

1. INTRODUCTION

A resolution adopted at the Twenty-eighth World Health Assembly requested the Director-General "to direct special attention in the future programme of WHO to the extent and seriousness of the individual, public health and social problems associated with the current use of alcohol in many countries of the world and the trend towards higher levels of consumption", and "to study in depth, on the basis of such information, what measures could be taken in order to control the increase in alcohol consumption involving danger to public health" (resolution WHA28.81). Four years later, resolution WHA32.40 called for consideration of ways of strengthening WHO's capacity to cooperate with countries in their efforts to deal with problems associated with alcohol. One way is to promote exchange of experience between countries and the 1982 Technical Discussions¹ will provide a valuable opportunity to do so.

Considerable information on such experience is already available in the extensive relevant literature and additional documentation has been provided to WHO by Member States and individual contributors. Much of this material has been brought together and discussed in previous WHO documents² and some of the more striking findings, together with their general implications are outlined below.

Alcohol problems: the changing situation

Investigation of available statistics has shown that in some countries persons diagnosed as "alcoholics" fill one-third to one-half of general or psychiatric hospital beds; heavier drinking among women and young people is being reported along with family breakdown; liver cirrhosis now ranks among the leading causes of death among males between ages 25 and 64 years; episodes of poisoning from consumption of spirits distilled illegally or without supervision are occurring in several areas of the world; measurable blood-alcohol levels in drivers may account for up to 50% of road fatalities; and within industry, heavy drinkers show high rates of absenteeism and low productivity on the job. All social classes are affected by alcohol problems and several reports show high rates among executives and other professional personnel called upon to play a major role in national development and whose training has often involved considerable expenditure for the country concerned.

In only very few countries have there been indications of reduction (mostly very slight and transient) in the estimated average rates of alcohol consumption per head for total populations, whereas in most areas these rates continue to rise. Such increases appear to be particularly marked among young people and women in certain parts of the world. Examples have been reported of a successful slowing down in the growth curve of traffic accidents as a whole, whereas those caused by alcohol have shown a considerable increase.

Such changes in rates of alcohol consumption and its consequences appear to be due in part to increases in production - including expansion of breweries and distilleries in the developing world - as well as strengthening of national and international marketing activities, leading to more widespread distribution and easy availability of alcoholic beverages. The laborious production of the local brew, often restricted by harvests and perhaps limited to specific occasions, is being replaced or complemented by large scale commercial production. At the same time, money has largely replaced barter, thus adding to the ease of obtaining consumer goods such as alcoholic beverages. These trends have been accompanied by a lowering of cultural constraints on drinking in some areas of the world, and in others a loosening of legal, administrative and price controls on the availability of alcohol. Another factor has been expansion of communications and tourism, resulting apparently in a cumulation of drinking patterns: for example, a habit of taking wine with meals may be added to the tradition of occasional beer-drinking sessions.

¹ Resolution WHA32.40 requested the Executive Board to consider "Alcohol consumption and alcohol-related problems" as the subject for Technical Discussions as early as possible. The decision to hold the discussions on this topic at the Thirty-fifth World Health Assembly was taken at the sixty-sixth session of the Executive Board.

² See selected list of WHO documents and publications, Annex 4.

Scope of this outline document

More detailed summaries and discussion of the available information are provided in the rest of this outline document. Consideration is given first to the types and extent of problems associated with alcohol consumption (section 2, with additional information in Annex 2). A review of factors associated with a high risk of suffering from or causing alcohol problems includes attention to quantities of alcohol available and levels of consumption, sociodemographic factors, sociocultural factors and socioeconomic change, and individual factors (section 3 and Annex 3). It is suggested that in determining a national policy concerning alcohol availability and alcohol problems (section 4) all the above topics need to be investigated in the specific national context, taking into account constraints on the implementation of policy proposals. Suggestions on the development of programmes to alleviate alcohol problems are then discussed (section 5), with special attention to the need to consider the variety of relevant contexts, including health, welfare, education and general development. Strategies for preventing the occurrence of alcohol problems, or for reducing their impact through treatment and management, are summarized. Emphasis is given to the need for community involvement in programme development and the value of monitoring for assessment and adjustment of programmes. Finally, some experience is reviewed concerning the establishment of mechanisms that may help to coordinate efforts at developing effective policies and programmes for dealing with alcohol problems (section 6).

Throughout this document, reference is made to appropriate parts of the WHO documents (Annex 4) where details of the sources of the data and conclusions mentioned here can be found. These documents contain also examples from a variety of countries illustrating the topics discussed below. It is expected that these examples can be enriched and updated by exchange of experience before and during the Technical Discussions.

Recommendations for action

The situation concerning alcohol problems was reviewed in 1979 by a WHO Expert Committee which included the following among its recommendations (9, p. 66).

"Recognizing the extent of alcohol-related problems in many countries and their emergence in others, the Committee recommends that governments should:

- (a) review the nature and extent of these problems in their population, the resources already available for reducing their prevalence and impact, and the possible constraints to be met in establishing new policies;
- (b) initiate the procedures necessary for the elaboration of a comprehensive national alcohol policy;
- (c) establish coordinating mechanisms to implement preventive and management policies and programmes and to ensure a continuing review of the situation;
- (d) implement these programmes within the framework of general health and national development, utilizing existing structures where feasible."

There have been recent strong indications that governmental concern about rising trends in alcohol problems is being translated into action, or at least preparation for action. Mechanisms have been established in a number of countries to review the situation concerning relationships between availability and consumption of alcoholic beverages and consequences for the health and welfare of the nation. National debates are taking into consideration not only the effects of increased production on State revenue, private enterprise and employment levels, but also the rights of the road user, industry and the family to be protected from the consequences of rising consumption levels.

Few, if any, countries are at present satisfied with the extent of the action so far initiated. A study of what has been undertaken, however, suggests that there is need to consider a wide range of topics.

It is proposed that, in preparation for the Technical Discussions, Member States might refer to the "Guide for consideration at national level of alcohol consumption, alcohol-related problems and relevant policies and programmes" This Guide has been revised and distributed already to some Member States with the help of the WHO Regional Offices and is included here as Annex 1.

2. RANGE AND EXTENT OF ALCOHOL PROBLEMS

2.1 Types of Problems associated with Alcohol Consumption (5)

Alcohol problems affect not only the individual drinker but also the family and society in general. They can usefully be viewed in the perspective of the public health model of complex interaction between the agent (ethanol), the host (drinker) and the environment (physical, mental and sociocultural setting: the family and the general community).

The problems for the individual may include the development of "alcoholism" or, to use the term introduced into the ninth revision of the International Classification of Diseases, the "alcohol dependence syndrome", with "impaired control over intake of the drug ethyl alcohol" and "a probably impaired responsiveness of his behaviour to social control" (2, p. 9). However, there are many additional physical, mental and social problems that are not necessarily related to dependence (as suggested in Figure 1).

Figure 1. Alcohol-related problems: for the drinker

Consequences of acute episode of heavy drinking: short-term impairment of functioning and control: aggressiveness, accidents; exposure to climatic conditions: physical disorders; arrest for drunkenness

Consequences of prolonged heavy drinking: liver cirrhosis, aggravation of other physical disorders, malnutrition, prolonged impairment of functioning and control, accidents, impairment of working capacity, alcohol dependence syndrome, alcoholic psychosis

Possible concomitants: loss of friends, family, health, self-esteem, job, means of support, liberty

In considering the possible repercussions of drinking on the family (see Figure 2) it has to be kept in mind that there are likely to be additional causes of the problems and that, in fact, the family problems may have contributed to the reasons for the excessive drinking.

Figure 2. Alcohol-related problems: for the drinker's family

Family disruption	Foetal damage from maternal drinking
marital discord	Child neglect
child and spouse abuse	Child development problems
loss of esteem for drinker	School dropout
Mental disorder	Juvenile drinking and delinquency
Poverty	

The community can be affected in a variety of ways by problems bearing some relationship to inappropriate or heavy use of alcohol (Figure 3).

Figure 3. Alcohol-related problems: for general community

Effects on public order	Output losses
obnoxious behaviour	e.g. on farm
violence	in factory
property damage	administrative inefficiency
Victims of drinker-caused	loss of skilled manpower
accidents	(premature death)
Manpower and economic costs of	
services (health, welfare, law-	
enforcement) for: drinker, family,	
affected others	

2.2 Rates of Alcohol Problems

No country is able to produce complete statistics on the incidence and prevalence rates of all the alcohol problems mentioned in section 2.1, but almost everywhere some estimates are available from a variety of sources (e.g., hospital admissions and rates of arrests, absenteeism, and accidents). The completeness of reporting will, of course, depend partly on the recognition of possible indicators of alcohol problems and partly on the existing resources for determining and dealing with such problems.

Whatever the degree of comprehensiveness of the information available, it would seem essential in each country to make some estimate of the variety and extent of alcohol problems before attempting to formulate national policies.

These questions are discussed briefly in Annex 2 and further information is available in reference 5, tables 5-8 and pp. 43-47; 6; and in the Regional publications: 10, 12, 13.

3. FACTORS ASSOCIATED WITH HIGH RISK OF ALCOHOL PROBLEMS

In the quest for measures to reduce the incidence and impact of alcohol problems, consideration must, of course, be given to the role of the agent (alcohol). Undue focus on alcohol availability, though, may preclude the investigation of the environment and host factors that is essential to developing a comprehensive programme. Examination of the relationship of sociocultural, sociodemographic and individual factors to alcohol problems should assist in the identification of groups and individuals that are likely to be at high risk for developing such problems within a specific population. It will become apparent, though, that in any area where measures and programmes are to be developed, there will be need for close study of the relevance of current knowledge on the above matters to the local situation.

These questions are considered briefly in the following paragraphs and more fully in Annex 3, with references to 1, 3, 5 and 6.

3.1 Alcohol Availability and Trends in Levels of Consumption

It is now generally accepted that there is a direct relationship between the quantities of alcohol available and the general level of alcohol consumption in the population. There is also some evidence that as these general consumption levels rise, the percentage of heavy consumers in the population increases. Concomitant rising trends have been observed in the rates of certain indices of health damage, such as overall mortality, the death rate from cirrhosis of the liver, and the incidence rates for certain cancers.

In any attempt to reduce levels of alcohol consumption and consequent damage it may be found essential to consider factors affecting the availability of alcoholic beverages. These include the quantities produced within the country as well as the amounts imported and exported, and the distribution network and regulations. Such information will be important in estimating consumption rates and in examining reasons for changing trends.

3.2 Sociodemographic factors

In developing programmes on alcohol problems it may be found economical to focus attention on high risk sociodemographic groups. The sociodemographic factors most frequently studied have been sex and age, social class and occupational group.

Age and Sex

Although most investigations have shown that males drink more alcoholic beverages, and more frequently, than women, reports of increasing drinking among the latter, and young women in particular, suggest that both sexes may soon be at equally high risk of damaging consequences of alcohol consumption. Reports from certain countries of the high percentage of young persons drinking - at times in large quantities with frequent drunkenness - and the lowering of the age at which heavy drinking starts, are indications of the need to look upon this age group as being at high risk of suffering from or causing alcohol problems in later life.

Social Class and Occupation

Few valid general conclusions can be drawn about the relationship between these factors and high risk of alcohol problems, but both could be usefully studied for their impact in specific settings. Certain occupations, such as those involved in the alcohol trade, work away from home, and heavy professional responsibilities, are often linked with higher risks.

3.3 Sociocultural Factors and Socioeconomic Change

Of considerable importance in determining whether a particular group or society is at high risk of developing alcohol problems is knowledge of changing sociocultural and economic trends. Rapid changes in these trends have frequently been associated with increase in availability of commercially produced alcoholic beverages and changes in the cultural controls on drinking. Again, there is a need for investigation of the particular situation to determine whether the existing controls are sufficiently strong to resist changing influences.

3.4 Individual Factors

No clear general relationship has been established between individual differences and responses to alcohol intake. Evidence of specific personality types and genetic determinants underlying alcohol dependence is inconsistent, but a wide range of recent psychobiological research is beginning to provide indications of possible relationships.

4. DETERMINATION OF NATIONAL POLICIES CONCERNING ALCOHOL AVAILABILITY AND ALCOHOL PROBLEMS

4.1 Preliminary steps

As mentioned on page 1, a WHO Expert Committee (9, p. 66) recently recommended that governments should "initiate the procedures necessary for the elaboration of a comprehensive national alcohol policy".

National review

For countries that have not already considered this matter, an essential preliminary step, of course, will be to review the national situation concerning alcohol availability and alcohol problems, any existing provisions for control and for mitigating the problems, and the possibilities of implementing more effective measures (9, p. 51).

A number of countries have already made such reviews and are finding them of value as a basis for policy and programme development (6; 10; 14). Using such experience and particularly that of collaborators in a WHO project (14) guidelines for investigating alcohol problems and developing appropriate responses have recently been drafted (7). These include a section on collating and reviewing background information at local and national levels.

It is suggested that such a review should start with a brief historical description of the role of alcoholic beverages in the country. This would include a consideration of the source and availability of the various types of beverage, drinking customs and patterns, and the attitudes to drinking, with emphasis in each case on changing trends. A discussion of trends in the extent and nature of problems related to alcohol consumption could follow. An attempt might then be made to describe the available preventive and treatment measures and resources and to assess their current and historical impact on alcohol problems in the country concerned.

4.2 Requirements and Constraints in Policy Determination

Need for policy statement

In most parts of the world, no statement of policy concerning alcohol availability and the handling of alcohol problems has ever been developed. The lack of an explicit policy has often added to an ambivalent situation. A review on the lines suggested may reveal that alcohol production and use are being promoted to increase state revenues, provide employment, encourage private enterprise, or to meet what are considered to be legitimate demands. At the same time, the extent and severity of damaging consequences of alcohol consumption may be increasing, with resultant rising public expenditure on services for dealing with these problems. When it has been determined that the situation is of such gravity that urgent action is required, it may be considered valuable to formulate, at high level, the principles that should underly the action to be taken and to establish priorities and strategies.

A policy statement concerning alcohol availability and problems may be seen as an essential contribution to the formulation of national health policies, strategies and plans of action. These topics will be debated at the Thirty-fifth World Health Assembly and are outlined in a document of the WHO Executive Board.¹ As stated there (page 15) "Each country will have to develop its health policies as part of overall socioeconomic development policies and in the light of its own problems and possibilities, particular circumstances, social and economic structures, and political and economic mechanisms".

Selection of priorities and strategies

Alcohol-related policies - written and unwritten - vary from place to place and over time, and have ranged from complete prohibition to unrestricted production, sale and distribution of alcoholic beverages. Increasingly, however, it is being recognized that - whether or not the national policy contains proposals for meeting demands for access to alcoholic beverages - consideration should be given to limiting harmful consequences of consumption. Where prohibition has been selected as the main policy, means of enforcement are likely to receive emphasis. Elsewhere, much attention has been given to problems affecting the individual and the repercussions on the immediate environment. In such situations, strategies for action have been seen as directed either to curtailing the liberty of the individual whose drinking behaviour offends society, or to changing his behaviour through religious, temperance and other persuasive movements or through treatment and support of various kinds. Another type of strategy emphasises education - of the general public or of particular population groups - concerning consequences of alcohol consumption and possible means of avoiding or alleviating such consequences.

In recent years, there has been increasing concern about the apparent low level of response to the more widely employed dissuasive, educational and treatment measures and consideration is being devoted to means of rendering such measures more effective. Renewed attention is being given also to the establishment and implementation of control policies that might more rapidly reduce the incidence of alcohol problems in total populations.

¹World Health Organization (1979) Formulating strategies for health for all by the year 2000. Guiding principles and essential issues, Geneva

Some recent statements of policy have emphasized the need for a concerted approach. Treatment and management of the existing individual and social problems related to alcohol consumption would continue to receive attention, but only within the context of a policy aimed at reducing their occurrence. At the same time there is recognition of the uncertain state of knowledge about the complex causes of alcohol problems and the efficacy of preventive and treatment measures. There is therefore need for continuous monitoring of the situation and for assessment and modification of policies.

Policies concerning selection of research priorities will necessarily be affected by the resources available. A current WHO project has, however, demonstrated (14) that countries in very different sociocultural situations and conditions of technological development can carry out operational research on community and national response to alcohol problems, whose findings can be of considerable value in developing policies and action programmes. Much additional biomedical, sociological and other research, aimed at achieving a better understanding of the causes of alcohol problems and possibilities of modification, is being carried out in various parts of the world. There is perhaps a need for increase in multidisciplinary research on these matters and for widespread discussion of the implications of the findings, both nationally and internationally.

Constraints and implementation

In formulating policies, account will have to be taken of forces that are likely to promote or hinder their implementation. There will be need, for instance, to gauge public attitudes and whether there is likely to be a climate of general acceptance of policy proposals. Religious and moral forces in the community, and variations between sub-groups, will need to be considered, as well as existing and changing sociocultural influences that may be affecting drinking patterns. Prevailing economic and financial interests could be a powerful constraint on the implementation of control policies, and the possible effects of policies on employment, especially in producing areas, may require investigation. National policies are likely to be affected also by the practices of neighbouring countries, as well as regional and possibly broader international groups, whose trade policies may either support or undermine national preventive efforts.

5. DEVELOPMENT OF PROGRAMMES TO ALLEVIATE ALCOHOL PROBLEMS

5.1 Context of Programme Development

In some countries programmes on various aspects of alcohol problems have been developed in different contexts and sometimes with conflicting objectives. The determination of national policies, including selection of priorities, should help to reconcile such divergencies and to guide the allocation of resources. Where considerable responsibility for programme development lies at sub-national level, relevant local bodies might be represented in national bodies or at meetings for policy making and programme development.

Alcohol problems can hardly be solved if looked at as isolated phenomena. Many references have been made to the complexity of their origins and consequences. It is becoming increasingly apparent that, in developing programmes to deal with alcohol-related problems, there is a need to consider not merely the separate health, welfare, moral, educational and economic aspects, but also the total implications for the socioeconomic development of the community or nation. A comprehensive programme on alcohol-related problems would therefore need to be situated within the general framework established to promote health, welfare and development. It may be found necessary, however, to set up or strengthen a "focal point", with one or more persons responsible for ensuring that alcohol problems are considered within a variety of relevant contexts. Alternatively, some administrations may prefer to develop a more specialized programme on alcohol problems with strong links to other more general programmes concerned with health, welfare, etc.

5.2 Preventing the Occurrence of Alcohol Problems (5; 9, p. 28)

Programmes aimed at primary prevention of alcohol problems usually include one or more of the following objectives and means of implementation: reduction in availability of alcoholic beverages (through administrative, legislative and economic controls); reduction in demand for alcoholic beverages (through educational, moral and religious efforts and through provision of alternative beverages, and opportunities for a more satisfying life-style); and a combination of the above for preventive programmes in specific high-risk groups.

Reduction in availability of alcohol

A great variety of controls have been imposed in various countries on the production, trade, distribution and consumption of alcoholic beverages - though not always for the purpose of preventing damaging consequences. Price controls through taxation, for example, may be strictly enforced for revenue purposes although, in fact, careful price adjustments according to average income trends may be an important way of limiting purchase and consumption. Reviews of research have indicated that whereas minor variation in regulations seem to have little effect on consumption rates, the latter appear to have risen significantly when there has been a rapid relaxation of control policies and control measures. On the other hand, there are strong indications that controls, properly enforced, may be the most effective tools for reducing many of the problems associated with the consumption of alcoholic beverages. The economic and political constraints on the imposition of controls, mentioned earlier, have to be weighed against the expected advantages (5, p. 95; 9, p. 30).

Reduction in demand

Information and education on alcohol and alcohol problems. These are widely seen as important means of reducing the demand for alcohol (9, p. 40; 8; 5, p. 171). Considerable experience has accumulated on a suitable framework for alcohol education and information programmes (e.g., within broader programmes for health and sociocultural development). Much expertise is also available concerning specialized techniques for improving communication effectiveness and information transfer as well as for promoting changes in attitudes. In efforts to change behaviour, mere provision of information is likely to be of limited value. Emphasis is therefore increasingly being laid on educational efforts that focus on the need to develop responsibility for personal health and welfare and that of the community. Whether or not a national education policy and programmes concerning alcohol problems have been defined, it may be considered important at local level to involve community members in shaping such programmes according to the significance attached to alcohol use locally, to the existing drinking patterns, and to the prevailing social controls as well as to the social changes underway (7).

In several countries important efforts have been made to develop alcohol education programmes for schoolchildren that may prove more effective than in the past for reducing demand and subsequent problems. Attention has also been given to the special needs and opportunities for providing such education to target groups, such as pregnant women, drivers and persons in certain occupational and professional groups, including those involved in coping with alcohol problems, such as the health and welfare professions.

Restriction of advertising. It has been contended that the kind of educational efforts outlined above may be counteracted where unlimited advertising of alcoholic beverages is permitted. In some countries all such advertising is banned. In others, advertising through certain media only may be banned or restricted. The restrictions issued are generally aimed against the encouragement of drinking by young people, or the presentation of strong drink as a challenge, a stimulant, a sedative or as beneficial to health. Advertisers in some areas have found ways of getting round such controls and constant vigilance may be required for enforcement. In some countries, however, active steps have been taken to involve the alcohol beverage producers in establishing a code for taking a more responsible attitude towards advertising and sales promotion.

Moral and religious forces. Such forces are considered in some parts of the world to be the strongest deterrents to the use and abuse of substances likely to have harmful consequences for the individual and the community. As in the case of other social and cultural controls on behaviour, there may be a need for careful investigation of means of arresting the breakdown of such regulatory forces in the face of rapid and widespread sociocultural change.

Social and other measures. Excessive use of alcohol may be an indicator of underlying social problems. In some areas, therefore, programmes on alcohol problems have provided for close collaboration in other community endeavours that aim at ensuring increased opportunities for employment, income, education and leisure activities.

Changes in the occupational environment may be necessary to prevent problems arising from the combined effects of alcohol and specific toxic substances.

The more widespread availability of non-alcoholic beverages - including safe drinking water - is also seen as an important preventive measure.

Certain additional preventive measures might be implemented locally. For instance, on occasions when heavy drinking may be expected because of festivities, special arrangements can be made to provide transport by those not involved in drinking.

Conclusions. It does not seem possible to recommend any single method of reducing availability and demand to prevent alcohol problems, but there are indications that a series of restrictions, established after careful consideration of local cultural and economic factors, and imposed after widespread public education, discussion and investigation of public attitudes, are likely to result in improvement in the situation. Maintenance of such improvement might entail an explicit definition of policy and the existence of an effective body to monitor the situation and to review and ensure enforcement of policy provisions.

5.3 Reducing the Impact of Alcohol Problems: Treatment and Management

Treatment and management of many of the damaging consequences of drinking depend very much on the resources available and have frequently been found not only expensive, but of limited efficacy (9, p. 44). A strong plea was therefore made by the WHO Expert Committee on Problems Related to Alcohol Consumption for according priority to preventive measures. At the same time many countries may recognize an urgent need to seek and implement low cost and more effective ways of coping with an existing heavy burden of alcohol problems. The term "management" is meant here to imply the use of strategies and techniques for dealing with problems that could not strictly be included under the term "treatment".

Family support (9, p. 47; 5, p. 205)

There is some evidence that undesirable consequences of alcohol problems are particularly damaging for the family of the heavy drinker. Children of "alcoholic" parents appear to be at especially high risk of both mental and physical health hazards. The vulnerability of families may be increased by the tendency in some populations towards more widespread and heavier drinking among women. There is a great need to consider how existing possibilities of family and community self-help can be maintained and strengthened, and how available services can be used more effectively to prevent or alleviate alcohol-related problems in the family setting.

Treatment and management of persons identified as "alcoholics" and "heavy drinkers"
(9, p. 45; 5, p. 205)

A great variety of provisions have been made in various countries for the management of persons identified as "alcoholics" or as suffering from the alcohol dependence syndrome¹. A wide range of methods of treatment have been employed, separately or in combination. So far,

¹This is the term incorporated in the International Classification of Diseases to replace "alcoholism".

however, the few well designed attempts to assess the efficacy of treatment models have failed to show any clear advantage of complex and lavish management régimes compared with simpler strategies. At both community and national levels there may be opportunities for stimulating or reinforcing the support offered by self-help groups, like Alcoholics Anonymous. Increased attention has recently been given to the value of specialized detoxification centres for dealing with public drunkenness, thus providing at least temporary shelter, as well as opportunities for physical care, simple counselling and possibly social assistance to the drinker's family.

In view of the paucity of evidence of the comparative value of various treatment and management measures for the alcohol-dependent person, it would seem of great importance that efforts be made to examine the measures currently employed at the local level, whether or not such techniques are formally structured or labelled as treatment, in order to make a preliminary assessment of their effectiveness. It should be recognized, however, that even with little or no treatment some persons labelled as alcoholics may stop drinking completely or go back to a socially acceptable level of drinking. If it is decided that additional treatment and management measures are required, it may be advisable to initiate trial programmes with limited objectives directed at a defined population, so that the costs (in terms of manpower and time) and effectiveness (including acceptability to the community) can be estimated in stages and the findings used to modify the programmes.

Programmes in the occupational setting (9, p. 49; 5, p. 218, 233)

Most people with alcohol problems have some kind of regular occupation. In many areas the work setting provides motivation and possibilities for identifying and attempting to reduce such problems, which often come to attention through absenteeism, illness, accidents, and lowered production and quality of work.

Countries may find it feasible to identify a range of occupational settings and initiate discussions with key personnel, including persons who may be engaged in occupational health programmes, and, where appropriate, with representatives of labour organizations (trade unions). There may already be an awareness of alcohol problems and their repercussions in the occupational setting, or this may have to be stimulated. Consideration of how problems should be met might need to await a preliminary investigation of their extent in particular work situations, and a review of existing resources and responses. Opposition to such inquiry may be encountered from several sides. Employees may fear loss of jobs, perhaps in a situation of high unemployment, and trade unions may be suspicious of programmes that might run counter to the workers' interest. Managers may find dismissal of workers with problems economically preferable to seeking other solutions.

Experience is, however, now available from a number of countries demonstrating some success in countering opposition to occupational programmes and in reducing alcohol problems, to the satisfaction of both workers and employer. In certain programmes, early identification, confrontation of the employee about his problems, counselling and follow-up are provided through an occupational health and social service within the specific occupational setting, although referral may be made to other community services. Elsewhere a centralized programme and referral service dealing specifically with alcohol problems may be used. Some programmes deal with these problems in a broader context of general behaviour problems affecting work performance.

Programmes in the traffic safety setting (5, p. 211)

Legislation on drinking and driving. Recognition of the high risks entailed in driving after drinking has led many countries to stipulate the limit of blood-alcohol level at which a detected driver is punishable or to define as illegal certain behaviour considered to constitute impairment on a basis of observation, which may be supported by information on blood-alcohol level.

In most of these countries, legislation has been passed on permissible testing. In several, the police are permitted to carry out breath tests, either at random at special places or only on persons involved in road traffic accidents. If positive, the test may be followed up

by a blood test with or without medical examination in some countries. Additional signs of inebriety may be a condition for penalization. Penalties imposed include fines, imprisonment, withdrawal of driving licence, which may be definitive for alcoholics, or transfer from sector of work. (Sec 5, table 16).

There is general agreement that legislation on maximum permissible blood-alcohol levels in drivers is of little value unless it is enforced and perceived to be enforced. Under such conditions, it has been shown to be successful in lowering road accident rates.

Scientific methods of assessing blood-alcohol levels from a breath sample are now available and could be used to increase detection rates and to affect drivers' awareness of increased probability of detection. In some countries additional legislation would be required to permit involvement of the police in breath-testing of drivers. Routine testing through "random" tests appears to be an inefficient use of resources and intensive campaigns of testing at selected places and times have been suggested as preferable method of enforcement.

High risk drivers. A number of studies have concluded that a high percentage, or even a majority of alcohol-related traffic accidents are caused not by drinking drivers who once in a while exceed the blood-alcohol limit, but by those who drink very heavily. It has been proposed in one country that priority should be given to dealing with this very high risk group of drivers, together with persons convicted for a second time within ten years, many of whom were found to have levels of over 1.5 g. ethanol per 1000g. blood. For such high risk offenders, the driving licence might be restored at the end of the ordinary disqualification only upon proof by the offender to the court that he no longer presented undue danger to himself or other road users by reason of his drinking habits. Some countries already have at least partial provisions of this kind. A step towards the prevention of alcohol-related traffic accidents might be the tightening up of standards for the licensing of drivers.

In planning prevention of alcohol-related problems, some countries have recognized the high risk to society of permitting drinking among drivers of mass transport, including trains and ships, and among plane pilots, as well as among those responsible for traffic safety and signals.

Education and rehabilitation programmes. Reviews have concluded that little scientific information is available on the effectiveness of various types of public information programmes in modifying drinking and drinking behaviour, but that most such campaigns are aimed at "social drinkers", since "problem drinkers" are too difficult to reach.

Rehabilitation programmes for convicted drivers have been initiated in a few countries, but they are mainly informational. Some attempts to evaluate the effect on subsequent driving behaviour of mandatory rehabilitation suggest that such enforced follow-up may be a sound decision. Probably driver rehabilitation programmes cannot be expected to result in dramatic reductions in alcohol-related traffic accidents since they deal only with known offenders, who constitute only a small proportion of those involved in such accidents in any one year.

Alcohol information is beginning to be included in driver education curricula in secondary schools in one or two countries. Information on the effects of alcohol and other drugs on driving behaviour and responses has recently been introduced into the curricula of driving schools in a few places. Up to now little information on the effectiveness of such programmes in reducing road accidents has become available.

From a review of surveys of countermeasures against the alcohol-impaired driver it can be concluded that, although a lack of data has often precluded the determination of the effectiveness of such measures, some successes have been identified as well as specific obstacles to effective campaigns. The major obstacle seems to be public attitudes towards drinking and driving. Long-term efforts would be required to attempt to change such attitudes.

5.4 Community Involvement in Programme Development

Reference has been made in several parts of this document to the need for collaboration at local level in reviewing alcohol problems and planning appropriate programmes to deal with them. In attempting to promote such involvement, consideration could be given to the strategies discussed in Alma Ata in 1978 by the International Conference on Primary health care.

Primary health care is stated in the report of the conference¹ to be "a practical approach to making health care universally accessible to individuals and families in the community in an acceptable and affordable way and with their full participation". Health care is described as being an integral part of overall social and economic development and emphasis is laid on the need for proper coordination between public health efforts and other sectors, such as education, anti-poverty measures and food production.

It is becoming widely accepted that individuals and families can acquire a capacity for assuming considerable responsibility for the health and welfare of themselves and the community, to "become agents of their own development instead of passive beneficiaries of development aid".

An attempt has been made to involve communities in such ways in the WHO Project on Community Response to Alcohol-Related Problems (14) and the Guidelines developed for the extension of the project (7) refer to means of achieving such involvement. It may be necessary first to promote the establishment of a local group concerned with alcohol problems, which can be helped to become a local expert resource and planning group. Representatives of such groups might be consulted at national level.

5.5 Monitoring the Alcohol Situation: Assessment and Adjustment of Programmes

Reviews of the history of alcohol problems among populations indicate that the situation is unlikely to remain stable, especially where sociocultural conditions are rapidly changing. To be of use, both programmes and policies will need to be adjusted to new conditions, taking into account assessments of their effectiveness. The kind of review of the situation referred to under 4.1 will be required initially, but means will need to be established for ensuring continuing information collection and assessment and follow through into action.

6. COORDINATING MECHANISMS FOR POLICY AND PROGRAMME DEVELOPMENT

In developing policies and programmes concerning alcohol use and alcohol problems, it is recognized that consideration has to be given to health, welfare, social and economic aspects as well as their total implications for the socioeconomic development of the community or country (9, p.54). The need for coordination of such efforts has been accepted in many countries in recent years and considerable experience is now available on the development and functioning of national instruments for this purpose (5, tables 1 and 13; 7). The work of these bodies may come under the responsibility of the ministry of health, or possibly of a special unit, institute or commission attached to a ministry, or of a special governmental advisory body, which may eventually develop into a national institute. Several countries have established coordinating bodies with membership representing various branches and levels of government, in many cases complemented by voluntary bodies and sometimes by representatives of economic interests. In some countries such bodies have been set up at sub-national level. Examination of these varied experiences may be found of value to countries newly considering the establishment of a national coordinating body.

Depending on the national context, a coordinating body may be empowered to take responsibility for investigating, carrying out or merely promoting the activities necessary for programme development.

¹ WHO/UNICEF (1978). Primary health care: Report of the International Conference on Primary Health Care, Alma Ata, USSR, 6-12 September 1978, Geneva, p. 38

An early task of this body might well be to formulate a policy statement as described in section 4.2, or to consider the need to amend existing policies.

The national coordinating body may need to take the responsibility for preparing a review, as outlined in section 4.1, or for ensuring that an existing draft is made more comprehensive. Where the review is being undertaken for the first time, the preparation process may provide valuable experience in collaboration between a variety of disciplines, interests and power structures.

In ensuring continued review of the situation and follow-through into action, the central body may need to spend much time in consultation, explanation, debate and securing agreement on recommendations. It may need to meet and overcome resistances at many levels from groups that may at first see their concern as incompatible with health and social interests. It will have to ensure that programmes concerning alcohol problems are adequately linked with other health and development programmes. A major task will be to secure political commitment to the proposed programme development.

ALCOHOL CONSUMPTION, ALCOHOL-RELATED PROBLEMS
AND RELEVANT POLICIES AND PROGRAMMES

Guide for consideration at national level and during the 1982 Technical Discussions

Purpose of Document

The attached list of items is intended not as a formal questionnaire, but primarily as a guide for national consideration of whether adequate attention is being devoted to alcohol-related problems.

If such an exercise has recently been undertaken in your country, this Guide may be used as a check list and it would be appreciated if a reference to any relevant report could be provided.

If there has been no such previous or recent review, the Guide may serve as a focus for discussion within your country. For this purpose, it may be feasible to bring together representatives of a range of disciplines and affiliations (including, for example, various governmental departments) who would be in a position to offer information and advice on the complex aspects of alcohol problems and how they can be confronted.

The findings may be of considerable value, not only within your own country, but also as a stimulus to action in other parts of the world where governments have expressed concern about the damaging consequences of increasing alcohol consumption.

It would, therefore, be much appreciated if a summary of relevant information, either in narrative form, or as notes providing brief responses to the list of items, could be sent to your WHO Regional Office for transmission to the Secretary of the 1982 Technical Discussions. Extracts of this material will then be incorporated into the expanded Background Document for the above Discussions. This revised document will be completed by the end of 1981 and made available to Member States in March 1982. Although the focus of the Technical Discussions will be on the points raised in item 3 of this Guide, some preliminary consideration of items 1 and 2 may be found essential.

Many countries have already provided WHO with a considerable volume of relevant information which has been utilized in the compilation of the WHO documents numbered 1 to 14 in the attached list of references.¹ If copies of the documents are not already available in your country, most of them can be supplied by your Regional Office. In order to simplify the preparation of your response to the following list of items, you may wish to insert references mentioning where such detailed information relevant to your country can be found. You may, however, wish to provide some additional and more recent information.

1. Review and monitoring of alcohol consumption and alcohol-related problems at national level
 - (i) Has there been any recent official recognition in your country (e.g., governmental statements, reports by a commission of inquiry or other nationally recognized body)² that consumption of alcoholic beverages is giving rise to serious problems (e.g., health, social, economic problems)?
 - (ii) If so, which are considered to be the main problems affecting (a) the drinker; (b) the drinker's family; (c) society in general; or certain sectors (e.g., in connexion with transport - road, rail, sea and air traffic; in the employment setting; in health and welfare services; in specific sex, age and occupational groups)?

¹ Annex 4

² Kindly supply references

- (iii) Do these problems appear to be increasing?
- (iv) Is the available evidence of the nature and extent of such problems adequate as a basis for policy and programme development?
- (v) Are there any national agencies that collect and analyse information on the nature and extent of alcohol problems and monitor the situation in a continuous way in your country?
- (vi) If not, is there a need for such information collection and monitoring at national level in your country? How could such work be promoted?
- (vii) Is there a coordinating mechanism, (for example, an inter-agency commission that brings together representatives of various ministries and other bodies) for carrying out periodic reviews of the situation concerning alcohol problems in your country, formulating appropriate recommendations, and ensuring the implementation of proposed action?

2. Prevention and management of alcohol-related problems at national level

- (i) Has there been any consideration at governmental or other national level of the extent to which alcohol-related problems can be prevented or alleviated?¹
- (ii) What specific preventive measures are taken or are needed in your country, for example:
 - reduction in availability of alcoholic beverages: administrative, legislative and economic measures;
 - reduction in demand for alcoholic beverages: educational measures; moral and religious measures; provision of alternatives (e.g., alternative beverages, recreational alternatives);
 - other measures (e.g., reinforcement of existing legislation, specific measures aimed at high-risk groups).
- (iii) Do programmes concerning the management of alcohol problems need to be reinforced in your country? For example:
 - management of the individual drinker: treatment to reduce disability; rehabilitation;
 - management of problems in the family setting: measures aimed at preventing and alleviating problems for the spouse and children of the drinker;
 - management of problems in the employment setting.

3. Development of policies and programmes concerning alcohol-related problems at national level

- (i) Is there an explicit policy statement in your country concerning alcohol availability and the prevention and management of alcohol problems?¹ If not, should such a statement be formulated? Under whose responsibility?

¹Kindly supply references

(ii) What are, or should be, the main principles of such a policy? For example:

- Emphasis on

- (a) unrestricted production, sale and distribution of alcoholic beverages, or
- (b) total or partial prohibition, or
- (c) attempts to introduce certain restrictions in the interest of the health and welfare of the individual and society

- Emphasis on

- (d) prevention through controls, education, or other measures, separately or in combination, or
- (e) treatment by trained staff, in specialized or general institutions, or efforts towards development of alternatives (e.g., self-reliance, primary health care other general community services), or
- (f) priority research requirement - e.g., priority accorded to operational research leading to action (as in the WHO Project on Community Response to Alcohol-Related Problems), or to biomedical and other research, aimed at achieving a better understanding of the causes of alcohol problems and possibilities of their resolution, or
- (g) a concerted approach involving prevention, treatment and management of alcohol problems and relevant research.

(iii) Are there any additional important principles that should guide programme development in your country? For example:

- programmes on alcohol problems seen in a perspective of health and development programmes: or as separate ("vertical") programmes;
- multidisciplinary approach: or responsibility of a defined category of specialists;
- consideration of repercussions of preventive efforts on trade, employment and revenue;
- continued monitoring of situation and assessment of effects of action attempted.

(iv) How is the necessary action for development of policies and programmes promoted and coordinated at local and national levels in your country and what further steps are required? (Reference could be made here to the response to 1. (vii), p.16.)

4. Summary of recommendations for most urgent action in your country

TDs/ALC/81.1
ANNEX 1
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RATES OF ALCOHOL PROBLEMS
(5, tables 5-8 and p. 43-47)

"Alcoholism" and "heavy drinking". Estimates of rates of alcoholics are sometimes based on estimation formulae using liver cirrhosis mortality rates or total alcohol consumption by the population, variations between individuals being assumed as distributed according to a log-normal curve (5, p. 47). Population surveys have been used as a more direct technique of estimating prevalence of "alcoholism", "heavy drinking" and other alcohol-related problems, but the methods used and definitions of what is being measured vary greatly (2, p. 61). The prevalence of certain alcohol-related problems is estimated also from census material (e.g., hospital admissions, arrest rates, absenteeism rates, accident rates where tests are made for blood alcohol content). The types of inaccuracies to be expected here are not only misdiagnosis, but under-reporting in an attempt to preserve the individual from stigma. Moreover, the completeness of reporting will depend on the availability of treatment and other facilities and the number and vigilance of reporting persons (e.g., physicians, police officers) as well as prevailing attitudes to indicators of alcohol-related problems.

Table 5 of Reference 5 attempts to summarise information available from surveys and estimates on rates of "drinkers", "heavy drinkers" and "alcoholics" among populations. It is obvious that the rates are not comparable and that the wide variations depend on the definitions employed, the age and sex groups surveyed, and the intensity of the search.

Criteria based on quantity and frequency of alcohol consumption are used in a number of surveys based on interview questionnaires or on assembled data from various sources (2, p 64). In some studies an attempt has been made to measure the intake of alcoholic beverages in terms of "heavy consumption". It should be kept in mind that, among other factors, body weight will affect the blood-ethanol level resulting from a given alcohol intake. The level at which drinking becomes "unsafe" is therefore also partly dependent on body weight.

Alcohol-related problems may constitute a heavy burden for medical services. In several countries or sub-national areas, patients with a primary or secondary diagnosis of alcoholism or alcoholic psychosis account for 20% - 30% of all first admissions to psychiatric hospitals (5, table 6, and p. 45). In a few areas these diagnoses account for even higher percentages of total admissions to psychiatric establishments. General hospitals, too, may admit a considerable percentage of patients with a diagnosis of alcoholism.

Cirrhosis of the liver. Cirrhosis can be an important consequence of prolonged drinking and has often been used as an index of the magnitude of alcohol problems generally. Of 49 countries for which mortality rates are available in 1974, the rates per 100 000 total population were below 5 in 8 countries and above 25 in 8. Between 1955 and 1977, most countries showed increasing rates for both sexes. In nearly all of the countries for which valid data can be obtained, cirrhosis now ranks among the five leading causes of death among males aged between 25 and 64 years (5, tables 7 and 8).

Excess mortality. Heavy users of alcohol have a substantially elevated risk of premature death (1, p. 41) although the mortality ratio may vary with the mode of identification (e.g., clinical, case-finding survey, drunkenness arrest record, or reported drinking habits).

Accidents. There are some indications that regular drinkers suffer more accidents than non-drinkers. According to an OECD report¹, between 30% and 50% of fatal traffic accidents in industrialized countries involve drivers with a high level of alcohol or other drug in the blood. Persons inexperienced in driving and drinking, that is especially young persons recently granted driving licences, are at a particularly high risk of road accident involvement. The rise in the road accident rate among young males in several countries is considered to be

¹Organization for Economic Cooperation and Development. Road Research Group (1978) New research on the role of alcohol and drugs in road accidents, Paris, p. 106

largely a result of increase in drinking at an increasingly early age, accompanied in certain countries by a lowering of the permissible age at which alcohol can be bought and consumed and at which a driving licence can be obtained. Alcohol has been incriminated in some air accidents. The role of alcohol in industrial accidents is not well documented but may be lower than expected because of high absenteeism rates among heavy drinkers.

Public intoxication. Statistics on public drunkenness will depend very much on whether this state is considered a punishable offence. Where the regulations have remained fairly constant, trends in arrest figures may provide valuable indications of frequency of heavy alcohol use.

Crime. There are wide variations in what is considered a crime and in many countries it is difficult to separate out the role of alcohol. There may be a higher prevalence of violent crime among "alcoholics" as compared with "non-alcoholics". Very high rates of alcoholism may be found among convicted offenders.

Family problems. A range of family problems has been associated with heavy drinking or "alcoholism" in one or more of the family members, although it is often not clear whether the drinking has been the cause or the outcome of the interpersonal and other family problems. Little systematic information is available on which to base an assessment of the role of alcohol in marital violence and child neglect and abuse. Job instability and financial insecurity within the family may be exacerbated by heavy drinking. There is evidence of much serious disturbance in wives of alcoholics, although it may not be clear whether the disturbance was present before the heavy drinking problems or as a consequence. Underlying psychopathology in both partners may be complicated. Higher rates of poor marital relations, marital conflict and marital separation are reported for families with alcoholics compared with controls and may help to explain the higher incidence of disturbances among the children of alcoholic parents than among controls. However, there is a paucity of evaluative studies on the effects of parental alcoholism on children (see 5, p. 208).

Occupational problems. The majority of persons with alcohol problems are pursuing some type of regular occupation, contrary to the popular image of the alcoholic as a down-and-out denizen of skid-row. There are few precise statistics on the extent of alcohol problems in various occupations, but there are indications that certain occupations are more closely associated with specific problems than others. The high rate of alcohol problems among company directors and other management groups may be related to the general acceptance of drinking as a social need in business life.

Verbal reports from several developing countries refer to high rates of alcohol problems among those in executive power with the future of the country in their hands. It is suggested that the reasons are complex, and often include anxiety, resulting from the shouldering of new and heavy burdens.

Attempts have been made to quantify the consequences to enterprises of heavy drinking among the workforce. It has been found that "alcoholic" employees may have a considerably higher number of days off for sickness and accidents than controls. (See 5, p. 218)

FACTORS ASSOCIATED WITH HIGH-RISK OF ALCOHOL PROBLEMS

1. Alcohol Availability¹ and Trends in Levels of Consumption

As mentioned in section 3.1, it is widely accepted that there is a direct relationship between the quantities of alcohol available and the general level of alcohol consumption in a population. Moreover, despite much debate about the positive relationship of the latter with the percentage of heavy consumers (1, p. 30), it now seems to be generally agreed that the hypothesis has some validity (5, p. 47).

The co-variation of per capita consumption and some indices of health damage have also been studied (1, p. 15). There is suggestive evidence of co-variation of average consumption level in a population and overall mortality taken as excess of male over female mortality in the middle age range. The alcohol consumption level appears, in general, to be a good predictor of the cirrhosis death rate, which is usually found to rise and fall with the level of alcohol consumption in general populations.

Evidence that laryngeal and oesophageal cancers are causally related to alcohol and tobacco consumption, particularly in combination, is accruing. At the present state of knowledge, however, there is little clear evidence of close correlation between other health indices and total alcohol consumption in populations. It has been pointed out that correlation may be dependent on a variety of personal, social, demographic and cultural factors.

Production. A main factor affecting the availability of alcoholic beverages for consumption is, of course, the quantity produced. In general, there has been a constant increase in the production of alcoholic beverages in the industrialized world and probably in many developing countries as well. Between 1960 and 1972, recorded production increased by 19% for wine, by 68% for beer, and by 61% for distilled spirits in 177 countries (3). For a number of countries no production figures are recorded although it is known that all three of the above types of alcoholic beverages are produced, at home or on a commercial scale. In many developing countries, in fact, unrecorded home production may be the main source of alcoholic beverages and little is known about the quantities available. Home production in many developed countries, whether legal or illegal, does not appear to be statistically important, but this situation could change, for example with increase in official prices of commercially produced beverages. Investment abroad has been growing and this is true particularly of the brewing industry, since transport costs affect export of the finished product, making direct investment in production abroad relatively advantageous.

Importation and exportation. The quantities of alcoholic beverages available are affected not only by production within a country, but also by importation and exportation practices. The volume of such imports and exports may depend on national and regional economic interests, as well as pressure from multinational enterprises and movements towards free trade or lowering of tariffs. Regulations concerning individual tax-free importation of alcoholic beverages may have a sizeable effect on quantities available within a country. In one country, for example, it was estimated that in 1976 one-third of the total volume of imported alcoholic beverages came through one free port.

Distribution. The availability of alcoholic beverages to populations is also affected by the numbers and distribution of outlets and regulations concerning time, place and quantity of sales. In recent years there has been a rapid increase in the numbers of places permitted to sell alcoholic beverages to take away (off-licence). Sale of alcoholic beverages together with other commodities (e.g., in supermarkets and department stores) rather than in specialized stores has made it much easier to consider alcoholic beverages as a commodity like any other. In some countries alcoholic beverages can be obtained through automatic vending machines. The distribution of alcoholic beverages, as of other commodities, has been greatly facilitated by increase

¹The word "availability" is used here to refer to the quantities of alcoholic beverages at the disposal of populations and the factors affecting these quantities.

in the availability of transport. The volume of travel and its overall economic importance have grown immensely in recent years; the availability of alcohol is an important factor in the competition for tourist trade.

Consumption levels. Reference 1 provides total consumption figures, by country and year, in 1000 litres of wine, beer and spirits (the last in terms of 100% ethanol). An attempt has been made to use the most reliable sources available. Despite any lacunae in these statistics it is immediately apparent that there have been considerable increases in consumption over the two decades. Between 1950 and 1972 the consumption levels doubled for each beverage category in some countries and for certain beverage categories consumption increased fivefold to twentyfold in other countries.

Some more recent statistics are available for several countries (5, tables 3 and 4, and p. 41; 6 and addenda) which show that trends in levels of total consumption have continued to rise in most countries, although in some there has been a slackening in the rate of increase in recent years and in a few, there has been a slight decline.

Although in producing areas the dominant type of alcoholic beverage consumed is still closely related to the type produced and accounts for most of the increases in consumption, use of additional beverage types contributes to the increase. Thus, in countries with traditional heavy wine consumption, there has been a marked increase in consumption of beer and spirits, whereas in countries where beer was the preferred drink, the consumption of wine and spirits has become more general.

It is more difficult to obtain reliable data on changes in consumption levels in the developing world, but the following example from a report received may be indicative of trends elsewhere. In a rather slowly developing country, a highly efficient brewing industry was established, with two multinational firms as principal shareholders. At the same time the numbers of sales points increased considerably and improvements were made, with the help of the industry, in the transport network. The average consumption of beer per head of the indigenous population increased more than tenfold between 1962 and 1978.

2. Sociodemographic Factors

Sex (5, p.135). Section 3.2 refers to the higher, and often considerably higher, rates of heavy drinking, alcoholism and other alcohol problems among men than among women. In many of the developing countries there is very little drinking among women; in others, the prevalence of moderate drinking among women is not negligible, but heavy drinking is much less widespread than among men. In societies where male and female roles are strongly differentiated, there tend to be sex differences in drinking.

Reports from several countries refer to a steady increase in alcoholism among women, noting however that the female alcoholic often belongs to a group of "hidden drinkers", not coming to attention, and likely to be a problem primarily to herself and her family. The general trends concerning sex differences in prevalence of alcohol problems are not yet clear. However, the finding in some countries that most young women drink, whereas there is a dominant pattern of abstention among older women, is a possible signal for future serious risk. A tentative conclusion from information available on alcohol problems among women might be drawn that, even in populations where women have traditionally not been heavy drinkers, they may become a relatively high risk group and should not be left out of account in the design of programmes on alcohol problems.

Age (5, p. 137). Some surveys have investigated the levels of consumption of alcoholic beverages by age and in a few cases these have been linked to levels of related problems. Evidence is accumulating from a number of countries (5, table 12) that a high percentage of young persons drink, at least occasionally, that this proportion is increasing, and that the amounts and frequency of consumption are rising. Certain studies have provided rather alarming figures on frequency of drunkenness among young people, although it is usually not stated how they define drunkenness, which may mean anything from slight tipsiness to drunken stupor.

An increasing alcohol-related problem among young people in some areas is traffic accidents. Admissions of young people to treatment facilities for alcohol problems are becoming more frequent as well, although the levels are still low. There are indications also that the age of onset of drinking and even of heavy drinking is declining. As mentioned with reference to sex, this may imply an increased risk of alcohol problems in later years. If heavy drinking starts early, associated problems may be expected to set in earlier, last longer and possibly attain more serious proportions than for groups where drinking starts later. A few recent follow-up studies have indicated, however, that the prognosis for later drinking problems may be less pessimistic than might have been expected.

Social class (5, p. 138). Several studies have investigated the relationship between drinking patterns, the consequences of alcohol consumption, and social class. Considerable differences have been found, both within and between countries, in each of these factors and their interrelationships. Determination of the high-risk groups among social classes would need to be a matter for investigation in each population where programmes are planned, since the effectiveness of approaches may vary from one social group to another.

Occupation (5, p. 139). Mention has been made earlier of the indications that certain occupations either cause higher rates of alcohol problems than others or attract vulnerable persons. In view of their exposure to risk, as well as their choice of occupation, it is not surprising that in countries where the occupation of publican exists, this category comes high on the list of cirrhosis mortality rates. Others concerned with the manufacture, distribution and sale of alcohol also run a considerably greater risk than average, as has been shown for workers in breweries and distilleries, especially where alcoholic beverages are provided free of charge to the workers or at reduced cost. Seamen have a reputation for heavy drinking and the reasons put forward include social acceptance of the habit, combination of drinking with activities habitual for sailors ashore, lack of alternative occupations, but also selection for work at sea by persons with an unstable background. Among the professions, medicine and the law have been singled out in some countries as having higher than average levels of alcohol problems, including liver cirrhosis.

3. Sociocultural Factors and Socioeconomic Change (5, p. 133, 159)

Sociocultural factors are found to be involved in both the causes and consequences of drinking and heavy consumption, and will also determine whether the consequences are labelled as problems. Among the sociocultural factors that have been studied are the cultural definitions and significance of drinking, beliefs about the value and symbolic functions of alcohol and the consequences of drinking; drinking contexts such as use in rituals, on public occasions and within the family; and use by different social and occupational groups. Many investigators have attempted to find sociocultural reasons for differences in rates of "alcoholism" and alcohol-related social problems among a variety of social and cultural groups. Thus, reported low rates of alcoholism among some groups are explained as due to the fact that the use of alcohol is learned at a young age, in a family setting, as part of a religious ritual, or as a normal part of a meal. On the other hand it is noted that among some other groups, where drinking is not well integrated with the rest of the culture, alcoholism rates are high. There may be no direct evidence that cultural drinking patterns are themselves responsible for differing ethnic rates of drinking problems. Rather than the patterns influencing the problems, both may reflect general systems of social-psychological control.

Many communities in the developing world, as well as specific groups within the highly industrialized countries, are undergoing rapid sociocultural and economic change. In several parts of the world introduction to alcoholic beverages was part of a first confrontation with an alien culture. Alcohol was widely used initially to establish friendly relations and trade and became an increasingly powerful weapon in subjugating populations to traders, colonial powers and often to local leaders themselves. Reports of sudden massive increases in alcohol-related problems among these populations abound, but not all are well founded nor do they necessarily provide a sound basis for generalization. However, the situation has at times become sufficiently alarming to trigger off efforts at counter-measures. This has occurred, for example, in some areas where new sources of wealth have recently been discovered.

In certain countries strong measures were instituted that discriminated between the local population - viewed as being unable to control their behaviour under the influence of alcohol - and the colonial or other power in authority. In a swing back of the pendulum, many of these controls were suddenly removed, with the result quite frequently of another large increase in availability to the indigenous groups of alcoholic beverages - often with an additional aura as a status symbol - followed by increase in related problems, and a resurgence of concern. The situation is now complicated by the rapid march of the processes of "modernization" which entail greater ease and volume of production and distribution of alcoholic beverages, the spread of a cash economy that simplifies the acquisition of alcohol, and changes in living and working conditions that are apt to alter drinking patterns.

There are wide differences between countries and between ethnic and social groups within each country which may determine breakdown or maintenance of cultural and social controls. In some countries undergoing rapid changes in conditions, a widening gulf can be observed between a former picture of relative abstinence and the present situation where smuggling, illegal production and drinking of alcohol destined for other purposes are causing grave concern. It has been pointed out that the impact of acculturation on social control systems and on opportunities for fulfilling personal goals are critical for outcome in terms of mental health and deviant behaviour. The differential effects of acculturation on alcohol use and alcohol problems, it is contended, will depend on two major classes of variables: social and psychological pressures for excessive alcohol consumption and social and psychological controls against such behaviour. Traditional controls may be strong enough to counteract increasing pressures under the impact of reculturation; on the other hand such controls may themselves be weakened in the process of cultural change. Recent studies tend to suggest that, in societies where acculturation has disrupted social controls, those with little access to economic opportunities have greater drinking problems than those with greater access to opportunities (9, p. 40).

4. Individual Factors (5, p. 141)

A mass of information - and opinions - has accumulated concerning individual differences in reasons for drinking and responses to alcohol consumption. Improved understanding of these matters would certainly be valuable in the establishment of preventive and treatment strategies. The failure to identify consistent differences, and the lack of clear differentiation between alcoholic and other populations concerning individual factors, however, make the implications of this literature difficult to interpret.

The search for particular types of personality susceptible to alcohol dependence or other alcohol-related problems does not seem to have been successful, although some recent research demonstrates significant relationships between variables in the personality system and frequency of drunkenness or problem drinker status.

The evidence from twin studies for a genetic determinant of alcoholism is inconsistent, although genetic control over the metabolism of alcohol is indicated. Studies attempting to replicate findings of an association with a genetic marker (blood groups, genetically determined proteins, finger ridge count) have given contradictory results except for colour blindness which, however, seems to be reversible and may be caused by malnutrition or toxic effects. Adoption studies have indicated that children of alcoholics, especially sons, are particularly vulnerable to alcoholism (often as an early age) whether raised by their parents or by non-alcoholic foster parents. It cannot be stated with any certainty that any specific factor is inherited, but genetic and environment factors may combine to produce what has been termed "familial alcoholism".

A selective review of recent research on psychobiological contributions to the alcohol dependence syndrome (2, p. 107) shows that a clearer understanding has emerged of the mechanisms of toxicity, tolerance and dependence, and the role of quantity and duration of consumption and blood-alcohol concentrations reached. Some evidence of direct cytotoxic effects of alcohol on the central nervous system suggests that the alcohol itself, rather than an initial psychic dependence, may be extremely important in the development of the alcohol dependence syndrome in cultures where high alcohol intake is customary. Research on critical threshold of blood-alcohol concentrations has thrown light on possible reasons for individual variations in reaction to alcohol, for example the wide range of differences in blood-alcohol concentration that may result from the intake of similar quantities of ethanol.

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9. WHO Expert Committee on Problems related to Alcohol Consumption (1980) Report, Geneva, WHO Technical Report Series, 650. (E, F, S)
10. WHO Regional Office for Africa. Second Working Group on Prevention of Alcohol-related Disabilities (1979), Report, Geneva, unpublished document. (E)
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13. WHO Regional Office for the Western Pacific, Working Group on the Prevention and Control of Alcohol-Related Problems, Tokyo, 27 May - 25 June 1980. Final report, Manila, document ICP/MNH/004. (E)
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Letters in brackets refer to availability in English (E), French (F), German (G), Russian (R) and Spanish (S).

* No longer available through WHO: information on sales through WHO Regional Office for Europe