

Primary Care Physicians' Views on Screening and Management of Alcohol Abuse

Inconsistencies with National Guidelines

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BACKGROUND. The effects of patients' abuse of and dependence on alcohol are well known, but screening for problem drinking by primary care physicians has been limited. The National Institute of Alcohol Abuse and Alcoholism (NIAAA) recommends that all patients be screened for alcohol use, all users be screened with the CAGE questionnaire, and all nondependent problem drinkers be counseled. We evaluated primary care physicians' screening methods for alcohol use and their management of problem drinkers to determine if they were following the NIAAA guidelines.

METHODS. We mailed a questionnaire to 210 internists and family physicians to assess their alcohol screening and management methods.

RESULTS. Only 64.9% of the respondents reported screening 80% to 100% of their patients for alcohol abuse or dependence during the initial visit; even less (34.4%) screened that many patients during an annual visit. Nearly all respondents (95%) reported "frequently" or "always" using quantity-frequency questions to screen for alcohol abuse, but only 35% "frequently" or "always" used the CAGE questionnaire. Only 20% of the respondents rated treatment resources as adequate for early problem drinkers, and 72% preferred not to counsel these patients themselves. A belief that a primary care physician could have a positive impact on an alcohol abuser was less likely to be held by respondents who were older, in a nonurban setting, or had more years in practice ($P = .05$).

CONCLUSIONS. A substantial proportion of the physicians in our survey sample were not following NIAAA recommendations. Most physicians preferred not to do the counseling of nondependent problem drinkers themselves, but to refer those patients to a nurse trained in behavioral interventions.

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Although the prevalence of alcohol abuse and alcohol dependence in general medical clinics ranges from 10% to 20%,^{1,2} screening for problem drinking by primary care providers has been limited.^{3,6} Several barriers to widespread screening for alcohol use have been reported, including physician time constraints and reticence to ask patients potentially offensive questions.^{7,8} Physicians may also be confused about the numerous methods used to screen for alcohol abuse. These include questions about the quantity and frequency of alcohol use,⁹ CAGE (Cut down, Annoyed by criticism, Guilty about drinking, Eye-opener drinks) questions,¹⁰ the Michigan Alcoholism Screening Test (MAST),¹¹ the *Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-IV)* criteria,¹² the Alcohol Use Disorder Identification Test (AUDIT),¹³ and laboratory markers.¹⁴ In 1995, the National Institute of Alcohol Abuse and Alcoholism (NIAAA) published recommendations on screening and management of alcohol abuse by primary care providers,⁹ but the impact of this document on clinical practice is unclear. Our goal was to determine if primary care physicians were following the NIAAA guidelines.

METHODS

We mailed questionnaires to all 210 internists and family physicians in the Jefferson Health System in November 1997 to assess their alcohol screening behaviors and beliefs. The practices are widely distributed throughout the metropolitan Philadelphia area. We sent a second survey to nonrespondents after 6 weeks. All respondents were guaranteed confidentiality.

The questionnaire asked about the proportion of patients screened for alcohol abuse during the initial visit or an annual visit, as well as the proportion of patients believed to be alcohol dependent. The instrument also included questions about the types of screening methods used and reasons screening might not occur. For patients identified as alcohol dependent, physicians were asked about the availability and success of treatment interventions. Additionally, we asked if the respondent would prefer to counsel early problem drinkers personally or refer them to a nurse trained in behavioral counseling. We obtained practice and demographic information, including physician sex, specialty, affiliation with university or community hospital, and number of years in practice. Our study was approved by the Thomas Jefferson University Institutional Review Board.

We used Jonckheere-Terpstra tests to look for associations between ordered categorical variables. Chi-square

tests were used to test for associations between nonordered categorical variables. We performed calculations using SAS 6.12 software (SAS Institute, Inc, Cary, NC).

RESULTS

The survey response rate was 68% (N = 131). Seventy percent of the respondents were men; 39% were aged younger than 40 years, and 19% were older than 60 years; 53% practiced internal medicine, with the remaining 47% in family medicine. Respondents were divided evenly by setting (48% urban and 52% suburban), and 33% were affiliated with a university hospital. Nonrespondents were more likely ($P < .05$) to be men than women (82% vs 70%) or affiliated with community hospitals (81% vs 67% university affiliated).

Only 64.9% of the respondents reported screening 80% to 100% of their patients for alcohol abuse or dependence during the initial visit; 34.4% of respondents said that they screened that many during an annual visit. One third of the respondents admitted to screening $\leq 40\%$ of patients during an annual visit. Eight percent of respondents responded that $< 1\%$ of their patients were alcohol dependent; 80% estimated that this proportion was 1% to 10%; and 12% estimated that more than 10% of their patients were alcohol dependent.

Questioning the quantity and frequency of alcohol use was the most common screening approach reported, with 80% of respondents indicating they "always" asked these questions. CAGE questions were either "frequently" or "always" used by only 35% of survey physicians. CAGE was "never" used by 27% of respondents, while MAST and DSM-IV criteria were not used by 83% and 75%, respectively. No physicians reported using AUDIT when asked to name approaches not listed in the survey. Laboratory markers were either "frequently" or "always" used by 57% of the physicians.

Only a small proportion of respondents cited time constraints and intrusiveness as barriers to alcohol screening (Table). Thirty-five percent responded that inadequate resources were available for the treatment of alcohol-dependent patients, and more than half (53%) believed treatment resources were inadequate for the early problem drinker. Most respondents (90%) replied that an intervention by a primary care physician concerning alcohol abuse or dependence could have a positive impact on such behavior, but only 21% were willing to say that treatment would be successful for at least half of these patients. Regarding the preferred type of intervention for early problem drinkers, 28% of surveyed physicians preferred personally counseling the patient in two 10- to 15-minute sessions, consistent with the approach recommended by Fleming and colleagues.¹⁵ The remaining respondents (72%) favored referring the patient to a nurse trained in behavioral interventions.

DISCUSSION

This survey was conducted 3 years after publication of the NIAAA guidelines for the screening and treatment of problem drinkers in primary care practices.⁹ Only two thirds of the 131 primary care physicians responding to our survey reported that they screened nearly all of their patients for alcohol problems during the initial visit, and one third screened nearly all their patients during annual visits. Wenrich and coworkers¹⁶ similarly found that approximately one half of 134 primary care physicians asked an alcohol-screening question of the majority of standardized patients. Our survey results also indicate that if screening does not occur during the initial visit, it is unlikely to occur at another time in the longitudinal provider-patient relationship.

Although alcohol quantity and frequency of use questions appear to be the mainstay for screening by our respondents, concerns have been raised in the medical literature about the reliability of using this approach alone.^{17,18} Patient denial of alcohol use and memory problems have been blamed for self-report underestimations of alcohol consumption by 40% to 60% in one region of the country.¹⁷ Several studies have found that physicians accept a higher rate of consumption as normal than would NIAAA experts.^{16,19} Due in part to these concerns, NIAAA recommends a second screening step of asking CAGE questions of all current drinkers. However, nearly two thirds of our respondents reported that they either do not ask CAGE questions or ask them only occasionally. Since at least 60% of Pennsylvania residents consume alcohol according to a 1995 NIAAA surveillance report,²⁰ and current drinkers visit primary care settings more often than nondrinkers,²¹ our data indicate that many respondents were not screening current drinkers with the CAGE questions. Studies preceding the publication of the NIAAA guidelines also indicate that the CAGE questionnaire is rarely used by primary care clinicians.^{16,19} Further, our respondents rarely reported using another screening tool in lieu of CAGE even though other approaches, such as TWEAK (Tolerance, Worried, Eye-openers, Amnesia, Cut down) and the Alcohol Use Disorders Identification Test (AUDIT) may outperform the CAGE questionnaire in certain primary care patient populations.^{22,23}

Laboratory tests suggestive of problem drinking (eg, gamma glutamyltransferase, aspartate aminotransferase, and erythrocyte mean cell volume) were used "most of the time" by more than half of our respondents. Although such markers may provide clues to the diagnosis of alcohol abuse, no test or combination of tests is as useful as the CAGE or MAST questionnaire in diagnosing alcohol abuse.^{24,25} The NIAAA suggests that laboratory markers could be useful in assessing compliance with an alcohol treatment plan but does not recommend their use for detecting problem drinking.⁹

Few respondents felt that time constraints or intru-

TABLE

Physicians' Responses to Questions Regarding Barriers to, Resources for, and the Success of Alcohol Treatment Approaches

Question	Strongly Disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly Agree (%)
Is it difficult to screen because of time constraints?	20.6	42.7	14.5	21.4	0.8
Is it difficult to screen because intrusive questions?	22.9	45.8	8.4	19.8	3.1
Are there adequate resources for treatment of alcohol-dependent persons?	4.6	30.0	20.0	33.1	12.3
Are there adequate resources for treatment of early problem drinking?	8.5	44.6	26.2	17.6	3.1
Will interventions have a positive impact on alcohol abuse/dependence?	0.0	1.5	8.5	45.0	45.0
Will treatment be successful at least 50% of the time?	5.5	50.4	22.8	18.9	2.4

sive questions presented obstacles to screening. Yet once a patient was identified as a problem drinker, many respondents were dissatisfied with the availability of resources for treatment, especially for early problem drinking. Many were also skeptical about the success of such treatment. Optimism was greater regarding the positive impact of an intervention by a primary care physician for patients who abuse or are dependent on alcohol. This belief is consistent with the results of a randomized controlled trial by Fleming and colleagues¹⁵ of several short primary care physician-conducted sessions on alcohol use. However, nearly three fourths of our survey physicians favored referring a problem drinker to a nurse trained in behavioral interventions. A study of a nurse-conducted behavioral program for problem drinkers found that 80% of primary care physicians in a Canadian city willingly referred their patients with drinking problems to the program.²⁶ This program led to a significant reduction in alcohol consumption.

LIMITATIONS

Our response rate of 68% in this study was substantially higher than the response rates (30% to 50%) in other surveys of physician practices concerning diagnosis and treatment of alcohol disorders.^{4,19} We conducted a questionnaire survey rather than a chart audit because audits are intrusive and may require patient consent. Additionally, physicians may not document in the chart questions about alcohol use, since this is not a billable service. Therefore, a recognized limitation of our study was that we used only self-reported data. In research on cancer screening practices, physician self-reported performance of recommended primary care interventions was generally higher than documented by chart review.²⁷ If this were the case, the actual alcohol screening rates for our respon-

dents might have been worse than reported.

Our study offers evidence that NIAAA guidelines are not being followed by clinicians in one large health system and lends support to the development of interventions to address this deficiency.

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REFERENCES

- Bradley KA. The screening and diagnosis of alcoholism in the primary care setting. *Western J Med* 1992; 156:166-71.
- Olson M, Brahm RL. The detection of alcohol problems in a primary care clinic. *J Commun Health* 1992; 17:323-31.
- Secretary of Health and Human Services. Ninth special report to the U.S. Congress on alcohol and health. NIH publication no. 97-4017. Washington, DC: Government Printing Office; 1997.
- Linn LS, Yager J. Factors associated with physician recognition and treatment of alcoholism. *West J Med* 1989; 150:468-72.
- Ford DE, Klag MJ, Whelton PK, et al. Physician knowledge of the CAGE alcohol screening questions and its impact on practice. *Alcohol Alcoholism* 1994; 29:329-36.
- Reid MC, Tinetti ME, Brown CJ, Concato J. Physician awareness of alcohol use disorders among older patients. *J Gen Intern Med* 1998; 13:729-34.
- Roche AM, Guray C, Saunders JB. General practitioners' experience of patients with drug and alcohol problems. *Br J Addict* 1991; 86:263-75.
- Rush BR, Powell LY, Crowe TG, Ellis K. Early intervention for alcohol use: family physicians' motivations and perceived barriers. *Can Med Assoc J* 1995; 152:863-9.
- US Department of Health and Human Services: the physician's guide to helping patients with alcohol problems. NIH Publication No. 95-3769. Washington, DC: Government Printing Office; 1995.
- Ewing JA. Detecting alcoholism: the CAGE questionnaire. *JAMA* 1984; 252:1905-7.
- Selzer ML. The Michigan Alcoholism Screening Test: the

- quest for a new diagnostic instrument. *Am J Psych* 1971; 127:1653-8.
12. American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 4th ed. Washington, DC: American Psychiatric Association, 1994.
 13. Saunders JB, Aasland OG, Babor TF, et al. Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption-II. *Addiction* 1993; 88:791-804.
 14. Skinner HA, Schuller R, Roy J, Israel Y. Identification of alcohol abuse using laboratory tests and a history of trauma. *Ann Intern Med* 1984; 101:847-51.
 15. Fleming MF, Barry KL, Manwell LB, et al. Brief physician advice for problem alcohol drinkers: a randomized controlled trial in community-based primary care practices. *JAMA* 1997; 277:1039-45.
 16. Wenrich MD, Paauw DS, Carline JD, Curtis JR, Ramsey PG. Do primary care physicians screen patients about alcohol intake using the CAGE questionnaire? *J Gen Intern Med* 1995; 10:631-4.
 17. Conigrave KM, Saunders JB, Whitfield JB. Diagnostic tests for alcohol consumption. *Alcohol Alcoholism* 1995; 30:13-26.
 18. Watson CG, Tilleskjer C, Hoodecheck-Schow EA. Do alcoholics give valid self-reports? *J Studies Alcohol* 1984; 45:344-84.
 19. Townes PN, Harkley AL. Alcohol screening practices of primary care physicians in eastern North Carolina. *Alcohol* 1994; 11:489-92.
 20. Williams GD, Stinson FS, Sanchez LL, Dunfour MC. Surveillance report #43. Apparent per capita alcohol consumption: national, state, and regional trends, 1995-97. Rockville, MD: NIAAA, Division of Biometry and Epidemiology, Alcohol Epidemiology Data System; 1997.
 21. Rydon P, Redman S, Sanson-Fisher RW, Reid AL. Detection of alcohol-related problems in a general practice. *J Studies Alcohol* 1992; 53:197-202.
 22. Bradley KA, Bush KR, McDonell MB, Malone T, Fihn SD. Screening for problem drinking. *J Gen Intern Med* 1998; 13:379-88.
 23. Bradley KA, Boyd-Wickizer J, Powell SH, Burman ML. Alcohol screening questionnaires in women: a critical review. *JAMA* 1998; 280:166-71.
 24. Bernadt MW, Mumford J, Taylor C, et al. Comparison of questionnaire and laboratory tests in the detection of excessive drinking and alcoholism. *Lancet* 1982; 1:325-8.
 25. Kitchens JM. Does this patient have an alcohol problem? *JAMA* 1994; 272:1782-7.
 26. Israel Y, Hollander O, Sanchez-Craig M, et al. Screening for problem drinking and counseling by the primary care physician-nurse team. *Alcohol Clin Exp Res* 1996; 20:1443-50.
 27. Montano DE, Phillips WR. Cancer screening by primary care physicians: a comparison of rates obtained from physician self-reports, patient survey, and chart audit. *Am J Pub Health* 1995; 85:795-800.