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Harm Reduction: Application to Alcohol Abuse Problems

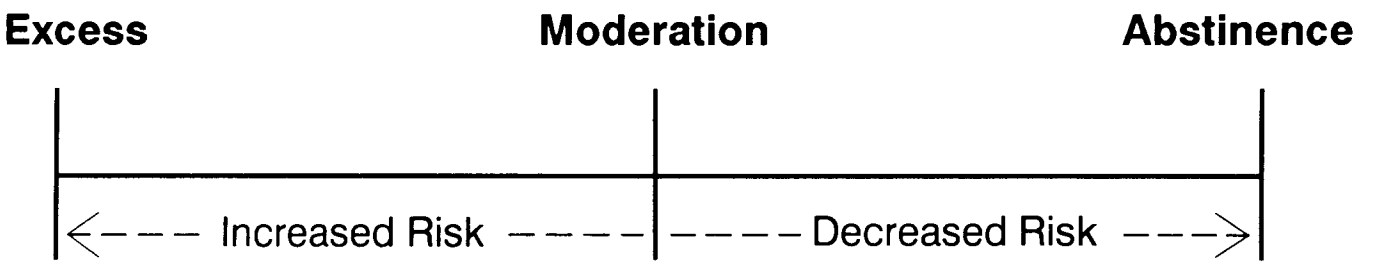
G. Alan Marlatt, Julian M. Somers, and Susan F. Tapert

> "Habit is habit and not to be flung out of the window by any man, but coaxed downstairs a step at a time."
>
> Mark Twain (Pudd'nhead Wilson's Calendar, chapter 6)

DEFINITIONS AND OVERVIEW

The terms "harm reduction," "harm minimization," and "risk reduction" often are used interchangeably in the addictive behaviors literature (Heather et al. 1993; O'Hare et al. 1992). Although they refer to the same general approach or model, Europeans (particularly the Dutch) call it "harm reduction," the British refer to "harm minimization," and Americans are more likely to prefer the term "risk reduction." In this chapter, harm reduction is defined as the application of methods designed to reduce the harm (and risk of harm) associated with ongoing or active addictive behaviors.

Harm reduction methods are based on the assumption that habits can be placed along a continuum ranging from temperate to intemperate use along with associated risks for harm (Marlatt and Tapert 1993). Figure 1 represents this continuum; the left side represents excess, the middle part is moderation, and at the farthest point to the right is abstinence. The risk of harm increases to the left and decreases to the right along this continuum. The goal of harm reduction programs is to move the individual with excessive behavior problems from left to right-to begin to take steps in the right direction to reduce the harmful consequences of the habit. It is important to note that this continuum model accepts abstinence as the ultimate risk-reduction goal. With the exception of eating habits, abstinence greatly reduces or entirely eliminates the risk of harm from most excessive behaviors.



"Any steps toward decreased risk are steps in the right direction."

FIGURE 1. *Continuum of excess, moderation, and abstinence*

But the harm reduction model promotes any movement in the right direction along this continuum as progress, even if total abstinence is not attained.

Below are, in the authors' view, some of the emerging themes that underlie current developments in the field of harm reduction.

1. Harm reduction is broad based and inclusive. As an approach to considering drug policy, harm reduction encourages the widest view possible of the varieties of harm associated with drug use and of ways to reduce this harm. As a function of this broad-based view, harm reduction provides a conceptual umbrella that integrates a variety of previously unrelated programs and techniques, including needle-exchange programs for injection drug users (IDUs), methadone maintenance treatment for opiate users, nicotine replacement therapy for smokers, and moderation-oriented drinking programs for problem drinkers.

2. Harm reduction tends to normalize rather than marginalize substance users. The harm related to substance use itself often can be wrenching for the users, their friends and family, and for the society to which they belong. However, the response to an individual's substance use can do much to either exacerbate or mitigate this harm. Harm reduction approaches acknowledge that, although it is difficult to eliminate the harm directly related to substance use, much can be done to eliminate the iatrogenic effects of interventions while enhancing opportunities for care. Within the normalization perspective,

   > . . . drug takers or even addicts should neither be seen as criminals, nor as dependent patients, but as "normal" citizens of whom we make "normal" demands and to whom we offer "normal" opportunities. Addicts should not be treated as a special category. (Engelsman 1989, p. 215)

   In this view, attention is focused on reducing the harmful or risky consequences of drug use rather than reducing drug use per se. Drug treatment programs that have "low-threshold" access to care illustrate this approach. Such programs attempt to address the health and social well-being of drug users without making these

services contingent on a commitment to change on the part of the user. Low-threshold programs make every possible attempt to include the needs of drug users within the broader context of health care and social services. For example, outreach workers in Amsterdam deliver a variety of health-related services and information to drug users in their communities. These and other projects "are not primarily intended to end addiction as such, but to improve addicts' physical and social well-being and to help them to function in society" (Engelsman 1989, p. 216).

3. Harm reduction places substance use on a continuum, relating levels of use to the severity of problems they engender for each individual. In this view, reductions in harm can be achieved incrementally. Although abstinence from drug use may be viewed as the ultimate objective, significant reductions in personal and societal harmfulness can be achieved en route to this goal. As explained by Allan Parry, a leader of harm reduction approaches to drug addiction and Acquired Immune Deficiency Syndrome (AIDS) prevention in Liverpool, England:

> Harm reduction takes small steps to reduce, even to a small degree, the harm caused by the use of drugs. If a person is injecting street heroin of unknown potency, harm reduction would consider it an advance if the addict were prescribed safe, legal heroin. A further advantage if he stopped sharing needles. A further advance if he enrolled in a needle-exchange scheme. A much further advance if he moved on to oral drugs or to smoked drugs. A further advance in harm reduction if he started using condoms and practicing safe sex practices. A further advance if he took advantage of the general health services available to addicts. A wonderful victory if he kicked drugs, although total victory is not a requirement as it is in the United States. (Parry 1989, p. 13)

4. Harm reduction deemphasizes the use of absolute restrictions on drug use as the primary means of reducing substance use problems. Many drug policy initiatives propose quantitative goals concerning substance use such as zero tolerance. Regarding alcohol, an often acrimonious debate has centered on whether the quantitative goal

for problem drinkers should be abstinence in all cases or whether moderate alcohol consumption is a viable option for this population. These policies and debates implicitly associate any use with abuse and fail to discriminate between the different degrees of harm associated with different levels of substance use. Adding further complexity to this equation are recent empirical studies that report good, if not superior, levels of adjustment among individuals who have experimented with drugs moderately compared with abstainers or drug abusers (e.g., Shedler and Block 1990). By avoiding quantitative prescriptions for change, harm reduction approaches can support any increment of change to reduce harmfulness. Also, because any degree of positive change is encouraged, harm reduction reduces the possibility of negative reactivity by individuals if a quantitative goal such as abstinence is not achieved or maintained.

HARM REDUCTION METHODS AND AREAS OF APPLICATION

Harm reduction methods can be employed in tenns of three main areas of application: (1) AIDS prevention (e.g., safe sex and condom use programs or needle exchange for IDUs); (2) treatment of ongoing, active addictive behaviors (e.g., methadone maintenance for opiate addiction or nicotine replacement therapy for tobacco smokers); and (3) secondary prevention of harmful addictive or excessive behaviors (e.g., controlled drinking or moderation of excessive food intake). Examples of each of these areas are provided below, followed by a summary of the harm reduction methods involved.

AIDS Prevention

AIDS prevention is one of the most critical examples of harm reduction (Sorenson et al. 1991). Public health officials around the world are acknowledging that the crisis of AIDS is more pressing than the threat of drug addiction or premarital sex, and several harm reduction measures can be taken to reduce the spread of Human Immunodeficiency Virus (HIV), including needle exchange, methadone maintenance treatment programs, and educational prevention programs. Harm reduction approaches offer at-risk populations simple behavior

changes that reduce the harm of high-risk activities, often with abstinence as the end point, but accepting that abstinence is not a realistic goal for all people. As relapse is common, people need skills to prevent harm if a relapse should occur. Harm reduction approaches work to empower rather than marginalize high-risk groups.

Open sex education is an often-controversial form of harm reduction. Sex education for students in primary and secondary schools has long been a topic of controversy. The nature of HIV transmission requires explicit sex education to inform young people, who may or may not be sexually active, how HIV is transmitted and how they can protect themselves and others. Sex education that deals with socioenvironmental influences on behavior (Walter et al. 1991), ideally accompanied by condom distribution, has been suggested as a major prevention effort for underage students. However, many school administrators advocate abstinence from sex despite the fact that more adolescents report having had sex and having had more partners than 10 years ago (Anderson et al. 1990). A 1989 national survey of 9th through 12th graders found that 58.5 percent reported having had sexual intercourse (Anderson et al. 1990). A recent national high school sample found that 2.7 percent reported having ever injected illicit drugs. Students who reported having learned about HIV in school were significantly less likely to report having ever injected drugs and having ever shared needles, reported fewer sexual partners, and were more likely to use condoms (Holtzman et al. 1991). Approximately 19.5 percent of U.S. AIDS cases to date were diagnosed in the 20- to 29-year age bracket, and many of these may have contracted HIV during their teenage years (Centers for Disease Control 1992). The spread of HIV could be stemmed by open sex education and HIV prevention programs that do not encourage sexual activity but acknowledge its presence among people of all ages while providing useful information and skills along with the tools necessary to have safe sex (condoms).

Treatment of Ongoing Addictive Behaviors

Harm reduction methods can be applied to the treatment of addiction problems in addition to AIDS prevention. Nonabstinent goals to reduce risk of harm include: (a) changing the route of drug administration, (b) providing alternative, "safer" substances, and (c)

reducing the frequency or intensity (quantity and dose level) or both of ongoing addictive behaviors. Although space does not permit a full discussion of each of these goals, a brief description of some examples may help clarify these methods.

In the first example, the goal is to reduce the harm of ongoing addictive behavior by changing the route of administration of the substance or drug. In AIDS prevention, needle exchange is the most obvious example: clean needles and syringes are used to administer injection drugs in place of dirty or shared needles (cf. Battjes and Pickens 1988; Brettle 1991; Stimson 1989). Another example is smoking or orally consuming drugs instead of using the injection method of administration. In the Merseyside region of Northwestern England, pharmacists provide drug clinics with noninjectable drugs in the form of "reefers" (herbal or tobacco cigarettes injected with heroin, methadone, cocaine, or amphetamine). Reefers are prescribed through drug dependency units located in Liverpool and other Merseyside hospitals or in self-contained units near town centers. For those who cannot immediately give up injecting drugs, a combined injection and reefer prescription can be given. For users who are able to move toward stabilizing on oral drugs, a combined oral and reefer prescription can be used (Canadian Center on Substance Abuse 1991). The Liverpool model of harm reduction has pioneered the policy of making illicit drugs available to addicts on a controlled basis (Marks 1991).

A related treatment method for nicotine dependence is nicotine replacement therapy (Benowitz 1988). Nicotine replacement therapy changes the route of administration of nicotine from smoking to either nicotine gum or a transdermal nicotine patch. The risk of cancer associated with smoking is thereby reduced by changing the method of drug ingestion. Although this form of treatment is recommended as a method of reducing withdrawal symptoms associated with smoking cessation with the eventual goal of abstinence, some smokers may maintain ongoing use with these replacement strategies or use them as a way of reducing intake or tapering down (Gross and Stitzer 1989; Russell 1991).

A second goal of nonabstinence harm reduction methods is the provision of a safer alternative substance or drug to replace the more harmful substance. The Dutch approach to decriminalizing cannabis use is an illustration of this approach. Here the rationale is that providing "soft drugs" as a means of experimenting with intoxicating substances will prevent users from turning to substances of higher risk such as cocaine or heroin (Engelsman 1989). The same argument applies to alcohol: programs that recommend moderate consumption of beverages low in alcohol content (e.g., wine and beer) promote alternatives to the excessive use of stronger beverages (e.g., distilled spirits).

Perhaps the most widely known example of this method is methadone maintenance as an alternative to opiate injection or heroin use. Methadone reduces risks associated with illicit substance use and injection and provides a realistic option for some drug users. Many clients report preferring this form of treatment to drug-free treatments (Chaney and Roszell 1985; Mavis et al. 1991). Methadone dispensing programs utilizing contingency contracting interventions that use urinalysis to test for illicit drug use have been indicated as most successful in keeping clients from using illicit drugs (Dolan et al. 1985; Higgins et al. 1986). Positive reinforcement by increasing methadone dosages for negative urinalyses has been shown to reduce dropout rates (Stitzer et al. 1986).

Secondary Prevention and Harm Reduction

The third goal of harm reduction applies both to the secondary prevention and treatment of addictive behaviors: to reduce the frequency or intensity or both of the target behavior. Risk-reduction programs based on moderation or responsible-use principles have been applied in prevention programs geared toward alcohol use (see below). Similar principles have been applied in promoting moderate food consumption for overweight individuals or those who have binge eating problems (cf. Brownell and Foreyt 1986). In addition, sex education for AIDS prevention may focus on reducing the frequency of high-risk sexual activity (e.g., promoting monogamous sex, reducing the number of unsafe sexual episodes, or moving toward less risky forms of sex).

One of the most controversial harm-reduction strategies is controlled or moderate drinking as an alternative to abstinence for people with alcohol problems (Heather and Robertson 1983; Marlatt 1983; Marlatt et al. 1993; Sobell and Sobell 1978). In the treatment of alcohol dependence in the United States, controlled drinking programs are rarely available compared to other countries (e.g., Canada, Australia, and many European countries). The bulk of the resistance to this approach stems from abstinence advocates of the medical model, who view alcoholism as a progressive disease that cannot be cured (i.e., moderation can never be attained by "recovering" alcoholics). According to these critics, abstinence is the only acceptable goal for both treatment and prevention-no amount of moderation training can stem the tide of this insidious disease.

One of the apparent paradoxes of controlled drinking programs for problem drinkers is that many clients exposed to this approach eventually end up abstaining from alcohol (Miller et al. 1992). From the perspective of harm reduction theory, such a "paradoxical" outcome is not surprising. Problem drinkers who otherwise might resist the high-threshold commitment to abstinence as a precondition for treatment or participation in an abstinence-based self-help group may well be attracted by a moderation program instead. Once they have entered such a low-threshold program and are taking steps in the right direction, it is little wonder that many of these clients end up abstinent. Many of the skills and coping strategies employed in these cognitive-behavioral programs can be used to foster both moderation and abstinence goals (cf. Nathan and McCrady 1987). The greater the number of options available to the large mass of otherwise unreachable problem drinkers, the more people will be motivated to seek help for their drinking. Instead of requiring that clients uniformly quit in a "cold turkey" approach, harm reduction provides the client with options to taper their use gradually, to opt for a "warm turkey" alternative route to quitting (Miller and Page 1991).

ALCOHOL AND YOUTH

Within the United States, the consumption of alcohol by young people is associated with numerous health problems, including alcohol-related accidents, academic failure, vandalism, relationship difficulties, and

acquaintance rape (Institute of Medicine 1990). Alcohol-related accidents are the leading cause of death among youth (National Institute on Alcohol Abuse and Alcoholism 1984). Alcohol is also the drug of choice among American youth. While the use of most illicit drugs has declined over the past decade, self-reported alcohol consumption has remained relatively constant (Johnston et al. 1989).

Of particular concern to health officials has been the pattern of drinking among youth, which often involves large quantities of alcohol consumed relatively infrequently. A pattern of so-called binge drinking has been identified among this group. If binge drinking is defined as having five or more drinks in a row during the previous 2 weeks, it has been reported that 41 percent of America's college students and 34 percent of their noncollege counterparts engage in binge drinking (Johnston et al. 1991). Although the frequency of binge drinking appears to have decreased in individuals of college age who are not enrolled in college between 1980 and the present, the frequency of this behavior among college students has remained relatively constant (Johnston et al. 1989). Moreover, between 1977 and 1989 the proportion of college students reporting that they drink to get drunk has increased two to three times, reflected in the finding that students drank greater quantities of alcohol with greater regularity in 1989 than in 1977 (Wechsler and Isaac 1992). These trends have prompted Federal Government agencies to recommend stricter legal controls on the availability of alcohol to youth and greater enforcement of punishment for the consumption of alcohol by those under the age of 21 (Kusserow 1991). Additional programs sponsored by the Federal Government are targeted at reducing binge drinking among college students (Eigen and Quinlan 1991).

Although there is agreement among college administrators, health officials, and others that the consumption of alcohol by college students constitutes a serious problem, there is little agreement regarding what to do about substance use among young people in general. In a recent comprehensive review of the treatment and prevention literature, the Institute of Medicine reported:

> There is perhaps no special population about which so much has been written; yet, despite the more than 2,000 published papers, the common feeling among investigators in this area is

> that very little is known about how best to treat youth with alcohol and other drug problems. (Institute of Medicine 1990, p. 359)

Many existing alcohol treatment facilities for youth are modeled on adult residential programs. However, the appropriateness of these programs for young people has been challenged on a number of points (e.g., Durst 1988; Woltzen et al. 1986). Several unique characteristics of college-age drinkers have been identified (see Marlatt 1988) that may support certain styles of intervention and contraindicate others. The pattern of drinking among college students, as well as the problems that they are likely to experience, is different from those of older problem drinkers. In contrast to the classic symptoms of alcohol dependence (e.g., daily drinking and withdrawal), college students are more likely to experience more acute alcohol-related problems relating to drinking in certain times and settings (e.g., weekend parties). Most collegians will fail to identify themselves as problem drinkers, and the labeling of young persons as "alcoholic" may restrict their opportunities to mature out of heavy drinking in the modal fashion (e.g., Fillmore et al. 1979). Also, because many college drinkers are under 21 years of age, they are engaging in illegal behavior. This legal conflict has led several important national organizations to denounce "responsible drinking" as a viable objective for underage collegians. In the absence of alternative sources of information, students tend to develop their drinking habits based on the behavior of peers as well as media depictions of drinking norms.

Among the challenges faced by those working with college drinkers are: (1) how to motivate students to participate in alcohol-related programs when students do not perceive themselves to have a problem, (2) how to moderate and, in some cases, challenge the influence of peer norms and media depictions, and (3) how to accelerate rather than impede the process of maturing out of risky drinking behavior. Another difficulty faced by workers in this area arises from the illegality of underage drinking. Options for intervention are limited because of the official position that the behavior under consideration should not occur in the first place. In this view, programs that attempt to develop responsible drinking habits are seen as promoting rather than solving the problem. Similar arguments are familiar to proponents of condom distribution and needle exchange programs.

THE HIGH RISK DRINKERS PROJECT

The High Risk Drinkers Project is a campus-based program for the reduction of alcohol-related problems among members of the University of Washington community (Marlatt et al., in press). This project has applied many of the principles of harm reduction to provide an alternative to traditional services for this population. Because alcohol use is associated with normal development among students, a program was developed in which a variety of risk factors and problems are assessed but labels such as "problem drinking" or "alcoholic" are avoided. As in other harm reduction approaches, this program attempts to place both alcohol-related problems and varieties of interventions on a continuum. Attempts are made to match individuals to levels of care based on the extent of their alcohol-related problems and, significantly, their willingness to receive any form of help or treatment.

In order to test the efficacy of this approach, a longitudinal study was conducted involving more than 400 students who entered the University of Washington as freshmen in 1990 (cf. Baer 1993). Students were selected from among the entire incoming class based on their reports of risky high school drinking or their experience of negative alcohol-related consequences prior to entering the university. Because the members of the sample are at increased risk for experiencing alcohol-related problems, this study is one of secondary prevention.

One of the features of many harm reduction programs is the utilization of low-threshold services. It is essential that the criteria for receiving services do not exceed the interest or commitment level of potential recipients. In this sample, few students would identify themselves as candidates for any form of treatment. In order to encourage students to participate in the program, the authors have developed a user-friendly stepped-care approach that is modeled after existing therapeutic practices for hypertension (see Sobell and Sobell 1993). The first step of the program consists of a single hour in which each subject meets with a member of the staff to receive feedback concerning his or her drinking risks and to review practices for reducing harm. Previous research has shown that brief interventions can have a significant and enduring impact on drinking habits (Baer et

al. 1992). Subsequent levels of care are available to subjects if the initial intervention is not sufficiently effective.

The therapeutic style is based largely on the principles of motivational interviewing (Miller and Rollnick 1991). This technique is designed to cultivate and strengthen an individual's level of commitment to change. Consistent with Prochaska and DiClemente's (1982) model of the stages of behavior change, the motivational interviewer's task is to help an individual advance from considering change to attempting change. Prochaska and DiClemente (1982) describe several levels of preparedness for change that individuals may pass through: precontemplation, in which change is not being considered; contemplation, in which the idea of changing emerges; action, in which some attempt to change is made; maintenance, in which successful actions are maintained; and relapse, in which the previous undesired behavior reemerges. Consistent with harm reduction, any movement toward taking and maintaining action is viewed positively.

Preliminary results of this ongoing project indicate that students assigned to the stepped-care program reported significantly lower levels of drinking after 2 years than students in a randomly assigned comparison group (Marlatt et al., in press). A measure of alcohol-related problems (the Rutgers Alcohol Problem Index; White and Labouvie 1989) recorded a similar decline among students receiving this intervention versus a comparison group.

Consistent with the above mentioned motivational orientation, a considerable part of clinical attention goes toward maintaining good rapport with the subjects. If an individual continues to report risky drinking practices or negative consequences of alcohol use subsequent to the initial interview, the student is advised and an attempt is made to engage the individual in a discussion of what might be the best course of action to take. A range of options is presented, but the decision to undertake any action is left to the student. This clinical style is informed by a body of research in the addictions field that underscores the importance of commitment to change as a contributor to the ultimate success of any program (Hall et al. 1990, 1991).

Certain parallels may be evident between this secondary prevention program, programs such as needle exchange to prevent the spread of

HIV, and tertiary prevention programs such as the mobile methadone clinics in Amsterdam. In each case, the program makes an attempt to enter the lives of the persons who might benefit from its services. The practitioners of these programs, like therapists of many schools, are advocates for the individuals they serve. Services and information are made available but are not forced on people.

For example, the workers who staff Amsterdam's mobile methadone clinics become personally familiar with many of the addicts that they serve and offer encouragement for change in addition to multiple services such as exchanging needles, administering oral doses of methadone, and providing condoms and first aid supplies. A great benefit of this approach is that a large proportion of the target population is in contact with some form of health promotion agency (Marlatt and Tapert 1993). In Amsterdam, it is estimated that 60 to 80 percent of IDUs are in contact with health agencies (Engelsman 1989, p. 217). This proximity greatly enhances the opportunities for care that may be administered. It also illustrates a type of societal response to drug-related problems that avoids alienating individuals by identifying them as either sick or criminal, but seeing them instead as people who are part of society and who need help.

HARM REDUCTION AND AMERICAN DRUG POLICIES

In 1992, the United States budgeted $11,680 million for Federal drug programs, 70 percent of which was allotted to interdiction and law enforcement and 30 percent of which went toward education and treatment programs. This division of resources will do little to reduce the numerous impediments to treatment for addicts and IDUs in the United States. More than 107,000 individuals were on waiting lists for treatment in 1991 (National Commission on AIDS 1991), but there are vastly more individuals who might benefit from some care. New York City has an estimated 200,000 IDUs but only 38,000 publicly funded treatment positions. Inadequate funding is only one of the factors that limits access to proper health care for drug users: needle exchange programs remain illegal in many cities and States; most treatment programs require abstinence as a condition of admission or continuation of services; the most widely available forms of treatment in the United States tend to incorporate disease model concepts or

involve submission to a "higher power," which many individuals find personally objectionable; and the threat of arrest and possible imprisonment for use deters many (e.g., pregnant females who may fear prosecution for child abuse). In contrast to low-threshold policies advocated under harm reduction. U.S. drug policy sets a very high threshold on drug-related services.

Beyond the harm that is done by underfunding treatment and educational programs, it is apparent that considerable harm is being added, rather than alleviated, by spending vast sums on interdiction and law enforcement. The persecution of addicts and recreational drug users alike is exacting an inconceivably high toll and is fiscally irresponsible because prison is a tremendously expensive form of treatment that is also demonstrably ineffective.

NOTE

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