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Alcohol Screening among Opioid Agonist Patients in a Primary Care Clinic and an Opioid Treatment Program

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Running title: Alcohol screening

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Abstract**:**

Problem alcohol use is associated with adverse health and economic outcomes, especially among people in opioid agonist treatment. Screening, brief intervention and referral to treatment (SBIRT) are effective in reducing alcohol use; however, issues involved in SBIRT implementation among opioid agonist patients are unknown. To assess identification and treatment of alcohol use disorders, we reviewed clinical records of opioid agonist patients screened for an alcohol use disorder in a primary care clinic (n =208) and in an opioid treatment program (n = 204) over a two year period. In the primary care clinic, 193 (93%) buprenorphine patients completed an annual alcohol screening and six (3%) had elevated AUDIT scores. Among the patients treated in the opioid treatment program, an alcohol abuse or dependence diagnosis was recorded for 54 (27%) methadone patients. Practitioner focus groups were completed in the primary care (n = 4 physicians) and the opioid treatment program (n = 11 counsellors) to assess experience with and attitudes towards screening opioid agonist patients for alcohol use disorders. Focus groups suggested organizational, structural, provider, patient and community variables hindered or fostered alcohol screening. Alcohol screening is feasible among opioid agonist patients. Effective implementation, however, requires physician training and systematic changes in workflow.

Key words: alcohol, SBIRT, opioids, agonist treatment, family medicine, implementation

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Introduction

Patients with opioid use disorders have specific health needs and risk behaviors (O'Toole et al. 2008; Klimas et al. 2012). Alcohol use is common. Up to 40% of patients in opioid treatment programs screen positive for an alcohol use disorder (Hartzler, Donovan and Huang 2010; Ryder et al. 2009) and risk alcohol-related comorbidities (Nyamathi et al. 2009; Bird and Robertson 2011; Gossop, Marsden and Stewart 2002; Staiger et al. 2013). Problem alcohol use among opioid agonist patients is associated with adverse health outcomes (Nyamathi et al. 2009; Staiger et al. 2013): worsened prognosis among those with chronic hepatitis C (HCV) infection, increased risk of fatal opioid overdose (Bird and Robertson 2011) and increased psychological/ emotional problems (Nyamathi et al. 2009).

Despite the potential for problem alcohol use to complicate opioid agonist therapy, there is little research on strategies to screen and treat alcohol use disorders among opioid dependent individuals. Issues involved in implementation of these strategies among opioid agonist patients are unknown. Alcohol use disorders are typically assessed as a safety concern rather than a health concern. In Ireland, where general practitioners can prescribe methadone for opioid dependent patients, interviews with 39 health professionals noted two major barriers to screening for alcohol use disorders among methadone patients: 1) insufficient knowledge, training and experience working with patients with alcohol use disorders and 2) a lack of specialist support (Childers et al. 2012; Field et al. 2013).

Screening, brief intervention and referral to treatment (SBIRT) strategies help primary care settings identify patients at risk for alcohol and drug use disorders, make brief interventions

available to reduce unhealthy levels of use and, when necessary, refer patients to specialized treatment services (Office of National Drug Control Policy 2013). The US Preventive Task Force recommends routine SBIRT for alcohol use (Whitlock et al. 2004; Moyer 2013).

The SBIRT Oregon residency training program (www.sbirtoregon.org) taught primary care physicians in federally qualified health centers to conduct SBIRT (Muench et al. 2012; Muench et al. 2014). One of the participating federally qualified health centers had a large caseload of patients prescribed buprenorphine for opioid dependence. The combination of routine SBIRT and buprenorphine for opioid dependent patients permitted an assessment of the use of SBIRT for alcohol use disorders (AUDs); focus groups explored staff perceptions of conducting alcohol SBIRT. A nearby non-profit opioid treatment program provided a comparison clinic to assess differences in screening for alcohol use disorders. Variation, however, in screening processes, staff training and patient preference (buprenorphine or methadone (Wu et al. 2011) limit inter-facility comparisons. Nevertheless, the comparison provides insight into identification and treatment of alcohol use disorders in both settings and how to improve screening processes.

Methods

An exploratory study completed chart reviews and assessed screening and interventions for alcohol use disorders among opioid dependent patients.

Participants. Patients were eligible if they received at least 90 days of buprenorphine or methadone treatment between April 1, 2011 and April 1, 2013. Practitioner focus groups assessed experience with and attitudes towards screening opioid agonist patients for alcohol use disorders.

Settings and health record abstraction. A federally qualified health center in Portland, Oregon had a caseload of 208 eligible buprenorphine patients. The SBIRT Primary Care Residency Initiative in Oregon was implemented from December 2009 - September 2013. The program implemented systematic methods for screening in seven health centers and trained residents to conduct brief interventions. The study clinic was an SBIRT Oregon site with roughly 200 active opioid agonist treatment patients receiving buprenorphine; all buprenorphine patients should have received an alcohol screening. Clinic policy required universal, annual screening with a three-item tool for alcohol, drugs and depression (Canagasaby and Vinson 2005). Positive patients were assessed with three instruments: AUDIT (Alcohol Use Disorder Identification Test) (Babor and Higgins-Biddle 2001), DAST (Drug Abuse Screening Test) (Skinner 1982) and PHQ (Patient Health Questionnaire) (Kroenke, Spitzer and Williams 2001). Trained research staff retrieved electronic health records for eligible patients and abstracted patient characteristics, results of the most recent screen, and alcohol-related interventions, if any, using a form adapted from prior research (Field et al. 2013; Cullen et al. 2009).

The opioid treatment program served approximately 720 active patients receiving methadone (51% women); 350 met study eligibility criteria. Alcohol use was assessed at admission and during annual medical exams with the SSI-AOD (Simple Screening Instrument for Alcohol and Other Drugs) (Center for Substance Abuse Treatment 1994) and DSM-IV. Breath and urine ETG (Ethyl Glucuronide) tests were administered if alcohol misuse was suspected by the intake counselor. Trained research staff retrieved electronic health records for the first 204 eligible patients (so that the number of chart reviews would be similar in the two clinics) and abstracted patient characteristics, results of the most recent alcohol assessment, and alcohol-related interventions, if any, using the adapted data form. We hoped to learn, from the

analysis, what was similar or different in the identification and treatment of alcohol use disorders among opioid agonist patients in a primary care clinic versus an opioid treatment program.

Qualitative Data Collection and Analysis. A focus group in each study setting probed the clinicians' experience of screening and treating patients for problem alcohol use and attitudes toward screening and assessed barriers and facilitators to routine alcohol screening. Five steps guided qualitative analysis of focus group transcripts: 1) data preparation, transcription and familiarization, 2) generation of initial codes, 3) theme assessment, 4) theme review and 5) theme finalization (Braun and Clarke 2006; Morgan, Krueger and King 1998). The first author generated themes via computer-assisted qualitative data analysis (CAQDAS). General higher-order themes were identified within the first half of the transcripts and data saturation occurred towards the end of the analysis (Guest, Bunce and Johnson 2006). Two external reviewers audited the themes and independently compared the list of themes against the focus-group transcripts and suggested corrections where they believed that the theme titles or structure did not correspond with transcripts. Disagreements were resolved by discussion.

Ethical considerations. The Institutional Review Board (IRB) at Oregon Health and Science University reviewed and approved the study protocol. Focus group participants were informed of the study purposes, and voluntary and anonymous participation before they signed informed consents. The IRB required removal of patient identifiers from abstracted data before the data were released for analysis and online training in responsible conduct of research (bigBrain.ohsu.edu) for all study staff.

Results

Demographics. In the primary care setting, the mean age of patients was 40.5 years (standard deviation: 11.3) and included 126 (60%) women and 169 (81%) with public or

commercial health insurance. In the methadone clinic, the mean age of methadone patients was 39.8 years (SD 13.7) and included 111 (54%) women and 154 (76%) participants with public or commercial health insurance.

The six buprenorphine physician prescribers in the primary care clinic were invited to participate in the focus group; four participated. Participants had a mean age of 40.1 years (range 28-55 years) and two were women. Eleven health professionals (e.g., counselors, social workers and intake staff) working in the opioid treatment program were invited to participate in a focus group; 10 attended. The addiction counselors had a mean age of 40 years (range 24-60) and six were women.

Screening and intervention for alcohol use disorders. The review of medical records from the primary care clinic found completed annual alcohol screens for 193 of the 208 eligible patients (95%); 28 (15% of those screened) completed the full AUDIT and six of the screened patients (3%) had an elevated AUDIT score (≤7). Five of the primary care buprenorphine patients received a brief intervention addressing their alcohol use.

Patients in the methadone clinic received an alcohol and drug assessment at intake; 54 patients (27%) received a diagnosis of an alcohol use disorder including 36 (18%) who met criteria for alcohol dependence and 18 (9%) for alcohol abuse. During the two year study period, the clinic administered 513 breath tests – none were recorded as positive in the patient record. Treatment plans are reviewed and updated every 90 days and an alcohol problem was recorded for 4% of the patients (n = 8). During the study period, five patients were prescribed disulfiram for alcohol dependence with observed dosing daily.

Qualitative Analysis. Analysis of the focus group transcripts suggested two major themes related to the use of screening and brief intervention for alcohol use disorders: (i) SBIRT practices and (ii) implementation issues.

*SBIRT practices: Screening***.** The practice of alcohol screening differed in the primary care and the specialty care clinics. Both clinics assessed alcohol use at admission. Ongoing screening in specialty care was based on suspicion. Breath testing and ETG (Ethyl Glucuronide) tests assessed patients who "acted peculiar" out of concern for safety rather than as routine screening. Focus group participants recognized limitations of this approach: "It's [a] lot easier to fly under the radar with alcohol than with other drugs." One clinician in the opioid treatment program explained that formalized alcohol screens were not used in annual assessments – "We do annual assessments, is that the same thing? There's nothing specific about alcohol on it though. I think that it would be good [to add an alcohol screen]." The annual screening process in primary care, conversely, was systematized into small steps – a three-item screen and full AUDIT screen for positives – each performed by different staff. This process ensured that most patients were screened. Physicians reported patient acceptance and support, "Mostly the patients were like: I'm really glad you care about me as a whole person."

*SBIRT Practices: Brief intervention and treatment***.** Physicians in the primary care clinic delivered a brief psychosocial intervention to patients who screened positive on the AUDIT. They acknowledged that some patients did not receive the brief intervention because of practice distractions, record deficits and a lack of attention to problem alcohol use in this patient sub-group, "Alcohol just seems so inane compared to shooting heroin." Standard pharmacotherapy was available for treatment of alcohol use disorders according to the primary care participants.

The specialty care clinic, on the other hand, managed alcohol use disorders with disulfiram delivered and observed during daily methadone dosing. Inpatient or outpatient detoxification while on methadone was offered as needed. The clinic's residential treatment facility permitted patients to remain on methadone. Counselors delivered psychosocial interventions in a one-to-one or group format; however, none of them were alcohol specific.

*SBIRT practices: Referral***.** Both clinics highlighted the role of referral to treatment of alcohol use disorders. Family physicians depended upon a "warm hand-off" to behavioral health partners and outside referrals for patients with more severe alcohol problems. A primary care physician noted, "When people are in the more severe category and you run out of time and you can hand them a list of AA meetings around the town, but it's just so unlikely that they are going to access it if they haven't already. That warm hand off process is huge." Specialty care staff handled these categories on-site and referred out only patients with the most severe alcohol problems.

Implementation issues. Participants described barriers and facilitators to use of alcohol SBIRT for opioid agonist patients. Often, the only distinction between a facilitator and a barrier was its presence / absence. For example, lack of time is a barrier, while adequate time with patients facilitates behavioral change. Responses were grouped into four concerns: 1) organizational and structural, 2) provider, 3) patient and 4) community implementation.

*Implementation issues: Organizational and structural concerns***.** Access to specialist support staff was limited in the primary care clinic. On-site social workers could not satisfy the demand for assistance because of competing tasks. Finance and reimbursement were issues that challenged both clinics, Family physicians had SBIRT billing code but did not use the codes. The opioid treatment program was not reimbursed for medication to reduce alcohol craving.

Treatment philosophies varied; the primary care clinic aimed for reduced alcohol use while the methadone clinic sought abstinence: “They can’t be drinking while they’re on methadone.”

Both clinics stressed the role of electronic medical records and clinic flow. The methadone clinic assessed every patient for alcohol at intake but lacked a ”tick box” in their records to note the assessment was completed. The primary care clinic addressed clinic flows and integrated SBIRT into the electronic record system. The record, however, failed to remind receptionists about annual screening and permitted physicians to exit the screen without delivering a brief intervention to positive patients: “Our whole world is now based on the [electronic record], everything we do has sort of a parallel virtual process that goes along with it and I think sometimes that becomes more our life than the reality.” Participants from the specialty clinic felt that tools for decision-making and clinical guidelines would improve consistency of care for problem drinking: “Having a consistent way that we treat specific [conditions], like alcoholism with this background and this level of care would be great. So that we can develop patterns and know how to treat them as they go.”

Implementation issues: Provider concerns. Training for doctors, social workers, police and other gatekeepers was a need in both clinics. Family doctors highlighted the importance of incorporating SBIRT early into resident curricula and having refresher training around brief interventions. Specialty care staff echoed this need for continuing education of key gatekeepers. “There are some programs that are implementing some screening tools for medical professionals to be a little more aware of the warning signs of addiction.”

Provider attitudes seemed to play a dominant role in addressing problem alcohol use at both clinics. Hypersensitivity to antagonism from patients and a lack of adequate attention to patient drinking led to alcohol use being overlooked. A physician remarked, “I definitely get

tunnel vision around their opiate dependence and maybe like oh yeah, you're smoking marijuana daily too, but we're here about your opiates." When asked whether alcohol should be treated differently than other drugs, participants from the specialty care clinic observed that while content may differ the process is the same. "When we do treatment from a bio-psycho-social approach, it all works no matter what drug you're addicted to. That part of methodology is the same."

Implementation issues: Patient concerns. Health professionals from both clinics perceived patient attitudes and motivations as key to addressing problem alcohol use. One clinician remarked skeptically, "But, when it comes down to alcohol, it's like the last thing that they have." Other chronic conditions, comorbidity and associated risk behaviors led some patients to drink as a means of self-medication and hindered reduction of alcohol consumption. Physicians worried about opening up this complex issue and felt the system was not prepared, "When you know of … people who are using heroin, there's a chance they're using it IV, and if they're using IV there's a chance they're accessing blood …, so if there's people we have coming with Hep C that have been drinking there's a whole other level of medical risk associated and it's hard to stabilize anyone, so people are coming in ill or they have other doctors' appointments or they're just not physically able to engage in programs."

Finally, a key theme interwoven throughout both group discussions was patient-physician trust as a facilitator of treatment engagement and treatment access. A counselor stated, "Engagement is key; how we treat our patient has a lot to do with what they tell us, so if the patients feel not judged, if they feel safe, they're going to be more likely to engage in the treatment process."

Implementation issues: Coordination of care. Interagency cooperation and better coordination of care appeared as strong facilitators of SBIRT for opioid agonist patients, especially by expediting the transfer of patient records from previous treatment following consent to release information. "The more information, the safer we can treat a person when they walk into the door, especially when medication assisted treatment is the factor."

Discussion

Chart reviews suggested that most opioid dependent patients (95%) seen in a federally qualified health center completed a routine annual alcohol screening; elevated AUDIT scores were recorded for six patients (3% of those screened) and brief interventions were completed with five of those patients. The methadone program, in comparison, diagnosed alcohol abuse or dependence at admission in 27% (n = 54) of the patient records reviewed. Patients treated in the methadone program appeared to have higher rates of serious alcohol use disorders than those who received buprenorphine in the primary care clinic. The record reviews in both clinics suggested that few patients received active treatment for alcohol abuse or dependence. Both clinics appear to be lax in aggressively addressing alcohol use disorders among patients treated for opioid dependence.

The analysis of focus group interviews provides insights into the potential value and barriers to screening and treating problematic alcohol use. Organizational, structural, provider, patient and community related concerns hindered or fostered alcohol screening. The most salient needs were continuing education for practitioners, access to specialist support staff, funding or reimbursement for alcohol screening and enhanced electronic medical records / clinic flows. Our observations support the feasibility and acceptability of implementing alcohol screening in these settings but suggest that most patients receive little direct care for alcohol disorders. Established

implementation science models can help develop strategies to address these barriers and improve the identification(Campbell et al. 2000; Damschroder et al. 2009).

Previous research found similar concerns. Up to 37% patients in other opioid treatment programs in the U.S. screened positive for an alcohol use disorder (Hartzler, Donovan and Huang 2010; Ryder et al. 2009), Qualitative studies with health care providers and patients in other treatment programs in the U.S. noted that professional education and training and a lack of specialist staff were key barriers hindering management of alcohol use disorders (Field et al. 2013; Nyamathi et al. 2009; Nyamathi et al. 2007)These findings were echoed in our interviews – primary care professionals needed an extra person to perform warm hand-offs and periodic refresher training. The specialty care clinic, however, did not report a lack of specialist staff or training – they were more concerned about the funding for screening and wished to formulate consistent guidelines/ standards of care. Organizational differences between the primary care and specialty care settings differ and affect SBIRT implementation.

Practices differed in our two settings. The primary care setting conducted open-access buprenorphine groups. Although not exclusively focused on problem alcohol use, the group appointments reduced treatment complications: “it was more about access, it wasn’t about we’re going to provide these wonderful group experience. We’re having [a] hard time getting our patients in, they no-show frequently. We open up an hour where 6-10 people can get [a] slot, they’re going to fill out a questionnaire, they’re going to be in the room, we’re going to answer their questions for 5-10 minutes and get them back individually.” In specialty care, group sessions were common, but not alcohol-specific.

The primary care clinic addressed hazardous and harmful drinking using brief psychosocial interventions and referred dependent drinking offsite. The specialty care clinic

addressed most drinking onsite, mainly with pharmacotherapy. . The specialty care clinic was able to accommodate such patients on-site in their facilities. The combination of alcohol detoxification and agonist treatment while in residential treatment can help curb drinking, consistent with previous research in Australia (Staiger et al. 2009). Agonist medication and residential treatment for alcohol should not be mutually exclusive treatment modalities.

Strengths and Limitations

Our research should be interpreted with caution. The small sample comprised of clinical staff from only two clinics in a single U.S. city limits potential generalizability. Other limitations include potential for selection biases and impression management, subjectivity inherent in the qualitative methods utilized and other detriments of the small provider sample beyond its impact on generalizability. Buprenorphine and methadone programs may serve different populations (Wu et al. 2011) and the alcohol assessments (AUDIT vs. DSM-IV) and care providers (i.e., physicians vs. counsellors) differed. Nonetheless, comparing these settings provided insights into areas where agonist treatment can be strengthened and streamlined with respect to the provision of SBIRT for alcohol use disorders. The study's key strength is the unique combination of opioid agonist treatment and the SBIRT Oregon initiative at the primary care clinic that provided a rare, naturalistic opportunity to evaluate implementation of alcohol SBIRT for this population.

Conclusion. Training health professionals in alcohol screening and intervention is a feasible and acceptable way of improving care for opioid agonist patients. Effective implementation requires systematic changes at multiple levels targeting obstacles specific to patient population or setting. Strategies that support implementation of SBIRT among opioid agonist patients, and similar vulnerable populations, include structural changes, interactive workshops, clinical guidelines, improved medical records and clinic workflows. These lessons

learned from implementation of alcohol screening within a primary care clinic can be adapted for specialty care and should be promoted and tailored to the specific population or setting under study.

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