A Randomized Controlled Trial of a Telephone Intervention for Alcohol Misuse With Injured Emergency Department Patients

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Study objective: We conduct a randomized controlled trial to test efficacy of a telephone intervention for injured emergency department (ED) patients with alcohol misuse to decrease alcohol use, impaired driving, alcohol-related injuries, and alcohol-related negative consequences.

Methods: ED patients screening positive for alcohol misuse were randomized to a 3-session telephone brief motivational intervention on alcohol, delivered by a counselor trained in motivational interviewing during 6 weeks, or a control intervention of a scripted home fire and burn safety education delivered in 3 calls. Patients were followed for 12 months and assessed for changes in alcohol use, impaired driving, alcohol-related injuries, and alcohol-related negative consequences.

Results: Seven hundred thirty ED patients were randomized; 78% received their assigned intervention by telephone, and of those, 72% completed 12-month assessments. There were no differential benefits of telephone brief motivational intervention versus assessment and a control intervention in all 3 variables of alcohol use (frequency of binge alcohol use during the previous 30 days, maximum number of drinks at one time in the past 30 days, and typical alcohol use in the past 30 days), alcohol-impaired driving, alcohol-related injuries, and alcohol-related negative consequences.

Conclusion: Despite the potential advantage of delivering a telephone brief motivational intervention in not disrupting ED clinical care, our study found no efficacy for it over an assessment and control intervention. Potential causes for our finding include that injury itself, alcohol assessments, or the control intervention had active ingredients for alcohol change. [Ann Emerg Med. 2016;67:263-275.]

Please see page 264 for the Editor's Capsule Summary of this article.

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0196-0644/$-see front matter

http://dx.doi.org/10.1016/j.annemergmed.2015.09.021

INTRODUCTION

Background and Importance

Alcohol misuse contributes to an estimated 1.8 million deaths globally, with half of these caused by intentional and unintentional injuries.[1] The emergency department (ED) presents an opportune location to identify injured patients with alcohol misuse. Screening, brief intervention, and referral to treatment for alcohol misuse is recommended to be integrated into the clinical care for injured patients.[2-5] Despite these recommendations, adoption by EDs in the United States has been limited, with the most often-cited barriers being financial resources and time constraints for ED providers.[6,7]

Research on the effectiveness of screening, brief intervention, and referral to treatment within the ED in addressing alcohol and other substance misuse has been mixed.[8,9] A common approach to ED interventions has been using the principles of motivational interviewing,[10] which emphasizes the role of the patient in making changes guided by an interventionist. Most other ED research on this topic has involved interventions delivered face-to-face in the ED, with some studies offering additional in-person or telephone follow-up sessions after the ED visit.[9,11] We previously reported on an intervention for alcohol misuse that used the ED to identify injured alcohol misusers, but rather than intervening within the ED environment, we delivered a telephone brief motivational intervention within 7 days of the patients' ED visit.[12,13] A telephone intervention after ED discharge has the advantage of the patient's not being distracted by their medical care, ED use time not being extended, and therapist time scheduled more efficiently while still capitalizing on the teaching moment of an ED visit for an injury. In our initial trial, comparing a telephone intervention for alcohol misuse with an assessment-only group, we found that patients receiving

Editor's Capsule Summary

What is already known on this topic

Alcohol is linked to many emergency department (ED) visits and causes morbidity and mortality.

What question this study addressed

Does a brief motivational intervention delivered by telephone after an ED visit for injury related to alcohol use decrease later alcohol use and impaired driving at 1 year?

What this study adds to our knowledge

This randomized controlled trial in 730 patients did not detect a decrease in alcohol use or other alcohol-related consequences after the telephone intervention.

How this is relevant to clinical practice

Other tools beyond a brief telephone intervention, as used here, will be needed to alter alcohol misuse for injured patients in the ED.

the intervention had decreased drinking and driving behaviors at 3 months[12] and decreased alcohol-related negative consequences at 12 months.[13] However, the intervention group did not decrease their alcohol use more than the assessment-only group.

Goals of This Investigation

The current study was a randomized controlled trial with injured ED patients who screened positive for alcohol misuse. We investigated whether a 3-session telephone brief motivational intervention delivered during 6 weeks decreased alcohol use, alcohol-related injuries, and impaired driving during the subsequent 12 months. Telephone brief motivational intervention was tested against a time-equivalent assessment control intervention also delivered in 3 telephone calls. The rationale for the current study was to build on our previous work to detect a change in alcohol use and attendant alcohol-related consequences between groups, and to use an assessment control intervention to control for participant-interventionist interaction. We hypothesized that, relative to the assessment control group, patients in the telephone brief motivational intervention group would have less alcohol use and impaired driving at 4 months postrandomization and that this group difference would persist at 12 months, along with distal outcomes of decreased alcohol-related injuries and alcohol-related negative consequences.

MATERIALS AND METHODS

Study Design and Setting

This randomized controlled trial enrolled injured patients who visited 2 urban EDs located in 1 northeastern US city from July 2010 until March 2013. To allow for some variability in the ED environment and patient population, one ED is a Level 1 trauma center with ED volume of approximately 105,000 visits per year, and the second is an academic community ED with approximately 55,000 patient visits per year. The research protocol was reviewed by the institutional review board for both hospitals and has a Certificate of Confidentiality agreement from National Institute on Alcohol Abuse and Alcoholism.

Selection of Participants

Research assistants were assigned to shifts that covered all days of the week and all periods at both EDs. To create a random sample of patients approached for recruitment, each research assistant was given a predetermined random sequence for approaching ED patient rooms. The research assistants initially reviewed patients' medical records for eligibility, including aged 18 years or older, ED visit for an injury, patient English speaking and medically stable, not being admitted to the hospital, and patient not incarcerated or intoxicated. If these criteria were met, the research assistant obtained verbal consent from the patient to be screened for study eligibility, which included having a telephone and not being homeless. Patients not meeting the eligibility conditions, as well as those refusing to participate during the screening process, had their reasons documented for later review. The participating patients continued the screening process on a computer tablet that initially confirmed that the visit to the ED was for evaluation of an injury that occurred in the last 7 days and then delivered the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST)[14] version 3.0 (see "Methods of Measurement" section). Patients with an ASSIST score of 11 or greater (moderate- or high-risk alcohol use) were then asked to consent to the study, in which they would receive a telephone intervention on either alcohol use or home fire and burn safety.

Participants electronically completed baseline assessments on alcohol use, injury history, impaired driving, and alcohol-related negative consequences (as well as home fire and burn safety behaviors). They were then randomized by the research assistant, who opened a sealed envelope directing assignment to one of 2 conditions: intervention (telephone brief motivational intervention for alcohol use) or assessment control (telephone educational intervention on home fire and burn safety). Randomization