

# Primary Care Physicians' Difficulty in Managing Patients with Alcohol Use Disorder: A Review Article

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## Abstract

In Japan, primary care physicians are frequently presented with alcohol use disorder (AUD) co-occurring with other psychiatric disorders. However, despite the high occurrence of AUD, few primary care physicians are confident enough to deal with it. This is because AUD is a distinct mental disorder, and primary care physicians tend to be inexperienced in dealing with mental disorders. There may also be an underlying educational gap and prejudice against AUD. Additionally, alcoholism often coexists with a variety of medical conditions, such as electrolyte abnormalities and rhabdomyolysis. Therefore, it is important for primary care physicians to apply their knowledge of internal medicine and strengthen their collaboration with psychiatrists as much as possible to effectively manage AUD among patients.

## Keywords

Alcohol Use Disorder, Mental Disorder, Prejudice, Stigma, Primary Care Physician

## 1. Introduction

Alcohol consumption is among the leading causes of preventable death worldwide, with three million deaths attributable to alcohol consumption per year [1]. Moreover, the harmful use of alcohol causes approximately 5.9% of all deaths annually, and 5.1% of the global disease burden is attributable to alcohol consumption [2].

Alcohol use disorder (AUD) is a chronically relapsing disorder characterized by a compulsion to ingest alcohol, loss of control in limiting alcohol intake despite adverse health, social and occupational consequences, and the emergence of a neg-

ative emotional state involving feelings of anxiety, irritability and dysphoria when access to alcohol is prevented [3]. It is estimated that 107 million people worldwide suffer from AUD, which causes 2.8 million premature deaths every year [4]. Chronic alcohol consumption damages multiple systems of the human body, including the cardiovascular, gastrointestinal, and nervous systems [5].

According to a 2023 survey conducted by the Japanese Ministry of Health, Labour, and Welfare, 119,000 people in Japan suffer from AUD [6]. Primary care physicians in Japan are expected to provide basic standards of care and fulfill the unmet needs of the population. Therefore, they must be involved with patients with AUD and manage AUD-related symptoms. In this study, we reviewed the difficulties in managing AUD and how primary care physicians are expected to work with patients with AUD.

## **2. Evidence-Based Primary-Care Interventions for AUD**

There are several evidence-based interventions for AUD that are utilized in primary care. We have discussed below some of the popular ones.

### **2.1. Screening, Brief Intervention and Referral to Treatment**

Screening, Brief Intervention and Referral to Treatment (SBIRT) is a public health approach that has been promoted in primary care and other medical settings to reduce hazardous drinking and drug use [7]. Early detection and treatment aim to prevent and resolve not only the physical and mental effects of alcohol, but also its impact on family life and work. SBIRT can be implemented quickly and easily at various institutions, such as hospitals, clinics, counseling centers, nursing care facilities, and health screening institutions. Additionally, by implementing common tests at various institutions, deepening mutual understanding of alcohol-related issues is possible. With the aim of providing early and effective interventions for AUD, the Alcohol Use Disorders Identification Test (AUDIT), a 10-item self-report questionnaire, was developed for screening harmful alcohol consumption and alcohol-related problems in primary care [8]. A retrospective cohort study conducted in 29 primary care clinics in Washington State showed that AUDIT scores had a J-shaped relationship with hospitalizations, with risk for all-cause hospitalizations higher for patients with the AUDIT-Consumption scores of 9 to 12, resulting in the demonstration of the potential clinical utility of the AUDIT [9].

Beginning in the 1980s, in the US and at the World Health Organization, evidence base for alcohol screening and brief interventions were provided in primary health care settings, resulting in SBIRT yielding short-term improvements in individuals' health [10].

### **2.2. Acamprosate**

Acamprosate has a novel mechanism of action that acts to support abstinence by restoring homeostasis in N-methyl-d-aspartate-mediated glutamatergic neurotransmission that becomes dysregulated in alcohol dependence and withdrawal

[11]. The National Institute for Health and Care Excellence guidelines recommend acamprosate as a first-line treatment, in conjunction with psychosocial therapy, to support those who have successfully withdrawn from alcohol to remain alcohol free [12]. Polysomnography and clinical data show that acamprosate reverses alcohol-related changes in sleep architecture, which may yield added value when treating patients with comorbid psychiatric disorders characterized by sleep disturbance, such as posttraumatic stress disorder, and anxiety and depressive disorders [13].

### 2.3. Naltrexone

Naltrexone has been FDA-approved for using in medication-assisted therapy for alcohol and opioid use disorders [14]. Naltrexone is a semi-synthetic opioid with structural similarity to other opioid agonists. Naltrexone is a competitive antagonist at mu opioid receptors in the central nervous system [14]. After a standard oral dose of 50 mg naltrexone in humans, brain-imaging studies have demonstrated that 95 % of cerebral mu opioid receptors are occupied [15]. A past prospective study carried out at a tertiary care center in India to research about the safety and efficacy profile of naltrexone, baclofen, and acamprosate in the treatment of alcohol dependence showed that naltrexone was most effective in decreasing craving and drinking behavior but maximum number of side effects were also reported [16].

However, medications for AUD have not been utilized within primary care region. A retrospective study analyzing administrative claims data from a statewide cohort of 10,138 Medicaid enrollees in South Carolina, United States, showed that only 5.9% of patients diagnosed with AUD were prescribed medications including naltrexone, acamprosate, disulfiram, and topiramate [17].

## 3. The Difficulty of Managing AUD

The Diagnostic and Statistical Manual for Mental Disorders, 5<sup>th</sup> edition defines AUD as a pattern of alcohol consumption, leading to problems associated with two or more of the 11 potential symptoms of AUD [18]. Therefore, AUD is a definite mental disorder. AUD is accompanied by changes in key brain areas that can persist even after alcohol use cessation. Additionally, it may result in excessive salience to alcohol-related cues, changes in the motivational properties of natural rewards, an altered and exaggerated response to stress, and difficulties with executive control and self-regulation [19]. Moreover, patients with AUD tend to have other mental disorders along with AUD. Depressive disorders are the most common psychiatric disorders among people with AUD and the co-occurrence of these disorders is associated with heightened risk for suicidal behavior [20] [21]. A study on patients with bipolar affective disorder (BD) recruited from the Stanley Foundation Bipolar Network outpatient clinic with more comprehensive care reported AUD in 33% of patients with BD [22]. Therefore, psychiatric knowledge is required to manage patients with AUD.

Proactively assessing mental disorders, at least in patients with complaints related to alcohol is important, not only by addiction specialists, but also by primary care physicians. However, this may be an idealistic policy.

Although primary care physicians play an important role in addressing patients' mental health needs and providing access to care [23], there are several challenges for primary care physicians worldwide in treating patients with psychiatric disorders.

In India, cannabis is one of the most commonly used illicit substances, and primary care physicians are the first contacts for the majority of patients with psychiatric disorders across India. However, they are not adequately trained to treat psychiatric and substance use disorders [24] [25]. Conversely, networks have been established to support primary care physicians in some countries. For instance, in Spain, community mental health professionals work in a coordinated and interdisciplinary manner with primary care teams based on a community model of care for people with mental health problems to provide comprehensive care [26].

A face-to-face household survey conducted in four communities in Japan reported that the prevalence of mental disorders was equal to that observed in Asian countries. However, the percentage of those receiving medical treatment was low, even for those with severe or moderate disorders [27]. Furthermore, a mixed-methods study (28 in-depth interviews and 315 survey responses) conducted to identify the educational gaps of general practitioners in Asia-Pacific countries reported a strong need for education on mental disorders [28]. Therefore, primary care physicians have limited knowledge in treating mental disorders.

Hence, to provide comprehensive care to the patients, Japan should adapt Spain's progressive initiatives in Japan's future national mental health strategies.

#### **4. The Stigma Associated with Patients of AUD**

The stigma associated with mental illness contributes significantly to the burden of mental illness and leads to disadvantages in many aspects of life, including personal relationships, education, and work [29]. According to Link and Phelan, stigma exists when the following interrelated components converge:

- People distinguish and label human differences.
- Dominant cultural beliefs link labeled persons to undesirable characteristics—to negative stereotypes.
- The labeled persons are placed in distinct categories to accomplish some degree of separation of “us” from “them”.
- The labeled persons experience status loss and discrimination that lead to unequal outcomes.
- Stigmatization is entirely contingent on access to social, economic, and political powers.

These components lead to the identification of differences; construction of stereotypes; separation of labeled persons into distinct categories; and full execution of disapproval, rejection, exclusion, and discrimination [30].

AUD is one of the most stigmatized disorders in the Western countries [31]. Individuals with AUD tend to be viewed as more responsible for their disorder, and elicit more social rejection and negative emotions than those with other disorders [32]. This stigmatization has been reported to be stable over time [33]. A public opinion poll conducted by the Cabinet Office, Government of Japan regarding the image of AUD, found that 51.7% of respondents think that patients with AUD are abusive and violent, 46.7% think they drink during the daytime instead of going to work, and 34.7% think the reason for the illness is the patient's weak will [34]. The stigma against AUD has also become widespread among the Japanese public.

Due to the influence of stigma, some people with mental illness may accept the discrediting prejudices held against them and thus lose self-esteem, leading to feelings of shame, a sense of alienation, and social withdrawal [35] [36]. However, among individuals with AUD, a preference for seeking treatment in primary care centers has been observed. Additionally, some Swedish studies have shown that most individuals with AUD prefer seeking specialist care within the healthcare services [37] [38]. Primary care physicians are responsible for ensuring that individuals with AUD are evaluated and cured without the influence of stigma. However, primary care physicians alone are not knowledgeable enough to provide appropriate treatment for AUD patients. Furthermore, reports show that stigma is present among physicians and correlates with unequal treatment of patients [39]. The strategy against stigma for healthcare disparities suggests that all physicians should acknowledge their susceptibility to stigma and health facilities should standardize measures addressing stigma at multiple ecological levels for a sustainable response [39] [40].

## 5. Case Presentation

Herein, we report a case of AUD that required hospitalization for an internal disease. This case shows how AUD is interrelated with both physical and psychiatric challenges, and how the collaboration between the primary care physician and psychiatrist was beneficial in treating the patient.

### Case

A 65-year-old man presented to the General Medicine Department with abnormal electrolyte levels and rhabdomyolysis. It was detected during an examination of listlessness and diarrhea at a family doctor's psychiatric clinic, and the doctor transported the patient to our hospital by an ambulance. The patient's medical history included AUD. The patient was transported to the hospital by an ambulance because of hypokalemia associated with heavy alcohol consumption. Although the patient denied alcohol consumption, his family physician strongly suspected underreporting.

On arrival, his vital signs were: Glasgow Coma Scale, E4V5M6; body temperature, 36.1°C; blood pressure, 118/75 mmHg; pulse rate, 104/min; respiratory rate,

16/min; and SpO<sub>2</sub>, 98% on room air. On physical examination, the patient's pupillary light reflex was prompt and his respiratory and cardiac sounds were normal. Manual muscle testing revealed that his upper and lower extremities scored 3. Leg edema was not observed.

Laboratory examination revealed an elevated creatine kinase (CK) of 4239 U/L (reference range: 30 - 185 U/L), hypokalemia of 2.9 mEq/L (reference range: 3.5 - 4.8 mEq/L), hypomagnesemia of 1.8 mg/dL (reference range: 2.0 - 2.7 mg/dL), and electrocardiography revealed QT prolongation with a corrected QT of 561 ms. He was given a heart monitor to wear for 24 hours to check for any irregularities and was treated with intravenous fluids—30 mEq of potassium was administered on day 1.

Hypomagnesemia was expected to improve with dietary intake, and 1500 ml of intravenous fluid was administered to treat the rhabdomyolysis. Laboratory findings on day 4 revealed magnesium improving to 2.0 mEq/L but potassium dropping to 1.8 mg/dL. Electrocardiography revealed QT prolongation, with a corrected QT of 337 ms. Based on these results, 50 mEq of potassium was administered on day 4.

Laboratory findings on day 7 revealed potassium and CK improving to 4.0 mEq/L and 2459 U/L, respectively. Under normal circumstances, further CK level correction would have been performed. However, the patient was unable to tolerate the hospital stay and insisted on being discharged despite medical advice. Owing to these circumstances, a referral document outlining his therapy during hospitalization was sent to his family psychiatrist, and the patient was discharged on day 8. Even after four months of discharge, the patient has not been readmitted.

This case shows that patients with AUD can develop internal medical illnesses because of the effects of heavy alcohol consumption; however, psychiatrists are not skilled in internal medicine. Additionally, primary care physicians do not tend to be skilled in managing psychiatric symptoms in patients with AUD. Therefore, the most important aspect of managing patients with AUD is a strong collaboration between primary care physicians and psychiatrists on a daily basis.

## 6. Conclusion

Dealing with patients with AUD in a busy clinical setting can be exhausting and frustrating. However, we must put aside the stigma against AUD and work with patients to find remedies through trial and error, with the cooperation of psychiatrists and other multidisciplinary professionals. We believe that the most important form of support for patients with AUD to overcome their own stigma is careful medical care by primary care physicians who are engaged in community medicine and have a good understanding of the patients' social and lifestyle backgrounds.

## Limitations of the Study

The study has certain limitations:

- Relevant quantified data could not be found regarding the educational gap

among the primary care physicians of Japan and other countries regarding mental health. Therefore, future studies could focus on exploring this.

- As the study discussed only one illustrative case, the findings may not be generalizable. Additionally, we may have limited experience in treating patients with AUD.
- Although we stated that a strong collaboration between primary care physicians and psychiatrists is the most important aspect of managing patients with AUD, we could not find recent examples of collaborative-care models in Japan or other countries.

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### **Data Availability Statement**

The data that support the findings of this study are available from the corresponding author upon reasonable request.

### **Ethics Approval Statement**

At our institution, review articles do not require approval from the ethics committee for publication. Therefore, institutional approval was not required to publish this study.

### **Patient Consent Statement**

Consent was obtained from all the patients by the corresponding author. Patient details were anonymized as much as possible.

### **Author Contributions**

TT, KK, and HF contributed substantially to the conception and design of the study and to the acquisition, analysis, and interpretation of data. All authors agree to be responsible for all aspects of the work and ensure that any questions related to the accuracy or completeness of any part of the work are appropriately investigated and resolved. All authors contributed to and approved the submitted manuscript.

### **Conflicts of Interest**

The authors declare no conflicts of interest regarding the publication of this paper.

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