

A Perspective on Science and Public Health Policy

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HISTORICALLY, ATTEMPTS to prevent alcohol-related problems have resulted in the formulation of public policies aimed at controlling the way in which alcohol is sold and used. Perhaps the most well-known example of this in the United States was Prohibition. Others have included State and local statutes governing public drunkenness, the sale of alcohol to minors, driving under the influence of alcohol, and a host of other measures designed to protect the public from the consequences of alcohol use.

Until fairly recently, alcohol-related public policies were based almost entirely on the ability of individuals and groups to convince Federal, State, or local governments of the need for such policies—no small undertaking, considering the stigma that has been attached to alcoholism and alcoholics. Evidence used to support claims of the impact and efficacy of public policies was based primarily on the experiences of recovering alcoholics, observations of alcohol treatment personnel, and common sense! (This path to the enactment of laws and policies to protect the public good is no different for alcohol than it has been for other public health areas or, for that matter, any area judged by society to be a public risk.)

In 1970, however, another factor entered into the alcohol-related policy equation—scientific research. Until that time, almost no research had been done on the causes and consequences of alcohol use. The creation of the National Institute on Alcohol Abuse and Alcoholism (NIAAA) that year led to the beginning development of a national alcohol research program.

Over the next decade, as the alcohol field grew and matured, individuals, alcohol-related groups, and organizations with a variety of viewpoints began to look to science to support or refute various proposed and existing public policy measures. With this quest for scientific evidence came questions about the appropriate relationship between alcohol research and the formulation of public policies to prevent, reduce, or otherwise

control alcohol abuse and alcoholism and, by extension, questions about the role of the NIAAA in formulating public policy.

NIAAA Activities

It is not possible to isolate the role of science in developing public policy about alcohol without an understanding of NIAAA's history. When NIAAA was established, the Institute had responsibility for all of the Federal Government's efforts to prevent and treat alcohol abuse and alcoholism. This included development of alcohol-related research, training of alcohol researchers and clinicians, and prevention and treatment programs.

By the end of the 1970s the NIAAA mission was changing from having direct responsibility for alcoholism treatment and prevention services, through support to State and local programs, to being a national resource for alcohol-related scientific, technical, and general information. The change from being the Federal focal point on all alcohol-related health issues to a national research institute was further accelerated by legislative changes in 1981 and 1986. The Omnibus Budget Reconciliation Act of 1981 transferred all responsibility for treatment services from the Institute to the States via an Alcohol and Drug Abuse and Mental Health Services Block Grant. In 1986, the Anti-Drug Abuse Act consolidated responsibility for alcohol and other drug abuse prevention and education services to a newly created Office for Substance Abuse Prevention in the Alcohol, Drug Abuse, and Mental Health Administration. Thus, for most of its history, NIAAA was responsible not only for a range of programmatic efforts related to alcohol abuse and alcoholism but also for developing national policies affecting the health aspects of alcohol use and abuse.

The present NIAAA mission is clear—to build the necessary scientific base to develop and improve methods to prevent and treat alcohol-related problems. As a research institute, the Institute

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supports and conducts basic, clinical, prevention, and epidemiologic research and supports research training programs for new scientists who wish to specialize in alcohol research. As a part of its research mission, NIAAA also conducts policy studies that have broad implications for prevention and treatment. A third major Institute function, to disseminate research findings, is accomplished by NIAAA through a number of mechanisms. These include the Alcohol Epidemiologic Data System; Alcohol Health and Research World, a professional journal distributed quarterly; Alcohol Alert, a publication designed to disseminate research findings quickly to alcohol clinicians; and specialized monographs and reports.

Role of Science in Policy Development

What is the nature of science? Science looks for answers. Science must be reliable and unbiased; scientists have a duty to report contradictory or negative evidence as well as confirmatory evidence. All scientific conclusions are tentative and can be modified or contradicted by further study. And science clearly has an important role in shaping public health policy decisions. Nevertheless, it is essential to understand that science and scientific evidence are rarely the *only* bases for public policy decisions.

In most situations, the public perception of a problem is a far more persuasive force in shaping public policies than is scientific evidence. For example, although scientific evidence of the harmful effects of cigarette smoking on health has been accumulating for more than 20 years, not until

recently has the public perception of smoking as a major health hazard resulted in policies governing smoking in restaurants, office buildings, and other public places. The other determinants of public policies that play as great a role, if not greater than, scientific evidence are cultural, religious, and political values as well as economic interests. Consider the sheer complexity of developing policies dealing with a drug that is widely used, a drug that is legal for persons over the age of 21, a drug that many use without harm, and a drug that affects the national economy on both debit and credit sides of the balance sheet. These circumstances generate a complex mix of economic, religious, and political pressures that help shape public policy. For instance, there is strong, well-publicized scientific information on the genetic heritability of a predisposition to alcoholism. Yet, alcoholics continue to be labeled as morally weak—a view that led to a public policy decision by the Veterans Administration which defined alcoholism as “willful misconduct.” The scientific evidence of alcohol’s detrimental effect on health, society, and the economy is ample; yet until the public perceives that alcohol abuse and alcoholism are public problems, public health policies will not be adopted to prevent or treat them.

It is important to understand that, as a science-dedicated institution, NIAAA does not *enact* social policy. We are a research organization that attempts to provide the data upon which social policies—some of which are politically sensitive—can be based. We can and do provide scientific information to individuals, groups, and others who may be advocates for one policy position or another; we cannot provide *scientific* justification for a particular position unless the research base is, indeed, supportive.

We do have research evidence related to some of the more sensitive social policy issues such as taxation, advertising, and college-age drinking. We know, for example, that alcohol consumption responds to price which, of course, raises the issue of taxation. Economic models have shown that if real prices were to change significantly for beer, for example—which they have not done for 30 years—several thousand young lives would not have been lost on our highways. Does this mean that the price will rise tomorrow? Of course not! Nor is it NIAAA’s job to see that it happens. But the research that we have done in econometrics and on social issues provides evidence on which people can base their thinking about such issues.

Another sensitive public policy area is the adver-

tising of alcoholic beverages. There is a widespread impression that we are smothered with advertising for alcoholic beverages on radio and television, in magazines and other print media, and on billboards and other advertisements in our communities.

Coupled with this impression is the belief that advertising has an effect on alcohol abuse and alcoholism. Yet the little research that has been done in the area—most of it in laboratory settings—does not demonstrate overwhelmingly that alcohol advertising has much effect. Because of the lack of scientific information on this issue, those in the alcohol field who want to change television and other forms of alcohol beverage advertising cannot really look to NIAAA science. They can, however, look to their own observations and to their political leaders—other potent elements in the social policy mix.

The social policy debate about college-age drinking creates a dilemma that might be resolved by science. For example, does restricting alcohol use on campuses cause students to go to a neighboring town to drink? If so, does this increase their risk for death and injury from an alcohol-related traffic accident? These are, of course, researchable topics that are appropriate for NIAAA research support.

Research also can lead to new ideas on preventing and treating alcohol-related problems. For example, there is a host of ideas on how to prevent children and teenagers from using alcohol. We already know that children in families with an alcoholic parent are at high risk for developing alcohol-related problems. Scientists are seeking to understand how we can identify these children by a variety of markers, such as changes in brainwaves, and other biological studies that may offer a clue to prevention and early intervention programs for high-risk youngsters. We also have evidence from psychosocial research that even at the early ages of 5 and 6, children who are particularly shy or aggressive in kindergarten are the ones most likely to get into trouble with alcohol and other drugs 10 years later. Using these scientific findings could well help school administrators and others who educate young children to design early age alcohol prevention programs.

Unfortunately, the evidence for some very popular kinds of approaches to preventing alcohol abuse and alcoholism is meager. For example, although enormous amounts of money and energy are going into school-based alcohol and other drug abuse prevention programs, when their effectiveness has been examined by rigorous scientific methods, the findings have been mostly negative. The data on

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programs that teach peer resistance are a little more positive, but the evidence comes only from short-term followup studies. The lack of scientific evidence, thus far, however, is no argument for stopping prevention and education programs pending the findings of research, but rather provides a strong rationale for continuing to conduct research on prevention activities.

Science does not have all the answers and, in all probability, will never have all the answers for the formulation of public policies. Even when scientific evidence is strong, other factors will always influence events. They have in the past, and they will probably continue to do so in the future. We are not strangers to policy decisions that may not be consistent with what science has found. Alcohol scientists have, can, and should communicate research findings to others in the alcohol field as a part of various policy debates; research findings are not useful if they are known only to researchers. Those who are involved in policy formation, however, should not expect science to support only a particular position or to be the singular determinant of a policy direction.

Each of us working in the alcohol field shares a common purpose. Whether scientist, clinician, policymaker, trainer, or volunteer, we all work to help reduce the suffering associated with alcohol abuse and the disease of alcoholism.