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Underutilization of Screening Tools for Alcohol Use Disorders – Part I: Results from Survey of Practices among North Carolina Mental Health Providers and Brief Review of Available Instruments

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Abstract

Background: Alcohol is the third leading cause of preventable death worldwide. With growing co-occurrence in those with psychiatric disorders, identification of these disorders is of increasing relevance. Various screening tools have evolved for uses from detecting dependence to identifying hazardous patterns of use. Use of these tools has allowed early detection of those at risk facilitating interventions often before addictive use becomes established.

Objectives: Here we report findings from a survey of mental health providers examining the use of screening instruments for alcohol use and their correlation to prescriptions for high-risk use and alcohol use disorders. We also review the available screening tools.

Methods: An anonymous online questionnaire was distributed to providers in various settings (academic, community and chemical dependence and veterans affairs). A total of 170 participated, a response rate of 85%. Data was analysed using Qualtrics software as well as a statistician.

Results: Screening is frequently avoided. Half of psychiatric providers have never used a screening tool. Community providers (Mdm=0%) use such tools much less than academic (Mdn=25%, U=852.5, p<0.001) and chemical dependence providers (Mdn=25%, U=90.5, p=0.001). Pharmacotherapy seems to be implemented more often by those that employ screening tools (Mdm=39.2%) compared to those that do not (Mdm=23.5%), U=1284.5, p<0.001.

Conclusion: AUDs are highly prevalent and often go undiagnosed and subsequently untreated. Despite guidelines recommending use of screening tools, our survey indicates few providers have adopted them. When used, however, there seems to be a greater implementation of pharmacotherapy to address problem-drinking leading to better outcomes. All primary care and mental health professionals should consider use of screens for comorbid alcohol use.

Keywords: Alcohol; Screening; Mental health

Introduction

Alcohol use disorder (AUD) is a global problem. It affects 20 million Americans and is associated with significant human and financial costs [1,2]. It is the third leading cause of preventable death [3]. Approximately 3 of 10 American adults drink in a risky way [4] and with 80% of the adolescent population having used alcohol this year this is likely to continue to rise [5]. A greater prevalence is noted in clinical populations especially those that are undergoing psychiatric treatment [2]. In fact, those with mental illness consume 38% of all alcohol sold [6]. On-going use complicates the course of medical and psychiatric conditions and carries significant risk for social exclusion. Sufferers, once identified, could be prompted into treatment involving both psychosocial approaches as well as diverse pharmacotherapy with proven efficacy on relapse rate [7,8]. A most recent national survey indicates, however, that those dealing with alcoholism rarely receive medications as only 3% of sufferers receive FDA-approved treatment [1].

Screening for disease is the mainstay in today's preventive health care practices allowing for early identification of those at risk of having a specific condition. In the case of alcohol misuse, screening assesses whether an individual may have an AUD or is at risk of experiencing problems from alcohol use. Screening can be conducted in various settings, by different professionals, either through interview or self-administered questionnaires. Early screening tools such as the Michigan Alcohol Screening Test (MAST) and the Cut Down-Annoyed, Guilty Eye opener (CAGE) questionnaire were developed to detect alcohol dependence. Over time, other instruments were introduced to assist with identification of risky and hazardous use in order to facilitate brief interventions early in those at risk and to facilitate treatment referral. In 1981 WHO developed internationally validated screening tools [9] for misuse such as the Alcohol Use

Disorders Identification Test (AUDIT) [10]. Many agencies have made recommendations for integration of such tools in health care systems [11]. As screening's effectiveness has been demonstrated the demand for instruments has increased. Currently there are several available that can be individualized to identify various subgroups of the population at risk.

Objective

Here we report findings from a survey of mental health providers with the main hypothesis being that use of screening tools translates into more medication prescriptions to address AUD. We also review the available screening tools with emphasis on when clinicians should utilize them.

Screening tools

There are many screening instruments available that can detect alcohol misuse with acceptable sensitivity and specificity. For the vast majority the AUDIT, or a two-part question inquiring about frequency and amount of consumption, suffices [12]. The US Preventive Services Task Force (USPSTF) and the National Institute on Alcohol Abuse and Alcoholism (NIAAA) have recently recommended that all primary care providers should screen adults over 18 yrs of age for alcohol misuse using either the AUDIT, abbreviated AUDIT-C, or single question such as "How many times in the past year have you had 5 (for men) or 4 (for women and all over 65 yrs of age) or more drinks in a day?". It has also been recommended that those at high risk be provided brief counseling interventions or referral to treatment if a more serious problem is found [13].

For greater accuracy, each tool available is designed with a particular target population in mind (age, race, language, inner city vs. rural, etc), time available with the patient and whether it is self or clinician administered. Designers of such have also taken into consideration that questionnaires that are too long are unrealistic for routine clinical use and those that are too short may not provide enough information. Also, self-report, paper based instruments, tend to provide more open disclosure than clinician administered instruments. Each tool available places a different importance on alcohol dependence versus hazardous and risky use.

The AUDIT was developed by Saunders et al under the auspices of the World health Organization [14]. The main focus was excessive drinking and 10 questions were chosen from 150 alternatives. They made recommendations on implementing the tool in various health care settings [14]. One of the advantages over other tools is that it identifies excessive drinkers who are not yet dependent and who have not yet come under attention for alcohol-related medical issues. It accomplishes this with 92% sensitivity and 94% specificity [10]. It employs a current time frame focusing on last 12 months (questions 1-8) as well as lifetime (questions 9, 10). It also assesses alcohol intake (questions 1-3), dependence (questions 4-6) and alcohol related problems (questions 7-10). All items range from 0-4 with a maximum score of 40. A short version, AUDIT-Consumption (AUDIT-C) consists of the first 3 questions which cover frequency and amount of use and frequency of binge drinking. Proposed cutoff points for hazardous drinking are ≥ 8 for AUDIT and ≥ 3 or ≥ 4 for AUDIT-C for identifying alcohol problems [15]. Additional screening tools are summarized in Table 1.

Tool	Target	Format	Administration	Language other than English	Special population
AUDIT (Alcohol Use Disorders Identification Test), 1989 [16]	Adults, Adolescents	10 questions taking on average 2 min to complete and 1 min to score. (Available in shorter versions such as AUDIT-C)	Staff or Self	Spanish and other languages	Blacks, Hispanics, incarcerated, women and college kids
ASSIST (Alcohol Smoking and Substance Involvement Screening Test), 2000 [17]	Adults	8 multiple item questions takes 10 min and less than 2 min to score	Staff	Spanish and other languages	Cross cultural and tested in 7 countries
CAGE (Cut-down, Annoyed, Guilty, Eye-opener), 1984 [18]	Adults, Adolescents	4 questions, less than 1 min to administer and score	Clinician	None	Focuses on dependent individuals
CRAFFT (Car Relax Alone Friends ForgetTrouble), 1999 [19]	Adolescents 14-18 yrs of age	6 question survey taking 3 min to administer and less than 1 min to score	Staff or self	None	Children. Also targets American Indian or Alaskan natives, inner city and suburban youth
S-MAST (Short Michigan Alcohol Screening Tool), 1975 [20]	Adults, Adolescents	13 questions taking 5 min to administer and 2 min to score; There is also a MAST: 25 questions about alcohol dependence (more advanced problems)	Staff or self	None	General and rural, primary care and mental illness. Detects abuse and dependence. Also has a geriatric version.
RAPS (Rapid alcohol problem screen), 2000 [21]	Adults	4 questions taking 1 min to administer and <1 min to score	Staff	Spanish	White, black, Hispanic and also in emergency departments
T-ACE (Tolerance, Annoyed, Cut-down and Eye-opener), 1989 [22]	Adults	4 questions taking <1 min to administer and <1 min to score	Staff	Other languages but not Spanish	Adaptation from CAGE for pregnant women, good for black inner city.

TWEAK (Tolerance, Worried, Eye-opener, Amnesia, Cut-down), 1994 [23]	Adults	5 questions taking <2 min to administer and 1 min to score	Staff or self	Other languages but not Spanish	Pregnant women, white, black Hispanic either innercity or rural. Combines MAST CAGE T-ACE
Brief Young Adult Alcohol Consequence Questionnaire (BYAACO), 2005 [24]	College Population	24 items, less than 10 min to administer and 1 min to score	Self	None	College only, assesses problem resulting from drinking
ARPS (Alcohol Related Problem Survey) [25]	Those>65 yrs old	18 item, 10 min to administer and <2 min to score	Self	None	For those>65 yrs of age

Table 1: Available screening tools.

Pharmacotherapies for AUD

There are several pharmacological treatment options that can be employed for the treatment of alcohol use disorder with minimal disruption to home and work life. Despite small to medium effect sizes these have shown proven overall efficacy to provide an important improvement in relapse rate [8]. It is advised to start with FDA-approved medications-Disulfiram for the motivated patient desiring sobriety [25,26], Naltrexone for most patients [27-30] and consider long acting injectable [31,32] if affordable, Acamprosate for those with established sobriety and may help with post withdrawal sleep problems as well [33,34]. Off-label considerations include Topiramate which has the highest evidence for efficacy [35] and Gabapentin, either alone or combined with Naltrexone, which is helpful especially to help with sleep, anxiety and withdrawal [36].

Methods

A 19-question survey was designed and distributed via Qualtrics (https://www.qualtrics.com) to prescribers involved in treatment of those with mental health illnesses in North Carolina. Although the four major academic institutions (East Carolina University, University of North Carolina, Duke University and Wake Forest University) were targeted, the survey was also distributed through the state psychiatric association's newsletter to community and chemical dependence providers. The survey was initially distributed May 15, 2016 and was available for 1 month with 3 weekly reminders sent out to non-responders. Within our institution, response rate was 85%. The final number of participants who completed the survey was 170. Through the use of an individualized link, participants were anonymously electronically registered. Responses were completely anonymous with no IP addresses or personal identifiers being collected. Data was gathered and further analyzed by Qualtrics and also a statistician. The study conductors have no disclosures and this study was exempt from East Carolina University Institutionalized Review Board (IRB) review (UMCIRB 16-000974) (Figures 1 and 2).

Results and Discussion

Among providers associated with academic institutions, close to half of patients seen in a primary psychiatric setting have been reported to have comorbid alcohol use disorders. This is troubling since evidence based screening for alcohol use disorders was avoided with almost half of the providers reporting they never use tools such as AUDIT. Kruskal-Wallis ANOVA revealed that type of institution significantly affected the frequency of use of AUDIT, $\chi 2(2, N=141)=16.35$, $p <.001$. Pairwise comparisons were made with Mann-Whitney U tests. The low frequency of use of AUDIT is a globally reported trend, however, community providers used it even less (Mdn=0%) than did academic providers, (Mdn=25%, U=852.5, $p<0.001$) and providers associated with chemical dependence facilities (Mdn=25%, U=90.5, p=0.001). Of patients identified with AUD, only a fourth is on medications despite a majority of patients being interested in treatment. Shockingly, 20% of providers have never prescribed any and those that do prescribe seem to favour off label medications over FDA approved. When patients are identified and medications are prescribed, providers seem to have had very positive experiences indicating patients tend to maintain sobriety longer, have less legal problems and are better able to engage in their medical and psychiatric care.

Frequency of use of both FDA-approved and off label medications was significantly higher among those who reported using evidence-based screening tools (Mdn=39.2%) than among those who did not (Mdn=23.5%), U=1284.5, $p<0.001$.

Limitations

This study sampled a relatively wide variety of providers and settings within the boundaries of North Carolina. The numbers of Veterans Affairs participants were not significant and hence no interpretations can be made regarding their practices. Whether there is generalizability of the practices of nationwide providers cannot be confirmed. The number of responders participating is relatively low; however, the high response rate increases the validity.

Summary and Conclusion

Alcohol use disorders are highly prevalent and disabling disorders that often go undiagnosed and subsequently untreated. Their comorbidity impedes treatment and social functioning of individuals with mental illnesses. It is imperative that individuals presenting for treatment of psychopathology be adequately screened for comorbid AUDs. Even in absence of AUDs, risky use may contraindicate use of some potentially useful psychotropics. The AUDIT tool has high enough sensitivity, specificity and generativity to be used in the average patient in a general mental health setting.

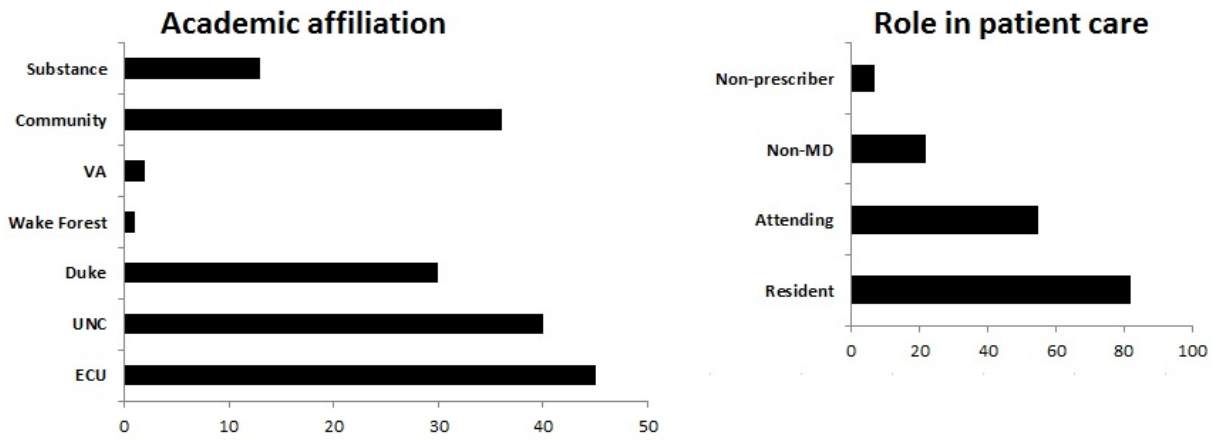

Figure 1: Characterization of survey participants.
Horizontal axis represents number of responders.

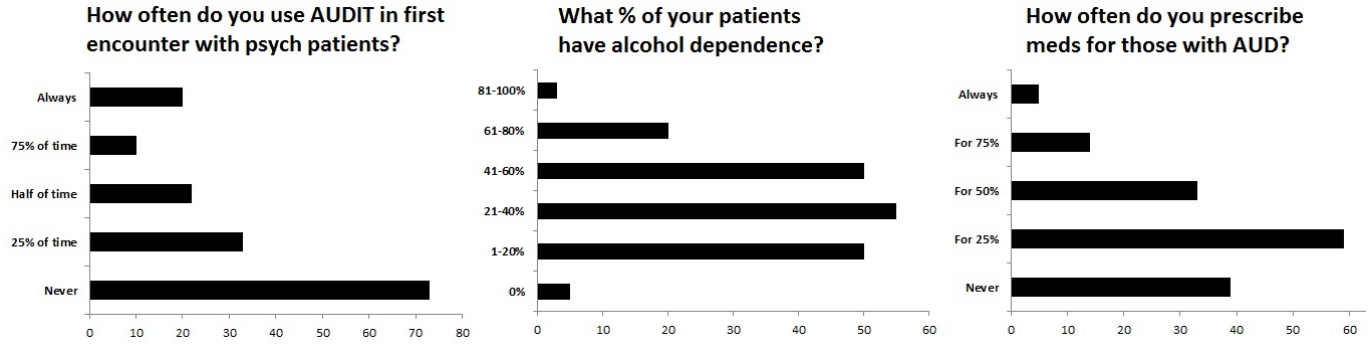

Figure 2: General practice survey.
Horizontal axis represents number of responders.

Treatment guidelines for AUDs recommend FDA approved medications in conjunction with biopsychosocial interventions. As seen, identification alone does not necessarily result in pharmacological implementation. Proper screening with tools such as the AUDIT although poorly utilized, may better identify suffers and facilitate discussion for treatment implementation. Use of AUDIT leads to better outcomes as prescribers that screen seem to be less hesitant in using pharmacotherapy in their patients.

As part of routine practices, general psychiatrists should implement screening, using a tool such as the AUDIT to identify patients with risky alcohol use.

Disclosure

The authors report no relevant financial conflicts.

References

1. Substance Abuse and Mental Health Services Administration. Results from the 2013 national survey on drug use and health: mental health findings, NSDUH Series H-49, HHS Publication No. (SMA) 14-4887. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2014.
2. Grant BF, Goldstein RB, Saha TD (2015) Epidemiology of DSM-5 alcohol use disorder: Results from the National Epidemiological Survey on Alcohol and Related Conditions III. JAMA Psychiatry 72: 757-766.
3. World Health Organization (WHO) Global Status Report on Alcohol and Health. http://www.who.int/substance_abuse/publications/global_alcohol_report/msbgsruprofiles.pdf . Accessed February 10, 2016.
4. NIAAA Alcohol Education Project (2004) Standardized SBIRT Curriculum. Retrieved May 15, 2008 from http://www.ed.bmc.org/sbirt/scope.php
5. Johnson L, O'Malley P, Miech RA (2016) Monitoring the Future national survey results on drug use, 1975-2015: Overview, key findings on adolescent drug use. http:// www.monitoringthefuture.org/pubs/monographs/mtf-overview2015.pdf. Published February 2016. Accessed January 20, 2016.
6. Saffer H, Dave D (2005) Mental illness and the demand for alcohol, cocaine and cigarettes. Economic Inquiry 43: 229-246.
7. Robinson S, Meeks TW, Geniza C (2014) Medication for alcohol use disorder: which agents work best. Current Psychiatry 13: 22-29.
8. Substance Abuse and Mental Health Services Administration and National Institute on Alcohol Abuse and Alcoholism. Medication for the treatment of alcohol use disorder: A brief guide. HHS Publication No.

(SMA) 15-4907. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2015.

9. Babor TF, de la Fuente JR, Saunders J, Grant M (1989) AUDIT The Alcohol Use Disorders Identification Test: Guidelines for Use in Primary Health Care. WHO/MNH/DAT 89.4. Geneva: World Health Organization.
10. Saunders JB, Aasland OG, Babor TF, de la Fuente JR, Grant M (1993) Development of the alcohol use disorders identification test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption-II. Addiction 88: 791-804.
11. Babor TF, de la Fuente JR, Saunders J, Grant M (1989) AUDIT The Alcohol Use Disorders Identification Test: Guidelines for Use in Primary Health Care. WHO/MNH/DAT 89.4. Geneva: World Health Organization.
12. Vinson DC, Kruse RL, Seale JP (2007) Simplifying alcohol assessment: Two questions to identify alcohol use disorders. Alcoholism: Clinical and Experimental Research 31: 1392-1398.
13. Moyer AV (2013) Screening and Behavioral Counseling Interventions in Primary Care to Reduce Alcohol Misuse: U.S. Preventive Services Task Force Recommendation Statement. Ann Intern Med 159: 210-218.
14. Saunders JB, Aasland OG, Babor TF, DeLaFuente JR, Grant M (1993) Development of the alcohol use disorders identification test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption II. Addiction 88: 791–804.
15. Reinert DF, Allen JP (2007) The alcohol use disorders identification Test: An update of research findings. Alcohol Clin Exp Res 31: 185-199.
16. AUDIT. http://www.projectcork.org/clinical_tools/html/AUDIT.html Accessed October 1, 2016.
17. ASSIST http://www.who.int/substance_abuse/activities/assist/en/index.html Accessed: October 1, 2016.
18. CAGE. http://www.projectcork.org/clinical_tools/html/CAGE.html Accessed October 1, 2016.
19. CRAFFT. http://www.ceasar-boston.org/CRAFFT/index.php Accessed: October 1, 2016.
20. Short MAST. http://projectcork.org/clinical_tools/html/ShortMAST.html Accessed October 1, 2016.
21. The Rapid Alcohol Problem Screen (RAPS4). http://adai.washington.edu/instruments/pdf/Rapid_Alcohol_Problems_Screen_201.pdf Accessed: October 1, 2016.
22. T-ACE. http://www.projectcork.org/clinical_tools/html/T-ACE.html Accessed: October 1, 2016.
23. TWEAK. http://www.prev.org/research_russell_tweak.html Accessed: October 1, 2016.
24. Kahler CW, Strong DR, Read JP (2005) Toward efficient and comprehensive measurement of the alcohol problems continuum in college students: The Brief Young Adult Alcohol Consequences Questionnaire. Alcoholism: Clinical and Experimental Research 29: 1180-1189.
25. Johnson BA (2008) Update on neuropharmacological treatments for alcoholism: Scientific basis and clinical findings. Biochem Pharmacology 75: 34-56.
26. Swift R (2007) Emerging approaches to managing alcohol dependence. Am J Health Sys Pharmacy 64: S12-S22.
27. Bouza C, Angeles M, Munoz A (2004) Efficacy and safety of naltrexone and acamprosate in the treatment of alcohol dependence: A systematic review. Addiction 99: 811-828.
28. Snyder JL, Bowers TG (2008) The efficacy of acamprosate and naltrexone in the treatment of alcohol dependence: A relative benefits analysis of randomized controlled trials. Am J Drug Alcohol Abuse 34: 449-461.
29. Srisurapanont M, Jarusuraisin N (2005) Naltrexone for the treatment of alcoholism: a meta-analysis of randomized controlled trials. Intl J Neuropsychopharmacology 8: 267-280.
30. O'Malley SS (1996) Opioid antagonists in the treatment of alcohol dependence: Clinical efficacy and prevention of relapse. Alcohol 31: 77-81.
31. Garbutt JC, Kranzler HR, O'Malley SS (2005) for the Vivitrol Study Group. Efficacy and tolerability of long-acting injectable naltrexone for alcohol dependence: A randomized controlled trial. J Amer MedAssoc 293: 1617-1625.
32. O'Malley SS, Garbutt JC, Dong Q (2007) Efficacy of extended-release naltrexone in alcoholdependent patients who are abstinent before treatment. J Clin Psychopharm 27: 507-512.
33. Witkiewitz K, Saville K, Hamreus K (2012) Acamprosate for treatment of alcohol dependence: Mechanisms,efficacy and clinical utility. Therapeutics Clin Risk Management 8: 45-53.
34. Verheul R, Lehert P, Geerlings PJ (2005) Predictors of acamprosate efficacy: Results from a pooled analysis of seven European trials including 1,485 alcohol-dependent patients. Psychopharm (Berl) 178: 167-173.
35. Johnson BA, Rosenthal N, Capece JA (2007) Topiramate for Alcoholism Advisory Board; Topiramate for Alcoholism Study Group. Topiramate for treating alcohol dependence: A randomized controlled trial. JAMA 298: 1641-1651.
36. Mason BJ, Quello S, Goodell V (2014) Gabapentin treatment for alcohol dependence: A randomized clinical trial. JAMA Internal Med 174: 70-77.