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# DRINKING IN CONTEXT: A COLLECTIVE RESPONSIBILITY

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#### **INTRODUCTION**

Alcohol can benefit as well as harm those who consume it. The duality of its nature makes alcohol unlike many other commodities and plays an important role in why people drink and in the outcomes they are likely to experience. Patterns of drinking shape both benefit and harm: Where people drink, what, how, when, how often, and with whom are all important influences. At the same time, drinking—like many other behaviors—is learned, it can be accompanied by responsible choices, and the potential for harm is preventable. In selecting alcohol policies, societies must decide how to encourage some behaviors and discourage others, while maintaining what they perceive as an appropriate balance between state and individual responsibility. This ICAP Review proposes a fresh approach to tackling this process in a way that respects the multiplicity of drinking cultures existing around the world and is responsive to the varying needs and resources in different communities, countries, and regions.

This Review sets the stage for the upcoming publication, *Drinking in Context: Patterns, Interventions, and Partnerships*,<sup>1</sup> by outlining the volume's three key themes. Namely, it is argued that *patterns of drinking* are the best way to describe drinking behavior and predict both positive and negative outcomes in a given society; that *targeted interventions* are key in maximizing the benefits and minimizing the harms related to drinking; and that *multistakeholder partnerships* offer an excellent opportunity to promote the complex mix of measures required by each society. In the broadest terms, the purpose of alcohol policies in countries where alcohol beverages are permitted is to establish appropriate, realistic, and sustainable approaches that will help reduce alcohol-related harms, promote safer drinking behaviors, and enhance the positive function of alcohol consumption for individuals and society.

#### **PATTERNS OF DRINKING**

# Understanding drinking patterns: Populations, behaviors, and contexts

The relationship between drinking and outcomes is complex. Traditionally, the extent of drinking in population has been measured by the average amount of alcohol consumed per person in a country—or *per capita alcohol consumption*—commonly derived from sales, production, and taxation statistics. This has formed the basis for epidemiological research in the alcohol field, dating back to the work of Ledermann in the 1950s,<sup>2</sup> and, more recently, for the most ambitious attempts to quantify the contribution of alcohol to deaths and disease states globally, the World Health Organization's (WHO) *Global Burden of Disease* project.<sup>3</sup>

<sup>&</sup>lt;sup>1</sup> The opinions expressed in this review are those of the individual author and do not necessarily reflect the views of the International Center for Alcohol Policies, its sponsors, or the International Harm Reduction Association.

Per capita consumption measures are a convenient way of collecting relevant data and are useful gross indicators of drinking in population. However, they do not capture the myriad ways in which individuals drink. To get a better understanding of drinking among individuals and groups, the harms and benefits that may accompany their drinking, and interventions likely to minimize harm, it is necessary to understand *patterns* of drinking. These comprise a number of facets: the quantity of alcohol consumed per occasion; types of beverages being consumed; the duration and frequency of drinking; the characteristics of individual drinkers; the settings in which drinking takes place and activities that accompany drinking; and the cultural role of alcohol and the social mores that surround it.

At a general level, drinking patterns describe three important aspects of alcohol consumption: *populations*, individuals or groups sharing common traits or drinking practices; *contexts* within which drinking takes place; and *behaviors* that may accompany drinking. These three broad aspects—individually and in interaction—have a bearing on outcomes. For example, there is great variation across countries and cultures in who drinks alcohol and who does not, and why. Gender, age and how drinking evolves across the life span (also known as *drinking trajectories*), socioeconomic factors and educational level, as well as factors related to health and genetic predisposition to problems define populations of drinkers and have an impact on how they drink and the consequences they are likely to experience. In addition, contexts within which an individual finds him or herself with regard to drinking—namely, the prevailing culture around alcohol in a given society, its acceptability and the general social mores surrounding it, as well as what types of beverages are consumed and where—are reflected in the drinking behavior (including the *rhythm* of heavy drinking, the extent to which heavy drinking episodes are isolated or spread out and how frequently they occur) and other activities that may accompany drinking.

The diversity of drinking patterns translates into the wide range of health and social effects that have been related to alcohol consumption.<sup>4</sup> It is well known that certain inappropriate drinking patterns may lead to a range of physical and social harms, affecting both the drinker and the wider community.<sup>ii</sup> These can be *chronic* health consequences (such as toxic effects on liver, heart, and other organs)<sup>5</sup> and *acute* outcomes (such as traffic crashes, injuries, and alcohol poisoning).<sup>6</sup>

On the other hand, it is established that moderate or low alcohol consumption may have a protective role for certain diseases, such as cardiovascular disease, ischemic stroke, and diabetes.<sup>7</sup> Also known but less noted is the broader benefit of drinking—its positive contribution to individual and social wellbeing. To that end, three general areas of benefit have been identified: *psychosocial benefits* (such as subjective health, mood enhancement, stress reduction, and mental health), *social benefits* (such as sociability and social cohesion), and *cognitive and performance benefits* (such as long-term cognitive functioning, creativity, and income earned).<sup>8</sup> To date, no means exist for assessing the value of these important outcomes in a quantitative fashion. The inability to include the broader positive contribution of alcohol to health and wellbeing in calculations of net benefit and harm represents a significant confounder in the available analyses and is an obstacle to balanced decision-making.

ii A caveat to relating drinking patterns to their possible outcomes should be noted: An association does not necessarily imply a *causal* link. Where such associations are made, other confounding influences that may modify the effects of drinking on a particular individual should also be taken into consideration—for instance, age and general health or other lifestyle factors, such as smoking, stress, diet, exercise, or obesity.

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## From patterns to policy

Drinking behaviors are diverse and vary not only from country to country, but also between areas within countries, between social groups, and across different time periods. Measures required to affect these practices are likely to vary as well. The choice of policies and interventions to reduce alcohol-related harms and the resources available for their implementation are influenced by social, cultural, political, religious, and economic factors. Views on public health and social issues also vary. Some countries have invested substantially in developing a public health framework for analyzing and responding to health problems; in others, it is rare or absent. New interventions must therefore be designed in the context of the available resources and cultural climate—but they certainly cannot be implemented without knowing the drinking behavior in some detail. Selecting the interventions that are right for particular populations, contexts, or behaviors requires getting beneath the data on overall population consumption and calls for prior assessment of drinking practices and the individual and social function of drinking, as well as identification of specific issues to be addressed.

Linking evidence and action may meet with considerable obstacles. Planners at local and national levels (particularly in developing countries) often find themselves in a "data desert," lacking the information necessary to make decisions. The growing interest in "evidence-based policy-making" and "evidence-based practice" has highlighted the gaps between information providers and decision-makers and led to various suggestions about how to get better evidence<sup>9</sup> and better utilization of evidence. Clearly, it is important to improve routine national data systems and surveys to collect information on alcohol consumption and problems. However, the financial implications are considerable. For example, resource-poor countries may face a difficult choice between, on the one hand, developing systems that contribute to global and national monitoring and, on the other hand, collecting local intelligence information that is directly linked to policy-making and developing local interventions.

Importantly, the absence of data does not put a hold on the need to develop policy measures. International agencies have become increasingly interested in rapid methods of assessing health and social problems, specifically in order to design interventions. Collectively known as *rapid assessments*, these methods have been developed as a practical tool for gauging health and social problems. Although rapid assessment in the alcohol field remains remarkably underused, this approach offers promise in areas where policy-makers, health and social planners, and practitioners need to gather information quickly; where there may be limited resources and capacity to collect information; and where conventional epidemiological, social science, and public health assessment methods (such as population surveys) may be difficult to undertake. The process involves a range of stakeholders and uses a variety of sources and research methods, often in combination. Table 1 provides a sample of issues that could be exploited in an alcohol assessment, the first step toward developing appropriate and acceptable interventions. Importantly, the choice of interventions needs to consider the feasibility of their implementation, including obstacles to be overcome and the procedures and resources needed to get them into place.

#### TABLE 1: COMPONENTS OF AN ALCOHOL ASSESSMENT

- An understanding of the particular cultural, economic, social, and political context, and appreciation of the role of alcohol within it
- Information on prevailing drinking patterns, trends in drinking behavior, and societal norms about drinking
- Identification of social, community, and individual benefits of drinking
- Identification of health and social problems associated with drinking
- Identification of particular groups at risk of drink-related problems
- Identification of high-risk drinking locations and settings
- Information on prevailing market forces and future economic trends
- Analysis of policy measures already in place and areas in which these may need further development
- Analysis of current interventions and their effectiveness and limitations, and allocation of resources to different interventions
- Assessment of existing levels of cooperation among key stakeholders
- Identification of opportunities for developing new interventions and/or modifying existing ones
- Development of a plan of action to create and implement new or modified interventions

There is no single quick policy fix to alcohol problems. Measures that respond to the reality of how people drink—their drinking patterns—can capture the many facets of drinking behaviors and related problems that exist around the world. Depending on specific needs and contexts, some initiatives may be more relevant than others or be of higher priority. How approaches are developed will depend on the culture in question, the role of alcohol within it, and the needs of a particular society. A balanced approach to alcohol policy does not view alcohol in isolation. Instead, it accepts that alcohol is a commodity with its own panoply of related risks and benefits. Like many other commodities—be they automobiles, medications, or foods—alcohol has positive effects and benefits, alongside negative ones. A sustainable alcohol policy must recognize this and strive to view issues surrounding alcohol as part of the broader panorama of human activity, risk, and responsibility.

#### **TARGETED INTERVENTIONS**

Interventions aimed at reducing the potential harm associated with drinking can be divided into two basic categories, which are by no means mutually exclusive and may be used in tandem to complement and strengthen each other. One is the *population-level* approach to prevention, consisting of across-the-board measures. These efforts rely heavily on controlling the volume of drinking across entire populations. The other approach involves interventions that are applied in a *targeted* way, focusing on particular groups, behaviors, drinking patterns, or settings where the potential for harm is elevated. The split between whole-population and targeted interventions is not always neat, because some population-level measures (e.g., health warning or information labels) can be aimed at both the whole drinking population and its subgroups (such as pregnant women, young people, or older adults).

The starting point for many alcohol policies is the population-level regulation of consumption through control of price and access to alcohol (e.g., by age and rules on when and where alcohol may be bought and consumed). The assumption behind such measures is that there is a fixed and predictable relationship between the level of average per capita consumption across a population and the inci-

dence of some social and medical problems. With this in mind, policies aim to reduce drinking across entire populations (usually at the national level) in an attempt to reduce harm.

Regulations concerning the availability of alcohol are a necessary component of any balanced alcohol policy. However, interventions must also be pragmatic; they need to consider the reality of people's drinking and consumer demands. The challenge, therefore, is to create safer drinking environments and to minimize harm when it does occur.

In answering this challenge, population-level measures *alone* are inadequate: They are often unresponsive to the needs of different cultures and contexts and may lack relevance to the requirements of at-risk individuals and groups. Thus, if governments rely solely on raising prices and limiting alcohol availability to reduce alcohol consumption across an entire population, certain high-risk drinking patterns or behaviors among specific groups may remain overlooked. Moreover, if controls at national level are seen as the main vehicle for influencing drinking, it may absolve other agencies and organizations from responsibility for developing and implementing measures that encourage responsible consumption, thus stultifying the process.

Targeted interventions are a critical component. These may be aimed at particular populations (e.g., problem drinkers, young people, and pregnant women), behaviors (e.g., binge drinking and alcoholimpaired driving), or drinking contexts (e.g., drinking establishments) and can be applied to complement national-level measures or be implemented in the absence of national measures and policies. The aim of targeted interventions is to minimize alcohol-related risks by shifting behaviors and norms linked with drinking to ensure that when people consume alcohol, they do so in the safest possible manner.

Because they focus on settings, situations, and at-risk individuals, targeted interventions are adaptable to the needs of diverse cultures and contexts. This flexibility allows them to be developed on the basis of the assessment of particular drinking patterns and practices. The research and evaluation literature gives some guidance as to which interventions are likely to be effective, although there are dangers in accepting "off-the-shelf" solutions: What works in some cultures, may not be appropriate for others.

At an individual level, targeted interventions offer a means of identifying at-risk individuals and implementing various measures aimed at changing their drinking behavior, including treatment, education, brief intervention techniques, therapy, behavior modification, or the promotion of abstinence. For instance, a particularly effective approach to reducing harm at the individual level is offered by brief interventions aimed at problem drinkers.<sup>12</sup> Brief intervention techniques can be adapted to suit the needs and interests of specific target groups. For example, Internet-based assessments have been developed that appeal to and have shown promise for young people.<sup>13</sup> For older adults, brief interventions can be modified for geriatric needs and integrated into services provided in long-term care facilities. Similarly, screening for pregnant women may help prevent problems for both mother and fetus if implemented early and as part of prenatal care. Brief interventions also offer a means of targeting hard-to-reach populations that may otherwise not be accessible to the health care sector (e.g., individuals who may be socially marginalized or of low socioeconomic status). To that end, homeless shelters, emergency rooms, pharmacies, and social services can provide valuable implementation channels.

In targeting behaviors, initiatives can be developed to separate drinking from other risky activities through, for example, information and awareness building (e.g., designated driver programs aimed to

reduce alcohol-impaired driving) or by modifying the context where drinking occurs. Adjusting the physical space in which alcohol is consumed by, for instance, changing lighting, creating partitions, and rearranging seating can offer ways to reduce the potential for harm from violent confrontations in bars and other drinking venues. A powerful intervention approach includes the training of staff in serving and retail establishments to recognize signs of intoxication and to deal effectively with problematic situations, including managing crowd control.

A successful design for alcohol policies that is both realistic and sustainable relies on balancing population-level measures with targeted interventions. How this balance is created will vary from one country to another, reflecting prevailing attitudes, social and economic circumstances, and culture. Perhaps the best illustration of synergistic approaches to prevention is offered by efforts in many countries to reduce the harm caused by alcohol-impaired driving. A range of approaches—including the population-level measures of establishing blood alcohol concentration limits and legislation on legal drinking age, the active enforcement of these laws, and targeted interventions, such as awareness-raising campaigns in schools, community centers, drinking establishments, and other public places and provision of safe and convenient transportation alternatives to driving—have played an important part in reducing harm associated with alcohol-impaired driving. Not only has there been a significant decrease in such injuries and fatalities, but also, in many countries, driving while intoxicated is now generally regarded as inappropriate and unacceptable behavior. A culture shift has occurred, instilling in the minds of those who drive that drinking may not be a compatible behavior.

Much of the success of these interventions is due to the fact that reducing harm associated with alcohol-impaired driving is something on which all segments of society can agree. In general, a concerted effort at the society, community, and individual levels stands a much better chance of success than single approaches that attempt to address an issue.

# Evaluating interventions: Appropriateness, feasibility, and impact

What constitutes "success" of a certain measure, however, is a complex issue. Effectiveness research—along with assessment of local conditions, discussed above—is increasingly an important component of prevention, especially given the growing emphasis on evidence-based prevention programming. When done well, such research allows interventions that work to be separated from those that do not, and modifications to be made in order to improve particular approaches. But it should be noted that the vast majority of policy measures and prevention programs is not evaluated, and that many programs are designed or implemented in such a way as to make evaluation difficult or meaningless.

Rigorous insistence on measurement may not always be possible, particularly when it comes to developing countries. There may be a lack of resources and technical skills to carry out evaluations; populations may be difficult to reach because of geographic isolation, high illiteracy rates, or absence of means for easy communication. In some cultures, there may be a reluctance to carry out assessment for fear of appearing critical of those who have initiated or implemented a program. Finally, when it comes to a basic economic decision between more prevention and evaluation, resources will almost invariably be allotted to prevention.

Moreover, whereas quantitative measures are certainly fairly straightforward to interpret, qualitative indicators are also important but more rarely taken into consideration. For instance, is it possible to quantify change in drinking culture? There needs to be some agreement among those who work in the

prevention field and, particularly, those who attempt to assess various prevention efforts that there is a place for both qualitative and quantitative measures of effectiveness.

The complexity of assessing interventions means that many efforts are never formally evaluated. This lack of formal evaluation is often emphasized by the critics of various targeted intervention approaches. However, this raises an important issue that is largely ignored for political or other reasons: The lack of evaluation is by no means proof that certain approaches *do not work*; it simply means that a program or an approach has not been evaluated, nothing more or less.

Clearly, every measure has its strengths and weaknesses, and no single approach is a panacea. In assessing an intervention or policy, other useful criteria, beyond the availability of scientific evidence for effectiveness, may be used. These should include a consideration of what is *feasible*—in other words, what can be realistically implemented with the available resources and within given political, economic, and social contexts—and what is *acceptable* to the target group, stakeholders, decision-makers, and public. The key criteria for the selection of some measures over others may be that they do not require procedural or structural changes or intensive allocation of resources.

The debate in the alcohol field about which measures are most effective has become unnecessarily polarized in recent years. The advocates of population-level measures discount the value of targeted interventions, while proponents of targeted interventions are largely critical of across-the-board initiatives and their reliance on regulation and enforcement. As the drink-driving example shows, however, it is possible and, indeed, desirable for these two approaches to work in tandem, implemented at the society, community, and individual level. Although many programs have not been evaluated, the totality of their efforts has produced change. There is certainly a need for more rigorous evaluation and the resources to achieve that goal. A better understanding of what is achievable in countries with limited resources is also desirable. This requires better understanding of how various institutions and organizations can work together. Many interventions require cooperation among a wide range of potential partners. Quite simply, interventions cannot be introduced in opposition to major organizations or groupings in the population. Many need active cooperation, support, and endorsement in order to be implemented and to work successfully. Reducing alcohol-related harms is "everybody's business"—including consumers, producers, retailers, educators, researchers, NGOs, law enforcers, and governments. Balance in alcohol policy requires implementation not only through top-down approaches that cast a wide net across the entire population, but also through efforts that both are aimed at and involve communities and their individual members.

### PARTNERSHIPS: ALCOHOL POLICY—A COLLECTIVE RESPONSIBILITY

The broad range of possibilities offered by targeted interventions regarding alcohol requires an equally broad range of stakeholders in their implementation. Because drinking beverage alcohol is deeply integrated into the values, cultures, and economies of so many societies, an adequate response is bound to reflect the diversity and complexity of these different contexts. Thus, for example, a number of government departments—including trade, finance, agriculture, and education, as well as health—may need to be involved, together with nongovernmental organizations representing a wide variety of civil society concerns. Equally, scientists and scholars from many different disciplines have insights to offer, as do professional associations. The private sector, including those involved in the production and distribution of beverage alcohol, also have important contributions to make to the

process by which societies determine how best to arrange their priorities with respect to alcohol. And, of course, consumers (as well as those who choose not to consume) need to have a voice in this exchange of views. All have valid perspectives, even though some of them may not be easily compatible with each other.

Developing realistic and sustainable alcohol policies does not require that all key players agree with each other—it is important to note that none of the sectors involved in the alcohol field can be really thought of as a monolith entity with one coherent policy, and views may vary *within* sectors as much as among them. Vague calls for "multisector partnership" are not likely to lead to a significant increase in communication or collaboration. A willingness not only to listen to other views, but also to allow meaningful participation of all those affected by alcohol policy, is much more likely to lead to effective actions that will curb the misuse of alcohol products. Alcohol policy partnerships, like other partnerships, can be facilitated by trust and a perception of mutual benefit, no matter how that benefit is defined by the various parties. They must include a commitment by all parties to the highest level of transparency and ethical standards, so that all involved can be judged by what they do and not just by what they say.

Past mistrust among various sectors involved in the alcohol field will not be easy to overcome. But by not expecting or demanding too much from any single stakeholder, unproductive antagonism might shift to productive partnership in which differing interests need not always lead to conflict.

#### **CONCLUSIONS**

Drinking beverage alcohol is a widespread source of individual and social pleasure in many countries around the world. Yet, some drinking patterns can lead to serious physical, mental, and social harms. Although the health sector has an important role in preventing these harms and in providing treatment services, finding the most appropriate place for alcohol in society is a collective responsibility, involving all key players in the alcohol field, both public and private. Various proposed solutions to alcohol-related problems are not necessarily at odds with one another and, on the contrary, can ultimately contribute to the combination of social, cultural, economic, and legislative changes that define true policy evolution.

The process of developing a new generation of alcohol policies is not based on a goal to achieve spurious consensus among parties with legitimate differences, but rather to promote full transparency in policy development, so that none of these differences is ignored. No one has a monopoly on alcohol policy. It is through partnerships that society can bring together the positive efforts by stakeholders who are not necessarily accustomed to working together, but who have much to teach each other. Such collective and complementary work can achieve much to advance public health.

#### **REFERENCES**

- <sup>1</sup> Stimson, G. V., Grant, M., Choquet, M., Garrison, P., Alexander, B., Gulbinat, W., et al. (in print). *Drinking in context: Patterns, interventions, and partnerships*. New York: Routledge.
- <sup>2</sup> Ledermann, S., & Tabah, F. (1951). Nouvelles données sur la mortalité d'origine alcoolique [New data on alcohol-related mortality]. *Population*, *G*, 41–56.
- <sup>3</sup> Murray, C. J. L., & Lopez, A. D. (Eds.). (1996). Global burden of disease: A comprehensive assessment of mortality and disability from diseases, injuries, and risk factors in 1990 and projected to 2020. Cambridge, MA: Harvard School of Public Health.
- <sup>4</sup> See for example: Stranges, S., Notaro, J., Freudenheim, J. L., Calogero, R. M., Muti, P., Farinaro, E., et al. (2006). Alcohol drinking pattern and subjective health in a population-based study. *Addiction*, *101*, 1265–1276; Bobak, M., Room, R., Pikhart, H., Kubinova, R., Malyutina, S., Pajak, A., et al. (2004). Contribution of drinking patterns to differences in rates of alcohol-related problems between three urban populations. *Journal of Epidemiology and Community Health*, *58*, 238–242; Green, C. A., Perrin, N. A., & Polen, M. R. (2004). Gender differences in the relationships between multiple measures of alcohol consumption and physical and mental health. *Alcoholism: Clinical and Experimental Research*, *28*, 754–764; Wells, S., & Graham, K. (2003). Aggression involving alcohol: Relationship to drinking patterns and social context. *Addiction*, *98*, 33–42; San José, B., van Oers, J. A. M., van de Mheen, H., Garretsen, H. F., & Mackenbach, J. P. (2000). Drinking patterns and health outcomes: Occasional versus regular drinking. *Addiction*, *95*, 865–872.
- <sup>5</sup> See for example: Pöschl, G., & Seitz, H. K. (2004). Alcohol and cancer. *Alcohol and Alcoholism*, *39*, 155–165; Murray, R. P., Connett, J. E., Tyas, S. L., Bond, R., Ekuma, O., Silversides, C. K., et al. (2002). Alcohol volume, drinking pattern and cardiovascular morbidity and mortality: Is there a U-shaped function? *American Journal of Epidemiology*, *155*, 242–248; Blanc, F., Joomaye, Z., Perney, P., Roques, V., & Chapoutot, C. (2001). Troubles somatiques [Somatic disorders]. *Alcoholic et Addictologie*, *23*, 319–333; Diehl, A. M. (1998). Alcoholic liver disease. *Clinical Advances in Liver Disease*, *2*, 103–118.
- <sup>6</sup> See for example: Paljarvi, T., Makela, P., & Poikolainen, K. (2005). Pattern of drinking and fatal injury: A population-based follow-up study of Finnish men. Addiction, 100, 1851–1859; Cherpietel, C. J., Bond, J., Ye, Y., Borges, G., MacDonald, S., Stockwell, T., et al. (2003). Alcohol-related injury in the ER: A cross-national meta-analysis from the Emergency Room Collaborative Alcohol Analysis Project (ERCAAP). *Journal of Studies on Alcohol*, *64*, 641–649; Hingson, R., Heeren, T., Zakocs, R. C., Kopstein, A., & Wechsler, H. (2002). Magnitude of alcohol-related mortality and morbidity among U.S. college students aged 18–24. *Journal of Studies on Alcohol*, *63*, 136–144.
- <sup>7</sup> See for example: Gunzerath, L., Faden, V., Zakhari, S., & Warren, K. (2004). National Institute on Alcohol Abuse and Alcoholism report on moderate drinking. *Alcoholism: Clinical and Experimental Research*, 28, 829–847; Nakanishi, N., Suzuki, K., & Tatara, K. (2003). Alcohol consumption and risk for development of impaired fasting glucose or type 2 diabetes in middle-aged Japanese men. *Diabetes Care*, 26, 48–54; National Institute on Alcohol Abuse and Alcoholism (NIAAA). (2003). *State of the science report on the effects of moderate drinking*. Rockville, MD: U.S. Department of Health and Social Services; Wannamethee, S. G., Camargo, C. A., Manson, J. E., Willett, W. C., & Rimm, E. B. (2003). Alcohol drinking patterns and risk of type 2 diabetes mellitus among younger women.

- Archives of Internal Medicine, 163, 1329–1336; Zakhari, S. (1997). Alcohol and the cardiovascular system: Molecular mechanisms for beneficial and harmful action. Alcohol Health and Research World, 21, 21–29.
- <sup>8</sup> Brodsky, A., & Peele, S. (1999). Psychosocial benefits of moderate alcohol consumption: Alcohol's role in a broader conception of health and wellbeing. In S. Peele & M. Grant (Eds.), *Alcohol and pleasure: A health perspective* (pp. 187–207). Philadelphia: Brunner/Mazel.
- <sup>9</sup> Ross, S., Lavis, J., Rodriguez, C., Woodside, J., & Denis, J. L. (2003). Partnership experiences: Involving decision-makers in the research process. *Journal of Health Services Research and Policy*, 8, 26–34; Walter, I., Davies, H., & Nutley, S. (2003). Increasing research impact through partnerships: Evidence from outside healthcare. *Journal of Health Services Research and Policy*, 8(Suppl. 2), 58–61.
- <sup>10</sup> Bero, L. A., Grilli, R., Grimshaw, J. M., Harvey, E., Oxman, A. D., & Thomson, M. A. (1998). Getting research findings into practice. Closing the gap between research and practice: An overview of systematic reviews of interventions to promote the implementation of research findings. *British Medical Journal*, *317*, 465–468.
- <sup>11</sup> Stimson, G. V., Donoghoe, M. C., Fitch, C., Rhodes, T., Ball, A., & Weiler, G. (2003). *Rapid assessment and response: Technical guide, TG-RAR*. Geneva, Switzerland: WHO Department of HIV/AIDS, Department of Child and Adolescent Health and Development; Manderson, L. (1996). Population and reproductive health programmes: Applying rapid anthropological assessment procedures. New York: United Nations Population Fund.
- <sup>12</sup> See for example: Barnett, N. P., O'Leary, T. T., Fromme, K., Borsari, B., Carey, K. B., Cornin, W. R., et al. (2004). Brief alcohol interventions with mandated or adjudicated college students. *Alcoholism: Clinical and Experimental Research*, 28, 966–975; Babor, T. F., & Higgins-Biddle, J. (2001). *Brief intervention for hazardous and harmful drinking: A manual for use in primary care*. Geneva, Switzerland: World Health Organization; Babor, T. F., Higgins-Biddle, J., Saunders, J. B., & Monteiro, M. G. (2001). *AUDIT: The Alcohol Use Disorders Identification Test: Guidelines for use in primary care*, 2nd ed. Geneva, Switzerland: World Health Organization; Baer, J. S., Kivlahan, D. R., Blume, A. W., McKnight, P., & Marlatt, G. A. (2001). Brief intervention for heavy-drinking college students: Four-year follow-up and natural history. *American Journal of Public Health*, *91*, 1310–1315; Bien, T. H., Miller, W. R., & Tonigan, S. (1993). Brief intervention for alcohol problems: A review. *Addiction*, 88, 315–336.
- <sup>13</sup> Saitz, R., Helmuth, E. D., Aromaa, S. E., Guard, A., Belanger, M., & Rosenbloom, D. L. (2004). Web-based screening and brief intervention for the spectrum of alcohol problems. *Preventive Medicine*, *39*, 969–975; Miller, E. T. (2001). Preventing alcohol abuse and alcohol-related negative consequences among freshmen college students: Using emerging computer technology to deliver and evaluate the effectiveness of brief intervention efforts. *Dissertation Abstracts International*, *61*, 4417–B.

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