Screening for Alcohol Use and Misuse in Older Adults

Using the Short Michigan Alcoholism Screening Test—Geriatric Version.

By Madeline A. Naegle, PhD, APRN,BC, FAAN

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Ed Eckstein
Overview: The Short Michigan Alcoholism Screening Test–Geriatric Version (SMAST-G) is often used in outpatient settings to detect “at-risk” alcohol use, alcohol abuse, or alcoholism in older adults. As the number of older adults in the United States grows, those who develop problems of abuse and a dependence on alcohol will grow as well. The availability of accurate, easy-to-use screening tools to detect people in need of counseling can increase the number of older adults whose lives can be improved and even lengthened. To watch a free online video of a nurse administering the SMAST-G, go to http://links.lww.com/A271.

Frances Gregory is a 65-year-old woman who’s been divorced for 15 years. (This case is a composite based on my clinical experience.) The mother of two adult sons, she owns a small clothing boutique. Ms. Gregory suffers persistent back pain from stenosis of the lower spine, which was diagnosed five years ago, and she takes amitriptyline (Elavil) to manage chronic pain. She has two employees; nevertheless, during an average workday she often spends six to eight hours on her feet. In addition, she experiences periodic low blood sugar and must monitor her carbohydrate intake. Ms. Gregory has struggled to make her business a success and says that she’s had little time to develop a social life. She often feels too tired to get together with her sons and their families, and when she calls them, it’s often in the evening after she’s had two or three glasses of wine or one or more mixed drinks.

When Ms. Gregory visits her orthopedist, she tells the nurse that she hasn’t been sleeping well and is eating less than usual. The nurse notes that Ms. Gregory appears tired, is poorly groomed, and has a flushed face—all signs of a possible alcohol problem. The nurse then proceeds to screen Ms. Gregory for excessive alcohol use, beginning by saying, “Sleep is often disturbed by drugs or alcohol. How often do you drink alcohol?”

Ms. Gregory says she’s a “regular drinker.” The nurse responds, “‘Regular’ means different things to different people. It would be helpful to know how many days a week you drink and how many drinks you usually have.” Ms. Gregory responds that she has one to two drinks almost every day and sometimes three a day on the weekend.

Nurses might question whether it’s necessary to screen for alcohol abuse in older adults like Ms. Gregory: given that they may not have many years to live, what’s the point in depriving them of one of their pleasures? But there are several reasons to screen for excessive alcohol use in older adults, and all are related to preventing illness and preserving the quality of their lives. Excessive drinking increases the risk of falls and accidents, complicates medical conditions common in older adults (such as diabetes, gastroesophageal reflux disease, and hypertension), and contributes to relationship problems. As fatigue and irritability increase, the mood is dampened, cognitive acuity diminishes, and isolation often increases. The National Institute on Alcohol Abuse and Alcoholism (NIAAA) recommends that men and women ages 65 and older have no more than seven alcoholic drinks per week. (For more reasons to screen older adults for alcohol abuse, see Why Screen for Alcohol Use and Abuse in Older Adults? page 52.)

The Short Michigan Alcoholism Screening Test–Geriatric Version (SMAST-G) is often used in outpatient settings, such as the one where Ms. Gregory is being treated, to detect current “at-risk” alcohol use, alcohol abuse, or alcoholism. Primary care settings are ideal for using this tool, but it can also be used by specialists. The SMAST-G was adapted from the Michigan Alcoholism Screening Test–Geriatric Version (MAST-G) specifically for use with older adults (the MAST-G is itself a modification of
Why Screen for Alcohol Use and Abuse in Older Adults?

Substance abuse is a major public health problem worldwide, and the substance most commonly abused is alcohol. The Substance Abuse and Mental Health Services Administration, an agency of the U.S. Department of Health and Human Services, estimated that in 2006 about half (50.9%) of the people in the United States who are age 12 or older (approximately 125 million people) and more than a third (38.4%) of those age 65 or older drink alcohol at least once per month. An estimated 22.6 million (9.2%) people 12 years of age or older were dependent on or had abused alcohol or illicit drugs in the previous year. And of these, “3.2 million were classified with dependence on or abuse of both alcohol and illicit drugs, 3.8 million were dependent on or abused illicit drugs but not alcohol, and 15.6 million were dependent on or abused alcohol but not illicit drugs.” Alcohol abuse is often linked to adolescent or underage drinking, binge drinking by young adults, or chronic alcoholism; however, because the U.S. population is aging and people are living longer, alcohol misuse and abuse is becoming a growing problem among people older than age 50 and affects approximately 15% of this population. Among adults ages 65 or older, 7.6% report binge drinking (five or more drinks on the same occasion at least once in the previous 30 days) and another 1.6% report heavy alcohol use (five or more drinks on the same occasion on five or more days in the previous 30 days). As the number of older adults increases, this pattern of drinking will pose more of a problem in the community. Substance abuse by older adults is often associated with the circumstances of aging, such as loss, medical illness, and life events such as decreased income, relocation, and changed social status.

Many older people continue drinking patterns established earlier in life and may not realize that continuing to drink the same amount of alcohol as they did when they were younger may place them at risk for health problems. “At-risk” alcohol use in adults younger than 65 years is defined differently for men and women. But the definition of “at-risk” alcohol use in men and women ages 65 and older is the same: those who consume more than three drinks per day and more than seven drinks per week are considered to be at risk for developing alcohol-related mental and physical health problems.

ADMINISTERING, SCORING, AND INTERPRETING THE SMAST-G
The SMAST-G consists of 10 yes–no questions about drinking and the ways it may affect older adults. The items on the test address the physical signs of excessive drinking, the connection between drinking and emotional states, problems controlling the amount of alcohol consumed, and the reactions of others to the older person’s drinking. The test is available in English and Spanish. It can be self-administered or given by a clinician; paper and pencil or a computer can be used. The test should be administered in a friendly manner and in a calm environment, when the patient is free from the effects of alcohol or other drugs. The clinician should explain the need to use the screening tool to uncover possible health risks and give reassurance that the information will remain confidential. People with whom the findings will be shared, such as family members or other health care providers, should be specified in follow-up discussions or on an information-release form. Another approach may be to include the test in a packet of general questions on lifestyle that can be presented during the patient’s first visit or at the start of a return visit. These questions should include topics such as exercise, diet, and the use of all mood-altering substances.

A common problem of older adults who take many medications is that they don’t understand the possible interactions between them, or between the drugs and alcohol.

Each item to which the patient answers “yes” receives 1 point. A score of 2 or more suggests that the patient has an alcohol problem. Because Ms. Gregory’s response to the nurse’s initial questions...
concerning alcohol use suggests she may have a drinking problem, the nurse asks her to complete the SMAST-G. Ms. Gregory scores a 3, indicating the need to obtain a comprehensive alcohol and drug history, including the quantities and frequencies of all medications and other substances used recreationally. A full evaluation of her pattern of alcohol use as well as her use of all prescription, over-the-counter, herbal, homeopathic, and illicit or recreational medications or drugs should be completed. (Of note, according to the Substance Abuse and Mental Health Services Administration, use of marijuana by people age 50 or older is expected to increase over the next decade.) A common problem of older adults who take many medications is that they don’t understand the possible interactions between them, or between the drugs and alcohol. In addition, older adults often don’t realize the negative effects of continuing to consume alcohol at levels considered “risky” to their health. (To watch the segment of the online video discussing the screening of older adults, interpreting the results of the screening, and developing a plan of care, go to http://links.lww.com/A272.)

Ms. Gregory is surprised when the nurse asks to speak with her about the effects of drinking on her health. She says, “I’ve always been a social drinker, and I don’t think I have a problem.” But a heavy drinker may deny the possible negative consequences of her or his alcohol consumption, focusing on the pleasures, euphoria, or relaxation alcohol can confer. Denial often underlies a patient’s defensive response, and the nurse might tell the patient that, because alcohol consumption is such a common practice, questions about drinking are necessarily part of a general health assessment.

COMMUNICATING THE FINDINGS
In discussing the SMAST-G findings with the patient, it’s important that the nurse
• ascertains the patient’s view of the problem.
• works with the patient from her or his perspective.
• give suggestions with empathy and encouragement, rather than be too directive.

Patient teaching. It’s also helpful to talk with the patient about alcohol use in older adults in general. People of Ms. Gregory’s age who have been consuming alcohol for many years can develop a tolerance to its effects—that is, they don’t experience the same relaxation or euphoria after a glass or two of wine, for example, and may gradually drink more alcohol or drink more often or both. Older adults may also drink the same amount of alcohol they did when they were younger, but their bodies can no longer metabolize it without the alcohol causing changes in the health of certain organs, such as the liver and pancreas, or other changes, including fatigue, problems with balance, sleep disturbances, or some combination of these. This was the case with Ms. Gregory. In such a situation, the following dialogue might take place.

Other Instruments for Screening for Alcohol Misuse in Older Adults

The CAGE questionnaire has four items and is used frequently in primary care. The acronym CAGE comes from the wording of the four questions asked: Have you ever tried to cut down on your drinking? Have people annoyed you by criticizing your drinking? Have you ever felt bad or guilty about your drinking? Have you ever had a drink first thing in the morning to settle your nerves or to get rid of a hangover? Its performance is considered comparable to that of the MAST, even though its questions are not targeted to older adults, who tend to have more problems than younger people after consuming even small amounts of alcohol. Still, Buchsbaum and colleagues found that the CAGE “can effectively discriminate elderly patients with a history of drinking problems from those without such a history.”

The Alcohol Use Disorders Identification Test (AUDIT), developed by the World Health Organization in the 1980s, can be administered as a brief interview or as a survey completed by the patient; it contains 10 questions and has been translated into several languages. Although the AUDIT is not specific to older adults and was outperformed by the MAST-G and the CAGE in one study of elderly male veterans, it has been found to have high sensitivity and specificity when used in a number of adult populations.

The Alcohol-Related Problems Survey (ARPS) and the Short ARPS (shARPS) were created specifically to screen older adults. In a 2002 study Moore and colleagues tested these two instruments, which “identify older persons whose use of alcohol alone or in combination with their comorbidities, medications, symptoms, and functional status may be causing them harm or placing them at risk for harm.” They found that these two tools were “more sensitive than the AUDIT and the SMAST-G” in identifying those at risk.

REFERENCES
Nurse: “You tell me that your drinking hasn’t changed and that you still drink two glasses of wine each night.”

Ms. Gregory: “That’s right. I certainly don’t want to have an alcohol problem.”

Nurse: “I understand. You also tell me that you’ve had no falls or hangovers. But your problems with sleep might be related to the amount of wine you’re drinking. Although your drinking hasn’t changed, the rate at which your body processes alcohol may have changed with age. Waking up in the middle of the night and feeling tired during the day may be related to this.”

The need for further patient teaching is evident in Ms. Gregory’s case and, at minimum, should consist of:

• a review of the effects of alcohol on balance, appetite, sleep, nutrient absorption, blood glucose levels, cognition, and memory.
• an explanation of the interaction of alcohol with amitriptyline, which Ms. Gregory is taking for pain. (Alcohol acts directly on the central nervous system, the primary site of action for amitriptyline, a tricyclic antidepressant sometimes used to manage chronic pain. Its long half-life contributes to central nervous system depression when taken with alcohol.)
• alternative relaxation methods such as meditation, yoga, and exercise.
• strategies to limit the number of drinks consumed and the occasions of use, such as mixing spirits with water, alternating alcoholic with nonalcoholic drinks over a long evening, and eating sufficiently during cocktail hour.
• a discussion of social drinking, its risks and benefits, and its role in social gatherings.
• support for finding more time for social activities and increasing contact with friends and family.

The nurse can also discuss the importance of meeting with a clinician who is certified as an addiction specialist—perhaps an RN with such certification or a psychiatric NP—for a full assessment. A physician or social worker knowledgeable about alcoholism may also be able to provide these services. The nurse who makes the referral should include detailed information on any diagnosed medical conditions the patient may have in the communication with the clinician.

The extent to which drinking alcohol is considered “risky” depends on comorbid medical or psychiatric conditions and individual physical characteristics as well as the amount of alcohol consumed. The goal for clinicians working with a patient like Ms. Gregory should be to explore further interventions that might reduce the harmful effects of alcohol consumption. An evidence-based approach that’s currently being used in older people with some success is the Brief Intervention, an empathic, non-judgmental health education approach that provides information, offers choices for making change, emphasizes the patient’s autonomy and responsibility, and communicates the belief that the patient is capable of changing her or his behavior.

Excessive drinking increases the risk of falls and accidents, complicates medical conditions common in older adults, and contributes to relationship problems.

CHALLENGES

There are a number of challenges associated with the use of the S Mast-G. One continuing obstacle is a lack of knowledge about the instrument among practicing nurses and physicians. Often no drug or alcohol history is included in intake histories, unless it’s clear from observed signs that the patient has a
Alcohol Use Screening and Assessment for Older Adults

By: Madeline A. Naegle, PhD, APRN, BC, FAAN, New York University College of Nursing

WHY: While as many as 60% of older persons abstain from alcohol use, drinking problems are the largest category of substance abuse problems in older adults. Alcohol consumption is associated with high morbidity and mortality in middle age adults and the vulnerability of older adults to the effects of alcohol, alone and in combination with multiple co-morbidities, increases the risk for immediate and long-term harm. The National Institute of Alcohol Abuse and Alcoholism recommends that alcohol consumption for adults 65 and older be limited to 1 standard drink (12 ounces of beer, 4-5 ounces of wine or 1 1/2 ounces of distilled spirits) per day or seven standard drinks per week.

BEST TOOL: The Short Michigan Alcoholism Screening Instrument – Geriatric Version (SMAST-G) was developed as the first short-form alcoholism screening instrument for older adults. A score of 2 or more “yes” responses suggests an alcohol problem (Blow, et al, 1992).

TARGET POPULATION: Older adults who are regular users of alcohol in any amount. The goal of screening is to identify an “at risk” population of persons drinking at levels linked with negative outcomes for physical and mental health such as stroke, depression and gastrointestinal problems. Older persons taking prescription medications are at greater risk. Using prescription drugs and alcohol in combination is not an uncommon occurrence.

VALIDITY AND RELIABILITY: The MAST-G, the original instrument from which this measure was derived, has a sensitivity of 93.9%, specificity of 78.1%, a positive predictive value of 87.2% and a negative predictive value of 88.9%.

STRENGTHS AND LIMITATIONS: The instrument serves as a screening tool only. A more comprehensive assessment for alcohol/drug dependence requires that the clinician inquire about the quantity and frequency of use, and the negative social and health consequences of every drug used, including nicotine, prescription, over-the-counter, herbal remedies, recreational drugs, and alcohol.

Geriatrics at Your Fingertips, an annually updated publication by the American Geriatrics Society, suggests using the CAGE questionnaire as a screening tool for alcohol misuse (Cut down, Annoyed by others, feel Guilty, need Eye Opener). A 2002 study by Moore, Seeman, et al, found that less than half of those screening positive on either the SMAST-G or the CAGE screened positive on both measures, suggesting that these instruments may be capturing different aspects of unsafe drinking. A positive score on the CAGE is considered indicative of alcohol abuse or dependence, whereas the SMAST-G is more likely to identify those at risk for negative outcomes of alcohol use. Clinicians may wish to screen for alcohol use using both brief measures.

FOLLOW-UP: Brief interventions by health care providers of older adults who are drinking at high levels have been shown to be useful in reducing alcohol consumption by older adults. Nurses in all health care settings serving adults over 60 should screen for excess alcohol use.
MORE ON THE TOPIC:

Short Michigan Alcoholism Screening Test–Geriatric Version (SMAST-G)
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Yes (1) No (0)

1. When talking with others, do you ever underestimate how much you drink?
2. After a few drinks, have you sometimes not eaten or been able to skip a meal because you didn’t feel hungry?
3. Does having a few drinks help decrease your shakiness or tremors?
4. Does alcohol sometimes make it hard for you to remember parts of the day or night?
5. Do you usually take a drink to relax or calm your nerves?
6. Do you drink to take your mind off your problems?
7. Have you ever increased your drinking after experiencing a loss in your life?
8. Has a doctor or nurse ever said they were worried or concerned about your drinking?
9. Have you ever made rules to manage your drinking?
10. When you feel lonely, does having a drink help?

TOTAL SMAST-G-SCORE (0-10) ____________

SCORING: 2 OR MORE “YES” RESPONSES IS INDICATIVE OF AN ALCOHOL PROBLEM.

For further information, contact Frederic C. Blow, PhD, Director, Serious Mental Illness Treatment Research and Evaluation Center (SMITREC), Department of Veterans Affairs, Senior Associate Research Scientist, Associate Professor, Department of Psychiatry, University of Michigan.

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problem." Often clinicians fail to ask, "Do you drink alcohol?" when obtaining medical histories and performing routine physical examinations and intake assessments. Or sometimes clinicians may pose questions about a particular quantity of alcohol consumed and the frequency of its consumption. Such queries do not take into consideration older adults’ varying levels of safe consumption, their increased vulnerability to the effects of alcohol, or the problems associated with the high prevalence of medication use in this age group. Older patients are often uncomfortable discussing alcohol consumption, and this is especially true of women. Alcohol use is still considered unacceptable in many cultural and religious groups, and by use women may be stigmatized. Despite increasing scientific evidence that addiction is a disease, many people continue to believe that alcoholism is subject to the will of the individual or is a sign of moral failing. As a result, the older adult may deny or minimize the amount of alcohol she or he is consuming, making it hard to obtain an accurate assessment.

It’s surprising, perhaps, that many physicians and nurses are still not knowledgeable about the clinical manifestations of alcoholism in older adults or do not consider alcohol use to be prevalent enough to be a problem in this population. As the number of older adults in the United States grows, the number developing problems of abuse and dependence on alcohol will grow as well. The availability of accurate, easy-to-use screening tools to detect people in need of counseling can increase the number of older adults who live longer and have higher-quality lives.

**CONSIDER THIS**

What evidence shows that the SMAST-G identifies alcohol use and abuse in older adults? The evidence for using the SMAST-G comes from studies of the original MAST, SMAST, and MAST-G.

- **Reliability.** Shields and colleagues conducted a metaanalysis of studies using the MAST and SMAST and found that most reported internal consistencies of 0.78 to 0.84, with the reliability of the two instruments being comparable and stronger in clinical samples than in nonclinical ones.

- **Validity.** The MAST is valid in hospitalized populations with alcohol problems, demonstrating a sensitivity of 97.1% and a specificity of 66.7% in a population of male geriatric outpatients. In other studies, the MAST-G had a sensitivity of 93.9%, a specificity of 78.1%, and a positive predictive value of 87.2%.

  - **Sensitivity.** The SMAST-G correctly identified 52% to 85% of older adults with alcohol problems. In a study comparing the CAGE and the SMAST-G, Moore and colleagues found that the SMAST-G identified older adults who were drinking at potentially harmful levels and who had not been detected by the CAGE, suggesting that the SMAST-G is particularly useful for this.

  - **Specificity.** The SMAST-G correctly identified 93% to 97% of older adults who do not have alcohol problems.

**REFERENCES**


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