Alcoholics Remaining Anonymous: Resident Diagnosis of Alcoholism in a Family Practice Center

Hunter E. Woodall, MD
Fairfax, South Carolina

Family practice residents rarely detect more than one half of the alcoholic patients they see. This study examines detection rates in terms of the patient's presenting complaint, the clinical encounter, and the resident's attitudes.

Over four months 218 patients of the family practice center of a large community hospital completed a survey that included the Short Michigan Alcoholism Screening Test (SMAST). Chart audits of each patient's visit assessed each resident's behavior in recording questions about the patient's use of alcohol. After the first four months, each resident completed a survey of his or her experiences and attitudes concerning alcoholism.

Using the SMAST scores and chart audits, 25 of the 218 patients were identified as alcoholic. The residents detected only 12 of the 25 alcoholics. Of 51 patients who presented for physical examinations, the residents recorded asking only 28 about their drinking; of 157 patients who presented for more limited visits, the residents recorded asking only six about their drinking. Residents rated the alcoholic patient as less motivated, more dangerous, less hopeful, and much sicker than the average person. First-year residents rated alcoholics much more negatively than did upper-level residents.

The SMAST again proved to be much more effective than clinical interviews in detecting alcoholism in patients.

Alcoholism has become the third leading cause of death in the United States.[1,2] Recently, investigators have reported that 16 to 18 percent of outpatients presenting to family practice clinics are alcoholic.[3–5] Despite the growing awareness of this high prevalence, many alcoholics remain undetected by their physicians.[3–5]

Screening questionnaires, such as the Michigan Alcoholism Screening Test (MAST)[6] or the CAGE,[7] correctly identify a much larger proportion of alcoholic patients than do laboratory tests or routine office interviews.[8] Since 1971 the MAST has been used in many clinical situations, always displaying excellent sensitivity (85 to 90 percent) and specificity (90 percent).[8,9] In 1975 Selzer et al[10] developed the Short Michigan Alcoholism Screening Test (SMAST), which is about one half the length of the MAST but retains similar diagnostic capabilities.

In 1982 Creek and colleagues[3] found that physicians at a family practice center diagnosed only six of 35 cases of alcoholism identified by the SMAST. In 1984 Lechman et al[5] reported that a group of family practice faculty and residents identified only two of the 24 patients identified as alcoholic by the MAST. Internal medicine residents at the Johns Hopkins ambulatory care clinic diagnosed only 11 of the 20 cases of alcoholism identified by the CAGE.[11]

Alcoholic patients rarely present complaining of their primary problem. Often the proper questions are not asked, and the diagnosis is not entertained. Residents' attitudes toward alcoholic patients tend to be negative,[12] perhaps enough to impair their diagnostic skills. Physicians who are pressed for time may not undertake the seemingly lengthy process of asking about drinking and alcoholic behavior.

This study estimates the prevalence of alcoholism in an urban family practice center and compares the resi-

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From the Family Practice Residency Program, Charlotte Memorial Hospital and Medical Center, Charlotte, and the Department of Family Medicine, University of North Carolina at Chapel Hill School of Medicine, Chapel Hill, North Carolina. At the time of this study Dr. Woodall was a Faculty Department Fellow in Family Medicine, Department of Family Medicine at Chapel Hill. Requests for reprints should be addressed to Dr. Hunter E. Woodall, P.O. Box 36, Fairfax, SC 29827.

TABLE 1. RESIDENT ATTITUDE SURVEY: A PARTIAL EXAMPLE

The directions were, "For each pair of (opposite) words, rank first an average person and then an alcoholic on the seven-point scale. Four is neutral." The full surveys had 16 word pairs.

1	4	7	Average	Alcoholic
Drunk		Sober	7	1
Sick		Healthy	6	2
Feminine		Masculine	4	4

dents' detection of alcoholic patients with their detection by the SMAST. Two other questions are explored: (1) Does the manner in which a person presents to the office affect the likelihood of him or her being queried about drinking? (2) Does the experience and attitude of a resident affect his or her skill in diagnosing alcoholism?

METHODS

For four months, beginning in November 1986, the staff of the family practice center asked 276 patients to complete a questionnaire regarding their alcohol use. Patients aged under 21 years, demented persons, and persons without charts were excluded.

The questionnaire began with a brief statement of the study's purpose and then asked subjects to choose to participate or not by circling "yes" or "no." Participating patients who drank completed the SMAST. To guard anonymity, the patients sealed the completed questionnaires in envelopes that were marked with their file numbers only.

Each patient's presenting complaint was assigned to one of three categories: physical examinations, chronic problems, and episodic problems. For example, a visit for continuing treatment of hypertension was categorized as a chronic problem, while a visit for a laceration was classified as an episodic one.

The SMAST, a 13-question, self-administered survey of the social, physical, mental, and legal consequences of excessive alcohol use,[10] is a forced-answer, yes-or-no survey. Each answer that is characteristic of alcoholism scored one point. In this study a score of 3 or more was considered diagnostic of alcoholism. Scores of 2 were interpreted to indicate possible alcohol problems but not definite alcoholism. Scores of 0 or 1 were considered normal.

After the initial four months, each of the 18 residents in the study completed a survey of his or her past experiences with alcoholics, which included a bipolar semantic differential survey[13] to analyze attitudes toward alcoholics (Table 1).

TABLE 2. SEX, AGE, AND EDUCATION OF THE RESPONDERS

Responders	Sex		Percent Male	Average Age (years)	Average Education (years)
	Male	Female			
Nondrinkers	19	61	24	44	11.7
Drinkers	37	101	27	35	13.4
Alcoholics	12	13	48	37	14

RESULTS

The staff of the family practice center collected 276 questionnaires. Eighteen of the questionnaires could not be used because the consent form or the SMAST was incomplete.

Forty patients refused to participate in the study after reading the consent form. The investigator could not review charts in detail without the patient's consent, but as a member of the family practice center's staff, the investigator could review the patient's problem lists. Five of the 40 patients carried a diagnosis of alcoholism. It is likely that a few undiagnosed alcoholics were missed because of their refusal to participate in the study.

Eighty respondents claimed they did not drink. Chart review showed eight of these nondrinkers were previously identified as alcoholics. The other 138 participants indicated that they drank and completed the SMAST. On average, the drinkers were younger and had more schooling than did nondrinkers ($P < .05$ Student's t test), but the sex distribution of the two groups was similar (Table 2).

Combined data from the charts and surveys of the 218 respondents revealed that 15 percent were alcoholic. Alcoholic drinkers did not differ in age and education from the other drinkers, but 48 percent of the alcoholic drinkers were male, while only 27 percent of the other drinkers were male ($P < .05$ chi-square) (Table 2).

The SMAST identified 22 alcoholics among the 138 drinkers who completed it. In addition, the chart reviews identified three alcoholics whom the SMAST missed. Two of these persons scored 1 and one scored 0 on the SMAST.

The residents identified only 12 of the 25 alcoholics. Nine of the 12 whom the residents detected had been recognized as alcoholic prior to the survey over the course of many visits. While the residents may have done better had their performance been surveyed over a longer period, many of the alcoholics that the residents missed had presented to the center multiple times prior to the survey.

The 13 alcoholics whom the residents missed included four men and nine women. Five of the 13 presented for

TABLE 3. PATIENTS ASKED ABOUT DRINKING BY TYPE OF VISIT

Visit Type	Patients Seen	Patients Asked
Physical examination	51	28
Episodic problems	92	3
Chronic care	75	3

physical examinations, five presented for follow-up of chronic problems, and three presented for episodic care.

Residents recorded asking only 34 of the 218 respondents about their drinking. The drinking status of patients presenting for physical examinations was recorded much more often than for patients presenting for more limited visits (Table 3). The patient's age, sex, or education made no difference in the likelihood of drinking status being recorded. No particular presenting complaint clued the residents to record questions asked about drinking.

The bipolar semantic survey of residents' attitudes asked residents to rank the average person and the alcoholic on a scale of 1 to 7 between pairs of words describing opposite characteristics (Table 1). Residents rated no difference between the average person and the alcoholic on the masculine-feminine word pair. On the remaining 15 word pairs, the residents rated the alcoholic more negatively than the average person, with four word pairs displaying greater differences than the others (Table 4). Because only 18 residents could be surveyed, the results represent only trends and were not analyzed for statistical significance.

Six residents had endured a personal experience with family or friends who were alcoholic, but their attitude ratings were similar to those of the 12 residents who claimed no such experience. On average, first-year residents rated greater differences between the alcoholic and the average person than did the upper-level residents (Table 4).

TABLE 4. AVERAGE DIFFERENCES BETWEEN RATINGS OF ALCOHOLICS AND AVERAGE PERSONS BY RESIDENT CLASSES

	Resident Class			
Word Pair	First Year	Second Year	Third Year	All Years
Sick-healthy	−4.83	−2.75	−1.25	−3.17
Hopeless-hopeful	−3.67	−1.75	−1.25	−2.28
Dangerous-safe	−2.83	−1.25	−1.50	−1.83
Aimless-motivated	−1.83	−1.50	−1.50	−1.61

DISCUSSION

The prevalence of alcoholism found in this family practice center is similar to that found in other centers.[3–5] A higher prevalence might have been reported had all 40 of the patients who refused to participate been examined more closely. The sample reflects accurately the family practice center's population, which is older than the general population and almost two-thirds female. Surveys of the general population reveal that male drinkers have a higher rate of alcoholism than do female drinkers, a finding that was also demonstrated here (Table 2). The SMAST could have missed some alcoholic women. The MAST has been criticized for underestimating the prevalence of alcoholism in women, and the SMAST is likely to do the same.

One third of all adults in this country do not drink,[1] a rate similar to the 37 percent of surveyed patients who did not drink. The younger average age of the drinkers compared with nondrinkers also reflects that of the general population.[1] A substantial number of persons who drink during adolescence and young adulthood abstain from drinking later in life. The difference in education between drinkers and nondrinkers is most likely the result of the difference in ages, with the younger cohort being more highly educated.

The SMAST appeared to be much more accurate than the residents in identifying alcoholics. Even if one assumes the SMAST generated two or three false-positive results (a 10 to 15 percent rate) and credits the residents with finding a correspondingly higher percentage of the alcoholics, the residents' rate of diagnosis is still low.

Residents could be reluctant to label patients as alcoholic on their charts until the problem is obvious, but not recording specific questions about drinking can cause the diagnosis to be missed in centers where patients often do not see the same physician on each visit. Clinically, one would not label persons as "alcoholic" simply on the basis of the SMAST score. Instead one could use the SMAST to flag patients who need further evaluation of their alcohol use.

The SMAST identified 16 alcoholics who had not been identified prior to the survey. The residents discovered only three of the 16; therefore, no differences in diagnostic skills among individual residents could be determined. A difference in technique became apparent, however. The three residents who each detected one of the previously unknown alcoholics all recorded asking questions about behaviors associated with alcohol abuse, not just about drinking itself. In contrast, the records of the 13 alcoholics who were missed contained no evidence that any questions regarding their drinking behaviors were asked.

The family practice center residents are instructed that all patients should have their drinking status recorded as part of a complete physical examination, but only 55 percent of the progress notes from physical examinations mentioned any questions about drinking. On ten of these examinations, the residents had used a form that prompted them to record the patient's drinking status. On more limited visits, the residents rarely recorded the patient's drinking status. Even drinkers who presented with panic attacks, depression, or abdominal pain had no questions recorded about their alcohol intake.

While in some cases residents could be asking the questions but failing to record negative answers, it is also likely that in many cases the residents are failing to recognize early clues to alcoholic drinking. Brown et al[14] have recently demonstrated that practicing physicians often miss early clues to their patients' alcoholism.

Differences in training may explain why first-year residents rated the alcoholic so much more negatively than did second- and third-year residents. Early in their second year the residents spend four or five days at alcoholism treatment facilities and attend one meeting of Alcoholics Anonymous. This experience with recovering alcoholics may have a positive effect on the residents' attitudes, but further study with a larger sample is needed to confirm this effect.

Residents did not stereotype alcoholics as male despite the relatively higher proportion of men in the alcoholic group. All the residents rated the alcoholic as much sicker than the average person, which may indicate a growing acceptance of alcoholism as a disease.

These results demonstrate again that a screening test, the SMAST, can be far superior to the unaided physician in detecting persons at high risk for alcohol abuse. Like any other test, the SMAST works best in the context of a properly conducted clinical encounter. The study supports the contention that all persons who drink should be screened periodically for alcohol abuse using one of the standardized questionnaires.[15] Training in the use of such screening questionnaires must be included in the family practice curriculum.

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