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# Alcohol use disorder manifestations and screening

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## ABSTRACT

### Introduction

Alcohol use disorder is a very common problem in many societies. It produces vast problems in the area of health of individuals, relations in families, public healthcare costs and danger to other community members. In Poland, 11.9% of Polish residents can be included in the general category of alcohol abusers, in which 2.4% of people meet the diagnostic criteria for alcohol addiction. Thus, even every family doctor meets in his practice patients who drink alcohol excessively and identification of patient suffering from alcohol-related problems is crucial as simple interventions are very effective.

### Objective

To present methods of assessment and screening for alcohol use disorder.

### Results

Screening for alcohol use disorder is complex process. Family doctor should carefully look for such symptoms as bloodshot eyes, reddish, swollen face with dilated facial capillaries and hand and tongue tremor. Patients may report some social problems. Laboratory tests may reveal elevated aspartate gamma glutamyl transferase levels and raised mean cell volume. Apart from clinical assessment, general practitioner should use standardized questionnaires like AUDIT, AUDIT-C, CAGE or MAST to identify patients with alcohol use disorder.

**Conclusions**

The problem of excessive alcohol consumption is very common in the primary care. Assessment of alcohol use disorder occurrence in patient is absolutely important and should be multifarious. General practitioner should perform careful physical examination and history taking, as some symptoms and signs may be indicators of problems with drinking alcohol. Obtaining results of simple laboratory tests can be a diagnostic tip as well. Screening also involves use of diagnostic instruments, preferably AUDIT (or AUDIT-C) or MAST, CAGE tools.

**Keywords:** Alcoholism, Primary Health Care, Screening

## INTRODUCTION

Alcohol dependence is a psychiatric illness defined in the ICD-10 classification as a persistent use of alcohol despite evident presence of harmful consequences. It is characterized by a craving or feeling of compulsion to use the alcohol along with evident impairment of the ability to control use of alcohol. This can be related to difficulties in avoiding initial use, difficulties in discontinuing use, difficulties in controlling the level of use. In this illness withdrawal state, or use of the substance to mitigate or avoid withdrawal symptoms may be present. Over time, presence of tolerance to the alcohol's effects develops. Patients progressively neglect of pleasures, behaviour or interests in favour of using alcohol [1]. Another disease related to excessive alcohol use is harmful use of alcohol. According to ICD-10, it is defined as a pattern of use that is causing damage to health. The damage may be physical or mental (for example episodes of depressive disorder secondary to heavy consumption of alcohol). Harmful patterns of use are often criticized by others and frequently associated with adverse social consequences of various kinds [2].

Frequently, the first stage of alcohol-related problems can be defined as risky drinking, defined by the US National Institute of Alcohol Abuse and Alcoholism as consumption of 5 or more standard drinks per occasion or 15 or more standard drinks per week [3].

Excessive alcohol consumption is the cause of more than 200 disease entities such as alcohol dependence, psychoses, alcohol-related depression and other non-psychiatric diseases like acute pancreatitis, liver cirrhosis, polyneuropathy, peptic ulcers and different locations of

cancer. Moreover, the World Health Organization estimates that excessive alcohol consumption is responsible for 5.9% of global mortality, or 3.3 million net deaths worldwide in 2012 [4].

In Poland, alcohol is widely available in many locations such as opened 24 hours a day alcohol shops, supermarkets, pubs and restaurants. The EZOP study found that 11.9% of Polish residents in working age can be included in the general category of alcohol abusers, in which 2.4% of people meet the diagnostic criteria for alcohol addiction syndrome [5]. Thus, many family doctors meet patients with alcohol use disorder. Despite the high prevalence of problems with the use of alcohol in the Polish community, detection and therapeutic intervention fall out poorly against the background of screening programs of other diseases.

Practice of the family doctor is an ideal place to carry out screening for risky behaviors related to alcohol consumption, alcohol dependence and to implement brief interventions related to this medical problem [6]. A five-minute intervention can reduce the number of people who drink alcohol in a harmful way to improve one-third [7]. Therefore it is extremely important patients with alcohol use disorder, to try to help them.

## OBJECTIVE

To present methods of assessment and screening for alcohol use disorder.

## RESULTS

### PHYSICAL EXAMINATION AND HISTORY TAKING [8, 9]

Patients suffering from alcohol use disorder may present them with some signs that at first glance, are reminiscent of problems with drinking alcohol. These are bloodshot eyes, reddish, swollen face with dilated facial capillaries and hand and tongue tremor as well [9]. The patient may be accompanied by the characteristic smell of fresh or digested alcohol.

Frequently, such patient comes for subsequent visits irritated and upset, and when the problem of drinking arises, he takes a defensive attitude and is very reluctant to give information on this subject, trying to minimize the problem [8].

Patients with alcohol use disorder may repeatedly see their family doctors for feeling of fatigue, headaches other non-specific symptoms, like abdominal pain, gastric discomfort, loss of appetite, nausea, vomits or diarrhea. Women can present pain symptoms during menstruation and diffuse pelvic pain [8].

A common problem are also sleep problems (insomnia), memory disorders and depressed mood. Patients may also experience muscle strength limitation or tingling sensations in feet and hands (symptoms of polyneuropathy) [8].

Hypertension which in many cases proves to be resistant to pharmacological treatment is also a frequent problem.

Patients may report some social problems. These include lack of financial liquidity, frequent conflicts at work and marital problems. Characteristic is displacement of the problem and charging the loved ones with blame for the situation that is present in the home environment. the family doctor can also receive information about cases of domestic violence [9].

Due to patient`s complaints, primary healthcare physician may refer patient to laboratory tests. The most frequent disfunctions in people using alcohol are elevated liver enzymes (Aspartate aminotransferase is typically higher than alanine aminotransferase), elevated gamma glutamyl transferase levels and raised mean cell volume. Recently, carbohydrate deficient transferrin is used as laboratory marker of alcoholism, but this test is not available in the practice of a family doctor.

Although, above described symptoms and signs are quite characteristic for patients suffering from alcohol use disorders, they are not diacritic. They are only tips for family doctor. Therefore, it is recommended to use simple tools for screening patients for alcohol-related problems.

## SCREENING INSTRUMENTS

### Alcohol Use Disorders Identification Test (AUDIT) [10]

The AUDIT tool [10] was designed by WHO to identify persons with hazardous and harmful patterns of alcohol consumption. The main advantages of this instrument include: rapid application, satisfactory sensitivity and specificity. It was constructed for primary health care workers and focuses on recent alcohol use. AUDIT consists of 10 questions about recent alcohol use (frequency of drinking and heavy drinking, typical quantity), alcohol dependence symptoms (impaired control over drinking, increased salience of drinking, morning drinking), and alcohol-related problems (guilt after drinking, blackouts, alcohol-related injuries, concerns of relatives about drinking). Patient may reach 0-4 points for each question. Total scores of 8 or more are recommended as indicators of hazardous and harmful alcohol use, as well as possible alcohol dependence [10]. It was found that AUDIT scores in the range of 8-15 represented a medium level of alcohol problems(simple advice should be given to the patient), whereas scores of 16 and above represented a high level of alcohol problems [11]. For patients with 16-19 AUDIT score most appropriate strategy involves providing simple advice and brief counseling as well as maintaining continued monitoring [10]. A brief intervention should include presenting results of screening procedure, conducting a joint identification with the patient of the risk

factors of harmful drinking and discussing the consequences, providing medical advice, getting a declaration of commitment to the treatment process, setting goals, i.e. reducing the amount of alcohol consumed or total abstinence and providing advice and support [12].

**The AUDIT Alcohol Consumption Questions (AUDIT-C) [13]**

The AUDIT-C tool [13] consist of only 3 question from full 10-item AUDIT instrument. These are: How often do you have a drink containing alcohol?; How many drinks containing alcohol do you have on a typical day when you are drinking?; How often do you have six or more drinks on one occasion? These items assess hazardous alcohol use. Scoring 0-3 points indicates for low-risk, but 4-5 points indicate for moderate-risk drinking (brief intervention should be implemented and referral to specialist considered), 6 or more points - high-risk drinking (definitely referral to a specialist addiction service should be made). The AUDIT-C test main advantage is really short time of administration and better performance than full AUDIT for heavy drinkers identification [14]. It also appear to be valid, brief screening tool for active abuse and dependence.

**Michigan Alcoholism Screening Test (MAST) [15]**

The MAST [15] is a 25-item questionnaire designed to provide a rapid and effective screening for lifetime alcohol-related problems and alcoholism. It includes questions about social consequences of excessive drinking (being arrested, drunk drive, neglecting duties, problems at work, family conflicts, friends loss), somatic lesions (liver cirrhosis, delirium tremens) and own opinions about drinking alcohol and the view of relatives on problem. Scoring 0 – 3 points indicates that patient has no apparent problem, but 4 points indicates for early or middle problem drinker, and 5 or more points for alcoholic. This measure has good reliability and validity, but is longer in administration and identifies more severe problems with alcohol use, not recognizing hazardous use of alcohol.

**CAGE [16]**

The name of CAGE [16] questionnaire is an acronym from four question it consists of: Cut down (feeling the need to stop drinking alcohol), Annoyed (irritation due to critical opinions of other people about drinking alcohol), Guilty (guilty about drinking), Eye-opener (need to drink alcohol as a first thing in the morning). It assess life-long problems and has demonstrated a high level of sensitivity and specificity for serious alcohol misuse screening [17]. Brevity and

simplicity are the main advantages of CAGE questionnaire, but there is some data CAGE is not reliable enough to screen for heavy drinking [18].

## CONCLUSIONS

The problem of excessive alcohol consumption is very common in the practice of a family doctor. Alcohol dependence and risky drinking are the basic disease entities. Brief intervention in the environment of primary healthcare is very effective. When severe alcohol problem is diagnosed, patient should be referred to specialist care. Assessment of alcohol use disorder occurrence in patient is very important and should be multifarious. General practitioner should perform careful physical examination and history taking, as some symptoms and signs may be indicators of problems with drinking alcohol. Obtaining results of simple laboratory tests can be a diagnostic tip as well. Another way of alcohol problems detection is use of standardized screening tools. There are many instruments, but AUDIT, MAST and CAGE are dedicated to primary healthcare setting. Among them, only AUDIT allows identification of patients presenting hazardous alcohol drinking patterns (others help in diagnosis of severe problem – mostly alcohol dependence). AUDIT has good reliability and validity and is a brief instrument, but there is a shortened version – AUDIT-C questionnaire as well. It is better in identification risky, heavy drinking and comparatively suitable as full AUDIT for dependence diagnosis. To sum up, family doctor screening for alcohol use disorder should include precise examination and use of diagnostic instruments, preferably AUDIT (or AUDIT-C) or other described in this article.

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