too small;
- illustrations did not fit the message.

Plimpton and Root (1994) also concluded that often the pamphlets and instruction leaflets were printed on unnecessarily expensive paper, using costly printing procedures, costing extra tax dollars or grant funds that could have been more usefully used elsewhere. The authors conclude that the public's lack of understanding of health information is being compounded by health professionals' lack of awareness of this issue. The authors say they met criticism of "dumbing everything down" when suggesting simplified materials. In their defence, they say that experience at health fairs has shown that even able readers chose easy to read materials if they have visual appeal.

Plimpton and Root (1994) were dealing with literature from across the range of health education and promotion, but there are studies that look at some other avenues for information as it relates to the alcohol and drug education field. Recognising the popularity of videos and audio-visual materials in alcohol and drug prevention programmes for young people (Glassford, Ivanoff, Sinsky, & Pierce, 1991), Montonen (1997) conducted a survey among Finnish students as to what they believed made a good video in this field. The study found the students' preferences were for videos that:

- Were thought-provoking.
- Produced an emotional response.

- Offered testimonials - the students preferred videos in which the characters' views of alcohol or drug use were "seemingly based on their direct personal experiences." On the other hand, students were critical of "boring" testimonials that were too long or repetitive.
- Offered breadth of views - the students wanted to see different views and opinions expressed about the central themes under consideration. They wanted a rounded view of drug users' lives, they wanted to hear about the positive and negative sides of drug and alcohol use, and they wanted a clear message.
- Took a fresh approach - the students welcomed the innovative approach of the two videos they were shown in the evaluation, contrasting them with other, more traditional, alcohol and drug education which they characterised as "preaching, overzealous, patronising or boring" (Montonen, 1997).

Finally, the students preferred videos that were realistic, and Montonen says the students' responses suggested that, to meet their expectations in this regard, videos needed to be:

1. believable - the story line should be plausible and the acting, and hence the characters, believable;
2. truthful - in other words, the video should depict reality accurately, and be objective in its presentation of the subject (Montonen notes that this aspect of truthfulness is tied to the viewer's own viewpoint on the subject. Some students defined objectivity as not exaggerating or over-dramatising the subject, while others defined it as not embellishing or attempting to conceal anything);
3. like documentaries - the students wanted the characters to be real people, rather than actors "speaking other people's lines" - another way of describing this might be "authenticity";
4. ordinary - again, the students appreciated videos showing ordinary young people in ordinary, everyday situations, rather than the "villains and heroes and the spectacular action not uncommon in drug-related television fiction and movies" (Montonen, 1997).

Other studies have looked at the effectiveness of putting health warning labels on alcoholic beverages, as required by law in some countries. In the United States, all alcohol products have been required to carry a warning label since 1989. A review of

research on the U. S. situation records that awareness of the labels has increased over time, and that regular drinkers are more likely than other drinkers to be aware of them. Nevertheless, studies have found the presence of the labels has had "only modest effects on risk perceptions and drinking practices." Further research suggests more prominent placement and stronger wording may improve both awareness and overall effectiveness (Wolfgan, 1997). Certainly, more prominent placement and larger labels were proposed by the Australian Medical Association after a survey it carried out in that country showed that only 40% of those questioned knew alcoholic drink packaging carried information about the number of standard drinks contained in that drink (Anthony, 1998).

Andrews (1995) reviewed research on warning effectiveness with a view to, among other things, defining the design issues involved. As a result, he found that the noticeability of the label appears to be enhanced by:

- message placement on the front label;
- placement in a horizontal position;
- absence of surrounding clutter;
- the inclusion of the words Government Warning (Godfrey et al., 1991); and
- the use of pictorials, colour, and signal icons, especially in combination. In one study, using eye-scanning equipment, mean response times in detecting the warnings was found to be reduced by 49% when pictorial, icon, and colour features were included (Laughery, Young, Vaubel, & Brelsford, 1993).

Other studies reviewed by Andrews looked at the message content, and suggested that, in conveying serious consequences, messages must be explicit about the risks (Laughery, Rowe-Halbert, Young, Vaubel, & Laux, 1991).

Warning labels are not required on alcohol sold in New Zealand, but there has been debate about whether the labelling should be introduced here. Carrie and Smedley (unpublished) recently tested four types of warning labels on a sample of 191 New Zealand university undergraduates in the 18-24 year age range. One of the labels was based on that used in the U.S. Another simply carried a slogan, *Where's that drink taking you,* linking it to the Alcohol Advisory Council of New Zealand (ALAC) advertising campaign promoting responsible drinking by youth. Yet another opened with a message about what constitutes "moderate healthy consumption" and warned of the health and other dangers of drinking in excess of that. The fourth label was similar in content, but stressed the risks of "excessive" alcohol consumption first,

before providing the advice - "if you drink, drink in moderation (this is no more than two drinks for men and one drink for women, per day)". The two latter labels use the principles of Protection Motivation Theory (Rogers, 1975), part of a body of what is known as fear appeal literature (see also Chapter 6, Message Content). This body of research holds that by raising a person's fears about the consequences of a certain behaviour, they may be persuaded to change the way they behave. As a result of their research, Carrie and Smedley (199) conclude that none of the labels tested were likely to have any "substantial impact on behavioural intentions" (p. 11), and that if the main objective of having warning labels is to change attitudes then, in the short term at least, they are ineffective. Carrie and Smedley do suggest, however, that if the aim is to educate and create awareness of the risks associated with excessive alcohol consumption, then labelling designed to satisfy the principles of Protection Motivation Theory could play "an important reinforcing and educational role (p. 12).

Andrews (1995) also outlines one study exploring whether or not warning labels result in behaviour change (Hankin et al., 1993). This looked at the impact of alcohol health warnings on at-risk pregnant drinkers from a prenatal clinic and showed that, six months after the appearance of the relevant label, lighter drinkers had reduced their drinking during pregnancy by a "small yet statistically significant amount." Pregnant risk drinkers did not, however, significantly change their consumption of alcohol during this period. As for the reasons why people resist warnings, Andrews suggests that these can be found in research into cigarette warnings, the fear appeal literature, psychological reactance theory, the persuasive communications field, and studies of addictive behaviour. For example, the theory of perceptual defense (McGinnies, 1949; Schuster & Powell, 1987), which suggests that people ignore messages contrary to their own beliefs, is one possible explanation. Fear appeal literature (Leventhal, Watts, & Pagano, 1967) reports a similar reaction when a warning has no suggestions about coping, or solving the problem.

The findings of a survey on the impact of cigarette warning labels in Australia is also worth recording here (Scanlon, 1998). The Center for Behavioural Research in Cancer carried out the survey among a sample of just over 500 people after warning labels on cigarettes had been made larger. The survey found that 66 percent had noticed the health warnings, compared to 30 percent before the larger warnings were required. When questioned as to whether the labels had had any effect on their

smoking, 14 percent said they had refrained from smoking because of the labels on at least one occasion.

A strong emphasis throughout the literature on health education and promotion is on the need for planning so that health educators know exactly what message it is they wish to get across, to what audience. Once that is clear, the message can be designed with that target audience in mind. This is considered to be of particular relevance in audiences of different cultures and/or ethnic groups. Bowen and Michael-Johnson (1990) promote the idea of audience-centred analysis in the context of message design in HIV and AIDS education for Black urban adolescents. Only when educators understand their audience can they decide on the most effective channels, strategies, and sources. In this case, the writers point out, educators are dealing with the disadvantaged, who feel they have no control over their lives anyway, and any interventions based on white middle-class models will fail (Bowen & Michael-Johnson, 1990).

Bowen and Michael-Johnson give a series of guidelines on what this means in terms of AIDS education, which also have relevance for other areas of health education aimed at groups outside the mainstream. These include the need:

- to focus on high-risk behaviours, not groups;
- to acknowledge obstacles to change;
- to use peer group educators as well as adults comfortable with the audience; and
- to ensure any messages about postponing the onset of activity are aimed at a younger audience - in other words, an audience that has not yet started the activity (in this case sexual, but also applicable to alcohol use);

They also stress that:

- affective education is more effective than cognitive education;
- educators must accept that change will take a long time;
- "candy-coated solutions" are to be avoided, since the audience with which educators are dealing with consists of streetwise kids who distrust that approach;
- instilling hope will be more successful in empowering the audience to change behaviour than will instilling fear and despair; and
- educators need to reach this group where they are to be found - in juvenile detention centres, housing projects, or on the streets.

Choice and style of language is also important, even if the material being disseminated is in English and designed for an ethnic group that speaks that language. For example, in the New Zealand Pacific Island written English has its own distinct style, and any printed material will need to reflect this if it is to be of any use in building rapport and understanding among those who will read it. On the other hand, English publications to be translated into particular languages will need to be written simply and unambiguously (R. Tustin, personal communication, September 3, 1999).

Others, however, warn against stereotyping across cultural groups, pointing out that there may be important differences based on factors such as income and family background. Rabin (1994) points out that in the African American community there are vast differences between the circumstances of those who are the descendants of the slaves brought to the United States during the 17th and 18th centuries and of the more recent immigrants from the Caribbean or Africa. There are also differences between Blacks in urban and rural communities, and among certain groups - such as youth - who have a culture that may cross ethnic barriers. Hence, according to Rabin, a programme that takes into account youth culture may in fact also reach young people of ethnic minorities who are at risk. In the light of this argument, Rabin suggests that health educators need to take a lesson from marketing, which puts more emphasis on geography, lifestyle, behaviour, financial status, and attitudes than on race. Speaking from a Pacific Islands viewpoint, Rivers (1999) suggests that the best way to reach young Pacific ethnic groups living in New Zealand would be to combine tradition media with the rap music popular within youth culture.

There is much literature on the various channels and levels of communication by which health messages are passed on. Ratzan (1994) identifies the complicated network of communication that can affect individuals' decisions about their health and lifestyle. They range from one-to-one contact with a primary health professional, as well as family members and friends, to primary groups such as the workplace and educational and religious institutions. Then there are the contacts through more specialised agencies such as community and trade union groups, and advocacy and watchdog groups. For example, for Pacific Island people who have migrated to New Zealand, the church plays a major role in their lives, and hence is seen as a key participant in alcohol education programmes, just as it does in their home countries (Ministry of Health, 1997). Church attitudes to alcohol, however, raise problems for

educators. While some Pacific Island churches allow moderate alcohol use, others demand abstinence, and a recent study of attitudes to alcohol among Pacific Island migrant communities in New Zealand (Ministry of Health, 1997), found that where churches supported prohibition, members of the congregation were hiding their drinking, making it difficult to promote alcohol awareness among certain groups. A report prepared by Health Research and Analytical Services (1994) of the New Zealand Ministry of Health for the Alcohol Advisory Council and the Ministry of Education also found different attitudes among Pacific Island students to they way school-based alcohol and drug education programmes are delivered. This study found that Pacific Island students were less interested in teacher-led programmes than Maori or Pakeha (those of European origin) students, and suggests this may be because Pacific Island societies are "traditionally organised around strong extended kinship relationships and clear status and authority structures". As a result, New Zealand school teachers - who are predominantly middle-class and Pakeha - may be at a disadvantage when "trying to talk frankly about alcohol and drugs with Pacific Island students" (p. 44). As well, Tu'tahi (1999) argues for the use of traditional media in the form of dance, drama, and music as an effective way of getting the message across to Pacific Islanders, even in the modern world of mass media. These "home grown media" he says, still succeed because they reflect the norms and values of Pacific Island cultures.

Finally, individuals also receive their health information through health education programmes and the mass media. Moreover, Ratzan, Payne, and Massett (1994) stress the complementary way in which mass communications and interpersonal communications work together in helping spread messages about healthy lifestyles. The message may initially be transmitted to the general population via the mass media, but after that, "interpersonal channels," with their "low reach, high specificity and high potential rate of influence" become a crucial link contributing to "the overall effectiveness in health campaigns (Ratzan et al., 1994).

In some cases, interpersonal communication may in fact be the only way to reach a particular population group. A Maori businessman, Ra Winiata, quoted in an article on marketing to Maori in Marketing magazine (Light, 1999) stresses that conventional approaches to getting a message across - advertising, cold calling or direct mail - do not work as well with a Maori audience as with an non-Maori one. Rather, he says, face-to-face contact and networking by identifying key people in the

community is "the way to build the trust and relationship that's required" (p.15). The same article (Light, 1999) quotes Ngaire Wilson, national co-ordinator of the Maori Business Network (MBN) as saying gatherings of people - known in Maori as *hui* - are particularly important for reaching Maori. "We prefer to do business face-to-face rather than through telephone or mail…….It's a cultural thing, we feel more comfortable with people when we meet them and share *kai* (food). There is more trust. Reading faces - the eyes, the smile - gives trust and the feeling of what that person is like" (p. 17). This approach has been put in to practice with a 3-year collaborative community action project aimed at reducing drinking and driving injuries among Maori. The project was provided by Maori for Maori, and included the use of *hui*, a display highlighting the impact of deaths on families and genealogy or *whakapapa* (an important aspect of Maori self-recognition), driver licensing programmes on *marae* (meeting places which are the focal point of Maori social and political life), and the formation of a Brothers Against Drunk Driving organisation (*tu* BADD) - grouping young Maori men (Moewaka, Casswell, & Compain et al., 1996; Moewaka, Casswell, & Compain et al., 1996a; Stanley & Casswell, 1994; Stanley, Casswell, 1996).

The research then highlights the fact that health educators need to be aware of the communication channels that work best for their particular target group. What is more, as Witte (1994) points out, educators also need to be aware that theirs is not the only message being disseminated, and that they can never be sure what people will actually hear, and what they will miss.

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Part Two - Interventions and Programmes: What Works?

Chapter 5: Youth interventions: School-based programmes

Introduction

Much of the effort in alcohol education goes into programmes aimed at youth, and in particular at young people in the school system. The school setting offers access to a large target audience of actual and potential drinkers (Wolfgan, 1997), A "captive audience", as Hansen (1993) describes it. The emphasis on alcohol education in the classroom also reflects the view that, next to the family, school has more influence than any other social institution (Kann et al., 1995). Munro (1996) points out, too, that schools are the one "social agency" with the professional capacity to educate young people about drug use issues (p. 220). The emphasis on school programmes also reflects concerns about youth mortality and morbidity as a result of the misuse of alcohol and other drugs (Kann et al., 1995). Here in New Zealand, research (Alcohol Liquor Advisory Council of New Zealand, 1997) has shown up the extent of "binge" drinking among young people - in this case defined as consuming five or more glasses of alcohol in one sitting - with a glass meaning a whole can or bottle of beer, or a whole glass of wine. According to the study:

- A third of young people said they had drank five or more glasses the last time they drank.
- More than a quarter said they had had a binge drinking session in the last two weeks.
- Nearly half of the heavier drinkers, or one fifth of all young drinkers, said they had drunk nine or more glasses the last time they drank.

The emphasis on alcohol education in the classroom is reflected in the literature on the effectiveness, or otherwise, of interventions. In considering this literature, however, there are some issues that need to be borne in mind. First, as mentioned in Chapter 3, much of the literature assessing programme effectiveness is based on the United States experience, with its emphasis on abstention rather than moderation, leading to criticism that its applicability to other settings needs to be critically assessed (Bagnall and Fossey, 1996; Midford, McBride, & Munro, 1998). Second, the quality of evaluation studies has also come in for strong criticism (as documented in Chapter 3), and the result is often confusion, with some studies

showing the same programme to be effective, ineffective, or even harmful in that it increases use (see Chapter 3 - controversy over Project DARE). Third, the matter is further complicated because, in many of the programmes that have been evaluated, alcohol is included in education aimed at preventing the use of a wide range of illicit drugs. This can in part be explained by the fact that alcohol is considered a "gateway" drug (Hansen, 1993) - with research showing that young people who are heavy users of alcohol are more likely to move on to illegal drugs (Kandel, 1978; Plant, Peck, & Stuart, 1982). Since evaluations rarely look at impacts on individual substances, this is an added complication in trying to assess changes in alcohol use.

Approaches and strategies

The field of alcohol and drug education has evolved since the first programmes of the 1960s and 1970s. Initially, the emphasis was on imparting information, and this took two distinct approaches: factually-based objective information, or fear arousal, in which the hazards of alcohol were stressed. A review of the field by Coggans and Watson (1995) cites a series of appraisals that suggest that this knowledge-based approach was ineffective (De Haes & Schuurman, 1975; Kinder, Pape, & Walfish, 1980; Moskowitz, 1983; Pickens, 1985; Schaps, DiBartolo, Moskowitz, Palley, & Churgin, 1981). The fear arousal approach in particular comes in for criticism for its lack of credibility with the target audience because the information may completely contradict audience members' personal experience (Advisory Council on the Misuse of Drugs, 1984; Capalaces & Starr, 1973; De Haes & Schuurman, 1975; Dorn & Murji, 1992; Power, 1989).

In a more recent paper, Blackman (1996), talking about drug education in general, emphasises the need for the message being given to reflect real-life experience. He is critical of the "war" approach exemplified by the drug education push by the Reagan administration in the United States during the 1980s, in which information is given *against*, rather than *about*, drugs. Recognition of this problem has led some countries to concentrate not so much on trying to stop consumption per se but on an approach known as harm reduction. Used first to try to reduce the adverse effects of illicit drug use (Single, 1996), this approach is now applied, as well, to alcohol education programmes in a number of countries. An example is the latest programme being implemented in New Zealand schools - *Caring for Yourself and Others* (Christchurch College of Eduction, 1998) - a programme that is supported by

the Alcohol Advisory Council of New Zealand (ALAC). This approach is not without its critics. As Midford, McBride, & Munro (1998) point out, the Australian experience - where harm reduction has only recently been introduced into school-based alcohol education - has been that some in the community see harm reduction as an alternative to abstinence, and thus as condoning or even encouraging drug use among the student population.

Early information-based programmes having been found to be inadequate, the emphasis has also moved to formulating programmes that are based on social and psychological theories of behaviour. This approach has seen researchers trying to find out why young people drink, and then developing strategies to counter those factors. Hansen (1993) identifies twelve strategies used in the classroom to prevent alcohol problems, each aimed at tackling a particular risk factor for alcohol misuse. These are:

- Normative beliefs - designed to correct misconceptions about what level of alcohol consumption is considered normal, among their peers, and in society at large.
- Personal commitment - to strengthen the commitment of those who have weak resolve by persuading them to voluntarily make pledges not to use or abuse alcohol.
- Values - to foster perceptions that alcohol use is not in harmony with the sort of lifestyle they desire.
- Information - to ensure that young people are clearly aware of the consequences of alcohol use and abuse.
- Resistance skills - to teach young people to effectively deal with pressure to drink from their peers or from the media.
- Alternatives - to make students aware of other ways to enjoy themselves without using alcohol (or other drugs).
- Goal-setting skills - to teach how to set and achieve goals, and to increase sense of achievement.
- Decision-making skills - to increase the ability to make reasoned decisions.
- Self-esteem - to increase young peoples' feelings of self-worth.
- Stress skills - to teach students to relax under pressure and resolve their problems.

- Assistance skills - to teach young people how to help their friends, and where and how to get support for their own problems.
- Life skills - to emphasise effective communication, assertiveness, and the resolution of personal conflicts, thus helping students maintain positive social relations.

Furthermore, he identifies four basic groups of programmes based on the strategies they employ. These are:

- Information-focused programmes.
- Affective education programmes (values, goal-setting, decision-making, self-esteem building, and stress management).
- Social influence programmes (resistance skills, life skills, and normative beliefs).
- Comprehensive programmes (including components from all the above).

Not all researchers are in agreement over the significance of these risk factors in alcohol use and abuse. For example, Coggans and McKellar (1994) - discussing drug-taking in general - warn against confusing young people's preference for friends who take drugs, with peer pressure. Others point to the lack of evidence that, overall, young people who take drugs do so because they lack the social skills to resist or are suffering from low self-esteem (Coggans & Watson, 1995). In support of this argument, Blackman (1996) points to the high level of drug use by the socially advantaged in countries such as Britain.

Other commentators suggest a distinction needs to be made between those who experiment with drugs and those who are heavy users. Gorman (1997) quotes a study by Shedler and Block, published in 1990, which found that young people who experimented with drugs, rather than being socially incompetent, were psychologically better adjusted than heavy users or abstainers.

Hansen (1993) studied the likelihood that modifying the twelve risk factors listed above would prevent alcohol use among young people and concluded that four were in fact strong correlates of alcohol us. These were:

- belief that alcohol use is acceptable among young people;
- low personal commitment to abstain from alcohol use;
- belief that alcohol fits with personal values; and
- lack of awareness of the consequences of alcohol use.

A fifth strategy, resistance skills - common to most of the programmes tested during the 1980s - was found to be a "moderately strong correlate" of alcohol use (Hansen, 1993). Hansen points out, however, that schools are not in a position to tackle two influences identified as major risk factors for alcohol use and abuse, namely socio-economic status and a family history of alcohol abuse, and must therefore place the emphasis on risk factors that they can influence.

Opinion is divided on the overall effectiveness of alcohol education programmes. It ranges from those who think drug education programmes do not work - and may even be doing harm by increasing use (Gorman, 1997) - to those who believe that, despite problems in evaluation, they do hold promise (Hansen, 1993). Gorman is particularly pessimistic, concluding that "there never was and nor is there now, strong empirical evidence to show that social-influence programmes can succeed where previous forms of drug prevention activities failed" (Gorman, 1997, p. 60). Certainly, the reviews show a mixed bag of results. For example, White and Pitts (1998) reviewed 62 drug education programmes aimed at young people and concluded that 18 of them produced evidence of programme effectiveness on drug-using behaviour. In only two cases, however, was hard evidence (rather than self-report data) given to substantiate claims of programme effectiveness. Their review, they say, confirms earlier similar studies that have shown it is easier to modify attitudes, normative beliefs, and knowledge than behaviour. They conclude that the best programmes can achieve is a short-term delay in age of onset of substance use by non-users, or a short-term reduction in the amount of use by current users. They suggest that more long-term follow-ups are needed to see if this translates into "either a further delay in regular use …. or non-progression to regular substance use" (White & Pitts, 1998).

Howard, Ganikos, and Taylor (1990) - citing a variety of research from the 1980s (Howard et al., 1988; Moskowitz, 1989; National Institute on Alcohol Abuse and Alcoholism, 1987) - suggest success has been limited, especially in the case of programmes that stress information and use traditional classroom teaching methods.

Hansen (1993) suggests that reviews that are skeptical about the potential for alcohol education programmes are focusing on the methodological difficulties, such as selection criteria and attrition. Based on his own review in 1992, Hansen believes that there is promise for the programmes despite the methodological problems which are limiting the research. He considered 35 studies and found that 14 programmes

had reduced the reported alcohol consumption of those enrolled in them. He also cites studies (Dielman, Kloska, Leech, Schulenberg, & Shope, 1992) which found that a programme in which students were taught about the short-term effects of alcohol use and misuse, and given practice in developing peer-pressure resistance skills, was effective in preventing alcohol use among high-risk students (defined as those who had used alcohol in unsupervised settings before beginning the instruction). The programme was, however, ineffective for other students, emphasising a point raised by Coggans and Watson (1995) - that substance users are not a homogenous group.

Foxcroft, Lister-Sharp, and Lowe (1997) also show up the limits on programme effectiveness. The major problems they found in evaluation methodology have already been noted earlier in this paper. Furthermore, their analysis of the evaluations that did meet the review team's criteria regarding relevance, outcome, and design, shows deficiencies in programme effectiveness as well. For example, a review of literature on short-term follow-up of programmes showed that 16 programmes were partially effectively, and 11 ineffective, while several studies reported that programmes appeared to increase participants' drinking relative to the control group. All the programmes combined social skills training with knowledge-based education. Five medium-term follow-ups were analysed, and none found evidence of programme effectiveness. That included two prevention programmes that had shown partial effectiveness in the short term. Again, two programmes appeared to have increased participants' drinking relative to the control groups, and in one case the intervention group (which had undertaken a U.S. knowledge and social skills programme aimed at teenagers) reported more excessive drinking than a control group three years later.

Foxcroft and his fellow authors reviewed only two long-term evaluations. One - of the U. S. Life Skills Training Intervention (LST) - showed that the programme had been effective, with participants self-reporting significantly less drunkenness compared with the control group. These figures are, however, challenged by Gorman (1997), who says they are based on a "high-fidelity group" representing "less than half of those recruited into the intervention at the start of the project, and as such is no longer comparable to subject in the control group" (p. 58). The other long-term follow-up reviewed by Foxcroft et al. is also of a U.S. programme, Project ALERT. It found that early signs of partial effectiveness were not repeated over the long term, and by the time the students had left high school, any

effects of the programme had disappeared. They also found that whether the programmes concentrated on alcohol alone, or on alcohol along with other drugs, appeared to have no effect on the outcome of the review.

For those looking for clues as to what works in programmes, Foxcroft and colleagues have disturbing news. The review turned up no obvious differences between programmes which studies had found to have some success, and those which had been evaluated as having no effect, or increasing participants' drinking (Foxcroft et al., 1997). The authors conclude, therefore, that "lack of reliable evidence means that no one type of prevention programme can be recommended" (p. 531).

Despite this, some guidelines have been suggested as to what constitutes a well-designed programme.

Programme planning and design

The importance of careful planning and design is emphasised throughout the literature on health promotion and education, and school programmes are no exception. Elias, Gager, and Staci (1997) suggest that, for an alcohol and substance abuse programme to be effective in the classroom, it must:

- be inclusive, so that it reaches all students and meets all learning styles;
- be culturally sensitive;
- offer cumulative and sequential lessons timed so that they offer intensive instruction as well as instruction over the long term; and
- be implemented in line with a school policy which must be clear about how problem behaviour will be dealt with, and offer school activities that are a positive alternative to destructive behaviours.

As noted above, there is support elsewhere in the literature for an intensive (in other words, frequent sessions) approach to alcohol and drug education. White and Pitts (1998) found that interventions that adopted this approach had a longer-term impact; booster or follow-up programmes are also recommended to ensure that the message is reinforced and programme gains are maintained (Dusenbury, Falco, & Lake, 1997; Howard et al., 1990; White & Pitts, 1998). On the other hand, the effect of interventions that took up less curriculum time has been found to diminish over time (Dusenbury et al., 1997). Dusenbury et al. (1997) say, however, that research has

yet to determine exactly what constitutes adequate coverage, or how many years of intervention constitute adequate follow-up. Bremberg (1991), on the other hand, suggests that to be effective, schools need to allocate at least one hour per week per year to programmes, or expose students to at least 20-30 hours of programme content in a year. Having reviewed studies of school-based health education programmes published in journals between 1976 and 1989, he found that the 25 programmes that had reported unequivocal behavioural change were relatively time intensive. Other common features were that the programmes:

- integrated classroom health education programmes with local community efforts;
- employed educational methods developed by behavioural scientists; and,
- combined teaching of groups with activities directed at individuals.

The research findings on the amount of classroom time that should be given to alcohol and other drug education has been taken to heart by the education authorities in New Zealand, where drug education is now an accepted part of a school's teaching programme through its inclusion in the *Health and physical education in New Zealand curriculum* (Ministry of Education, 1999).

Furthermore, the literature shows support for education to begin at an early age. Coggans and Watson (1995) suggest that early intervention is important if young people are to find a behavioural alternative to drugs, and a social context conducive to healthy lifestyles - both factors believed to play an important part in preventing drug problems. Lloyd (1996) argues for education beginning with primary school children aged 8 to 11 years to ensure that education precedes actual drinking experience, echoing the advice of Bowen and Michael-Johnson (1990) in connection with AIDS prevention education among at-risk youth (see Chapter 4). Bagnall and Fossey (1996) - discussing alcohol education initiatives in Scotland - add the rider that alcohol education aimed at children in the upper primary school classes is more appropriately delivered as part of a wider context of general health education, leaving more focused instruction on alcohol to the secondary school level. This, they argue, reflects the fact that children of primary school age tend to be proscriptive regarding any alcohol use, and are often reluctant to admit to the possibility that they might drink in future (Bagnall & Fossey, 1996).

White & Pitts (1998) - as a result of their review of the effectiveness of drug education, including alcohol education - endorse the need for flexibility in programme

design to cater to students' individual needs and backgrounds. They suggest that programmes should be individually paced to ensure all participants receive the programme in full, and be targeted at the specific needs of young people at differing stages of drug use as well as from differing social and cultural backgrounds. Kumpfer (1997) too, notes that "universal prevention" programmes, designed for general use in the classroom, may have to be complemented by "selected prevention" programmes targeted at those seen to be at greater risk of substance abuse, and "indicated prevention strategies" aimed at those showing early signs of substance abuse and associated behavioural problems.

Finally, they emphasise that programmes must be implemented as planned, citing Botvin (Botvin, Baker, Dusenbury, Botvin, & Diaz, 1995) and Pentz (Pentz, Trebow, Hansen, et al., 1990), who say that this frequently did not happen with programmes they had designed, and that in those cases, the effectiveness was reduced. This has led to the observation that, while health education programme failures are commonly blamed on the model, theory, and activities they incorporate, little attention is given to the skill of the interventionists. This leads to the argument that more attention may need to be given in evaluation to the way interventions are conducted in the field, and to the skills of the staff presenting them (Steckler et al., 1995).

Content and delivery

White and Pitts (1998), discussing the general area of drug education, identify a number of elements to be found in programmes that have been effective in the classroom. They list these as elements that:

- increase knowledge;
- change beliefs about prevalence of use;
- provide the skills to resist pressure to use drugs;
- provide peer support and modelling;
- enhance self-esteem;
- provide alternative strategies for gaining peer approval and personal reinforcement; and
- improve attitudes to abstinence.

The programmes also contained a mix of focused and generic training in these elements (White & Pitts, 1998).

Hansen's (1993) review of school-based alcohol education programmes concluded that the most successful programmes tended to include social influence approaches. In other words, they addressed beliefs about levels of consumption and issues of personal commitment, provided information about alcohol, and taught resistance skills. The least successful programmes took an affective approach. In other words, they concentrated on training in self-esteem, decision-making, stress management, and goal-setting (Hansen, 1993). Howard et al. (1990) also cite literature suggesting that providing experiences to young people which can change their perceptions of the risks of alcohol use - such as visits to hospital emergency rooms - show promise.

In terms of delivery styles, the literature shows a clear preference for the use of peer education, and interactive rather than non-interactive teaching (Howard et al., 1990; Lloyd, 1996; Tobler & Stratton, 1997). A review of eight studies, reported in a 1995 Harvard Mental Health Letter, found that programmes that "reduce drug use more effectively, at least in the short run" are interactive, "encouraging children to teach one another instead of commissioning an authority figure to provide information and issue warnings" ("Doubtful DARE," 1995, p. 7). The commonly-used U.S. intervention DARE was found by this study to be largely ineffective, and the authors criticised its lecture format and its use of police officers to deliver the programme ("Doubtful DARE," 1995). Peer education received an early boost from a World Health Organization (WHO) Four Country study conducted in 1989 (Perry et al., 1989). It tested alcohol prevention programmes of identical content in four countries chosen at random, with the only difference being that in some cases the programmes were teacher-led and in others used peer education. The programme content was based on successful anti-smoking education interventions, with key elements being that use was not viewed as deviant but as social, and students were provided with ways to cope with the challenges of adolescence. The study also used control groups. The results showed that the students who were in peer-led programmes had significantly lower alcohol use scores than the students in teacher-led or control groups. The researchers concluded that a peer-led social-psychological approach to adolescent alcohol health appeared to be effective across a variety of settings, cultures, and economic backgrounds.

Lloyd (1996) reports on a pilot programme ("Drinking and Me") which used this approach in a number of British secondary schools in the early 1990s. Students responded that they had enjoyed being taught by a member of their own class, and that they could relate to one of their classmates better than to their teacher. Teachers reported that pupils were committed to the process and in some classes said everyone in the class had taken part - in contrast to what happened in formal lessons.

Message communication has been shown to be more effective and acceptable if it is delivered by someone with whom the audience identifies, and whom the audience feels to be honest and sincere (Downie, Tannahill, & Tannahill, 1996, p. 133). That has implications for the choice of students to take part in peer-led programmes. Coggans and Watson (1995) observe that peer leaders must not be selected on the strength of their school results or popularity with teachers, since such young people will not be well regarded by those most likely to misuse drugs. Rather, they cite Botvin's (1990) definition of the qualities needed by peer leaders in the area of substance abuse education. They should:

- be attractive and credible to high-risk adolescents;
- have developed communication skills;
- show responsible attitudes; but
- be somewhat unconventional.

On the other hand, Brown and Einsiedel (1990) report research indicating that unconventionality may not appeal to all young people. Students interviewed in schools about the impact of an anti-smoking campaign reported finding most credible the role models in the campaign who had the look of an "average, slightly older, self-confident, adolescent" rather than, as had been expected, those role models with "a slightly deviant" look. The authors see this as confirmation of Rogers' (1973) "source homophily" - meaning that people are more likely to be persuaded by those they see as similar to themselves (Brown & Einsiedel, 1990).

Botvin (1990) further suggests that, since peer leaders will lack the management and organisational skills of a good professional teacher, the best approach is to make use of both, according to their strengths.

Once again, however, there are question marks over the impact of peer-led education on use. Coggans and Watson, in their 1995 review of drug education, found two meta-analyses (Bangert-Drowns, 1988; Tobler, 1986) that included effects

of peer programmes. Tobler's study looked at 143 drug programmes that came under five categories of approach - peer-led, alternatives, knowledge plus affective, knowledge only, and affective only. The conclusion was that peer programmes showed the greatest effect over a range of measures, including drug use. Tobler's study has its critics, however, and Bangert-Drowns (1988), considering the results of 33 evaluations, concluded that while peer education had a positive effect on knowledge and attitudes, it did not have any effect on drug use. The same study also showed that those who took part voluntarily in programmes were more likely to report a drop in use after the intervention than those who had been forced to attend (Bangert-Drowns, 1988).

Bagnall and Fossey (1996) - speaking for teachers they interviewed during a study of alcohol education initiatives in Scotland - make a plea for teachers to be given training in alcohol education. Many of the teachers they surveyed, in both primary and secondary schools, reported having reservations about their ability to provide this type of education, and this is borne out in other studies (Elias et al., 1997; Silverman, 1992). Bagnall and Fossey (1996) also found strong support for parents to become involved in the process, and the authors suggest that this conforms with the view that significant others have an important impact on an individual's drinking knowledge, attitudes, and behaviour (Bagnall & Fossey, 1996, p. 256).

The above discussion must be read in the light of the widespread skepticism about the real effectiveness of school-based programmes in changing behaviour. Edwards et al. (1994) remind us of the conclusions Moskowitz came to in the mid-1980s: that educational programmes had largely been ineffective in preventing alcohol use; and that, while many programmes increased knowledge, very few influenced attitudes, and even fewer influenced consumption. They conclude that subsequent research has supported Moskowitz's findings, even when "large-scale social influences programmes have been carefully evaluated" (Edwards et al., 1994, p. 177).

Wallace and Staiger (1998) - reviewing literature on school-age drug education programmes in general - are even more critical of attempts to draw best practice guidelines from those programmes currently operating. They hold that what is commonly accepted as fact, is open to challenge and may require drastic revision. For them, the key question is not so much what works as "how much unlearning about drug education is now required" (Wallace & Staiger, 1998, p. 170). It is worth

stressing, however, Munro's (1997) argument that drug education programmes have been subject to "unrealistic expectations" regarding their impact on drug use among the young in a drug-using society and that, instead, programme success should be calculated on educational rather than behavioural criteria (p. 1). It should also be emphasised that school-based programmes do not operate in isolation. To be effective, the attitudes and skills being passed on in the classroom must be reinforced, not only in the wider school environment, but also in the student's home and local community (Health Research and Analytical Services: Ministry of Health, 1994, p. xix).

Other Youth Interventions

As well as school programmes, there are also interventions aimed at young people that take place in the community setting, taking what is known as the "alternatives-based" approach. These interventions work on the principle that drug users in general indulge because they are bored or frustrated with their lives, and have never had the opportunity to engage in more constructive lifestyles, because of cultural, social, and/or monetary reasons. Reviewing the literature on this approach, Coggans and Watson (1995) acknowledge that if younger people are involved in challenging and satisfying leisure and work-related activities, it is more likely that these will continue into adolescence and, subsequently, into adult life. They conclude, however, that the alternatives approach is probably ineffective in reducing drug use (Coggans & Watson, 1995).

Barwick (1999), in a review of international literature on what makes for effective school-based drug education, emphasises that multi-faceted community programmes are seen as "offering the most hope for reducing drug-related harm" (p. 3). Such a programme might comprise, along with a school-based education programme, media campaigns, the provision of challenging and enjoyable activities for young people, environmental improvements and increased law enforcement (Barwick, 1999).

For those who are problem alcohol and drug users, there are treatment programmes in place. A review by the New Zealand Health Technology Assessment (NZHTA) Clearing House (1998) of both day and residential treatment programmes for young people (12 to 19 years of age) with a substance abuse problem found methodological problems (as noted in Chapter 3) in the evaluations of programmes.

Nevertheless, it does conclude that day programmes appear to be effective, despite some inconsistencies in specific outcomes. In one evaluation of four separate day programmes, three of them showed a significant reduction in self-reported drug use. Another study of three such programmes showed improved educational achievement, although in the case of one of these, that achievement did not follow through to any improvement in gaining full-time employment. Yet another study of three-day programmes showed that in one instance there was a reduction in illegal behaviour. The NZHTA review points out, however, that there are no definitions of what elements make for successful day programmes, and it concludes that more research is needed.

The same review also looked at residential programmes, but concluded that there is insufficient evidence to evaluate the effectiveness of these in treating adolescent substance abuse (NZHTA Clearing House, 1998). As well, there were no studies that compared day programmes with residential ones (NZHTA Clearing House, 1998).

Once again, this is an area where more research is needed before useful conclusions can be made about what makes for programme effectiveness.

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Chapter 6: Mass Interventions

Mass communications are popular as a health education measure, being used as a first step in raising awareness about an issue or in mobilising a community when health promoters need to reach large audiences quickly and efficiently (Steckler et al., 1995). Furthermore, using mass communications is a common approach in efforts to prevent alcohol problems, whether alone or in combination with other strategies (Howard, Ganikos, & Taylor, 1990). The popularity of the mass media for this task reflects their advantages in being able to provide information to vast numbers of people in many sectors of society, making them "extremely powerful communications tools" (Downie, Tannahill, & Tannahill, 1996).

Mass media channels

The mass media take a number of forms, giving health promoters a range of options. There are the electronic media of radio and television, and the print media, comprising newspapers and magazines. Then there is a range of what have been called "small media." This group includes billboards, posters, pamphlets, videotapes, and comic books. New technologies also offer CD-ROM, interactive videodiscs, and virtual reality programmes (Steckler et al., 1995). Of these media, television has been a particularly popular medium for alcohol educational messages, reflecting its increasing pervasiveness in modern-day societies (Edwards et al., 1994). The themes of these campaigns, as identified by Edwards et al., are messages advocating moderation - including information on what levels are safe, strategies for reducing intake, and portrayals of the positives of moderate use - and campaigns to combat drink-driving.

Despite the fact that the promotions come from a broadcast medium, the messages they carry are aimed at the individual. Edwards et al. (1994) observe that the earliest television campaigns tried to directly influence behaviour with "persuasive messages or information about alcohol." That approach has been superseded by campaigns that draw on Bandura's Social Cognitive Theory, also known as Social Learning Theory (Bandura, 1977). This approach holds that behaviour is learned, and that in many cases individuals learn by observing the way others behave, and imitating them, if the particular behaviour observed is seen as

producing results that will be of benefit to the observing individual. The person observed may be personally known to the observer, or be a public or media personality. In taking up this theory, health communicators have incorporated the use of role models, and depictions of the target behaviour, into their campaigns using mass media. The messages are also tailored to appeal to specific audiences, and to sub-groups within a wider target audience (Ajzen & Fishbein, 1975; Petty & Cacioppo, 1981; Rubin, 1986).

Comprehension of mass media campaigns

An important area of study has been the part played in the impact of mass media campaigns by an individual's attitude to, and comprehension of, messages. Downie et al. (1996) cite the work of Kelly (Kelly, 1992; Kelly & Sullivan, 1992) emphasising the importance of understanding the perspective of the intended audience if messages are to have the intended effect.

Sutton, Balch, and Lefebvre (1995) illustrate how messages can produce unexpected outcomes. They cite an education programme on breast cancer screening that included the message that women with a family history of the disease were at greater risk of developing breast cancer themselves. The intention was to supply the facts about risk factors, but later research showed that the message was received rather differently. The audience concluded that, if there was no family history of breast cancer, there was no reason to worry. As a result, many did not present for screening. Yet, as the authors point out, 80 percent of women who are diagnosed with breast cancer do not have a family history of the disease (Sutton et al., 1995).

Downie et al. (1996) emphasise that increasing importance is also being placed on an individual's self-perception and the role that this plays in behaviour change. A key concept here is "perceived susceptibility" or vulnerability (Downie et al., 1996). It is the basis for a widely-cited model for behaviour change, the Health Belief Model (Becker, 1974). According to this model, there are four factors that affect whether or not behaviour change will take place in response to a cue for action, such as a doctor's advice or a health message on television. These factors are:

- perceived barriers to performing the recommended response;
- perceived benefits of performing the recommended response;
- perceived susceptibility; and

- perceived severity.

Wilde (1993) also stresses the importance of what is known as the "latitude of acceptability" - meaning that there is a limit to the amount of change the recipient can, and will, make. Within these limits, the greater the change being advocated, the greater the persuasive impact. If, however, the change being advocated exceeds the "latitude of acceptability," then no change will take place, and the recipients may even choose to act in complete opposition to the message. Wilde concludes that the lesson for health promotion campaigns using the mass media - for which the latitude of acceptability cannot be known - is that messages should advocate changes in a series of relatively small steps over an extended period of time.

The effect of positive depictions of alcohol

Health promoters, however, face the fact that theirs is just one of a host of messages being received by the public, and that the coverage of health matters in both the print and electronic media, whether it be news, entertainment programmes, movies, or documentaries, will not always be as the health professional would wish (Backer, Rogers, & Sopory, 1992). This is particularly true of the alcohol field. Atkin (1993) cites two content analysis studies - one of alcohol advertising on television, the other of magazine advertisements (Atkin & Block, 1981; Finn & Strickland, 1982). He lists the variety of benefits linked to alcohol within the advertisements as follows: delicious flavour, social camaraderie, masculinity, escape, refreshment, physical relaxation, femininity, elegance, romance, and adventure. From this, Atkin concludes that the persisting impact as a result of "dozens or hundreds of exposures" serves to "disinhibit drinkers" as they come to believe that drinking is a widespread norm, that alcohol is a harmless substance, and that it is acceptable to use alcohol for escape and relief (Atkin, 1993, p. 530). These findings are echoed by New Zealand research (Holibar, Wyllie, Barnes, Fuamatu, Aioluputea, & Casswell, 1994; Wyllie, Zhang, & Casswell, 1994a, 1994b.). Surveys of attitudes to alcohol and host responsibility advertising on television among young New Zealanders aged between 10 and 29, found most respondents in the 12 to 16 age group accepted the link between drinking and having "a good time" (Holibar et al., 1994), while almost half the men and a third of women in a study of responses of 18 to 29 year olds said

some of their favourite advertisements on television were those for alcohol (Wyllie et al., 1994).

Alcohol also appears in dramas and soap operas on television, and again not always in the way people working in the field would wish. For example, Scotland's Chief Medical Officer, Sir David Carter, is quoted in a newspaper article as taking to task two prominent British soap operas shown in New Zealand - EastEnders and Coronation Street. He suggested that they could be setting a bad example by showing high alcohol consumption by characters in the series and called on the media to show both the good and bad side of alcohol (Steward, 1997). These sentiments are echoed by Atkin (1993), who argues that the amount of exposure of alcohol and drinking is less important that the motivations and consequences shown in those depictions. Many such depictions, he says, are positive or neutral about alcohol, and almost all the portrayals involve characters who possess positive attributes, such as high social status (Atkin, 1993).

Whether or not these exposures - and in particular advertising - have any significant impact on consumption is, however, an area of lively debate. Discussing the issue, an Australian alcohol and drugs publication (Wood, 1998, p. 8) quotes the director of the Alcohol and Drug Service at St Vincent's Hospital in Sydney, Dr Alex Wodak, as saying that "whether alcohol (advertising) increases aggregate sales or merely changes brand share is one of the most contentious and central issues in the debate over alcohol advertising."

New Zealand has its own debate. Although alcohol advertising was allowed on television in 1992, the argument that it should be banned because it contributes to alcohol problems continues (Welch, 1998). The New Zealand studies mentioned above (Holibar, Wyllie, Barnes, Fuamatu, Aioluputea, & Casswell, 1994; Wyllie, Zhang, & Casswell, 1994a, 1994b.) found links between positive attitudes towards drinking and a greater liking for alcohol advertising across the age groups surveyed, and, in the case of the older age group (18 to 29 year olds), a liking for television alcohol advertisements was "significantly associated with how much these 18 to 29 year old men and women drank" (p.3). The greater the liking for advertisements, Wyllie et al. (1994a) found, the more likely they were to drink larger quantities on a typical occasion, to drink more frequently, and to consumer larger annual volumes of alcohol. Furthermore, 18 to 29 year old men who liked alcohol advertisements more were more likely to be experiencing problems from their drinking, compared with

men of the same age who consumed similar quantities of alcohol, but liked the advertisements less.

Atkin (1993) reviews a range of research on the effect of advertising alcohol on a range of measures. These include consumption (Atkin, 1992; Atkin, Hocking, & Block, 1984; Kohn & Smart, 1987; Strickland, 1983), initiation of drinking (Aitken, Eadie, & Leathar, 1988; Atkin & Block, 1981; Grube, 1992; Neuendorf, 1985), excessive drinking (Atkin, Neuendorf, & McDermott, 1983; Strickland, 1983) and drunk driving (Atkin et al., 1983). His conclusion is that alcohol advertising "stimulates a more favourable predisposition, higher consumption, and greater problem drinking by young people." Nevertheless, Atkin (1993, p. 535) concludes that the evidence "clearly does not support the interpretation that advertising exerts a powerful, uniform, direct influence." Rather, it appears that "advertising is a contributing factor that increases drinking and related problems to a modest degree rather than a major determinant" (Atkin, 1993, p. 535). Addressing the question whether or not television advertising of alcohol should be banned, Atkin argues that the evidence does not justify such a move. Rather, he suggests, the elimination of the commercials would produce "only a small improvement in drinking problems" and any stigma associated with the removal would fade over time (p. 538).

Meanwhile, Wilde (1993) is much more sceptical of research on the impact of advertising on drinking habits, arguing that it is fraught with methodological and interpretative difficulties. He illustrates his point with the hypothetical example of a study looking for possible links between the frequency of watching alcohol advertising, and frequency of drinking, or the amount drunk. If the researcher finds a positive association, Wilde suggests, there are, in principle, three possible interpretations. First, the study may mean exposure to alcohol advertisements stimulates drinking. On the other hand, it may mean that being a drinker increases interest in, and thus self-induced exposure, to alcohol advertisements. Finally, both drinking and exposure to advertisements may be due to a third factor that explains both. This third factor might be social class, employment status, or personality trait (Wilde, 1993, p. 985).

Wilde is critical of research findings (Aitken et al., 1988; Atkin et al., 1984) that interpret the "mere observation of a positive correlation between exposure to a given type of message and a particular behaviour" as evidence that the exposure "causes that behaviour or enhances its frequency" (Wilde, 1993, p. 989). He suggests

that research summarised by Smart (1988, pp. 319-321) is more cogent. In these studies, the researcher exposed audiences to alcohol advertisement or drinking scenes on television and monitored their drinking. The experiments showed no "convincing evidence" that exposure increases the amount of drinking by subjects (Wilde, 1993, p. 986).

Wilde cites conflicting work on the impact of alcohol advertising bans: first, the work of Smart (1988) - this time on short-term and long-term bans on mass media alcohol advertising in a variety of jurisdictions (British Columbia and Manitoba in Canada; Norway; and Finland) - and of Simpson, Beirness, Mayhew, and Donelson (1985), who made comparisons between eight different countries with total or partial bans. In no case did the before-and-after studies find evidence that advertising restrictions reduce consumption (Wilde, 1993, p. 991). Chetwynd, Coope, Brodie, & Wells (1988), in their study correlating expenditure on cigarette advertising in the print media and consumption in New Zealand over a 13-year period, found a "statistically significant positive regression co-efficient" for quarterly data, but a "negative, though statistically not significant, co-efficient for annual data" (Wilde, 1993, p. 991). This, Wilde argues, is insufficient for their conclusion that "bans on cigarette advertising would result in a reduction in overall cigarette consumption" (Chetwynd et al., 1988, p. 413).

On the other hand, Edwards et al. (1994) suggest that research on the impact of alcohol advertising on drinking behaviour has been strengthened methodologically since the studies carried out by Smart (1988). These authors suggest that work by Grube and Wallack (1994) and Connolly, Caswell, Zang, and Silva (1994) strengthens the argument that advertising does have an impact. Connolly et al. examined the number of alcohol advertisements recalled by 13-year-old New Zealand boys to see if there were links with self-reported beer consumption when they reached the age of 18. The study found no relation with frequency of drinking, but did find that those who recalled more advertising (mostly television beer ads) reported that they drank larger amounts of beer when they did drink. Grube and Wallack's study was of United States children aged 10 to 14, and investigated the relationship between their awareness of advertising, and beliefs about drinking and intentions to drink. It found that children who could correctly identify more beer advertisements looked more favourably on drinking, and indicated they intended to drink more frequently as

adults. The conclusion of Edwards et al. (1994) is that evidence that advertising has a small but contributory impact on drinking behaviour is slightly stronger than before.

Using the media

Those working in the alcohol prevention field have of course been aware of these other influences, and have launched their own counter-messages. Public Service Announcements (PSAs) - in which free time is given on the electronic media for these brief messages - have been found to be problematical. Howard et al. (1990) point out that historical data on smoking in the U.S., produced by the Office on Smoking and Health (1989), indicate that the use of PSAs on television to counter commercial advertising was an effective strategy in the short term. Furthermore, they point out that when the ads were withdrawn in response to a voluntary termination of cigarette advertising, "the anti-smoking campaign on the electronic media was significantly weakened" (Howard et al., 1990, p. 7). New Zealand introduced a system of public service announcements - known as alcohol moderation advertising time - when the decision was made to allow alcohol brand advertising between the hours of 9 p.m. and 6 a.m. on television and radio in early 1992. This has seen between $NZ1m. to $NZ1.5m a year from 1995 allocated by radio and television to counter-advertising, The stakes are, however, far from equal. In 1995 alone, the liquor industry spent more than $NZ31m on television advertising a rate of four to one in favour of the industry (Stewart, 1997; Wyllie, Waa, & Zhang, 1996). It should be noted that while counter-publicity may be feasible in the regulated world of broadcasting media such as television and radio, it will more of a challenge to get health messages across as more people move to the new interactive and unregulated media such as the Internet for their information (also see Chapter 12).

There are other problems too with the use of publicly-funded counter-advertising. First, because no advertising fees are charged on PSAs, they are likely to be placed at times when commercial airtime is difficult to sell, meaning that they are not aired to prime-time audiences. The brevity of the messages, as dictated by the electronic media, also means that it is difficult to put across complex information. What is more, a good- quality product is expensive to produce, while changes in the electronic media have also had an impact. Opportunities for reaching viewers have declined with developments such as the remote control (which allows the television audience to switch channels to avoid the commercial breaks), and cable TV (which

means a big increase in the number of potential channels from which viewers can choose) (Steckler et al., 1995). The Australian experience, too, is that liquor advertisers have moved to other avenues for promoting their products - including sponsorship and incidental advertising, which are not subject to advertising codes - in order to avoid the regulation surrounding advertising in the mass media (Stewart, 1997). Educators have therefore looked to other means to get their message across. They may choose to pay for time, perhaps in partnership with private enterprise, which will sponsor the commercial time. Another approach has been to use "edutainment" - also known as enter-education (Steckler et al., 1995). This approach was first used in Peru in 1969 and has since seen family planning messages being presented in a soap opera on Indian TV, health messages being presented through popular music in the Philippines, storytelling in Nigeria, and through comic books in a number of countries (Backer et al., 1992; Steckler et al., 1995).

In the United States, the Harvard Alcohol Project mounted a campaign to promote its "designated driver" concept through inclusion on prime-time entertainment programming, and in 1988, television writers agreed to include references to the scheme, along with drunk-driving prevention messages, in their scripts and storylines (Winsten, 1995). As a result, the concept that one person should remain sober so that they can drive their friends home has since appeared in more than 140 different television programmes (Steckler et al., 1995; Winsten, 1995), among them prime-time series such as *Cheers*, *Roseanne*, and *L A Law*. (Backer et al., 1992; Winsten, 1995). Backer et al. (1992) report that an evaluation showed increased use of "designated drivers" following that exposure, and in a paper presented at a conference on alcohol and traffic safety in Adelaide in 1995, the Director of the Project reported on surveys showing the extent to which the use of "edutainment," along with other publicity measures, had raised awareness of the concept in the United States (Winsten, 1995). Atkin (1993), on the other hand, comments that there is no evidence to indicate this approach had any impact on knowledge, attitudes, or behaviour of teenage audiences. Steckler et al. (1995) point out that researching this area will be "particularly challenging" because of the other factors that could have an influence, such as interpersonal modelling or formal instruction. The designated driver concept is discussed at greater length in the section dealing with drunk driving (Chapter 7).

Another popular approach has been media advocacy (Steckler et al., 1995), described by Wallack (1994) as "the strategic use of mass media to advance a social or public policy initiative" (p. 270). By capturing the attention of the news media, and putting a particular subject before the public eye, media advocacy taps in to the power of the media for agenda-setting, in other words its power to influence the issues people talk and think about (Steckler et al., 1995). The organisation MADD (Mothers Against Drunk Driving) is an example of this approach at work in the alcohol field. This area has its difficulties: it is by definition opportunistic, since advocates need to be able to both create the news and react quickly to breaking news and unexpected events; it may also be controversial, mixing as it does science, politics, and activism (Wallack, Dorfman, Jernigan, & Themba, 1993) and may not therefore be suitable for every situation (Jernigan & Wright, 1996). Again, the impact of media advocacy is difficult to evaluate. As Steckler et al. (1995) point out, surveys can measure public opinion, but cannot infer the causes of those opinions.

Mass interventions - do they work?

In discussing mass interventions overall, the question "do they work?" is a problematic one. Steckler et al. (1995) speak of the "dearth of empirical evidence" on the effectiveness of public information campaigns in all their guises. Even in assessments of large-scale health promotion programmes - such as the Stanford Heart Disease Prevention Programme, the North Karelia Project, and the Minnesota Heart Programme - where a reduction in risk behaviours has been found, it is not possible to separate out the contribution of the mass media component (Carlaw, Mittelmark, Bracht, & Leupker, 1984; Maccoby & Solomon, 1981; Puska et al., 1985). Feinleib (1996) also points to the difficulties of ascertaining whether or not these programmes have had a lasting effect on health behaviour. This author notes a "rebound phenomenon" relating to smoking and knowledge about cardiovascular disease after the Stanford Project had come to an end. The control communities appeared to show continued improvements, while the intervention community showed adverse or level trends. This prompts Feinleib to raise the question: is it possible that, "for certain intervention efforts, the target population becomes inured to the messages so that when the special efforts end the programmes continuing in the general population are not sufficient to maintain the changes?" (Feinleib, 1996, p. 1697). On the other hand, Le Fanu (1994, p. 92) points out that it is accepted that "those whose health behaviour

needs changing most may well be those who are least susceptible to health education messages," meaning that health educators need to find alternatives for targeting this "hard-to-reach" population (Freimuth & Mettger, 1990; Guldan, 1996).

Despite these reservations, there are arguments put forward for the use of mass media campaigns. Le Fanu (1994) cites Leventhal's (1973) calculation that while such campaigns have a positive effect of only around 10 percent, "spread over a long period of time, they can influence the cultural perception of the risk," as anti-smoking campaigns since the 1950s are credited with doing (Le Fanu, 1994, p. 93). Edwards et al. (1994) also suggest that the impact of such interventions is symbolic - their contribution being not so much to change drinker behaviour at the individual level, but to influence the social climate by encouraging public debate on the issue.

Mass interventions are also seen as playing another indirect role, through what is known as "Diffusion Theory" (Rogers, 1983; Ryan, 1948; Ryan & Goss, 1943). This was defined by Rogers (1983) as "the process by which an innovation is communicated through certain channels over time among members of a social system" (p. 5). Mass communications plays a significant role in this, but interpersonal networks are most important (Littlejohn, 1992). Hence, although mass media messages may have a direct effect on only a small number of people, these people then pass on their behaviour change to other individuals through their face-to-face contacts (Wilde, 1993). These "opinion leaders" (or "early adopters" as they are also known) can be found in all sectors of the population, and someone who may be an "opinion leader" in one field may be an "opinion follower" in another.

As Wilde (1993) points out, to be effective, the behaviour must be conspicuous to others, and some campaigns have attempted to strengthen the impact by producing promotional material (such as lapel buttons or stickers) that mark the wearers out as supporters (or opponents) of a particular behaviour. Wilde gives the example of a safety belt campaign in France in which seatbelt users were encouraged to place a bumper sticker on their car reading: "I wear my seatbelt. How about you?" (Labadie & L'Hoste, 1978). The aim is to reach a critical mass of people, at which stage the idea diffuses under its own power (Backer et al., 1992).

As Le Fanu (1994) has highlighted, there remains a section of the community which is not susceptible to campaigns. Guldan (1996) refers to this group as "late adopters," who have not been reached because they lack education, access to the media, or are at a disadvantage in some other way. This group, Guldan argues,

requires education strategies that are quite different from the initial strategies aimed at the wider community. Steckler et al. (1995) suggest that more research needs to be done on how diffusion of innovations, and other theories of change such as social cognitive theory, and theory of reasoned action[2], can be used to enhance interventions.

While mass interventions are unlikely to have any impact on behaviour change, especially in the short term (De Haes & Schuurman, 1975; Dorn & Murji, 1992), there is consensus that they have a place if they are used as part of a wider strategy (Coggans & Watson, 1995; Edwards et al., 1994; Le Fanu, 1994). As Edwards et al. point out in discussing alcohol education interventions in general: "…. in order to have any chance of effectiveness, [they] need to be entwined with other strategies, especially those which more directly impact on the drinker's environment" (Edwards et al., 1994, p. 180).

Edwards et al. cite the examples of television campaigns to prevent drink-driving where the messages have been coupled with measures such as face-to-face instruction on the use of blood-alcohol level calculators (Worden, Flynn, Merrill, Waller, & Haugh, 1989) or random breath testing (Homel, 1988). These have, they say, provided the few exceptions to the general finding of reviews (Blane & Hewitt, 1980; Dorn & South, 1983; Moskowitz, 1989; Wallack, 1980) that mass interventions show limited effect on audience beliefs and attitudes, and no impact on self-reported drinking (Edwards et al., 1994). Glanz (1996) refers to this broader approach to health promotion as the socio-ecological approach, incorporating as it does the options of changing people and/or changing the environment. Furthermore, there are those who argue that this wider environmental approach is where the emphasis should be, a point made by Wodak in a paper to a conference in Glasgow in 1992:

> Ironically, strategies for which there is most evidence of effectiveness in reducing alcohol-related problems, namely increasing alcohol excise and decreasing alcohol availability are seldom adopted. In contrast, strategies for which there is least evidence of benefit, such as education, are adopted and implemented enthusiastically. (p. 68)

[2] Theory developed by Ajzen and Fishbein (1980) which argues that an individual's intention to behave in a certain way is determined by that person's attitude towards that behaviour as well as their beliefs about how they think other people would like them to behave (Littlejohn, 1992).

Guidelines for campaign design and implementation

1. Planning issues

While bearing in mind the reservations about the efficacy of mass education interventions, there is ample advice on how health educators can make these programmes more effective. The communication process can be summed up by the following series of questions:

Who says what?
Through what channels?
To reach whom? And,
Why? (Abdool, 1992).

The campaign designer therefore needs to understand who the campaign's audience is; the message he or she wants to convey to that audience, and why; and the best way to get that message across. In order for the communication process to work, however, the message must be comprehensible to its audience, and thus one of the basic requirements is that the information in a campaign be accessible (Glanz, 1996). Campaign designers, in considering this aspect of design, need to be aware of the limitations of mass media. They cannot teach complex skills or effectively put across complex issues, although they can raise awareness and reinforce other initiatives (Tones, 1996). Planners are also advised to set clear objectives for their campaign, and to set goals that are realistic and attainable (Backer et al., 1992; Brown & Einsiedel, 1990; Hastings & Haywood, 1991; Tones, 1996). The clearer the objectives, the easier it will be to evaluate the extent to which the campaign was a success (Brown & Einsiedel, 1990).

Other important components of programme design at this planning stage are identified as choice of channel, timing of campaign, and choice of target audience (Backer et al., 1992; Tones, 1996). As regards the first of these, the use of a combination of media channels (for example television, radio, and print) is considered to be more effective than concentration on a single medium (Backer et al., 1992; Tones, 1996). The use of multiple media is not only considered more efficient, but is necessary if the message is to have the greatest possible impact (Abdool, 1992). The importance of visual content in any educational material is also emphasised in the light of psychological research showing that 83 percent of learning is visual and 11

percent aural. Furthermore, 20 percent of what is heard is retained, whereas 50 percent is retained when the visual and aural are combined (Abdool, 1992). Arkin (1990) also suggests that educators should not forget the minority media, a reminder that certain channels may be better at reaching certain sectors of the community.

Furthermore, in planning what channels they will use, and how they will use them, educators need to take into account the lifestyles and personal priorities of the target audience (Coggans & Watson, 1995). This can be illustrated with an example, not from the health field, but from an evaluation of an experiment in Ghana using radio to provide rural education. Its failure is blamed, among other things, on the fact that programmes were broadcast at times when the target audience was working in the fields, or had retired to bed. Other factors included the fact that the programme content was imported from other countries, and that the broadcasts were one-way, neglecting the fact that education and information exchange in the village setting were traditionally interactive (Ansu-Kyeremeh, 1992).

It is also recommended that campaign designers factor into their plans the use of the journalistic functions of the news media, which, with little or no cost, will increase the visibility of the campaign (Backer et al., 1992; Tones, 1996). Edutainment, as discussed earlier in this chapter, is another option that should be considered. McAlister (1995) makes the case for the use of documentary journalism, which he says is cheaper than using advertisements, features real people rather than actors, and presents the audience with a balanced exploration of both sides of a story. Bearing in mind the evidence, cited earlier, that mass media campaigns do not work in isolation, commentators agree that they should be supported by direct services such as telephone hot lines and support services (Backer et al., 1992; Tones, 1996). They should also run in tandem with community, small group, and individual activities (Backer et al., 1992) sited in schools, workplaces, and other community institutions (Tones, 1996). The timing of campaigns is identified as another factor in their success, and organisers are reminded to consider issues such as what else will be happening at the time they run their campaign (Backer et al., 1992; Tones, 1996).

2. Audience identification

As Abdool (1992, p. 159) comments: "A single message or campaign cannot pretend to do everything for everyone." For that reason, educators will have a target audience in mind for their intervention. Consequent on that is the need for a good "programme-to-audience match" if the programme is to be effective in getting

through to that audience (Glanz, 1996, p. 28). In recent years, social marketing has been a popular tool for this aspect of programme planning. This concept is based on the 4 Ps of marketing in the commercial world - Product, Price, Place, and Promotion. It borrows from the commercial world approaches such as audience analysis and segmentation, consumer research, product conceptualisation and development, message development and testing, directed communication, facilitation, exchange theory (the relationship between price and perceived benefit), and the use of paid agents, volunteers, and incentives (Ling, Franklin, Lindsteadt, & Gearon, 1992). In the social context, it is described by Kotler & Roberto (1989) as "a social change management technology involving the design, implementation and control of programmes aimed at increasing 'the acceptability of a social idea or practice in one or more groups of target adopters". A simpler explanation comes from Garner (1984): to him social marketing is getting "the right message, to the right audience, in the right way".

The use of social marketing in the health field is criticised in some quarters on ethical grounds. Ling et al. (1992) cite the work of Laczniak, Lusch, and Murphy (1979), who interviewed a range of experts and found a wide range of concerns on ethical grounds. These included fears of the powerful impact it could have; as one respondent put it, "social marketing could ultimately operate as a form of thought control by the economically powerful" (Ling et al., 1992, p. 242). The survey by Laczniak et al. also found that marketers feared their discipline could be tainted by social causes, especially in connection with controversial causes, and that as a result the public might come to view all marketers as neo-propagandists. Some health educators were concerned that because social marketing targets the individual, it could result in victim-blaming (Ling et al., 1992). Others believe a system devised for marketing commercial products is at odds with the philosophy of community empowerment (Ling et al., 1992). There are other objections to the fact that social marketing represents an imbalance of power, using as it does a central agent who "sells" health to, and hence dominates, the audience (McAlister, 1995).

In the 1990s, social marketing has become more pervasive in the field of health education and promotion. Weaknesses are recognised. First, it requires major investments in terms of time, money, and human resources, and these are not always available in the public health sector (Ling et al., 1992). More important, however, is the fact that since this is a system designed for the world of commerce, it does not fit

altogether comfortably within the social arena. Whereas a commercial company can cease marketing a product that is unpopular with its customers, health educators have no such opportunity to adjust the product or service they provide to the interests and preferences of the client (Novelli, 1989). Ling et al. (1992) believe that social marketing as a tool needs more rigorous and objective evaluation to ascertain its effectiveness.

Nevertheless, the contribution social marketing can make to effective health communication campaigns has been recognised (Backer et al., 1992; Rogers, 1994; Tones, 1996). One of its most important contributions is in defining target audience - also known as market segmentation. Rather than defining an audience purely in demographic terms (age, gender, and ethnic grouping), the research techniques of social marketing allow audiences to be identified in terms of their psychographics (in other words, attitudes, values, and beliefs) - a much more effective measure in terms of campaign impact (Backer et al., 1992; Rabin, 1994; Tones, 1996). That knowledge will put campaign designers in a position to choose the best media for their message, and allow them to design messages that are appropriate to their audience in terms of language and image (Hastings & Haywood, 1991). It will also allow them to identify the sectors of their audience who are best reached in other ways, through community institutions or interpersonal contacts (Yee & Weaver, 1994).

Besides focusing campaign planners' attention on what it is they want their target audience to do, it also ensures that they consider "why the audience might be motivated to comply with, or might resist engaging in, the desired behaviour" (Brown & Einsiedel, 1990, p. 154). The result is campaigns that have been designed and implemented with the intended audience's "needs and perspectives clearly in mind" (Hastings & Haywood, 1991, p. 142), and are hence more likely to be cost-effective (Kotler, 1982). Pre-testing of messages and constant monitoring during the course of the campaign are other concepts from social marketing credited with improving campaign effectiveness (Backer et al., 1992; Hastings & Haywood, 1991; Ling et al., 1992). While the target audience for campaign designers may be the group that is most obviously at risk, it is suggested that more effective campaigns ensure that their messages are pitched at those who have a direct interpersonal influence on the target group, such as peers or parents (Backer et al., 1992).

3. The communicator

The audience's perception of the communicator also plays an important role in the effectiveness, or otherwise, of campaigns. Studies into the process of persuasion have shown that people are more likely to agree with a message, and be persuaded to change their habits because of it, if they find the source or the speaker to be trustworthy, competent, and attractive (Atkin, 1979; Wilde, 1993). As discussed in the section on peer education in Chapter 5, the audience for a message is more likely to be influenced if they see the person communicating the message as similar to themselves in aspects such as age, sex, linguistic style, social class, personality traits, and membership of a group (Wilde, 1993). This obviously has implications for the choice of role models to appear in mass interventions. Campaign planners need to ensure that their chosen spokesperson will appeal to the target audience (Tones, 1996). They must also, however, continue to maintain their credibility. Hence care needs to be taken to ensure that the role model does not become a negative influence through his or her personal actions, by, for example, later being discovered to have substance abuse problems (Backer et al., 1992).

4. Message content

Five components of message presentation are identified as playing a major role in whether or not an audience receives, listens to, understands, remembers, and responds to a mass media campaign. These are content appeal, style, frequency, timing, and accessibility (Atkin, 1981; Bettinghaus, 1986; Rogers & Storey, 1987). That means that any message should be in language that is easily understood by the audience (Hastings & Haywood, 1991). It also means that the message must catch the attention of the audience by presenting "novel stimulation." If the information is not new, then it needs to be presented in "an original manner" (Wilde, 1993, p. 988). One way of attracting the attention of the audience is through what are known as "motivating appeals." These appeals may address conditions that individuals aspire to, such as romance, prestige, or belonging; or want to avoid, such as horror, pain, death, or ridicule (Wilde, 1993). Wilde, who has reviewed the research in this area as it relates to road safety (Wilde, L'Hoste, Sheppard, & Wind, 1971), says that studies are limited, and the findings that are available are mostly unclear.

There are, however, two major exceptions. The use of humour has been shown to be ineffective, and so has the use of fear appeals (Wilde, 1993). Strong fear

appeals, he states, are "aversive", and lead to "defensive avoidance" - in other words, the recipients turn their attention from the message the moment they see, or hear, or read it, and do not want to think about it later (p. 988). The research does not, however, totally preclude the use of an element of fear in messages. Messages using "mild or intermediate" fear appeals (p. 988) can be useful if, at the same time, the audience is given information that allows them reduce their anxiety (Backer et al., 1992; Tones, 1996; Wilde, 1993) - in other words, that informs them on what action to take to avoid the depicted consequences.

Discussing positive motivating appeals, Kelly and Edwards (1998) suggest that educators in the health arena should take the lead of alcohol advertisers and use image advertising (also known as lifestyle advertising) in counter-messages. They point out that research with adolescents has helped give a picture of what young people find appealing about alcohol commercials, and rather than featuring messages urging moderation, counter-advertising might instead feature "fun-loving, attractive youth engaged in exciting alternatives to drinking" (Kelly & Edwards, 1998, p. 57).

One of the most popular theories of mass communications, Uses and Gratifications Theory (Blumler & Katz, 1974; Katz, Blumler, & Gurevitch, 1974) has highlighted the way that the mass media audience takes a proactive role in choosing which messages to process, and which to ignore. Research has shown that a major factor in that choice is whether or not the message is perceived to be gratifying their need for knowledge, or helping them solve a problem in their lives (Atkin, 1981; Dervin, 1981). For that reason, mass intervention messages need to be personally relevant to members of the audience (Andrews & Shrimp, 1990; Brown & Einsiedel, 1990).

The fact that campaigns are aimed at bringing about behaviour change also has implications for message content and design. Authors agree on the need for messages to include practical information (Glanz, 1996), or what is also known as "concrete instructiveness" (Wilde, 1993, p. 988). This means that messages should give an indication of what action should be taken, or in the case of visual media, should display the target behaviour, thus enhancing social learning through modelling and imitation (Wilde, 1993). Wilde suggests, for example, that general slogans such as "Alcohol kills slowly" are less effective than a message such as, "Had a few drinks? Get a ride" (p. 988). It is also agreed that messages will be more effective if they emphasise positive behaviour changes and the highly-probable, immediate

benefits which these will have, rather than negative consequences of current behaviour, particularly if those consequences are only likely to appear in the distant future (Backer et al., 1992; Tones, 1996).

As stated earlier, in the discussion on the role of the communicator in mass media interventions, research has shown that perceived similarity between communicator and target audience enhances message effectiveness by reducing the "psychological distance" between source and recipient (Wilde, 1993, p. 987). This also relates to message content. If the message expresses views that are also held by the audience, then the "psychological distance" will be further reduced (Wilde, 1993). The difficulty in the health area is that the position being taken by the communicator may differ substantially from the views of the audience. To get over this problem, educators may use what is known as "inoculation" - anticipating opposing views, and refuting them in the original message (Wilde, 1993). Taking this approach in a single mass media message does, however, have implications for the order in which these opposing views are presented. The general advice is that the "pro" arguments should come first, followed by the attack on the counter-argument, recognising that the information contained at the beginning of a message tends to have a greater effect on the recipient than that which comes later.

Finally, repetition of a single message during an intervention campaign is held to have greater impact than presentation of a variety of messages.

The advice on what elements go to making a more effective campaign must, however, be seen in the light of the factors emphasised earlier in this paper, namely that mass media interventions are generally held to be ineffective in changing behaviour, and that if they do have an impact, it is by raising awareness in the early stages of efforts to bring about healthier lifestyles. Furthermore, it is once again important to stress the fact that this form of intervention appears to have little impact unless it is part of a wide-ranging strategy. As Edwards et al. (1994) point out:

> …Efforts to assess the effect of mass media campaigns on drinking behaviour ….. Have generally failed to detect significant effects on consumption as a consequence or exposure to these campaigns. When campaigns have been supplemented by other interpersonal and policy focused interventions, they may have contributed to behavioural change (p. 175).

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Chapter 7: The Environmental Approach

The previous chapter emphasised the importance of reinforcing the education approach to alcohol use with measures that address the wider environment. This wider emphasis recognises that individuals may not be in a position to cease an unhealthy lifestyle, even if they want to, because of social and/or economic reasons (White & Maloney, 1990). Wolfgan (1997) identifies two quite separate approaches to prevention efforts at the environmental level. One approach concentrates on the physical and social factors that regulate exposure to alcohol - this is sometimes referred to the "social-control" approach (Howard, Ganikos, & Taylor, 1990). The other aims to mediate the risk that drinking poses to an individual (Wolfgan, 1997) - this is the "harm reduction" approach. An example of the first approach includes policies regarding the availability of alcohol; the circumstances under which it may be consumed; and the age at which people may buy alcohol, or drink in establishments where it is served. Examples of the second approach include measures to provide safer drinking environments; alternative forms of transport for drivers whose alcohol consumption has taken them over the legal blood alcohol limit; and devices in cars that prevent them being driven by someone whose blood alcohol level is above legal limits.

The social-control approach

Economic disincentives are one way of trying to influence alcohol consumption (Howard et al., 1990). Increasing taxation is one way of doing this; although it has generally been aimed at revenue-gathering rather than at prevention, it does have the effect of putting limits on the amount drunk (Howard et al., 1990). Studies have found links between increases in the price of alcoholic beverages and decreases in alcohol-related problems such as traffic fatalities and cirrhosis (Coate & Grossman, 1987; Cook, 1981). The experience of Australia suggests that pricing can have an important impact directly on consumption patterns. The Australian authorities have deliberately created a price differential between low and high, or full strength alcohol to encourage consumption of the former. The policy is credited with pushing consumption of low alcohol beer (in other words beers with less than 3.5% alcohol content by volume) to up to 17 percent.

Howard et al. (1990) identify other economic disincentives, this time directed against alcohol producers and servers - namely, the threat of liability suits. They suggest that these threats have played a part in softening industry attitudes towards alcohol warning labels, since the presence of a label forewarning consumers of dangers may absolve the producer of any liability for ensuing harm. The fear of legal action is also credited with playing a role in persuading the hospitality industry to take an interest in introducing server training programmes (McKnight, 1991) - in other words, programmes to train staff to recognise the signs that a drinker may cause problems, and to equip them to deal with that situation. New Zealand's latest alcohol legislation - the Sale of Liquor Act - has increased fines for servers of alcohol on the grounds that significant penalties may heighten awareness about host responsibility.

Whereas economic disincentives have never primarily been a prevention tool, considerable emphasis has been given to controls on the availability of alcohol as a means of cutting consumption, and hence reducing the problems alcohol can cause. A number of studies have found links between restrictions on the availability of alcoholic beverages and a reduction in alcohol problems (Howard et al., 1990), as well as on consumption (Edwards et al., 1994). The measures found to have this effect include changes in the minimum legal drinking age, restrictions on the number and type of places where alcohol can be sold and consumed, regulation of beverages according to their alcohol strength, and controls on the hours and days of sale (Edwards et al., 1994; Howard et al., 1990).

Considering studies on the impact of a minimum drinking age, Edwards et al. point out that recent rises in the minimum age in the United States have afforded an opportunity to study the impact. One set of studies looked for correlation between minimum drinking age and traffic crashes involving alcohol for the relevant age group. In their review of these studies, Edwards et al. say the general finding is that a lower age limit is associated with more such crashes, while an increased age was associated with a reduction. The same authors note that a review by the United States General Accounting Office (1987) concluded that there was "solid scientific evidence that increasing the minimum age for purchasing alcohol reduced the number of alcohol-involved traffic crashes for young people who are below 21 years old" (Edwards et al., 1994, p. 138). Similar studies in several Canadian states after the minimum age was lowered there found an increase in alcohol-related crashes among the young (Bako, McKenzie, & Smith, 1976; Schmidt & Kornaczewski, 1975;

Shattuck & Whitehead, 1976; Whitehead et al., 1975; Williams, Rich, Zador, & Robertson, 1975).

As regards consumption, Edwards and colleagues (1994) cite two studies only - one conducted in the United States and Canada (O'Malley & Wagenaar, 1991), and the other restricted to Toronto in Canada (Smart & Fejer, 1975; Smart & White, 1972). In the former study, O'Malley and Wagenaar found lower alcohol consumption in the long term (in other words lasting into the early 20s) among young people in areas where the legal age limit had been raised by at least one year. In the latter study, a series of surveys were done among students at Toronto high schools before, during, and after the lowering of the drinking age from 21 to 18 in 1971. The proportion of students reporting using alcohol at least once showed an increase both before and after the age change (1970-1972), but the increase between 1968 and 1970 was even larger (Smart & Fejer, 1975). The law was also found to have increased the frequency of alcohol consumption, but not the quantity drunk on any one occasion (Smart & White, 1972). The Toronto study had no control group.

Edwards et al. (1994) looked to studies of the impact of industrial strike action by retail and production workers in the liquor industry for evidence as to the impact that reducing the supply of alcohol has on drinking and alcohol-related problems. For example, they cite a study by Mäkelä (1980) of the impact of a strike in Finland in 1972 which closed retail stores for 5 weeks. Using observational, survey, and statistical data, Mäkelä found that overall consumption of alcohol decreased by about one-third, arrests for public drunkenness halved, drink driving arrests fell between 10 and 15 percent, and assault and battery arrests were down by around 25 percent. Similar consumption falls were noted in a study during another strike in Finland in 1985 (Österberg & Säilä, 1991).

Edwards et al. (1994) also relate the experience in Poland during the mass strikes and demonstrations that accompanied the challenge to the Communist authorities in 1980 as another illustration of the impact availability can have on consumption. In response to public criticism, the Polish authorities reduced the number of retail vodka outlets, cut back on the production of potatoes - an ingredient of vodka - and reduced production of vodka itself. Prices rose as a result of the decrease in production. The result of this was a drop of 24 percent in consumption, a reduction in drink-driving arrests of 40 percent, and a decrease of 10 percent in the number of traffic crashes that were alcohol-related (Morawski & Wald, n.d.).

Edwards et al. point, however, to the experience in the USSR in 1985, when the government of the time introduced initiatives to try to reduce consumption of vodka and low-quality high-alcohol wines in favour of beer and high-quality wines. The move had some unfortunate consequences. A black market in illegal alcohol flourished and there was a sudden increase in deaths as a result of consumption of the illicit supplies. The move did have some health benefits as well, with overall mortality declining, and life expectancy for males increasing. On the other hand, research by Gorman, Labouvie, Speer, and Subaiya (1998) suggests that the role of density of liquor outlets in alcohol problems should not be overstated. Using New Jersey police statistics (New Jersey Division of State Police, 1991-96), the researchers found no association between the rate of violence and the density of alcohol outlets, even though alcohol was involved in between three and four out of every ten domestic violence offences.

Restrictions on the hours and days on which alcohol may be sold are another way of controlling availability. Again, Edwards et al. (1994) cite studies that track the impact of changes in opening hours in Australia (Smith, 1987; Smith, 1988a, 1988b, 1988c), and in Scotland (Bruce, 1980). These, they conclude, have some methodological problems, but seem to "present at least prescriptive evidence for the impact of these changes upon a number of alcohol problems" (Edwards et al., 1994, p. 137). Studies in Sweden (Olsson & Wikström, 1982) and in Norway (Nordlund, 1985) cited by Edwards et al. show, however, that while there were declines in alcohol-related problems, there appeared to be no impact on overall consumption.

The recent experience of both Australia and New Zealand is also worth recording in any discussion on links between availability and consumption. Both countries have seen declining per capita consumption of alcohol during the past 15 years or so, despite an increase in the opening hours and numbers of drinking establishments. In New Zealand, per capita consumption dropped from 9.6 litres of absolute alcohol in 1980 to 7.0 litres in 1995. The Australian figures for the same period show a drop from 9.6 litres to 7.6 litres (Stewart, 1997). Economic recession and alcohol pricing policies are deemed to be the key factors in the drop in New Zealand consumption (Zhang & Casswell, unpublished). Respondents surveyed by Wyllie, Zhang, and Casswell (1993) cited having less money, not wanting to drink and drive, concerns about health and fitness, and greater acceptance that it was appropriate to drink less as reasons for reducing consumption. In the case of

Australia, the impact of random breath testing, lowering the allowable blood alcohol level for drivers, introduction of low alcohol beers, indexation of beer prices, more early screening and minimum intervention for alcohol-related problems, and public health campaigns are seen as encouraging safer responsible drinking (Hawks & Lenton, 1995). In these cases, other factors appear to be providing a counterbalance to the greater availability of alcohol (Stewart, 1997).

Another strategy for trying to moderate consumption focuses on training those serving the alcohol to recognise the cues that suggest a customer has had too much to drink, and to refuse to serve alcoholic drinks to such people (Howard et al., 1990). This approach is considered to show promise (Howard et al., 1990), and is a popular policy in North America, Australia, the Netherlands (Edwards et al., 1994). In New Zealand, such a programme - known as Host Responsibility - was launched in 1991 (Wyllie, Holibar, & Tunks, 1995). A Maori equivalent, known as Manaaki Tangata, was introduced in 1994. Reviewing the literature on server interventions, Edwards et al. conclude that the research shows that changes in server behaviour can result in differences in the blood alcohol counts (BAC) of those leaving licensed premises, and hence their risk of being involved in traffic crashes or other alcohol-related problems. Edwards et al. point, however, to some mixed results concerning the efficacy of server education. McKnight (1988) studied pilot projects in two U.S. states - Michigan and Louisiana. While he found a positive impact in Michigan following server training, the Louisiana programme had no effect. Edwards et al. (1994) cite later studies (Saltz, 1988; Saltz & Hennessy, 1990a, 1990b) that suggest that this approach is most effective when it is coupled with a change in the serving sales practices of the licensed establishments, and when training is also given to the managers of the outlets. The importance of training managers in host responsibility is also stressed in a New Zealand study (Baker, Barwell, Lowe, Murphy, Murray, O'Neill, Pilbrow, Rowe, Stansfield, & Speedy, unpublished), on the grounds that "attitudes and practices at higher levels filter down to the barstaff population". Another New Zealand study of the host responsibility programme (Wyllie, Holibar, & Tunks, 1995) found differences between the success of the programme depending on the nature of the liquor outlet. Pubs, taverns, and chartered clubs were found to be adopting the programme more successfully than sports clubs and nightclubs. The researchers conclude that lack of training may be the key, especially in the case of sports clubs, which generally rely on a big pool of volunteers for their serving staff,

making training difficult. An emphasis on making money in any licensed establishment was also identified as a barrier to the success of the programme (Wyllie, Holibar, & Tunks, 1995). Overall, however, the evaluations as the programme proceeds have found that only a limited number of managers felt host responsibility had not helped them. According to Wyllie and Holibar (1984), almost two-thirds (63%) of managers surveyed mentioned "some sort of positive response from patrons", and about the same proportion (64%) felt there had been "some sort of positive change in the attitudes of their patrons to host responsibility and intoxication issues" over the previous twelve months (p. 4).

Finally, while acknowledging that the research "demonstrates the effectiveness" of these various environmental measures aimed at influencing access to alcohol, Edwards et al. (1994) recommend that such measures should be viewed as "a means to a policy end", rather than as "restrictiveness for restriction's sake" (p. 207). Nor, they recommend, should any such measures already in place be "dismantled piecemeal because political sentiment turns against restrictiveness, with the reasons for such measures having been introduced in the first place forgotten" (Edwards et al., 1994, pp. 207-208).

Harm reduction

The concept of harm reduction has its genesis in public health efforts in the 1980s to stop the spread of the virus that can lead to AIDS, HIV, among intravenous drug users through needle-sharing (Riley, 1993; Strang & Stimson, 1990). Against a background of zero tolerance to illicit drug use, a group of public health specialists decided that a new approach needed to be taken if the AIDS threat was to be met. They developed a number of measures to reduce the spread of HIV among this high-risk group, including a programme to allow drug users to exchange old needles and syringes for new ones, along with cleaning kits for needles. This approach of minimising the harmful effects of drug-taking, rather than eliminating drug use, became known as "harm-reduction" or "harm-minimisation" (Single, 1996). This approach has now spread from AIDS prevention to substance use and abuse programmes, and has, for example, been the basis for government alcohol and other drug strategies in a number of countries in the 1990s, among them, Australia, New Zealand, Canada and Britain - all nations where alcohol is a leading cause of drug abuse problems.

Single (1996) suggests that the trend towards using this approach to tackle the problems caused by alcohol is due to several factors. First, he says, is the declining political support for controls on alcohol availability in many parts of the world. This is due to the fact that alcohol consumption has fallen in many countries; the lifting of international trade barriers is also playing a part. The second factor cited by Single as reinforcing the trend towards harm reduction in the alcohol field is research suggesting that it may be more efficient to focus on heavy drinking occasions rather than on the level of consumption. The same author cites research in Australia (Stockwell, Hawks, Lang, & Rydon, 1994), Canada (Single & Wortley, 1993) and the United States (Midanik, Tam, Greenfield, & Caetano, 1994), in which the level of consumption and the number of heavy-drinking occasions were related to various indexes of alcohol problems. The research "consistently found that the number of heavy-drinking occasions more strongly predicted drinking problems than consumption level" (Single, 1996, p. 242). He cites other research (Single, Brewster, MacNeil, Hatcher, & Trainor, 1995) carried out in Canada that found higher rates of alcohol problems among drinkers whose overall alcohol consumption was not high, but who drank immoderately (defined as five or more drinks in a row) on seven or more occasions per year, than among those whose total consumption was higher, but who rarely, or never, drank immoderately. Single (1996) also suggests that the "harm reduction" approach will gain further impetus as a result of new evidence regarding the potential benefits of moderate alcohol use (see also Chapter 2).

The message conveyed by the harm reduction approach is "avoid problems when you drink," which Single (1996) argues is perfectly compatible with current messages about alcohol: "Drinking less is better." The harm reduction strategies used cover a wide range. Single (1996) gives the following examples:

- special glassware used in pubs in Scotland - when the glassware is broken it shatters into fine particles and so cannot be used as a weapon if a fight develops (Plant, Single, & Stockwell, 1996);
- adaptations to the physical structure and layout of drinking establishments - furniture may be padded to prevent injury and space is compartmentalised to minimise harm in the case of a fight;
- Quebec's "Nez Rouge" (Red Nose) programme - this community-based initiative provides two drivers (one for the drinker and one for their car) for

anyone who has had too much to drink at a party or licensed establishment (Single & Storm, 1985);

- free public transport - this is provided in a number of U.S. cities on New Year's Eve and other festive occasions when heavy drinking may take place;
- substitution of less intoxicating or damaging beverages - low beverage beers, wines, and spirits are promoted in many countries; and
- server training programmes.

In New Zealand, harm reduction drives the country's alcohol legislation, the Sale of Liquor Act, with its requirements to provide food and non-alcohol beverages in licensed premises (Stewart, 1997). This has been further reinforced by campaigns such as the server intervention programme, Host Responsibility, mentioned above. That promotes non- and low-alcohol drinks, alternative transport, not serving intoxicated patrons or minors, and codes of practice for the industry. The campaign is not confined to licensed establishments, but has also been extended to include those supplying alcohol at parties and other private gatherings (Stewart, 1997).

Another example of harm reduction given by Single (1996) comes from the Canadian province of Alberta. The Liquor Control Board in the province introduced special early opening hours for a store in downtown Edmonton to discourage those with serious alcohol-dependency problems from consuming potentially lethal non-beverage alcohol such as shoe polish. In this case, the measure was not aimed at reducing consumption level, but directed instead towards reducing the harm that would result from drinking dangerous substitutes for alcoholic beverages. Single (1996) also gives, as an example of the harm reduction approach, alcohol treatment programmes that use controlled drinking, as opposed to abstinence, for those whose alcohol use is causing concern, but is not at the level of serious dependency.

A harm reduction approach is to be seen in the British city of Liverpool, where the Liverpool City Alcohol Working Party is developing a strategy for safer drinking environments to reduce alcohol-related violence. The emphasis is on reducing injury from glass when violent situations erupt. As well as an information campaign using both mass media, and "small media" such as posters, postcards, and beer mats, the campaign will also use more practical strategies. Licensed premises will be encouraged to sell alcohol in shatterproof glasses, to discourage the removal of bottles and glasses from their premises, and to clear away bottles and glasses when

they are empty. Discarded bottles and glasses will also be cleared from the street to ensure that they are not used should violence erupt (K. Sheppard, personal communication, January 16, 1999).

The question is, do harm reduction strategies work? Single (1996) reports that evaluation studies have shown that harm reduction programmes in the field of AIDS prevention have been successful in reducing the spread of AIDS and other diseases without raising levels of drug use among the general population (Buning, 1990; Donoghoe, Stimson, Dolan, & Alldritt, 1989; Riley, 1993; Stimson, 1989; Watters et al., 1990; Wodak, 1990). Single (1996), however, cites no evaluations on the impact of harm reduction policies on problems associated with alcohol use, reflecting perhaps harm reduction's relative infancy as a strategy. The Liverpool City programme envisages measuring the impact of its project by analysing data from the following areas:

- awareness and recall of the products;
- comparison of the percentage these injuries represented in hospital admissions (currently 12.4% of all admissions are alcohol-related);
- comparison of Accident and Emergency admissions over the past three years; and
- levels of awareness of the campaign among the target group (young people, especially males, aged 16-25 are identified as the primary target group, while licencees and door staff are the secondary target).

It is also intended to try to ascertain the contribution of the different components of the campaign to its credibility and effectiveness among the target group (K. Sheppard, personal communication, January 16, 1999).

Knowledge and attitude are one way of measuring effectiveness of harm reduction approaches such as server intervention programmes. As Wyllie, Holibar and Tunks (1995) warn, however, in their review of New Zealand's Host Responsibility programme, the question remains as to whether or not improvements in management and staff awareness and changing attitudes among patrons and private hosts translate into changes in behaviour.

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Chapter 8: Drink-Driving

Concern at the large proportion of traffic fatalities and injuries that involve alcohol has focused particular attention on this area of alcohol use and abuse. As a result, a wide range of strategies has been used around the world to try to reduce the prevalence of driving while under the influence of alcohol (DUI). Laws have been introduced to prevent drivers legally taking the wheel when their blood alcohol count (BAC) is above a certain level, while in cases of repeat offending, the driver's licence may be revoked, or his or her vehicle impounded. Special enforcement measures such as checkpoints and breathalysers have been put in place to back up those laws. In other measures, mass interventions and community-based programmes have been introduced to educate the public about the dangers, and legal consequences, of driving while above the legal BAC level, and treatment and rehabilitation programmes have been introduced for offenders.

Media advocacy has also been a tool in the campaigns against drinking and driving. Activist grassroots organisations such as Mothers Against Drunk Driving (MADD) and Students Against Drunk Driving (SADD), which were set up in the early 1980s, are credited with playing a key role in raising public awareness and changing attitudes, leading to a dramatic turnaround in the social climate regarding drinking and driving (Stewart, Voas, & Fell, 1995). These same organisations are also credited with influencing legislators to bring in stricter drink-driving laws. In the United States, for example, more than 2,000 state laws related to alcohol-impaired driving have been introduced since 1982, and MADD is regarded as an important force behind many of the laws (Hingson, 1996).

The decline in alcohol fatalities

The question "has all the effort poured into strategies to prevent drinking and driving had any effect?" appears to be answered by marked declines in the number of alcohol-related traffic fatalities in some countries over recent years. In the United States in 1982, the year the transport authorities first began investigating the proportion of crashes involving alcohol, traffic fatalities in which alcohol was a factor represented just over 57 percent of the total number of road deaths. By 1995, that figure had fallen to around 41 percent (Hingson, 1996) - a decline of around 26 percent (Wolfgan, 1997). By 1997, the alcohol-related road toll had fallen further

still, to just over 39 percent of road fatalities ("Drunk-driving Deaths," 1998). The greatest declines have been among young people (Hingson, 1996; Wolfgan, 1997). Wolfgan points out that between 1977 and 1993 the number of drivers aged between 16 and 24 killed on U.S. roads in alcohol-related crashes decreased by 40 percent, and attributes the early stages of the decline to laws adopted in that country in 1977 which increased the minimum legal drinking age to 21. As Hingson makes clear, there have been a number of other traffic safety measures introduced since 1982 that were not alcohol-related and which could have had an impact on U.S. road deaths. These include laws requiring seatbelt use and child restraints. This appears not to be the case, however, since, over the period 1982 to 1995, road fatalities that did not involve alcohol increased by 28 percent (Hingson, 1996).

New Zealand is another country where fatal crashes and serious injury accidents involving alcohol have been showing a drop at a time when the authorities have been putting a major effort into combating drink driving. Since 1995, the traffic authorities have mounted a major television advertising campaign aimed at drinking and driving, along with other factors affecting road safety, such as speeding with a major advertising campaign on television. At their peak, in 1987, road toll statistics showed there were 266 fatal road crashes involved alcohol - representing 40.5 percent of all fatal crashes. In the case of injury crashes involving alcohol, the peak was in 1990, when there were 2,716 such crashes - 22.3 percent of the total injury crashes. The figures showed minor falls from then until the early 1990s, but registered a big drop in both categories between 1992 and 1993, before the campaign to combat drinking and driving began. Fatal accidents involving alcohol fell from 221 (or 40.8%) in 1992 to 185 (or 35.8%) in 1993 while in the case of injury accidents involving alcohol, the fall was from 2282 (or 20.6%) in 1992 to 1906 (or 18.2%) the following year. By 1998 the figures were down to 118 fatal crashes involving alcohol (27.1%) and 1347 injury accidents where alcohol was a factor (16.2%) (Land Transport Safety Authority, 1999).

The role of drink driving strategies

In New Zealand, the Land Transport Safety Authority (1999) credits its road safety package campaign with bringing about the "dramatic" changes in the road toll, and in public attitudes towards drinking and driving, in the period 1995 to 1997. It cites a fall in the percentage of late night drivers who were over the legal alcohol limit

(from 2.5% to 2.1%), a drop in the percentage of male drivers admitting to driving while drunk (down 2% to 38%), and a decrease in the number of those who believed there was only a low risk of being caught drink-driving (down 6% to 44%). The statistics cited above, however, make clear that the road toll as a result of drinking and driving was decreasing before the campaign began (Macpherson & Lewis, 1997). As well, as the Authority admits, other factors have also played their role - including improved roads, better safety standards in cars, and public relations initiatives by other groups, including local government, and central government agencies. It is, then, not an easy matter to come to firm conclusions about the effectiveness, or not, of programmes aimed at combating drinking and driving.

Stewart et al. (1995) specifically looked at the role programmes aimed at reducing alcohol-impaired driving may have played in the decline in the U.S. alcohol-related road death toll. These authors acknowledge how difficult it is to pinpoint cause and effect, given the various factors that can have an influence on road fatality statistics. These include the number of miles driven, trends in alcohol consumption, economic conditions (increased drinking and driving are associated with a strong economy), and the number of licensed drivers (up 14 percent between 1982 and 1992) and registered vehicles on the road (up 17 percent for the same period) (Stewart et al., 1995, p. 518). They conclude, however, that "neither the amount of change in drinking or in driving per se, nor the fluctuating economic conditions, appear to account for the very large reduction observed over the last decade" (p. 518). While admitting that the factors contributing to the change are likely to be "complex and interconnected," thus ruling out an exact apportioning of impact, the authors suggest that three factors have contributed to the decline. These are:

- deterrence, including enforcement practices, administrative licence revocation, and lower BAC limits;
- raising the drinking age to 21; and
- increased public awareness and activism (Stewart et al., 1995, p. 518).

The same authors further observe that in the case of deterrence, vigorous and effective enforcement is seen as an important factor in reducing drinking and driving. They cite a study (Ross, 1992) that found communities which used checkpoints to test drivers' BACs experienced significant decreases in alcohol-related traffic crashes, suggesting that checkpoints, because they are so visible, may highlight the "increased vigour and conspicuousness of enforcement efforts" (Stewart et al., 1995, p. 519).

There is other support for this approach. Hingson (1996) cites the experience of the Australian states of Victoria and New South Wales, where random breath testing was introduced on a massive scale, resulting in as many as one driver in three being stopped and breathalysed in any one year. The result was an immediate 37 percent drop in alcohol-related fatal crashes, and a sustained 24 percent decrease over the next five years (Hingson, 1996).

Emphasis on intensified enforcement was also the approach used in the drinking and driving component of a pilot intervention known as the Community Trials Project in three communities in the United States - one in Northern California, one in Southern California, and one in South Carolina. The project aimed to deter drivers from drinking by increasing their perception of the risk of being arrested, and the campaign used a variety of measures, including media advocacy, extra police officer hours for enforcement, greater use of breathalysers, increased training for police, and monthly checkpoints. Other parts of the programme focused on alcohol outlets, providing server training, local zoning to reduce the number of alcohol outlets, and measures to combat underage alcohol sales. An evaluation found that alcohol-related traffic crashes were reduced by around 10 percent in comparison with control communities. Sales of alcohol to minors were also cut by half (Voas, Holder, & Gruenewald, 1997). Studies such as these, Hingson (1996) concludes, demonstrate the potential for community interventions to "change social norms about unacceptable drinking behaviour before driving" (p. 225).

The community approach was used in the New Zealand city of Christchurch. In a Community Alcohol Action Project (CAAP) known as "Lifesaver" various individuals, groups, organisations and institutions that might normally stand at opposing sides on the debate over drinking and driving were brought together to implement the campaign. It consisted of host responsibility programmes, community education, special promotions at community events, television programmes and general news coverage news media coverage, as well as a designated driver scheme supported by local liquor outlets, which provided free soft drinks to the driver. The campaign was accompanied by a 'blitz' by local police on drinking and driving. An evaluation found that police statistics for drinking and driving showed a decline during the campaign, although the researchers caution that it is difficult to extrapolate the factors that produced this result. They conclude that the improvement was

"probably the result of a number of factors interacting with each other" (Norton & Kirk, 1993, p. 63).

While visible enforcement is seen as essential if laws to deter drinking and driving are to be effective, Hingson identifies another barrier - that of ensuring that drivers are aware of the law. He reports on studies in California and Massachusetts which found that between 45 and 50 percent of young drivers were unaware of the drink-driving laws that applied to them. Hingson (1996) further cites a study carried out in the U.S. state of Maryland (Blomberg, 1992) to ascertain the level of awareness of the state's zero-tolerance law, which made it illegal for drivers under 21 to drive after drinking any alcohol. The introduction of the law was accompanied by public service announcements. The study found that there was a one-third greater decline in alcohol-involved crashes among drivers receiving intensive education than among those who received no intensive education (Hingson, 1996). This is a point taken up by Clayton (1997), who points out that there is some evidence to suggest that the publicity is as important as random breath testing itself in reducing drink driving (p. viii).

Mass media campaigns

Mass media advertising has been commonly used in the campaign to reduce drinking and driving. Span and Saffron (1995) researched the contribution of this approach in the drink-driving prevention strategies employed by the authorities in the Australian state of New South Wales. These strategies include a range of initiatives, such as server programmes in hotels and clubs (see Chapter 7), and the encouragement of alternative transport. The focus of the strategy has, however, been on random breath testing (RBT), and it is here that mass media advertising has been seen as an important component. Once again, the study stresses the importance of backing up publicity about drinking and driving, as well as other road safety messages, with enforcement. It is generally accepted by researchers that New Zealand's campaign of random breath testing, based on the Australian model, was less successful because traffic policing was not sufficiently visible (Hayes, Moloney, & Lester, 1996). On a similar theme, Macpherson & Lewis (1997), in their critique of the impact of the first year of New Zealand's television road safety campaign remark that they found little evidence to suggest that the road safety or drink-drive television advertising of itself made any change to drink-driving behaviour. They further

suggested that the fact that the campaign was not strongly linked to drink-driving enforcement may have reduced its effectiveness. What is more, Clayton (1997) adds that if initiatives are to continue to be effective over the long-term they must be backed up by publicity or enforcement. This point is echoed by Norton and Kirk (1993), who point out that public awareness of an issue can decrease during the course of a campaign unless it is kept in the public eye (p. 50).

As noted in the earlier chapter on mass interventions, the Span and Saffron (1995) study found problems with advertisements that used graphic depictions of crashes and the consequences - in other words, publicity that used fear appeals. Furthermore, the authors report that in one study to assess the impact of such material, "a number of subjects were unable to finish the research, and many were unable to comment on the advertisements for some time after viewing" (Span & Saffron, 1995, p. 548). They therefore conclude that "the processing of messages may be impaired by graphic crash/consequence scenes" (p. 548). Discussing message content, Span and Saffron stress, in line with other mass communications research, that messages need to be clear, concrete, and relevant to the experiences of drink-drivers. The messages, they add, need to focus on behaviour, reactions, and consequences from the driver's point of view. Furthermore, they say that while television advertising reaches a wide audience and is more memorable, radio advertising can be effective as a supporting medium. They suggest that the absence of a visual image can be an advantage, since there is less distraction from the main message. Radio also offers the opportunity to reach drivers "closer to the potential drink-driving situation" - in other words, while they are in their car (Span & Saffron, 1995, p. 549).

The designated driver scheme

One high-profile approach to reducing the number of drunk drivers on the roads has been what is known as the "designated driver" programme. This approach originated in Nordic countries (Winsten, 1995), and was introduced in the U.S. in 1988 by the Harvard Alcohol Project. Winsten, who is the Director of the Project, describes the designated driver movement as offering several important strengths.

- It promotes a "new social norm that the driver does not drink any alcohol, thereby fostering a social environment conducive to the prevention of alcohol-related traffic crashes."

- It goes beyond the dictum, "Don't drink and drive," and offers a positive alternative.
- It lends social legitimacy to the non-drinking role.
- It encourages people to plan ahead for transportation if they intend to drink, getting away from "the risky idea of gauging 'when to say when' after one's judgement has been impaired by alcohol."
- It asks for only a modest shift in behaviour, but that slight shift can help prevent hundreds of thousands of injuries, and tens of thousands of deaths, each year.
- It is a simple, straightforward concept - "If you drink, don't drive" (Winsten, 1995, pp. 615-616).

The designated driver approach has, nevertheless, attracted criticism. DeJong and Wallack (1992) argue that while this strategy has "a commonsense quality that is appealing" (p. 430), the uncritical attention it has attracted in the news media deflects attention from other alcohol-related problems that account for the vast majority of deaths and injuries associated with alcohol use. They also argue that it has distracted public health advocates and policymakers from the wider social, environmental, and economic factors that influence alcohol consumption. As well, the same authors, along with a number of other critics, argue that the presence of a designated driver encourages companions to drink more than they normally would (Atkin, 1993; DeJong & Wallack, 1992). Manahi (1998) is particularly critical of the scheme, suggesting that it forces educators and parents "into a terrible and confusing loss of credibility" (p. 5). Young people hear its pro-drinking message accurately, she argues, and that is: "it is all right to get drunk as you like - so long as someone else drives" (p. 5). Wolfgan (1997) notes, in discussing the designated driver strategy, that one U.S. evaluation found that young people who agreed to appoint designated drivers often forgot to do so, and that when they did, the designated drivers typically drank alcohol, although less than they usually would.

Winsten (1995) challenges these criticisms, arguing that the programme promotes a new set of social norms in which drinking and driving is seen as deviant, rather than normative, behaviour. The result, he says, is pressure from the public for extra tax dollars to go towards other strategies, such as enforcement and breath testing, and a message to judges and juries to take drunk driving cases "more

seriously" (p. 620). Winsten also challenges the argument that the designated driver campaign has deflected attention from other alcohol-related problems, suggesting that newspaper coverage of other alcohol abuse topics has remained high. Answering the criticism that the designated driver movement encourages increased drinking among those who are not going to be behind the wheel, Winsten points to U.S. statistics showing no increase in abusive drinking among young people since the late 1980s, when the programme was introduced.

Waagenar (1992), commenting on the DeJong and Wallack paper, suggests the key factors in whether or not designated driver schemes will work are, first, how the concept is implemented, and second, who regularly uses designated drivers. It may be, he suggests, that the scheme appeals to those at low to moderate risk of driving while impaired by alcohol, with those at the highest risk unaffected by the strategy. Simons-Morton and Cummings (1997) evaluated the impact of a designated driver programme implemented in conjunction with a responsible server programme (see also Chapter 7) in the city of Houston in Texas on the grounds that point of purchase interventions by alcohol servers provided a promising approach to preventing drinking and driving. Servers were trained in their role in preventing drunk driving, buttons promoting their outlet's participation in a designated driver scheme were distributed to them to wear if they chose, and in the case of one establishment, servers routinely talked about the designated driver programme to patrons. The research found no correlation between the number of designated drivers and the level of server promotion of the campaign, leading Simons-Morton and Cummings to conclude that "designated driver and responsible server programmes by themselves may not have a substantial impact on consumer behaviour" (p. 340). As a result, they suggest that, to work, such programmes need to be part of a much wider strategy that might include:

- intensive, skill-oriented server training;
- increased management support for server responsibility programmes;
- increased consumer demand for designated driver programmes;
- complementary counter measures directed at drinking and driving (Simons-Morton & Cummings, 1997, p.340-341).

The designated driver approach has been tried elsewhere as well. Bagnall and Fossey (1996) report that, when it was implemented in one part of Scotland, free soft drinks were offered by licensed premises participating in the scheme to any driver

with two or more passengers. At the time Bagnall and Fossey were writing, the project had not been evaluated. The two authors suggest, however, that the provision of free soft drinks should help to "counteract negative attitudes often attributed to teenagers concerning the purchase of non-alcoholic drinks in licensed premises." It also, they conclude, "facilitates the skills and decision-making required to be a safe driver by making the healthy choice the easy choice" (p. 258). As mentioned above, it is also an approach that has been incorporated into wider community programmes such as Christchurch's 'Lifesaver' campaign. In this case, however, a designated driver was just one of the options used by those surveyed during the campaign. A third used a designated driver for their night out drinking, but nearly as many (30%) limited their drinks. Other strategies were to not drink any alcohol at all (17%), use a taxi (15%), ensure they had something to eat as they drank (12%) or ask someone to come and pick them up (12%). Two percent reported not doing anything to avoid driving after an evening drinking (Norton & Kirk, 1993).

Treatment and rehabilitation

The education, treatment, and rehabilitation of those convicted of driving while intoxicated (DUI) is another area of emphasis. Education programmes, in line with other education efforts in this area, show limited success in changing behaviour when they are used on their own (Howard, Ganikos, & Taylor, 1990). On the other hand, research exists (Steward & Ellingstad, 1988) that suggests education interventions may be "useful supplements" when used with deterrents, such as licence revocation (Howard et al., 1990, p. 7). In fact, Clayton (1997) cites licence suspension as "the most effective sanction against the drink driving offender", especially when it is imposed immediately after the offence has been committed. He concedes, however, that it is not totally effective in stopping offenders from driving.

The effectiveness of a combination of approaches is also shown up by a meta-analysis cited by Hingson (1996). The review, by Wells-Parker, Bangert-Drowns, McMillen, & Williams (1995), indicates that treatments which combined punishment, education, and therapy, along with follow-up monitoring and aftercare, were more effective for first-time and repeat offenders than any single approach. The lesson Wells-Parker et al. (1995) draw is that treatment alone never substitutes for sanctions or remedies, but nor do remedies and sanctions substitute for treatment. The review also found that weekend intervention programmes to evaluate alcohol and other drug

abuse, and create an individualised treatment programme, resulted in lower rates of re-offending than did a period in jail, a suspended sentence, or a fine.

The risk of recidivism associated with a jail sentence for drink driving offences is also backed up by other research cited by Hingson (1996). A United States review done jointly for the National Highway Traffic Safety Administration (NHTSA) and the National Institute on Alcohol Abuse and Alcoholism (NIAAA) (1996) found only one of 80 studies that showed any reduction in re-offending as a result of a jail sentence for DUI offences. This single study showed what Hingson (p. 223) describes as "reasonably convincing evidence" of a three-year reduction for first-time offenders in the state of Tennessee who received mandatory two-day jail sentences. In one study, long periods in prison were associated with higher recidivism (Mann, Vingilis, Gavin, Adlas, & Anglin, 1991).

An article in the *Southland Times* (Gerken, 1998) highlights another aspect of this area of prevention. The article followed a fatality in which a seven-year-old boy in the town of Gore had been hit and killed by a car carrying seven intoxicated teenagers[3]. It quoted a local police officer as saying that rather than alcohol and drink-drive campaigns not getting through, there was a sector of young people who "chose to ignore it [the messages]." It is a problem group, Clayton (1997) comments, that no jurisidiction has yet succeeded in effectively dealing with. Sweedler (1995), in a discussion of how to deal with these persistent drinking drivers, speaks of a group "who do not appear to be deterred by the threat of social disapproval or legal punishment" (p. 859). To deal with them, he suggests a range of enforcement strategies and sanctions, including automatically revoking the licences of first-time and repeat offenders, ensuring that enforcement and justice agencies have information about all offenders to accurately identify and deal with repeat offenders, and the confiscation of the vehicles of those who drive while their licence is suspended for DUI offences. Sweedler also emphasises that drivers arrested for drinking and driving should not be able to escape sanctions such as suspension from driving by entering a treatment or education programme. Instead, any such programmes should be in addition to punishment.

Finally, Marshall (1995) discusses drink-driving rehabilitation programmes offered in prisons in the Australian state of Victoria, and whether or not these are

[3] The ALAC website (http://www.alcohol.org.nz - Alcohol & its affects) carries a Quicktime audio presentation of the effects of this incidence on the lives of those affected - including the dead boy's parents, the teenage owner of the car involved, and the woman who supplied the youths with alcohol.

successful in allowing those who take them to regain their licence after release. Under Victorian state law, those convicted of drinking and driving must undertake a series of compulsory steps to get back their licences, including an assessment of alcohol usage. Of the 33 prisoners studied who had taken the prison programme, 30 percent went on to regain their licences, whereas none of the control group of 21 was successful. Marshall (1995) points out that those who succeeded in getting their licence back were those who had a more stable lifestyle. The result, he emphasises, begs the question, "What is success?" He points out that 70 percent of those who took the drink-driving programmes failed to get their licences back, and he suggests that the challenge is to meet the needs of the "less successful" group - an option that would require "a more comprehensive approach to the issues of re-integration into society, of which the drink-drive programme would only be a part" (p. 797).

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Chapter 9: Workplace Programmes

The problems of alcohol in the workplace received little attention before the 1980s (Alcohol and the Workplace, 1995). Now, however, it is recognised that alcohol does have an impact, socially and economically, within the work setting. Furthermore, the workplace is now seen as offering great potential for reaching people with a drink problems, and those who have a potential problem (Alcohol and the Workplace, 1995).

Much of the literature in this field relates to the United States, where considerable publicity has recently been given to the impact of the abuse of drugs - including alcohol - on the economy. The economic loss in that country has been calculated at around $US140 bn. per year in lost productivity, product defects, thefts, absenteeism, health-care expenses, workers' compensation claims, and accidents (Oliver, 1994). Concern at the economic consequences of substance abuse has seen a big increase in the number of workplaces that have introduced substance abuse prevention programmes. Figures from the American Management Association (AMA), cited by McPheters (1995), show that half the Association's 7,000 corporate members were using drug awareness training, along with testing and counselling, in 1994 - well up on the 21 percent that had such programmes in place when AMA member companies were surveyed seven years earlier, in 1987. This is an area, however, that appears to be sensitive to overall economic conditions. Another AMA survey in 1995 showed that while drug testing was increasing, the percentage of AMA members running drug education programmes in the workplace had dropped to 47 percent ("Study: Companies Cut," 1995).

In the United Kingdom, it is estimated that up to 14 million working days are lost each year because of inappropriate drinking - representing between 3 to 5 percent of all absences. The monetary cost of absenteeism in 1992 was put at more than £1m., while alcohol is believed to be involved in 20 to 25 percent of all industrial accidents, and 60 percent of the fatal accidents in the sector (Alcohol and the Workplace, 1995). In Australia, 1988 figures put the economic impact of alcohol abuse there at $A6.03 bn., just below the most 'expensive' drug in terms of financial impact - tobacco - at $A6.84bn. It is pointed out, however, that statistics for the impact of alcohol use within the workplace are difficult to quantify (Alcohol and the Workplace, 1995). In New Zealand, for example, there has been lively debate over

the extent of the problem (Mackay, 1995). In 1994, a report by ESR (the Institute of Environmental Science and Research Ltd), using local data and extrapolations from Australian and United States research, suggested the annual cost to New Zealand of alcohol and drug abuse was $NZ1.5bn (Mackay, 1995). Local researchers in the field criticised the way the New Zealand data had been used, and ESR - which had developed a drug testing system for workplace use - was accused of "dressing up a marketing document as research" (Mackay, 1995, p. 25).

Alcohol use does, undoubtedly, have an impact socially and economically within the workplace. Among the problems identified are the fact that problem drinkers take between two and eight times as much sick leave as other employees, and may work at only 75 percent efficiency (Henderson, Hutchinson, & Davies, 1996). For an organisation, that can translate through to loss of productivity through lateness and absenteeism, poor performance, safety concerns, and adverse effects on other employees, the company image, and customer relations (Alcohol and the Workplace, 1995).

Research has shown that some occupations have higher rates of problem drinking than others. Publicans and barstaff, doctors and seafarers have higher rates of deaths from alcohol-related causes than average (Alcohol Concern, 1995). Other occupations where drinking is found to be heavier are the arts and media (Henderson, Hutchinson, & Davies, 1996). Position within the workforce can also be a factor. According to U. K. findings (Office for National Statistics, 1998), men on low incomes (less than £100 a week) and those in the higher income bracket (earning more than £500) appear to be slightly more vulnerable to developing alcohol problems. Women working full-time in professional or managerial posts are, according to the British statistics, most likely to develop problems (Office for National Statistics, 1998).

A number of occupational risk factors have been identified that could contribute to alcohol problems. The main one is occupational stress (Crum, Mutaner, & Eaton, 1995), a condition that is often the result of major changes in the workplace, be it coping with new technologies or with new structures within an organisation. Occupational stress can also be worse in times of economic recession, when workers may feel insecure about their job, or feel pressured by the need for greater accountability. Unacceptable workloads, monotony, a poor working environment, discrimination, and harassment are identified as other sources of stress (Alcohol and

the Workplace, 1995). In these cases, good management practices are seen as being the key to combating alcohol problems within the workforce.

In 1995, the International Labour Organisation finalised a Code of Practice for the management of drug and alcohol problems in the workplace. The role of good management practices is recognised in the code, which includes a clause outlining that employers have a duty to take preventive or remedial action where certain job situations are seen to be contributing to alcohol- and drug-related problems. Among the other key points of the code are that:

- alcohol and drug problems should be considered health problems, and dealt with as such through counselling, treatment and rehabilitation;
- disciplinary action should only be taken as a last resort should a worker fail to co-operate fully with treatment programmes;
- employers and workers, and their representatives, should be jointly involved in assessing the effects of alcohol and drug use in the workplace, and in drawing up written policy for the organisation;
- policy should apply equally across the company, regardless of whether staff are from management or the wider workforce;
- information, education, and training programmes about alcohol and drugs should be undertaken to promote health and safety in the workplace, and should, where possible, be integrated into broad-based health programmes;
- confidentiality should be maintained except where legal or professional ethics principles are involved; and,
- workers who seek treatment and rehabilitation for alcohol or drug problems should not be discriminated against, and should enjoy normal job security, and the opportunity for transfer and advancement (Drug and Alcohol Problems in the Workplace, 1995).

The code also touches on the controversial issue of testing in the workplace for alcohol and drugs. It points out that any decision as to whether testing is fair and appropriate involves a series of moral, ethical and legal issues. As indicated earlier, testing for drugs has become increasingly popular in the United States, with over 80 percent of large listed companies there reported to be operating formal substance testing and screening programmes (Alcohol and the Workplace, 1995). The possibility of workplace testing or screening has also been raised at a high level in New Zealand. In 1994, the then Health Minister, Jenny Shipley raised the possibility

of workplace testing at a workshop on workplace substance abuse in 1994, using the ESR figures cited above as evidence that it was time to open serious debate on the whole question. The Minister acknowledged, however, that there were human rights and privacy issues that would have to be taken into account (Mackay, 1995). Others argue that before any policy decision is made to introduce drug testing in to the New Zealand workplace, more research is needed to ascertain whether drug and alcohol use pose a major problem in the workplace, and whether drug testing would be the answer (Thomas, 1997). Some researchers argue that drug testing on its own is not an effective way of achieving a drug-free workplace, and that it may in fact be counter-productive. Oliver (1994) says resorting to such authoritarian measures as drug testing may lead to a drug "sub-culture" flourishing on a work site because employees in general will feel alienated, and will turn a blind eye to any substance use or abuse within their midst. Instead, Oliver, and other authors practising in the field, (McPheters, 1998) argue the case for enlisting the entire workforce in a training programme aimed at preventing drug and alcohol use and abuse. McPheters (1995) suggests that fellow employees are in a much better position to identify workmates who have a problem of substance abuse than "distant supervisors and senior management," and proposes training sessions in which employees can learn more about substance abuse in general, as well as how to identify and help a fellow employee they suspect has a problem (p. 44). Oliver (1994) emphasises that, to be a success, workplace programmes need to have the key people in the company involved, and suggests that a taskforce involving union leaders, influential supervisors, and respected employees will encourage others to take part. Where there is a case for introducing testing in the workplace (for example for drivers, pilots, or machinery operators), the policy should be drawn up in consultation with the workforce. It should also be seen as part of the occupation health policy of a company - in other words, it should be designed to prevent risks to colleagues from the actions of a worker under the influence of alcohol or other drugs (Health & Safety Executive, 1999?).

A company alcohol policy is seen as another key factor in tackling alcohol-related problems at work. It is recommended that any policy should include:

- a statement on why a policy is needed;
- a definition of what constitutes inappropriate drinking;
- details of how problem drinking is viewed, and how it will be deal with; and

- a statement on alcohol in a wider context, such as the availability of alcohol at social events (Alcohol and the Workplace, 1995).

It is worth noting, however, that any guidelines on how to deal with the use of alcohol in the work setting may need to take into account cultural factors, a point the ILO acknowledges (Drug and Alcohol Problems in the Workplace, 1995, p.3). While countries such as the U.K. and the U.S. have shown increasing interest in introducing policies, European countries have little in the way of regulation on consumption in the workplace. For example: Belgium bans only those alcoholic beverages that have an alcohol level over 6%; France bans the consumption or distribution of some alcoholic beverages in the workplace, but not beer, wine, and cider; and Italy bans the consumption of alcohol beverages in workplaces, but permits the consumption of "reasonable quantities" of beer or wine in work cafeterias at lunchtime (Fortium & Delmarcelle, 1995). This is seen as a reflection of "a wider social ambivalence about alcohol use and alcohol problems" in these countries (Alcohol and the Workplace, 1995, p. iii).

As far as the proven effectiveness of programmes is concerned, it appears, once again, that more research is required. Bagnall and Fossey (1996), in a review of alcohol education initiatives in Scotland, find no interventions that have been evaluated, despite the "relatively active" workplace alcohol education scene in that country. Roman and Blum (1996) also point out that considerably more research is needed to confirm "strong suggestive evidence" that workplace interventions can be effective (p. 136). These two authors reviewed 24 articles, published in peer-reviewed journals between 1970 and 1995, reporting on the impact of these programmes.

In common with other reviews in the field of alcohol education effectiveness, Roman and Blum note methodological weaknesses in the studies, especially the absence of replication. Despite these reservations, they comment that there is strongly suggestive evidence, and some conclusive evidence, of the effectiveness of these programmes when they include core components of the Employee Assistance Programme (EAP) model - that is, programmes that encourage sensitivity to behaviour change, and use self-referral and supervisory observation of performance to identify employees with problems. They say that these types of interventions are effective in rehabilitating employees with alcohol problems, as well as in affecting the attitudes of supervisors and employees in general for a reasonable period after the completion of training. They note, however, that none of the studies of interventions

offer any help in identifying what works in terms of programme effectiveness. They also comment on the absence of studies showing that these types of interventions do not work. Roman and Blum (1996) suggest this may be because the evaluations are generally done by researchers with a "professional or organisational vested interest" in the outcome (p. 148). Another possible reason is that most articles evaluating workplace alcohol programmes are published in journals aimed at practitioners, and it may be judged to be a waste of space to report on programmes that are ineffective (Roman & Blum, 1996).

The EAP approach of the workplace has also been adapted to the school community in order to provide alcohol and other drug abuse intervention and prevention services for students - known as the Student Assistance Programme or SAP. Such programmes are seen as having an important role, not just in tackling alcohol and drug abuse, but also in dealing with other behaviours such as truancy, absenteeism, classroom misconduct, and vandalism, which are linked to substance abuse (Manahi, 1998).

In the United States, the first of these programmes was introduced in six schools in Westchester County, New York, during the 1979-80 school year. The programme uses professional councillors to identify and reach "troubled children", in other words those who have a parent or parents who are substance users, or who may have been abusing alcohol or other drugs themselves (National Institute on Alcohol Abuse and Alcoholism, 1984). As in the EAP model, referrals are confidential, and students may themselves seek help, or a teacher or other member of the school staff may make a mandatory referral, in which case the parents are informed (National Institute on Alcohol Abuse and Alcoholism, 1984).

A number of factors are considered important requisites for a Student Assistance Programme is to work. The support of students at the school is seen as absolutely crucial if the SAP is to be effective, and the school - and its wider community - must be ready to discuss openly the issues of drug and alcohol abuse, and see a need for such a programme (National Institute on Alcohol Abuse and Alcoholism, 1984). Parental attitudes, on the other hand, are identified as one of the major hindrances to programme outcomes. They may lack the knowledge of where or how to refer their child, they may be disinterested, or deny that their child has a problem (Milgram, 1998). Lack of time during the school day has been identified as another barrier to any programme that tries to deal with the personal problems of

students, along with the fear of negative reactions from fellow students, and/or parents (Milgram, 1998). Manahi (1998) stresses that school need to be aware of their limitations in deciding whether or not to implement a programme, allowing energy and resources to be focused in key areas where the SAP can make a difference.

Finally, the crucial question again arises: how effective are Student Assistance Programmes? During the 1982-83 school year, the Westchester model was evaluated to assess its effectiveness in decreasing the quantity and frequency of alcohol and other drug use, as well as the impact it had had on the school attendance records of participating students. The study - using a self-report questionnaire before and after the programme - found that 63 percent of those who reported use of alcohol in the 30 days prior to the pre-test, did not on the post-test. Furthermore, 93.9 percent of those who reported using marijuana in the 30 days prior to the pre-test reported that they had not used the drug in the 30 days prior to the post-test (National Institute on Alcohol Abuse and Alcoholism, 1984). In a more up-to-date evaluation, Milgram (1998) surveyed school administrators in Connecticut, New Jersey and New York to determine the how Student Assistance Programmes were being used, and perceptions of the efficacy. The 451 administrators surveyed (29.6% of an original sample) indicated that assistance efforts were "very effective to somewhat effective" in helping students (p. 115), measured primarily by the number of students using the programme, improvements in their grades and attendance, feedback from teachers and parents, and the improved school awareness. The support from the community for the assistance programmes was also seen as an endorsement of the approach. SAPs in the three states, Milgram, concludes, play "a significant role in helping students who are experience problems and also positively impact on the school and the community" (p. 115).

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Chapter 10: Alcohol intervention in primary health care

In 1980, an expert committee of the World Health Organization first pointed to the potential for primary health carers to detect those at risk from "harmful and hazardous alcohol consumption before health and social consequences become pronounced", and called for strategies to be devised that would allow this to happen with the minimum of time and resources (World Health Organization Brief Intervention Study Group, 1996). As a result, a major project is underway to develop and implement brief intervention for harmful alcohol use in the primary care setting (Monteiro & Gomel, 1998). The family medical practice is seen as an ideal context for the early detection of excessive alcohol use because it gives access to a large proportion of the population (McCormick, Adams, Powell, Bunbury, Paton-Simpson, & McAvoy, 1999; Richmond & Mendelsohn, 1998), reflecting the fact that it is the most accessible and readily available sector of the health system in many countries (Heather, 1997). What is more, patients in general believe that it is the role of their family physician to give them preventive lifestyle advice (Nutting, 1986; Slama, Redman, Cockburn, & Sanson-Fisher, 1989).

Howard, Ganikos, and Taylor (1990) point out that studies of preventive interventions by primary care physicians in terms of smoking, nutrition, injuries, weight reduction, and self-examination ("Final Report," 1988; "Guide to Clinical," 1989) have highlighted the importance of their role. Howard et al. say that this suggests primary care physicians could similarly make an important contribution in the field of alcohol. The authors envisage primary care physicians playing a useful role in anticipatory guidance for young people and their parents, in establishing "doctor-patient consensus" about what constitutes normal alcohol intake, and in early detection of problems, counselling, and referral to specialised treatment where necessary (Howard et al., 1990, p. 8).

Barriers to effective intervention

While interventions by primary health care providers has been shown to be effective (see Chapter 11, *Brief Interventions*) the reality is that family physicians are either not discussing drinking with their patients, or are only responding when a patient shows obvious signs of dependency (Adams et al., 1997). The result is that

80 percent of the GPs surveyed in a New Zealand study had used brief intervention for hazardous drinking with less than 13 patients a year - despite the fact that these doctors endorsed the role they could play in preventive medicine (Adams et al., 1997). Research has shown a variety of reasons why this should be so. In some cases this may be because alcohol intervention is not given the priority of some other adverse lifestyle factors, in particular smoking. A study of general practitioners in the United Kingdom as part of the WHO project mentioned found that only 79 percent of those sampled considered moderate drinking as "important" or " very important". The figure for a similar study in New Zealand was 86 percent" (Adams, Powell, McCormick, & Paton-Smith, 1995).

Another barrier is a lack of training for primary health care practitioners to equip them for health promotion work (Heather, 1997). In the New Zealand study cited above (Adams et al., 1997), only a quarter of the doctors surveyed had received more than 10 hours postgraduate training on alcohol problems, and lack of training was identified by them as one of the main disincentives for intervention (p. 293). The result was that they "do not know how to identify problem drinkers who have no obvious symptoms of excess consumption (Powell, Adams & McCormick, 1995, p. 21). Studies by the WHO to date have made clear that, in the long term, curriculum changes are going to be needed in medical and nursing schools at both graduate and post-graduate levels if the focus is to shift from long-term treatment of chronic alcohol problems to preventive action (Monteiro & Gomel, 1998). Lack of support from alcohol support agencies is also seen as another disincentive (Heather, 1997; Powell, Adams, McCormick, 1995).

The stigma attached to alcohol problems can also make it difficult for general practitioners to raise the issue with their patients (Heather, 1997). GPs surveyed in New Zealand believed patients would be "angry or annoyed if asked about their alcohol consumption (Powell, Adams, & McCormick, 1995). Nettleton and Thompson (1993) suggest that, in Scotland too, uptake by GPs of a primary health care intervention aimed at reducing alcohol (DRAMS - Drinking Reasonably And Moderately with Self-control) is being hindered by "the reluctance of many established GPs to address their patients' alcohol problems" (p. 48). Ritson (1985) further suggests that the treatment of alcohol problems within the primary health care setting is being held back because physicians, and their patients, think only in terms of alcoholism, rather than the broader concept of social and medical alcohol-related

problems. A change of viewpoint, Ritson says, is needed for a shift from concentrating on "the search for the hidden alcoholic in the medical practice caseload," to viewing alcohol consumption as a potential health hazard, and hence a subject about which the doctor may legitimately inquire (p. 89). A survey of health and welfare professionals in New Zealand (CM Research, 1995) showed that excessive drinking was only likely to be recognised if it was accompanied by obvious physical, social or behavioural manifestations. Furthermore, unless they saw the drinking as damaging to the individual or those around him or her, those surveyed could see no positive consequences of drawing attention to excessive consumption. They felt, as noted above, that the patient may resent having attention drawn to their drinking. They were also deterred from acting because they believed they believed the likelihood of success was low, and that the patient would "almost certainly" not be prepared to deal with it unless they were supported by family or friends (CM Research, 1995). The incidence of alcohol problems amongst physicians working in the primary health care sector is identified as another reason why they may be reluctant to intervene with patients about their intake of alcohol (Powell, Adams, & McCormick, 1995).

Adams et al. (1997) found that time and money were important impediments to GPs taking up a role in early intervention for hazardous alcohol use. Among the most popular responses were that:

- doctors are reimbursed on a per patient basis, not a time basis;
- the government health scheme does not reimburse doctors for time spent on preventive medicine;
- there is insufficient time to ask about every patient's alcohol consumption;
- government health policies in general do not support doctors who want to practice preventive medicine; and,
- patients would not be willing to pay a fee for alcohol counselling.

In a busy practice, the researchers conclude, "an activity which is poorly funded tends to become a lower priority" (Adams et al., 1997, p. 294), and policy makers can make a contribution by introducing financial and other incentives for preventive activities.

Communication in the primary health care setting

As in other forms of health promotion, effective communication lies at the heart of changing behaviour, and traditional approaches to communication within the physician-patient context are seen as a key factor in the success of intervention at the primary health care level. Kreps (1990) notes that the use of medical jargon by health care providers often confuses consumers, citing studies (Barnlund, 1976; Woods, 1975) showing how this can lead to misinterpretations of practitioners' messages by patients. The nature of the patient/doctor encounter also plays a role in fostering misunderstanding, since many health care situations take place against a background of urgency and heightened emotions (Thompson, 1990). Thompson also emphasises the role played by the physician's approach to the patient in the primary health care setting. Patients felt that their doctor communicated well when he or she was warm, friendly, and listened to what they, as patients, had to say; but too often patients were not satisfied with their doctor's communication skills (Korsch & Negrete, 1972).

Other impediments to good doctor-patient communication noted by Thompson (1990, p. 32) include patients' reluctance to "initiate communication" because they are in awe of the doctor; they fear their concerns will be met with a negative reaction; they are suspicious of the answer they will receive; or they are conscious of the limited amount of time they have with the health practitioner (Skipper, 1965a, 1965b).

Changing Behaviour

Thompson's (1990) review also explores the important factors in initiating behaviour change in the primary health care setting. According to the research reviewed, the level of patient compliance with doctors' orders is low (Dervin, Harlock, Atwood, & Garzona, 1980), averaging as little as 50 percent in one study (Miller, 1975). It appears, however, that one way in which health practitioners can try to improve compliance is by ensuring they give the patient adequate information. Here, Thompson cites research by Pruyn, Ruckman, van Brunschot, and van de Borne (1985) showing that breast cancer patients were more likely to adopt an unproven diet remedy in cases in which they believed they had received insufficient or unclear information from their physicians. The information given must also be accurate. Studies in the United Kingdom and New Zealand found that GPs were citing upper limits for responsible alcohol consumption that were lower (and in the case of New

Zealand, considerably lower) than the levels recommended by alcohol education agencies (Adams et al., 1995).

There are other variables that are also significant. Compliance increases, for example, with the status of the message source (Levine, Moss, Ramsey, & Fleishman, 1978); when patient expectations are met (Francis, Korsch, & Morris, 1969); and when the patient is satisfied with his or her treatment (Francis et al., 1969). The research shows less compliance, however, when it means major changes in habits and lifestyle (Charney, 1972), or when the patient/health professional relationship is marked by formality, antagonism, or mutual withholding of information (Davis, 1968).

The stages of change approach to behaviour modification

Stages of Change theory, developed by two research psychologists (DiClemente & Prochaska, 1985; Prochaska & DiClemente, 1983) is becoming a popular model for bringing about behaviour change. The theory suggests that there are five stages on the path towards behaviour change, namely, Precontemplation, Contemplation, Preparation, Action, and Maintenance. At the pre-contemplative stage, individuals have no intention of changing their behaviour since they are completely unaware of the behavioural options open to them. Contemplation represents the stage at which they begin to think about the behaviour that is putting them at risk, and to consider the need for change. The third stage, Preparation, sees the individual making a commitment to change, and taking the first steps towards achieving that change. The Action stage sees the individual consistently performing the new behaviour, and finally comes the Maintenance stage, in which the new behaviour continues, and the individual takes steps to avoid lapsing into the former risky behaviours (Witte, 1999). The Stages of Change model was initially used in smoking cessation programmes, but has now been extended to other areas of health promotion and education, including alcohol education. The model can be used by educators wanting to reach a mass audience, but it also has applications within the primary health care setting, where the health professional, using motivational interviewing techniques, can ascertain what stage the individual is at, and tailor any advice to suit.

Ashworth (1997), in a review of research into the effectiveness of the Stages of Change approach, acknowledges its appeal. It has the advantage that it is easily

understood, facilitates communication about motivation, and helps health professionals to understand why educational interventions sometimes fail. Ashworth's (1997) review found six trials (Campbell et al., 1994; Goldberg et al., 1994; Gomel, Oldenburg, Simpson, & Owen, 1993; Prochaska, DiClemente, Velicer, & Rossi, 1993; Skinner, Strecher, & Hospers, 1994; Strecher et al., 1994) comparing stage-based interventions with non-stage-based interventions. Only one of these studies dealt with face-to-face interventions (Gomel et al., 1993), and that was an intervention aimed at preventing smoking, and improving a range of other health indicators, at a worksite. The other interventions used individually tailored self-help manuals, or computerised messages, and one study looked at the use of Stages of Change in training doctors to undertake smoking cessation counselling. Ashworth (1997) concludes that there is, as yet, no coherent body of evidence on which to judge the efficacy of the Stages of Change model, and that methodological difficulties make firm conclusions difficult. The research does indicate, however, that staged interventions are superior to non-staged ones, and more research is now needed to confirm that "superior efficacy" (Ashworth, 1997). Ashworth (1997) further comments that, while it is generally accepted that behaviour-change skills are easily learned, the reality appears to be that "staff need sophisticated and intensive training to become skilled facilitators of behaviour change" (p. 172); while the concepts might be easily grasped, the skills needed to put them into practice are not so easily obtained (Hall, 1996).

Studies have been carried out in Australia (Richmond & Mendelsohn, 1998) to survey how general practitioners felt about using Stages of Change as a basis for their counselling, and any barriers they faced in incorporating it into their practice. In two separate studies, the participating GPs were first trained in using the model to help patients either to reduce their alcohol consumption or stop smoking. The studies found that the Stages of Change approach was popular with the GPs, and that the majority of physicians were still using the method six months after training. The main barrier identified by the participants was a lack of time to devote to Stages of Change counselling. This, Richmond and Mendelsohn (1998) point out, was despite the fact that these doctors need no longer waste time with those who are not yet ready to change their behaviour, and can spend that extra time on those patients who are likely to benefit. They warn, however, that their findings cannot be generalised to the larger population of physicians in Australia since those who accepted the

invitation to train in the method are more likely to be motivated to use the programme (Richmond & Mendelsohn, 1998).

The enthusiasm with which Stages of Change theory has been taken up in the health field underlines the potential many believe it has to enhance health promotion interventions, particularly in the primary health area. As Ashworth (1997) points out, however, more research is needed to confirm its potential, and that includes studies of how it can be realistically used in the primary care setting. Without such research, there is always a danger, she suggests, that the whole model could become "unjustly discredited" (p. 173).

The efficacy of intervention in the primary health sector is discussed further in Chapter 11 under the heading, *Brief interventions*.

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Chapter 11: Treatments

There has been considerable progress in recent years in terms of diagnosis, assessment, and treatment of alcoholism and problem drinking. Progress has been made in the use of pharmacological treatment for alcoholism, including detoxification agents for use during withdrawal, alcohol-sensitising agents to help patients refrain from drinking, and anti-craving agents to reduce the appetite for alcohol (Wolfgan, 1997). Treatment also includes interventions to prevent relapse, and attention is paid to a patient's expectations about alcohol, based on research showing that positive and negative expectancies about the effects of alcohol can play an important part in whether or not an individual decides to drink alcohol after going through treatment (Wolfgan, 1997).

Among the major areas of study has been the use of patient assessment as part of diagnosis of alcohol problems, with the aim of improving the outcomes of treatment. This approach allows clinicians to determine characteristics that may be significant in deciding which course of treatment is most appropriate, and what the prognosis is likely to be. The factors that are thought to play a role in treatment success or failure, are subjective well-being, drinking-related beliefs, the individual's readiness to change, alcohol-related expectancies, social functioning, and social support for drinking and abstinence (Wolfgan, 1997). This idea that different treatments work for different people was put to the test in a major United States research project, Project Match. In the study, a total of 1726 people of varying personal characteristics and degrees of alcohol problems were assigned randomly to three treatment types:

- Twelve-step facilitation therapy - newly developed by the research team based on the Alcoholics Anonymous twelve step programme.

- Cognitive-behavioural therapy - this approach sees problem drinking as a learned response to life's problems and tries to re-programme those responses by teaching coping skills and alternative strategies for handling high-risk situations.

- Motivational enhancement therapy - a form of brief intervention delivered in four sessions over a period of 12 weeks. It aims to generate the motivation

and commitment to change behaviour using Stages of Change theories (see below). The patient's partner may also be involved in this therapy approached during the early stages of the process.

Some of the study group received their allotted therapy as outpatients, while others were referred after at least a week as an inpatient, or intensive day hospital treatment (Ashton, 1999).

The Project Match research team drew up a series of sixteen hypotheses to be tested by their study. Among them were that:

- more severely dependent individuals would be best served by twelve-step facilitation or cognitive-behavioural therapy because both approaches are more intensive than motivational enhancement therapy;
- problem drinkers who were seeking to find meaning in life would be better served by twelve-step facilitation because of its emphasis on spirituality;
- motivation enhancement therapy would be best for poorly motivated clients;
- women would respond better to cognitive-behavioural theory than to twelve-step facilitation; and,
- clients with more severe psychiatric symptoms would be best suited to cognitive behavioural therapy (Project Match, 1997).

In the end, only one of the hypotheses was confirmed - namely, that patients with ***few*** psychiatric symptoms (such as anxiety, depression or psychosis) did better with twelve-step treatment than with other treatments. There was also some evidence that twelve-step facilitation did appeal to well-motivated clients seeking meaning in life. Otherwise, matching seemed to make no difference at all. All treatments seemed to be effective across a range of individuals, motivational therapy, despite the brief nature of the treatment, showed itself to be as effective as more intensive interventions, even with "difficult" clients (Ashton, 1999). As Ashton (1990) points out, it was the "first sound demonstration that the lay wisdom of twelve steps *can* do as well as clinically developed therapies (p. 16).

Although the matching hypotheses were not upheld, there were some characteristics within each of the groups (aftercare and outpatient) which predicted a better outcome, regardless of the treatment. These included, in the aftercare group:

- less dependent drinkers did better than those who were more dependent;
- clients with higher motivation did better than those with less motivation; and,
- men were less successful than women.
- In the outpatient group:
- high motivation at the outset improved outcome; and,
- greater sociopathy was associated with poorer outcome (Project Match, 1997).

It must be pointed out that Project Match has drawn strong criticism, not least because of the amount of money spent (US$27m) to find out what some commentators believe is very little. There was also no control group of untreated individuals for the study, somewhat undermining the case for categorically saying that treatment works (Ashton, 1999). In this regard, it has been pointed out that it would be very difficult to get ethical agreement to a study which deliberately left problem drinkers without treatment (Wood, 1999).

Other criticism contends that the study group consisted of socially stable volunteers who were motivated enough to undergo an elaborate screening procedure. Excluded from the study were people who were drug dependant, those under 18, individuals who were psychotic, potentially violent or currently under criminal justice supervision, as well as the socially isolated or the homeless (Ashton, 1999; Project Match, 1997). Consequently, the critics contend, "the results were obtained under such ideal clinical and financial conditions that they bear little resemblance to the real world, and therefore are largely untranslatable into ordinary clinical practice" (Wood, 1999, p.11).

Other aspects of the study that are suggested as possibly influencing the favourable outcome include:

- Quality control on the delivery of programmes. Therapies were carried out in strict adherence to manuals and with careful supervision (Ashton, 1999; Project Match, 1997).

- The quality of the therapists delivering the programmes. All the Project Match therapists were qualified, experienced in and committed to the therapy they delivered. They received three days training in the relevant therapy, and were supervised and monitored randomly by video during the course of the project (Ashton, 1999).

- Treatment compliance was high. Clients were sent reminders about their treatment sessions, and interviews were carried out with relatives (Project Match, 1997), and the project recorded an "unusually low drop-out" rate (Ashton, 1999, p. 20). The high client compliance was only minimally related to the severity of the client's problems (Ashton, 1999).

- Follow-up compliance was high, and the intensive follow-up activities involved in the research project may have influenced outcomes (Project Match, 1997).

As Dr John Saunders, Professor of Alcohol and Drug Studies in the University of Queensland points out (Wood, 1997), what is clear from Project Match is that an enthusiastic, empathic, committed therapist will obtain better results"(p. 12).

A three-year follow-up to Project Match is currently underway into long-term trends. In the meantime, while opinions as to the relevance of its findings, Project Match is seen as an important landmark in research into alcohol treatment, and a pointer to further research in the area (Comments on, 1999).

Brief interventions

Edwards et al. (1994) argue that, in formulating policy to deal with drinking problems, treatment and prevention must go hand in hand. They further argue that if alcohol treatment is to make a significant impact on a population-wide basis, then it must be delivered on "an appropriate and community-wide scale" (p. 210). The treatment approach known as "brief intervention" (see also Chapter 10) aims to meet

this need. Wolfgan defines this as the "early detection of harmful substance use before any physical dependence has developed" (Wolfgan, 1997, p. 285). As the title suggests, sessions are restricted, generally numbering four or less, and usually take place within the primary health care setting. Ideally, brief intervention for potential or actual alcohol problems should consist of a consultation taking around 5 minutes, during which the doctor will assess the patient's current level of drinking and give advice on what constitutes responsible consumption (Adams, Powell, McCormick, & Paton-Simpson, 1997).

This means that brief interventions are for the most part carried out by health professionals who are not specialists in the treatment of addiction (Wolfgan, 1997). Research suggests that the patients most likely to benefit from this form of treatment are those who:

- are socially stable;
- have a brief history of problem drinking;
- do not suffer from depression;
- do not have severe social or relationship difficulties;
- do not see themselves as in the grip of an illness;
- see benefits in altering their drinking habits, including benefits in terms of their own self-esteem; and
- have flexible goals in that they are ready to consider both abstinence and controlled drinking as ways of dealing with their problem (Chick, 1992).

These findings should, however, be read in the light of the research turned up by Project Match as outlined earlier in this chapter.

As to whether the brief intervention approach is effective, reviews suggest that while more research is needed, this approach does show potential. Chick (1992), in a review of studies carried out at that stage, concludes that it was "emerging as an important new concept" (p. 1035). In a review published a year later, Bien, Miller, and Tonigan (1993) considered 32 randomised trials, and concluded that brief interventions were more effective than no counselling, and often as effective as more extensive treatment. In a separate study, based in a general hospital, it was reported that only 12 percent of 11,282 patients with untreated alcohol-related illnesses refused their referral for treatment, and that 60 percent of 2,424 patients offered intervention kept their appointment, and entered treatment (Healthcare Intervention Services,

1994). In a later study, McMenamin (1997) tracked, over a six year period, the outcomes among a group of 70 patients with alcohol problems who were subject to brief intervention at a New Zealand practice. Nearly half (44%) achieved abstinence or controlled drinking, although the study showed that the process of change was slow. Intervention was intermittent, averaging between five to six over a prolonged period. The average time for change to take place was four years, with some patients taking up to 8 years to achieve their drinking goal. Furthermore, McMenamin suggests that a further 37 percent of the study group reporting a reduction in their consumption without evidence of sustained change may well represent a group requiring a longer period to achieve abstinence or controlled drinking. As a result, he concludes, brief intervention in the surgery is more likely to be successful for patients who remain in the practice for some years. Shepherd (1997) believes that, in view of such findings, doctors need no longer be ambivalent about using "chat alcohol interventions" on the grounds that they are not effective, or will not persuade the patient to comply. Rollnick, Butler, and Hodgson (1997) recommend caution, however, in the application of brief intervention. They argue that it may not be practical to offer brief advice to all excessive drinkers, that heavey drinkers who are not experiencing problems may resent the intrusion, and furthermore, that there is uncertainty over the public health gains of this approach. These authors suggest that rather than simply offering advice on drinking limits, GPs give patients a greater say in what is talked about during the consultation, and encourage them to more actively participate in making decisions about their lifestyle behaviour changes Rollnick, Butler & Hodgson, 1997).

In New Zealand, the National Health Committee has recently issued guidelines for recognising, assessing and treating alcohol and cannabis use in the primary care setting in an attempt to promote brief intervention among primary health professionals (National Health Committee Working Party, 1999). It suggests five general principles should be followed by primary health carers wanting to assess and treat substance abuse at an early stage. They are:

- express empathy by accurate listening that clarifies the patient's experience, feelings and interpretations;

- amplify the discrepancy between current behaviour and broader goals by weighing the pros and cons
- avoid arguments since they are counterproductive and breed resistance;
- review a patient's readiness to change when there is resistance; and
- support a patient's belief in the possibility of change, while recognising that the patient is responsible for choosing and carrying out that change.

The guidelines also stress the importance cultural background can play in a successful outcome to brief intervention, and suggest that where there are significant differences between the patient and the health professional, assistance should be sought from a culturally appropriate service or specialist. The document also recognises the problems in identifying people with alcohol problems at an early stage, before they show obvious signs of dependency. This problem can be overcome, it suggests, by embedding alcohol and cannabis use questions within a general review of health and lifestyle. Once a problem is identified, the guidelines say, the practitioner should attempt to bring about positive change through a series of brief interventions. It warns that this may take time, as the patient passes in and out of the various stages of behaviour change - in other words, the Stages of Change (National Health Committee Working Party, 1999).

Controlled drinking

This treatment approach, rather than focusing on abstinence from alcohol, tries to limit intake by setting limits to drinking. Although it has been in existence since the mid-1970s, it is an approach that remains controversial in some quarters (Wolfgan, 1997). Controlled drinking is not universally accepted in the United States as an appriopriate treatment for alcohol problems. On the other hand, it is a well-accepted in Europe, as well as Australia and New Zealand. A co-ordinated research project by the World Health Organization (WHO) of 1655 heavy drinkers in ten countries as part of the WHO's development of low-cost interventions for the primary health sector found, however, that "moderate drinking goals can be achieved by a substantial proportion of heavy drinkers who are not seriously dependent on alcohol (Monteiro & Gomel, 1998). Other research has shown that this approach can work with a small

sub-set of individuals, and the keys to whether or not it is appropriate include the severity of dependence, the extent of an individual's drinking history, psychological dependence, previous treatment, and the extent of current liver damage. The treatment is most likely to be effective in achieving long-term asymptomatic drinking in the case of those who, at the outset of treatment, show a lesser degree of dependence, reject the label "alcoholic," and do not accept that their treatment goal should be one of abstinence (Wolfgan, 1997). Controlled drinking has particular application in the treatment of young people who have alcohol problems. This sector of the population is generally resistent to the idea of abstinence from alcohol, but that the same time, have only a short drinking history, making them good candidates for this approach (I. MacEwan, personal communication, September 17, 1999).

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Chapter 12: New Technology

A new field of communication study has been opened up with the increased use of new technologies such as CD-ROM, computer assisted instruction (CAI), electronic mail, and the Internet (which marries computing and telecommunications to allow multimedia, interactive communication on a global scale). These new technologies have the potential to affect many areas of society, and the health field is no exception. In order to understand the potential of these new technologies for health promotion and education, and for alcohol education in particular, it is useful to consider what they have to offer that sets them apart from traditional communications. Discussing the potential for new technologies in health communication, Chamberlain (1994) identifies three characteristics that mark them out.

The first of these is demassification - defined by Chamberlain (1994, p. 273) as "the ability of the consumer to choose à la carte." Rather than receiving messages "in concert" with others through the mass media, individuals can now make individual choices about what they want to see, hear, or read from a huge selection of media. Chamberlain claims that the implications for mass communicators are "huge" (p. 274). Instead of addressing their messages to a mass audience, they must now "learn how to send multiple messages, through a myriad of channels, tailored in such a way that the content appears to be (or can evolve into) an individual message for the receiver" (p. 274).

The next characteristic singled out by Chamberlain (1994) is asynchronicity. Chamberlain defines this as "the ability of an individual to send, to receive, to save, or to retrieve messages at his or her own convenience" (p. 274). He suggests that the implications for communicators are profound, since they are no longer able to ensure that the message sent is received. He concedes that mass media communicators already face this problem to a certain extent, in that they cannot guarantee that their particular message was received, and that the target audience was receptive to it. Chamberlain points out, however, that once a message is digitalised, "the opportunities for manipulation become infinite, allowing the individual total control of the content" (p. 274).

The third quality listed by Chamberlain (1994) is interactivity, or "the ability to talk back to the user" (p. 275). He points out that developments here are not limited to the personal computer, but apply also to television, where experiments have

been going on in North America and Europe with interactive services and entertainment delivered through cable television. Besides allowing feedback between sender and receiver, interactivity is also changing education and information-gathering. Developments such as CD-ROM, and hypertext on the Internet, allow students, and others, to decide which information they want, in whatever order they like, and at their own learning speed - in other words, information gathering and learning have become individualised and personalised (Chamberlain, 1994). CAI also offers the flexibility of programme delivery and design recommended by White and Pitts (1998) (see Chapter 5). The new technologies, and in particular the Internet, then, have the reach of the mass media, but the qualities of interpersonal communication (Cassell, Jackson, & Cheuvront, 1998).

It is this interactivity that opens up such exciting possibilities for educators, since it allows a degree of individualised learning that has to date been largely unattainable (Steckler et al., 1995). Furthermore, this interactivity is seen as having particular advantages in terms of health education and promotion where changing behaviour is the prime goal. Cassell et al. (1998) argue that, for health communication to be persuasive, it must be "transactional," allowing "give and take between the persuader and the persuadee" (Cassell et al., 1998, p. 73). They refer to the body of research showing the limitations of mass media channels, used alone, in changing behaviour, but their improved effectiveness when linked in with interpersonal communications channels.

The interactivity provided by computer assisted instruction (CAI), even without the global interpersonal communication capabilities of the Internet, is also seen as having educational potential by allowing active learning (Meier & Sampson, 1989). Orlandi, Dozier, and Marta (1990) point to the way computer technology allows the development of "micro-worlds" in which students can learn to respond to simulated situations, learn the consequences of their actions, and engage in long-range planning on the basis of that knowledge. The authors conclude that it may be impractical or impossible to gain such skills in real-life situations, and they identify this aspect of CAI as having the greatest potential in substance abuse prevention (Orlandi et al., 1990). At the time of writing, however, Orlandi et al. had no access to reviews of the effectiveness of computer learning in teaching the skills development component of substance-abuse prevention (Orlandi et al., 1990). Orlandi et al. (1990) identify the confidentiality afforded by computers as another advantage that CAI

brings to substance abuse prevention, as it allows sensitive issues, which adolescents might find difficult to discuss openly with others, to be dealt with.

Similar advantages have been noted in research on the use of computers within the primary health care system for education and counselling on alcohol use. An American study (Krishna, Balas, Spencer, Griffin, & Borren, 1997) that trialled interactive computerised patient education found that, in general, patients undertaking computer-administered interviews about their alcohol use preferred these to face-to-face interviews with their physician (a preference expressed by 75 percent of the 64 percent who returned questionnaires). Significantly, the group which was interviewed by computer reported 30 percent higher levels of alcohol consumption, suggesting that participants were more honest in the presence of a non-judgmental computer than in the face-to-face interview situation, where they might want to be seen in the best possible light (Krishna et al., 1997). The authors suggest, also, that patients may be able to express themselves better without the time constraints that apply during a normal, face-to-face visit to the physician. The computer group also preferred getting their instruction about the medical effects of alcohol by computer, although they showed no greater knowledge than subjects who had received their instruction by video. Both groups increased their overall knowledge in this area (Krishna et al., 1997).

The fact that individuals, provided they are equipped with a computer and an Internet connection, can communicate with others, regardless of geographical boundaries, has major implications for health professionals in terms of information and service delivery. The Internet allows the transmission of print, visual, and audio material, and this allows access to a wide range of up-to-date information as well as the potential for diagnosis and treatment at a distance - known as telemedicine. It is, however, not just health professionals who can benefit from this. The vast communication network can also link individuals with similar problems and concerns to a computerized, interactive support group (Ratzan, 1994). Proponents of media advocacy see the new computer-based communications systems as an aid to planning and sharing information in their field of interest (Jernigan & Wright, 1996). As well, those seeking help on alcohol problems can find a variety of sites catering for their needs. A review of Internet resources on alcohol abuse and alcoholism (Schmitz, 1997) contains the addresses of the web sites of national agencies and activist groups, and sites offering help to individuals for whom alcohol is causing problems. Schmitz

likens the Internet to a "spiderweb", which, depending on one's point of view, is "either a thing of beauty or an entrapment" (Schmitz, 1997, p. 51). On the positive side, she lists ease of access: Being able to download or print, for immediate use, information and resources from around the globe and from a variety of providers - including libraries, government agencies, non-profit organisations, businesses, and individuals. Some of that information, she points out, is only available on the Internet. Through its e-mail and bulletin board services, the Internet also allows researchers to keep up with what is happening in their field, and to communicate with their colleagues (Schmitz, 1997).

On the negative side, Schmitz (1997) stresses that there are no "gatekeepers" monitoring what may, or may not, be posted on the Internet. In the light of that, the information may be inaccurate, because it has not been proofread, or because it comes from an unreliable source; it may not have been subject to peer review; and "it may not be there tomorrow" (p. 52). As the Internet gains popularity among the general public as a source of health information, doctors are reminded of the need to themselves become acquainted with what is available, and prepare themselves by identifying Web sites that are reliable (Krishna et al., 1997).

While the potential of the new technologies is recognised, several authors stress the need for more research into their impact and effectiveness. Steckler et al. (1995), discussing health promotion in general, suggest that research into the individual technologies needs to be increased; they suggest as a starting point the topic of how the interactive media can be used to influence populations with a low level of literacy. Cassell et al. (1998) call for research into the development of Internet-based programmes that build on the Internet's advantage of marrying interpersonal and mass communication to change behaviour. They suggest this can be done using existing health communication theory, such as the Health Belief Model, the Stages of Change model, and Bandura's Social Cognitive Theory (Cassell et al., 1998). Krishna et al. (1997) also point out the "paucity" of controlled trials on the efficacy, or otherwise, of the thousands of Internet-based health education sites. More research is needed, they say, to specify what sort of computerised patient education "does really result in positive changes of health status" (p. 32).

Despite the gaps in our knowledge, Chamberlain (1994) believes that there are some key points that health communicators should consider when contemplating making use of the new technologies. First, he says, a member of the target audience

will expect to be treated as an individual, with messages tailored to his or her own specific interests and needs rather than those of the masses: "One-on-one messages (or at least the illusion of same) will be the preferred mode of communication" (p. 282). He argues, too, that the target audience will also expect more from their message in terms of use of hypertext, use of multimedia to appeal to their senses, and the opportunity to respond to the message. Chamberlain stresses, however, that the technologies do not, of themselves, make for effective communication. "The message remains paramount," he says, and "no amount of technology is going to compensate for an ill-conceived or ill-designed message" (p. 272).

Although Internet-based services are certain to expand, telephone information services remain popular, and new services continue to appear, especially services for the general public. Services range from the very specific to the very general (e.g. a single telephone number for the whole country that the general public can dial, sometimes for any conceivable enquiry about health).

One of the largest undertakings in this area was initiated some eight years ago by the UK National Health Service, which provided a single free phone number for all citizens of the UK. Although most callers did not know, calls were divided into regional groupings, which corresponded mainly with the Regional Health Authorities (RHAS) and the information services they operated. The information services were operated mainly by information professionals, although a few healthcare professionals were employed. In the last twelve months the NHS has piloted another scheme called *NHS Direct*, in the first instance by telephone, but it is now planned to develop this service as a on-line service with computer access. *NHS Direct* is operated by nurses and is designed to provide useful information on the most commonly occurring medical and healthcare conditions. During a twelve-month pilot scheme the service has been available only to certain parts of the country, but has already received 75,000 calls. Eighty percent of callers were advised to act differently from their pre-call intention. It is estimated the full operational service (which will begin shortly), will, after about two years, attract 10 million calls per annum (which is approximately one sixth of the population). A service of this magnitude (and predicted success) can hardly be ignored!

As NHS Direct is evaluated there are likely to be many useful indications for the setting up of similar services - not necessarily in the main body of health, but in related areas regarding safe drinking, drinking and health, and drinking and driving.

A related LTK initiative also has relevance to the communication of information about alcohol consumption. The NHS has recently launched the *National Electronic Libraryfor Health* (NELH) which aims to give healthcare professionals a 1 5 second turnaround time on most information queries. A similar speedy information service (based upon authoritative evidence) could be entertained for a wide range of professionals concerned with alcohol consumption: indeed, for professionals concerned with substance abuse in general.

Any discussion of new technology needs, of course to be tempered by reality. On a global scale, only a relatively small number of people have the privilege of having access to technologies such as the Internet, and in some cases still have no access to basic communications via the telephone. In Cambodia in 1996, for example, there were more than 100 people to every telephone (Denny, 1999), while in Africa, there are 14 million telephone lines for a population of 700 million[4]. As the South African Minister for Posts, Telecommunications and Broadcasting, Jay Naidoo pointed out in an address to a conference on Communications in Africa in 1996, more than half the world's population has never made a telephone call, and few have used a computer[5]. Even in the developed world, where telephone lines are in abundance, there may be sectors of the community who cannot be reached by telecommunications technologies. In New Zealand, for example, 20 percent of Pacific Island families do not have a telephone in their home, meaning that the use of free telephone lines or the internet are not appropriate for health educators wanting to reach this community (R. Tustin, personal communication, September 2, 1999). In such cases, more traditional forms of communications must still be used to get messages across.

[4] From a speech by the South African Minister for Posts, Telecommunications and Broadcasting on January 14, 1999 on the occasion of the launch of South Africa's first satellite, Sunsat. [On-line]. Available: http://docweb.pwv.gov.za/docs/sp/1996

[5] Available: http://docweb.pwv.gov.za/docs/sp/1996

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