Screening for Alcohol Problems

Alcohol is the most commonly used drug in the United States. The majority of Americans consume alcohol moderately and do not experience adverse consequences from its use, but substantial proportions of men and women experience problems with alcohol from youth to advanced age. Alcohol use, abuse, and dependency affect patients' health in a variety of ways and can profoundly confuse medical diagnosis and treatment. With a problem of such magnitude, it is easy to see why physicians in all specialties are eager for a simple, inexpensive, and accurate screening test.

The CAGE questionnaire in particular has gained remarkable popularity, no doubt because it is simple, straightforward, and easy to remember. Unfortunately, however, the questions are also quite transparent and anyone interested in obscuring the diagnosis (either consciously or unconsciously) would have no trouble doing so. This has prompted some of us to wonder if the test's usefulness could actually approximate its popularity.

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Nevertheless, in the absence of a better screening examination, the CAGE has become a regular part of a medical education effort,1 and most medical students can at least recognize the test if not recite the 4 questions. This screening test has also achieved some degree of acceptance outside academia. A managed care group recently inquired not only into what percentage of patients are screened for alcohol problems but how often the CAGE is used. Although it is encouraging to know that managed care professionals believe it is important and no doubt cost-effective to identify alcohol problems, one wonders if the CAGE deserves to become the standard measure of this activity. The study by Crowe and colleagues2 in this issue of the ARCHIVES is a welcome critical look at the usefulness of the CAGE and the Brief MAST as screening tests for alcohol dependency. It also offers an opportunity to contemplate the difficulties inherent in this task.

The nature of alcohol disorders makes clinical care and screening more difficult than with other common conditions such as breast cancer, hypertension, or hypercholesterolemia. Specifically, alcohol problems are associated with social stigma, and patients are not eager to have the condition uncovered at any stage. For this reason, patients may not be truthful with themselves or others regarding the extent of consumption or negative consequences resulting from its use, and so patients and physicians may find themselves at cross-purposes in the screening process. This phenomenon of ignoring the reality of alcohol consumption and related consequences is aptly called denial, and is a recognized component of alcohol and other drug problems. Denial is a particularly troublesome disease characteristic since there are no objective biologic tests, such as histological tests or blood chemistries, that are reliable indicators of alcohol problems. Diagnosis requires that health care providers rely on the patient or family members to supply subjective information regarding drinking behavior and adverse consequences. This combination of subjective diagnostic criteria and denial creates a major barrier for physicians in the screening and diagnosis of alcohol problems.

Similarly, the search for a good screening test has been handicapped by the lack of a simultaneously useful and objective diagnostic gold standard against which to measure the proposed screening tests. The original validation studies for screening questionnaires relied on hospital admission for treatment of alcohol disorders as the gold standard for alcohol problems, and they were able to show that the questionnaires successfully discriminated between alcoholic and nonalcoholic patients. However, this does not mean that the results of that validation study can be generalized to an outpatient primary care patient population. Since someone in treatment is more likely to acknowledge negative consequences of alcohol use than the typical patient with an alcohol problem seen in our primary care clinics, this study design might make the screening tests appear more clinically valuable than they really are. Validating these instruments on study populations that more closely resemble the patients we see in our clinical practice is necessary before any test becomes the recognized standard for screening. Unfortunately, the more the study population resembles our clinical practice, the more difficult it is to define accurately which study subjects are alcoholic or not, and so investigations continue.

The study by Crowe and colleagues2 showed that the commonly used CAGE and Brief MAST tests varied in their accuracy from one group of subjects to another. These differences were not limited to the change in positive predictive value expected with the varying prevalence of alcohol problems between the groups. The sensitivity of the tests also varied between the high-risk group of subjects (having a relative receiving treatment for alcohol problems) and the community group (having a prevalence of alcohol problems approximating the general population), with the sensitivity of the test being higher in the high-risk group. The study also showed a
lower sensitivity of both tests among women in both groups. This suggests that these tests should be carefully interpreted in the light of patient variables such as the sex and family history of alcohol problems. It does not mean they cannot be useful. It means we must be cautious when using the test so as not to underestimate the likelihood of alcohol dependency in the face of a negative result.

These 2 tests share another limitation. They do not uncover hazardous drinking, which is defined as an average consumption of more than 1 drink per day for nonpregnant women, and more than 2 drinks per day for men. These are the levels of consumption at which the demonstrated risk for alcohol-associated diseases such as hypertension and breast cancer exceed the potential benefits derived. Episodic heavy drinking is also considered hazardous and should be addressed by primary care providers. Since “brief office interventions” have been shown to reduce morbidity and mortality in nondependent heavy drinkers, one could argue that screening for hazardous drinking may be more important than screening for alcohol dependency for which intervention may be less effective.

If these brief questionnaires are not as accurate as we would like them to be and do not target the group most amenable to intervention, who and how should we screen for alcohol problems if at all? Available scientific information supports screening all adolescents and adults for hazardous drinking as well as alcohol abuse and dependency, but there is no simple screening process that accomplishes this for all patients.

One must still ask about consumption patterns by inquiring about quantity (a standard drink being 12 oz [360 mL] of beer, 5 oz [150 mL] of wine, or 1.5 oz [45 mL] of distilled spirits). Patients exceeding the levels for moderate intake or engaging in binge drinking should be cautioned about their use and advised to decrease their intake to within the moderate range.

Because alcohol abuse and dependency are not defined by consumption patterns but rather by continued drinking in the face of negative consequences resulting from its use, alcohol craving, or withdrawal syndromes, inquiries must be made into these areas. Common medical consequences of alcohol use include dyspepsia, hypertension, and depression. Common social consequences are family dysfunction, job loss, school failure, and arrests for driving while intoxicated. Although brief questionnaires may be helpful, we have seen that they are not always accurate when used with women and groups who have a low prevalence or awareness of alcohol problems. More extensive inquiries may be needed with these patient groups or lower thresholds for a positive test result used.

Brief office interventions involve giving objective, honest, respectful, and nonjudgmental feedback to patients regarding the risks or negative effects of their alcohol consumption coupled with advice to modify their intake. It can be very revealing to watch patients respond to advice to decrease alcohol intake. For instance, if a patient is reluctant to decrease his or her alcohol intake in an effort to normalize blood pressure, improve dyspepsia, or decrease risk for breast cancer, the patient has an unhealthy relationship to alcohol and should be observed over time for other alcohol-related health issues. Also, though some patients will agree readily to decrease alcohol consumption, when followed up over time they are unable to achieve this goal. This calls into question their ability to control their drinking, and increases the likelihood of an alcohol abuse or dependency problem.

In summary, primary care practitioners should screen for alcohol problems. The approach must be eclectic, and as with many chronic diseases, the clarification process may take weeks or months to complete. Brief office interventions should be performed on those patients having hazardous drinking patterns or suspected alcohol abuse or dependency. Patience and diligence are required, but benefits to the patients’ health are potentially great. Family physicians are in a position to make a substantial contribution in this area.

K. Patricia McGann, MD, MSPH
Palo Alto Medical Foundation
Palo Alto, Calif
and Department of Medicine
Stanford University School of Medicine
Stanford, Calif

REFERENCES