Remote Brief Intervention and Referral to Treatment for Alcohol (R-BIRT)

A Major Qualifying Project
Submitted to the Faculty of
Worcester Polytechnic Institute
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in
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By

________________________________
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Abstract

Alcohol use and abuse is a national issue that has been leading to a steady increase in Emergency Department (ED) incidents. Brief intervention with patients that have been seen in the ED, has been shown to decrease the number of drinks that a patient drinks in a given week. In-person intervention, known as Screening, Brief Intervention, and Referral to Treatment (SBIRT), is the current gold standard at UMass Memorial Hospital. To increase the number of patients seen and decrease the cost while maintaining the efficacy of the intervention, Remote Brief Intervention and Referral to Treatment service for alcohol (R-BIRT) is being piloted. A non-inferiority study was designed to see if R-BIRT is just as successful at lowering drinking as SBIRT. While this study is still ongoing, the current data suggests that R-BIRT is not worse than SBIRT at lowering alcohol consumption.
Acknowledgements

I would like to acknowledge the people that have helped make this clinical study successful and possible, including but not limited to:

- My sponsor, Edwin Boudreaux PhD, for his efforts on designing and supporting this study.
- My project advisor, Professor Jill Rulfs, for her guidance and support throughout the project.
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- Rachel Davis, PostDoc in the Department of Emergency Medicine, for her help and guidance with analyzing the data.
- Cynthia Retamozo, Behavioral Health Coach, for allowing me to shadow her through the process of both SBIRT and R-BIRT interventions.
- The entire team who has dedicated their time to making this study successful.
- The participants who made this study possible.
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Introduction

Alcohol Use Prevalence in the Emergency Department

The Centers for Disease Control and Prevention (CDC) estimates that drinking in the United States is responsible for “2.5 million years of potential life lost and 88,000 deaths” (Centers for Disease Control and Prevention (CDC), 2018). In 2010, $249 billion was associated with negative effects of alcohol use such as damage, deaths, and criminal justice efforts (CDC, 2018; Bernstein et al., 2007). The number of alcohol related incidents has increased dramatically in recent years, resulting in approximately five million patients visiting the Emergency Department (ED) in 2014 compared to three million in 2006 (White, Slater, Ng, Hingson, & Breslow, 2018). Ensuring that these patients receive intervention and treatment is vital to the patient's health and to decreasing the number of ED visits related to alcohol use. Bernstein et al. found that a 15-minute discussion with the patient is enough to reduce the number of drinks a patient consumes each week by 14% (Bernstein et al., 2007).

![Figure 1. Standard Drink Sizes.](Image courtesy of NIH, n.d.)

The low risk drinking limit as put forth by the National Institute for Alcohol Abuse and Alcoholism (NIAAA) is surpassed by drinking more than 14 drinks per week or four drinks in a given day for men and more than seven drinks per week or three drinks in a given day for
women and anyone over the age of 65. A standard drink size is shown in figure 1. Those that surpass the low risk drinking limit should be targeted in the ED for brief intervention (Boudreaux, 2016, pg 1).

SBIRT

Currently in-person intervention, known as Screening, Brief Intervention, and Referral to Treatment (SBIRT), is used as the gold standard form of intervention for alcohol use and abuse at the University of Massachusetts Memorial Health Care-Medical Center (UMMHC-MC) ED. SBIRT involves screening patients for drinking above the low risk limits put forth by the NIAAA, assessing the patient, and providing them with education and brief intervention if needed for their alcohol use and or abuse. The screening process involves the use of a survey which quickly provides the behavioral health specialists with insight into the patient’s drinking habits (see Appendix A). Once a patient triggers an alert, a behavioral health specialist will meet in-person with the patient and further assess his or her alcohol use and determine if he or she is a candidate for SBIRT. A referral to a treatment facility is made for all of those who screen positive for alcohol abuse and give consent to do so (Boudreaux, 2016, pg. 3). Once enrolled in the SBIRT program, the patient will receive further in-person intervention from a behavioral health specialist at one, three, and six months post enrollment. SBIRT has been shown to reduce the average number of drinks per week by seven after six months of enrollment in the program (Boudreaux, 2014, pg. 107). SBIRT is costly and time-consuming resulting in a need for a change in the gold standard of brief intervention (Boudreaux, 2014, pg. 98).

R-BIRT

The new approach to brief intervention and referral to treatment for alcohol users being examined in this study is Remote Brief Intervention and Referral to Treatment service for alcohol (R-BIRT). R-BIRT is a telehealth service that will be able to reach more patients remotely in a more cost effective and sustainable manner. The difference between SBIRT and R-BIRT is the mode of delivery while the method and outcome for the patient is identical. In SBIRT, the behavioral health specialist interacts with the patient in-person from the screening process through post six months of enrollment. R-BIRT is different in that the behavioral health specialist interacts with the patient from a remote location via a telephone call (Boudreaux, 2014,
R-BIRT is hypothesized to be just as effective at lowering alcohol consumption as the gold standard SBIRT (Boudreaux, 2016, pg. 1).

Model of Change

In order for brief intervention, whether it be SBIRT or R-BIRT, to be effective it must encourage the patient to see the need for a change in his or her behavior. The Health Belief Model is a theory created by social scientists that predicts behavioral changes based on six factors. The factors include risk susceptibility, risk severity, benefits to action, barriers to action, self-efficacy, and cues to action (Jones et al., 2015). Risk susceptibility is the patient’s view as to how likely he or she is of acquiring this disease or illness. In view of alcohol use and abuse, this factor would be how likely a patient deems he or she is to become “an alcoholic.” The second factor, risk severity, is the patient’s view on how severely this disease or illness could impact his or her life. Benefits to action would need to be available to the patient in order for him or her to even consider taking action against the disease or illness, which in this case is alcohol use and abuse. Barriers to action would need to be limited in order to maximize the likelihood that the patient would take action. Self-efficacy is the patient’s confidence in him or herself that he or she is capable of making this change in his or her lifestyle, decreasing the amount of alcohol he or she consumes each week. The last factor in the Health Belief Model is cues to action which can come from outside sources such as family or health care workers, or from within oneself because of a recent experience. Each of these factors is important in the patient’s path towards changing his or her lifestyle and lowering the amount of alcohol consumed weekly. The more positive each of these pillars is, the more likely change will take place (Jones et al., 2015). The first step in taking action to change is ensuring that the patient can identify that he or she has an illness. As Weinstein has shown, a person’s willingness to change will diminish if the risk susceptibility or risk severity is negligent (Weinstein, 2000).

Hypotheses

This study is designed to test the non-inferiority hypothesis that R-BIRT will be more cost effective with the same benefits as SBIRT. This non-inferiority hypothesis is designed to test if R-BIRT is not worse than SBIRT at reducing alcohol consumption. This study is also designed to test the hypothesis that R-BIRT is not worse than SBIRT at lowering risky drinking
behaviors, alcohol related incidents, and usage of healthcare (Boudreaux, 2014, pg 97). R-BIRT will be more effective as it will increase the amount of time that health coaches can spend intervening with patients, decrease the expense of office space, and centralize hiring and training of health coaches. Overall, R-BIRT will be more cost effective than SBIRT, while maintaining the effectiveness of the health outcome (Boudreaux, 2014, pg 98).
Methods

To compare SBIRT and R-BIRT methods with the least amount of bias, a randomized calendar (Appendix B) was created to determine which days in-person, SBIRT, or over the phone, R-BIRT, interventions would be used. On an SBIRT day, the patient was approached in-person by a Research Assistant (RA) for all components of the screening and of the study processes. Whereas on an R-BIRT day, all components of the screening and study were completed by the RA in a remote location over the telephone. SBIRT is the current gold standard which will act as the control group, while R-BIRT is the new technique being tested. An overview of the enrollment process is depicted below in figure 2.

![Flowchart of Enrollment Process](image)

**Figure 2. Flowchart of Enrollment Process.** The enrollment process begins with screening of patients and determining their eligibility. Then the patients are separated into treatment groups and the study outcomes are obtained (Boudreaux, 2014, pg 103).

Both treatment groups were first screened in the ED for risky alcohol use in multiple ways. In the first method, nurses screened patients with a single item alcohol screener (Appendix C). The second method involved volunteer RAs screening patients with the HERA survey (Appendix A). In the third and final method, Behavioral Health Specialists reviewed ED in-patient charts and screened patients with the HERA survey either over the telephone or in-person depending on the predetermined delivery method for that day (Appendix A). For those that screened positive for risky alcohol use, eligibility for the study was then determined by the RA either over the telephone or in-person. In order to be eligible for the study, the patient must be
over the age of 18, English speaking, alert and oriented, have screened positive for NIAAA, have an Alcohol Use Disorder Identification Test (AUDIT) score of greater than 8, have a Drug Abuse Screening Test (DAST) score of less than 3, not be currently in treatment, not be in state custody, not have pending legal action, be able to paraphrase study requirements, not currently be intoxicated, and have a reliable telephone (Boudreaux, 2014, pg 103). If eligible, the RA then explained the study along with its risks and rewards to the patient and obtained consent in the form of a signed copy of the consent form and HIPAA authorization (Appendices D&E). On an R-BIRT day, an RA explained the study in-person and signed the consent form and HIPAA authorization with the patient. For those patients that gave consent, a baseline assessment was conducted by the RA that explained the study. The baseline assessment measures several variables for each patient. These variables include the number of drinks the patient has consumed in the past week, the consequences that the patient faces because of alcohol, patient’s knowledge, readiness to change, and self-efficacy. A baseline assessment of the patient’s healthcare utilization will also be taken into consideration (Boudreaux, 2014, pg 104). An overview of the R-BIRT methodology can be seen in figure 3 on the next page. Those that agreed to participate in the study were compensated for their time.

**Figure 3. Overview of R-BIRT Study.** The figure depicts the steps in which the R-BIRT treatment is executed (Boudreaux, 2014, pg 97).
If needed, booster calls were performed by the RA that administered the baseline assessment for participants in both the SBIRT and R-BIRT treatment groups. Follow up interventions were performed by a RA at one, three, and six months post enrollment. The follow up consisted of a series of questions to determine how the patient was doing socially, emotionally, and physically (Appendix F). This survey was administered either online or via telephone for both SBIRT and R-BIRT treatment groups. Participants that completed the follow ups were compensated after each one for their time (Boudreaux, 2014, pg 106).

The goal is to enroll 356 participants in the study in order to have enough power. A total of 310 participants would be enough to give 80% power, but the goal adjusts for those that will drop out of the study (Boudreaux, 2014, pg. 109). As of February 1, 2019, there were 210 participants enrolled.
Data Analysis

Study data were collected and managed using REDCap electronic data capture tools hosted at UMass Medical School. REDCap (Research Electronic Data Capture) is a secure, web-based application designed to support data capture for research studies, providing 1) an intuitive interface for validated data entry; 2) audit trails for tracking data manipulation and export procedures; 3) automated export procedures for seamless data downloads to common statistical packages; and 4) procedures for importing data from external sources (Harris et al, 2009).

The data that is collected from this study will first be analyzed to determine whether any missing data is due to random chance or not. This will be completed by creating a logistic model. If data is missing due to a non-random event, then the data will be analyzed via the latest version of SAS PROC MI and PROC MIANALYZE software (Boudreaux, 2014, pg 107).

In order to determine the effectiveness of SBIRT and R-BIRT, the reduction of reported drinks per week will be calculated between baseline and at post one, three and six months. From previous studies, it is expected that SBIRT will decrease the number of drinks per week by seven drinks after six months from initial intervention. With this data, a paired samples t-test and a linear random effects model will be created in order to determine any significant differences between the effects of SBIRT and R-BIRT on reduction of weekly alcohol consumption. Mixed effects modeling will be used to confirm the hypothesis that R-BIRT is just as effective as SBIRT. PROC GLIMMIX software will be used to analyze differences between the following variables in the two treatment groups: drinking above the NIAAA low risk limits, consequences due to alcohol, and acute healthcare utilization (Boudreaux, 2014, pg 107).

It is expected that R-BIRT will be more cost effective for the healthcare system than SBIRT. This will be confirmed through a cost-effectiveness analysis. The ratio of R-BIRT costs to R-BIRT benefits, will be compared to the ratio of SBIRT costs to SBIRT benefits. An Incremental Cost Effectiveness Ratio (ICER) will be calculated to measure the differential costs to benefits of the two treatments. (Boudreaux, 2014, pg 107&108).

The primary results of interest from this study are average reduction in drinks per week in patients at one, three, and six months post intervention for SBIRT and R-BIRT. The average cost per patient will also be determined for both SBIRT and R-BIRT (Boudreaux, 2014, pg 108). A structural equation model will be created to determine if any of the demographics or other
underlying baseline information correlated to the reduction in drinks per week (Boudreaux, 2014, pg 109).
Results and Discussion

The demographics analyzed among the 210 participants include sex, race, and ethnicity. Figure 4, below, depicts the distribution of males versus females. The majority of the participants identified as male, but no conclusions can be made about sex and risky drinking habits from this study.

![Pie chart showing sex distribution of participants]

Figure 4. Sex Distribution of Participants. Of the 210 participants, 22.9% identified as female and 77.1% identified as male.

A majority of the participants identified as White as shown in figure 5, on the next page. This statistic does not correlate drinking habits to race. Ninety-two percent of participants identified as non-Hispanic. Ethnicity can also not be correlated to drinking habits.
Figure 5. Race Distribution of Participants. Of the 210 participants, 188 identified as White, 9 identified as Black or African American, 1 identified as Asian, 0 identified as American Indian/Alaskan Native, 0 identified as Pacific Islander, and 13 identified as other.

To test the non-inferiority hypothesis that R-BIRT is not worse than SBIRT at lowering drinking levels, change in drinking habits after 1 month were analyzed for both groups. By February 1, 2019, 132 participants had completed the 1 month follow up. Of the 132 participants, 67 were enrolled in R-BIRT and 65 were enrolled in SBIRT. Figures 6 and 7, on the next page, depict the change in drinking habits after 1 month from baseline among the participants in each group.
Figure 6. SBIRT: Change in Drinking Habits after One Month. One month after the initial intervention, the participant was again asked about his/her drinking habits during the previous week. The difference in the total number of drinks from baseline to post one month was analyzed for each participant. The average was a decrease of 27.5 drinks with a standard deviation of 47.6 drinks and a mean of 14 drinks.

Figure 7. R-BIRT: Change in Drinking Habits after One Month. One month after the initial intervention, the participant was again asked about his/her drinking habits during the previous week. The difference in the total number of drinks from baseline to post one month was analyzed for each participant. The average was a decrease of 36.4 drinks with a standard deviation of 55.8 drinks and a mean of 15 drinks.
The average decrease in weekly alcoholic drink consumption was 27.5 and 36.4 for SBIRT and R-BIRT, respectively. The standard deviation for both groups was large indicating that this method of intervention was extremely helpful for some and not helpful for others. This wide range may be due to the participant’s readiness to change and not necessarily a reflection of the efficacy of the intervention. Based on the data displayed in figures 6 and 7, R-BIRT had more participants that decreased their drinking levels by higher amounts compared to SBIRT. The participants of SBIRT were more concentrated in the lower range of change in weekly drinks. Because this is a small data set and does not follow the study throughout the full six months, no conclusions based on the two interventions can be made. The current data suggest that R-BIRT is successful at lowering alcohol consumption and is comparable to the success of SBIRT. A t-test was used to determine that the difference between the two intervention groups is not significant, P= 0.33 and n=0.05. There was no statistical significance between the two groups, supporting the non-inferiority hypothesis that R-BIRT is not worse than SBIRT at lowering alcohol drinking levels.

The data analyzed is not from a complete set of participants and more follow ups will be performed to see how the participants are managing their drinking habits at three and six months after the initial intervention. The cost of R-BIRT versus SBIRT will be further analyzed in order to enhance the installation of this new intervention method. In the future R-BIRT intervention will be performed in EDs at other hospitals to compare the effectiveness and costs of the treatment (Boudreaux, 2014, pg 108).
References


Appendices

Appendix A

Screening Survey

Part 1: Alcohol Screener
- How often do you have a drink containing alcohol?
- A standard drink is one 12-ounce can or bottle of beer, one glass of wine, one cocktail/mixed drink, or one shot of liquor. How many drinks containing alcohol do you have on a typical day when you are drinking?
- How often do you have four or more drinks on one occasion?
- How often do you have five or more drinks on one occasion?

Part 2: Alcohol Pros/Cons
- What are some good things about drinking?
- What are some not so good things about drinking?

Part 3: Alcohol Assessment

PROMPT
I have some information on low-risk drinking guidelines, would you like to hear about them?

You are at moderate to high risk for developing alcohol-related problems. You scored the same as people who drink more than the recommended amount or who already have some negative effects of use.

We know that drinking 4 or more drinks on one occasion or more than 14 drinks per week can put you at risk for health, social or legal problems.

What are your thoughts on that?

Heavy drinking can increase your risk for many illnesses and other problems, including:

- Certain cancers, like stomach cancer
- Stomach and other gastro-intestinal problems
- Liver disease
- Immune system problems (makes you more likely to get sick)
- Problems with memory and concentration
- Increased risk for accidents and falls
- Depression
- Troubled relationships
- Birth defects (in pregnant women)

- How often during the last year have you found that you were not able to stop drinking once you had started?
- How often during the past year have you failed to do what was expected of you because of drinking?
- How often during the past year have you needed a drink first thing in the morning to get yourself going after a heavy drinking session?
• How often during the last year have you had a feeling of guilt or remorse after drinking?
• How often during the last year have you been unable to remember what happened the night before because of your drinking?
• Have you or someone else been injured because of your drinking?
• Has a relative, friend, doctor, or other health care worker been concerned about your drinking and suggested you cut down?
• How long has it been since you last drank any alcohol?
• Have you ever been in treatment for alcohol use?

Part 4: Withdrawal
• In the past 30 days, including today, have you had any withdrawal symptoms (physical or emotional) when you cut down or stopped using alcohol?
• If yes, please check the withdrawal symptoms you had in the past 30 days, including today.
• Have you ever had serious withdrawal symptoms that caused you to be unable to function normally, like seizures, hallucinations, or confusion?
• If you stopped using all substances for 2 or 3 days, do you think that you would experience withdrawal symptoms?

Part 5: Alcohol Readiness to Change
• How ready are you to get treatment for your alcohol use?
• Would you like to change your alcohol use?
• When would you like to quit?

Part 6: Alcohol Action Plan
• What are some steps that will work for you to change?
• When do you plan to cut back?
• When do you plan to quit?
Appendix B

Treatment Group Calendar

<table>
<thead>
<tr>
<th>SUNDAY</th>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
<th>FRIDAY</th>
<th>SATURDAY</th>
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<td>October 9</td>
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<tr>
<td>BIRT</td>
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</tr>
<tr>
<td>October 14</td>
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</tr>
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</tr>
<tr>
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<tr>
<td>October 28</td>
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<td>October 31</td>
<td>November 1</td>
<td>November 2</td>
<td>November 3</td>
</tr>
<tr>
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<td>Telephone</td>
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<td>In-person</td>
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</tr>
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</table>
## Appendix C

### Alcohol Screener


<table>
<thead>
<tr>
<th>BNI STEPS</th>
<th>DIALOGUE/PROCEDURES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Raise subject</strong></td>
<td>Hello, I am ______. Would you mind taking a few minutes to talk with me about your alcohol use? <strong>&lt;PAUSE and LISTEN&gt;&gt;</strong></td>
</tr>
<tr>
<td><strong>2. Provide feedback</strong></td>
<td>From what I understand you are drinking [insert screening data]... We know that drinking above certain levels can cause problems, such as [insert facts]... I am concerned about your drinking.</td>
</tr>
<tr>
<td>• Review screen</td>
<td></td>
</tr>
<tr>
<td>• Make connection</td>
<td>What connection (if any) do you see between your drinking and this ED visit? If patient <strong>sees connection</strong>: reiterate what pt has said. If patient <strong>does not see connection</strong>: make one using facts.</td>
</tr>
<tr>
<td>• Show NIAAA guidelines &amp; norms</td>
<td>These are what we consider the upper limits of low risk drinking for your age and sex. By low risk we mean that you would be less likely to experience illness or injury if you stayed within these guidelines.</td>
</tr>
<tr>
<td><strong>3. Enhance motivation</strong></td>
<td>[Show readiness ruler] On a scale from 1-10, how ready are you to change any aspect of your drinking?</td>
</tr>
<tr>
<td>• Readiness to change</td>
<td></td>
</tr>
<tr>
<td>• Develop discrepancy</td>
<td>If patient says: ≥2 <strong>ask</strong>: Why did you choose that number and not a lower one?</td>
</tr>
<tr>
<td>• Explore Pros and Cons</td>
<td>≤3 or resistance <strong>ask</strong> pros and cons. Help me to understand what you enjoy about drinking? <strong>&lt;PAUSE AND LISTEN&gt;&gt;</strong> Now tell me what you enjoy less about drinking. <strong>&lt;PAUSE AND LISTEN&gt;&gt;</strong></td>
</tr>
<tr>
<td>• Use Reflective Listening</td>
<td>On the one hand you said, <strong>&lt;RESTATE PROS&gt;&gt;</strong> On the other hand you said, <strong>&lt;RESTATE CONS&gt;&gt;</strong> So tell me, where does this leave you?</td>
</tr>
<tr>
<td><strong>4. Negotiate &amp; advise</strong></td>
<td>What’s the next step?</td>
</tr>
<tr>
<td>• Negotiate goal</td>
<td>What do you think you can do to stay within the safe drinking guidelines? If you can stay within these limits you will be less likely to experience [further] illness or injury related to alcohol use.</td>
</tr>
<tr>
<td>• Give advice</td>
<td>This is what I’ve heard you say... Here is a drinking agreement I would like you to fill out, reinforcing your new drinking goals. This is really an agreement between you and yourself. Provide drinking agreement [patient keeps 1 copy].</td>
</tr>
<tr>
<td>• Summarize</td>
<td><strong>Suggest Primary Care follow-up to discuss drinking level/pattern</strong></td>
</tr>
<tr>
<td>• Provide handouts and suggest PC f/u</td>
<td><strong>Thank patient for his/her time</strong></td>
</tr>
<tr>
<td>• Thank patient</td>
<td></td>
</tr>
</tbody>
</table>

ED=Emergency Department; BNI=Brief Negotiated Interview; SBIRT=Screening, Brief Intervention and Referral to Treatment; PC=Primary care; NIAAA=National Institute of Alcohol Abuse and Alcoholism

Adapted from 19, 28, 29
Appendix D

Consent Form

UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL
COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS IN RESEARCH
CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Title of research study: Remote Brief Intervention and Referral to Treatment-2 (RBIRT-2) for alcohol

Investigator: Edwin Boudreaux PhD

Sponsor: National Institute of Health (NIH)

Why are you being invited to take part in a research study?

You are being asked to participate because you have come to the Emergency Department (ED) today and you use alcohol. You do not have to be interested in changing your alcohol use to participate. We don’t intend to tell you what to do; we simply want to have a conversation with you about alcohol use.

What should you know about a research study?

Your participation is entirely voluntary.

You do not have to be in this research study. If you join the study, you can stop or leave at any time with no changes in the quality of the health care you receive.

If you decide not to participate you will still have the option of having conversations about alcohol use as part of our standard of care.

You will be told about any new information or changes in the study that could affect you.

You can ask all the questions you want before deciding if you want to be in this study.

Why are we doing this research?

We are doing this research study to compare ways of having a conversations about alcohol use.

How long will the research last?

In addition to a brief 5-minute questionnaire to determine your eligibility, you will receive an assessment either in person or over the phone that we expect will last up to 60 minutes. You will be also be called by phone in one, three and six months from today so we can find out if the information you received was useful to you. These calls will take about 15 minutes. We will also review your medical records from the past 6 months and for the next 6 months to see if you returned to the hospital for any reason.

How many people will be studied?
We expect about 356 people will be in this study at UMass Memorial Health Care.

**What happens if I say yes, I want to be in this research?**

- We will conduct a brief screening to see if you are eligible to participate.
- If eligible, a computer program will randomly assign you (like the flip of a coin) to one of two different ways of talking about alcohol use.
  - One would be delivered over the phone, while the other would be delivered in person.
  - If assigned to the phone version, a Health Coach will have the conversation with you over the phone during your ED visit. We will provide you with the phone to use.
  - If you are assigned to the in-person version, a Health Coach will have the conversation with you in person during your ED visit.
- With both conversations, you will be interviewed about your alcohol and other substance use. If you want, you will receive some educational information or about how to change your drinking.
- The information you provide to us during this conversation is entered into a computer and a summary is transferred to your UMass electronic health record. Clinicians who have access to your medical record will be able to see the summary.
- You will then be called at one, three and six months after your interview today to see if any of the information that you are given has been any help to you. During those follow-up calls, we will also ask you about your mental health, substance use (alcohol and drugs), medical visits, employment history and if you’ve experienced any legal issues.
  - If you agree, the interview will be audio recorded so that an independent rater can check to see how the interviewer is doing. We will transfer the recording to a secure file to send to the rater and then we will erase it from the recording device.
  - If you do not want the interview recorded, just let the interviewer know.

**Conflict of Interest Disclosure**

The study is being paid for by the National Institutes of Health. UMass and Tridiuum are partners in this project. Any interventions that are developed as part of this project will be jointly owned by UMass and Tridiuum. Both organizations could potentially earn money from selling the interventions.

Dr. Boudreaux, the Principal Investigator on this study, is a faculty member at UMass. He also works closely with Tridiuum and has been granted opportunities to acquire stock in the company. Dr. Boudreaux gets paid for some of his work done for Tridiuum.

**What are the risks of being in this study?**

There are a few risks associated with this study. Some of the questions we ask may make you feel uncomfortable. You can skip any question you do not want to answer. Your personal information could be lost or exposed. This is very unlikely to happen, and we will do everything we can to make sure that your information is protected.
An improbable but mentionable risk is delay of medical care for the ED patients secondary to participating in the R-BIRT or SBIRT during their ED visit. Since permission is obtained from the treating physician or nurse prior to approaching the patient and the treating staff can interrupt the interview at any time, it is unlikely that the assessment will interfere with ED care.

**Will being in this study help me in any way?**

No, the results of the study may help others in the future, but there is no direct benefit to you.

**Will being in this study cost me any money?**

No, there will be no additional cost to you from being in this study.

**What happens to information about me?**

We will try to limit access to your personal information, including research study and medical records, to people who have a need to review this information. We cannot promise complete privacy. The UMMS Institutional Review Board (the committee that reviews, approves, and monitors research on human subjects) and other representatives of UMMS may need to review your records.

Also, the following people will have access to the information: (1) your medical treatment team; (2) the research team; (3) Tridiium, the company that has designed the computer program; and (4) for patients who agree to send their information to a substance abuse counselor, the substance abuse counselor or program will receive a summary report and your personal contact information. All of these people and organizations are obligated to protect your confidentiality.

If we learn that you plan to hurt yourself or others, we will break confidentiality to help you.

If we learn of any child or elder abuse, we are required to break confidentiality and report this to state authorities.

To help us protect your privacy, we have obtained a Certificate of Confidentiality from the National Institutes of Health. With this Certificate, we cannot be forced to give out information that may identify you, even by a court subpoena, in any federal, state, or local civil, criminal, administrative, legislative, or other proceedings. We will use the Certificate to resist any demands for information that would identify you, except as explained below.

We cannot use the Certificate to resist a demand for information from the United States Government that is used to audit or evaluate federally-funded projects. There is also information that must be disclosed to the federal Food and Drug Administration (FDA).

You should understand that a Certificate of Confidentiality does not stop you or a member of your family from giving out information about yourself or your involvement in this research. If you give an insurer, employer, or someone else your written consent for them to get research information, then we cannot use the Certificate to say no.

You should also understand that there are two (2) more exceptions to the protection of the Certificate. The Certificate does not prevent us from reporting to health officials certain communicable diseases required by Massachusetts state law. In addition, it does not prevent us from reporting to authorities, without your consent, any knowledge of child or elder abuse, intent to hurt yourself or others.
Will I be given any money or other compensation for being in this study?

You will be paid the following amount to reimburse you for your time:
- You will be given a $5 gift card for your baseline participation.
- For each follow-up interview completed (1, 3 & 6-months) you will receive a $40 gift card.
- If you complete all follow-up interviews you will receive an additional $20 gift card.
- Total possible compensation = $145 in gift cards.

What are my other options?

You do not have to be in this study. If you decide not to be in the research now or later, it will not affect your usual care and it won’t be held against you. You can receive educational information without being in the research.

What happens if I say yes, but I change my mind later?

You are free to leave the study at any time. There are no penalties and you do not lose any benefits to which you are otherwise entitled. Data that we have already used will stay in the study database and cannot be removed in order to maintain the integrity of the research. However, you can ask us to destroy any information that identifies you so that no one can tell the data belonged to you. Additionally, we will continue to review and collect information from your medical records for 6-months before and after you join the research unless you ask us to stop. Our contact information is listed below.

Who can I talk to?

If you have questions, concerns, complaints, think the research has hurt you, or would like to withdraw from the study, please contact:
Edwin D. Boudreaux, PhD
55 Lake Avenue North
Worcester, Massachusetts 01655
Phone: 508-421-1400

This research has been reviewed and approved by an Institutional Review Board. You may talk to them at (508) 856-4261 or irb@umassmed.edu for any of the following:
- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to talk to someone besides the research team.
- You have questions about your rights as a research subject.
- You want to get information or provide input about this research.
Signature Block for Capable Adult
Your signature documents your permission to take part in this research.

______________________________   __________________
Signature of subject             Date

______________________________
Printed name of subject

______________________________   __________________
Signature of person obtaining consent   Date

______________________________
Printed name of person obtaining consent
Appendix E

HIPAA Authorization

UMass Memorial Medical Center
AUTHORIZATION TO DISCLOSE
PROTECTED HEALTH INFORMATION FOR RESEARCH PURPOSES

The privacy law, Health Insurance Portability & Accountability Act (HIPAA), protects my individual identifiable health information (Protected Health Information, or PHI). The privacy law requires me to sign an authorization (or agreement) in order for researchers to be able to use or disclose my protected health information for research purposes in the study entitled: Docket # H00006924: Remote Brief Intervention and Referral to Treatment-2 (RBIRT-2) for alcohol

I authorize UMass Memorial Medical Center to disclose my protected health information to:
- UMass Medical School including the researcher Edwin D. Boudreaux, PhD and his research staff.
- Tridiuum the developers of the assessment software – and its representatives.
- Substance Abuse Treatment Facility and provider receiving referral
- Federal and State authorities that oversee research.
- Sponsor of research: National Institutes of Health (NIH)

Protected Health Information (PHI) that may be disclosed includes all boxes below marked with an “X”, and PHI which is listed in the sections titled “Other” below.

<table>
<thead>
<tr>
<th>General Records</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiac Studies (Heart)</td>
</tr>
<tr>
<td>Consultations</td>
</tr>
<tr>
<td>Discharge Summaries</td>
</tr>
<tr>
<td>EEG/EMG/Sleep Studies</td>
</tr>
<tr>
<td>Emergency Service Records</td>
</tr>
<tr>
<td>Home Health Records</td>
</tr>
<tr>
<td>Hospice Records</td>
</tr>
<tr>
<td>Immunization Records</td>
</tr>
<tr>
<td>Laboratory Reports</td>
</tr>
<tr>
<td>Office/Clinic Notes</td>
</tr>
<tr>
<td>Operative/Procedure Reports</td>
</tr>
<tr>
<td>Pathology Reports</td>
</tr>
<tr>
<td>Problem List</td>
</tr>
<tr>
<td>Pulmonary Studies (Lung/Respiratory)</td>
</tr>
<tr>
<td>Radiology (X-ray/CAT/MRI/Ultrasound/Nuclear)</td>
</tr>
<tr>
<td>Rehabilitation Notes (PT/OT/Speech)</td>
</tr>
</tbody>
</table>
Other (Specify):  

<table>
<thead>
<tr>
<th>Statutorily Protected Records</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abortion</td>
</tr>
<tr>
<td>Alcohol/Drug Abuse</td>
</tr>
<tr>
<td>Psychiatric Health</td>
</tr>
<tr>
<td>Sexual Assault Counseling</td>
</tr>
</tbody>
</table>

Other (Specify): non-UMMHC Substance Abuse Treatment Providers

My protected health information will be disclosed as listed above for the following reasons:
- To complete a research study to compare ways of having conversations about alcohol use.

I do not have to sign this Authorization. If I decide not to sign the Authorization:
- It will not affect my treatment, payment or enrollment in any health plans, or affect my eligibility for benefits.
- I will not be allowed to participate in the research study.

If I sign the Authorization, I understand that:
- I have the right to withdraw, or revoke the Authorization.
- If I revoke the Authorization, I will send a written letter to: Edwin D. Boudreaux, PhD, Emergency Medicine Department, 55 Lake Avenue North, Worcester, MA 01655 to inform him or her of my decision.
- If I revoke this Authorization, researchers may only use the protected health information already collected for this research study.
- If I revoke this Authorization my protected health information may still be used and disclosed should I have an adverse event (a bad effect).
- If I change my mind and withdraw the Authorization, I will not be allowed to continue to participate in the study.
- Any disclosure carries the potential for re-disclosure. Once UMass Memorial Medical Center releases my protected health information, it may no longer be protected by the HIPAA privacy rule.
- The entities receiving my protected health information will use it as described in the Consent Document for this study.
- I may not be allowed to review some of the research-related information in my medical record until after the study is completed. When the study is over, I will have the right to access the information again.
- I will receive a signed copy of this authorization for my personal records.

This Authorization does not have an expiration date.

If I have questions about the research study, I should contact: Edwin D. Boudreaux, Ph: 508-421-1400.
If I have not already received a copy of the Privacy Notice, I may request one. If I have any questions or concerns about my privacy rights, I should contact the UMass Memorial Medical Center Privacy Officer at the phone number 508-334-5551.

I HAVE READ AND UNDERSTAND THE ABOVE STATEMENTS AND AUTHORIZE THE DISCLOSURE OF THE INFORMATION REQUESTED ABOVE

<table>
<thead>
<tr>
<th>Signature of Subject</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject Name (Printed)</td>
<td></td>
</tr>
<tr>
<td>Person obtaining HIPAA Authorization</td>
<td>Date</td>
</tr>
</tbody>
</table>

NOTE TO PI:
Forward the original signed authorization to:
Health Information Management – Room HB 354
UMass Memorial Medical Center
55 Lake Avenue North
Worcester, MA 01655
Give a copy of the signed authorization to the research subject, and keep a copy for the study files.
Appendix F

Follow Up

<table>
<thead>
<tr>
<th>RBIRT-2 FOLLOW-UP ASSESSMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Administered at one, three and six months]</td>
</tr>
</tbody>
</table>

A. Identifiers

**DO NOT READ TO PATIENT-TO BE COMPLETED BY RA**

- a. Subject ID _ _ _
- b. Subject’s Initials _ _
- c. RA Initials _ _ _
- d. Today’s date [mm/dd/yy]
- e. Time began [hh:mm]

1. Introduction

Hello, my name is [insert name] and I am calling on behalf of the UMass Medical Center. I am trying to reach [insert patients name] and confirm the patient’s contact information.

You came into the UMass emergency room on [insert date of visit]. At that time, you agreed to participate in a study on ways to have a conversation about alcohol use with patients. I would like to ask you a few follow-up questions. The conversation will take about 5- to 15 minutes. If you complete the conversation, you’ll receive a gift card for $40. Is this a good time to talk?

1a. Did the patient agree to continue with the assessment?
- Yes
- No
If 1a = 1 (Yes), THEN: Continue to Section 2

**BRANCH if 1a = 0 (No), THEN:**

1b. Did the patient withdraw from the study?
   "Yes"
   "No"

**BRANCH if 1b = 1 (Yes), THEN:**

Verbal Consent to Continue Reviewing Medial Records

1c. Ok, thank you. I will document that you have withdrawn from the study. While no further contact will be made is it ok for us to continue reviewing your medical records?
   "Yes"
   "No"

---

### 2. Assessment of Recent Drinking [7-Day TLFB]

I have just a few questions about your drinking during the past 7 days… We want to get an idea of how many drinks you consumed on each day during this time. For our purposes, one drink equals:

1. 12 oz. Beer
2. 5 oz. Glass of wine
3. 12 oz. wine cooler
4. 1 1/2 oz. shot of liquor
5. mixed drink containing 1 shot of liquor

This is not a difficult task, especially when you use a calendar. Let’s begin, starting with today and work backwards over the week.

1. Start Date [mm-dd-yy] _________________
2. End Date [mm-dd-yy] _________________

---

<table>
<thead>
<tr>
<th>Month 201X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday</td>
</tr>
<tr>
<td>#</td>
</tr>
</tbody>
</table>
3. Do you have any special holidays or dates, I should mark on my calendar to help you better recall your drinking during the past 7 days? Good things like birthdays, anniversaries, social events, paydays, or not so good things such as sickness, accidents, legal problems, (etc.)…{insert subject’s response}

5. Now today is {insert day and date: ___________________________}.  
   Have you had any drinks today, even a sip? If yes, about how many drinks?  
   {insert subject’s response on the corresponding date in the calendar}

6. Yesterday was {insert day and date:______________}.  
   Did you have any drinks yesterday, even a sip? If yes, about how many drinks?  
   {insert subject’s response on the corresponding date in the calendar}

7. The day before yesterday was {insert day and date:______________}.  
   Did you have any drinks then? If yes, about how many drinks?  
   {insert subject’s response on the corresponding date in the calendar}

8. Four days ago was {insert day and date:______________}.  
   Did you have any drinks then? If yes, about how many drinks?  
   {insert subject’s response on the corresponding date in the calendar}

9. Five days ago was {insert day and date:______________}.  
   Did you have any drinks then? If yes, about how many drinks?  
   {insert subject’s response on the corresponding date in the calendar}
10. Six days ago was {insert day and date:__________________}. Did you have any drinks then? If yes, about how many drinks? {insert subject’s response on the corresponding date in the calendar}

11. Seven days ago was {insert day and date:__________________}. Did you have any drinks then? If yes, about how many drinks? {insert subject’s response on the corresponding date in the calendar}

3. Stages of Change Algorithm

Now I have a question about your thoughts about drinking…

1. Which of the following statements best describes your thoughts about your drinking today?
   "I do NOT plan to take some specific action or steps to cut down on my drinking in the next three months.
   "I plan to take some specific actions or steps to cut down on my drinking in the next three months
   "I plan to take some specific action or steps to cut down on my drinking in the next week.
   "I have consistently been taking some specific actions or steps to cut down on my drinking for more than the past 30 days.
   "I have taken SOME specific action or steps on a consistent basis to cut down on my drinking for more than the past 3 months.

4. Drug Use

1. In the past month, have you used drugs for non-medical purposes [including misused or abused over the counter drugs or street drugs]?  
   "Yes
   "No

   BRANCH if 4.1 = 1 (Yes), THEN:
2. In the past month which of the following drugs have you used for non-medical purposes? [CHECK ALL THAT APPLY]  
- Marijuana  
- K2/Spice  
- Painkillers / Opiate medications  
- Heroin  
- Cocaine  
- Stimulants  
- Tranquilizers/sedatives  
- Hallucinogens  
- Ecstasy  
- Cold or cough medications  
- Other drug not listed above

BRANCH if 4.2 = 11 (Other drug), THEN:  
3.2.1 Specify {insert text}

3. In the past month have you tried to reduce your drug use?  
- Yes  
- No

4. In the past month have you intentionally gone for more than 24 hours without using drugs?  
- Yes  
- No

5. In the past month how many days have you gone without using drugs? {insert #}

5. ED Visit Follow-Up

1. Since your ED visit, have you spoken with a treatment provider or organization that helps people stop using alcohol or drugs?  
- Yes, someone contacted me  
- Yes, I contacted someone  
- No, I did not speak with any treatment provider  
- Patient unable to complete question

BRANCH if 5.1=(No, I didn’t contact anyone),THEN:

2. Do you intend to contact a treatment provider?  
- Yes  
- No
<table>
<thead>
<tr>
<th>3. Did you complete an initial evaluation with a treatment provider, where a person asked you a bunch of questions about yourself, including your <strong>alcohol or drug</strong> use?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. Was the initial evaluation completed over the phone or in person?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone</td>
</tr>
<tr>
<td>In-person</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5. About how many treatment sessions have you attended after the initial evaluation?</th>
</tr>
</thead>
<tbody>
<tr>
<td>{insert #}</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. Did you complete treatment?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No, dropped out</td>
</tr>
<tr>
<td>No, still in treatment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7. Did you attend any sessions with a self-help group [i.e., Alcoholics Anonymous or Narconon]?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
</tbody>
</table>

## 6. Emotional Health

The new few questions ask about your health and how you are getting along emotionally.

<table>
<thead>
<tr>
<th>1. In general, I would say my health is:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
</tr>
<tr>
<td>Fair</td>
</tr>
<tr>
<td>Good</td>
</tr>
<tr>
<td>Very Good</td>
</tr>
<tr>
<td>Excellent</td>
</tr>
</tbody>
</table>
2. In the past two weeks, how often have you felt sad, down, or depressed?
   "Never or rarely
   "Some of the time
   "Often
   "All or almost all of the time

3. In the past two weeks, how often have you felt less pleasure from things you used to enjoy?
   "Never or rarely
   "Some of the time
   "Often
   "All or almost all of the time

7. Medical Care and Event Data

Now I have some questions about things which may or may not have happened to you in the past 6 MONTHS.

A. Were you a patient overnight [INPATIENT] in the hospital for at least one night in the past 6 months?
   "Yes
   "No

   BRANCH if A=1 (Yes) THEN continue to 1-5:

1. Were you a patient overnight [INPATIENT] in the hospital for at least one night in the past 6 months for a surgical problem?
   "Yes
   "No

   BRANCH if 7.1=1 (Yes) THEN:

1a. What was the total number of admissions spent in the hospital for a surgical problem in the past 6 months? {insert #}

1b. What was the total number of nights spent in the hospital for a surgical problem in the past 6 months? {insert #}

2. Were you a patient overnight [INPATIENT] in the hospital for at least one night in the past 6 months for a psychiatric problem?
   "Yes
   "No
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2a.</td>
<td>What was the total number of admissions spent in the hospital for a <strong>psychiatric</strong> problem in the past 6 months? {insert #}</td>
</tr>
<tr>
<td>2b.</td>
<td>What was the total number of nights spent in the hospital for a <strong>psychiatric</strong> problem in the past 6 months? {insert #}</td>
</tr>
</tbody>
</table>
| 3. | Were you a patient overnight [INPATIENT] in the hospital for at least one night in the past 6 months for an **alcohol or drug** problem?  
   "Yes  
   "No |
|   |   |
| 3a. | What was the total number of admissions spent in the hospital for an **alcohol or drug** problem in the past 6 months? {insert #} |
| 3b. | What was the total number of nights spent in the hospital for an **alcohol or drug** problem in the past 6 months? {insert #} |
| 4. | Were you a patient overnight [INPATIENT] in the hospital for at least one night in the past 6 months for any other medical problem?  
   "Yes  
   "No |
|   |   |
| 4a. | What was the total number of admissions spent in the hospital for any other medical problem in the past 6 months? {insert #} |
| 4b. | What was the total number of nights spent in the hospital for any other medical problem in the past 6 months? {insert #} |
| **BRANCH if 7.1 or 7.2 or 7.3 or 7.4=1 (Yes) THEN:** |
| 5. | During the time you were admitted to the hospital, did a doctor, nurse, or other health worker ever say anything to you about your alcohol use?  
   "Yes  
   "No  
   "Don’t know/Don’t remember |
<table>
<thead>
<tr>
<th>Question</th>
<th>Branch if B=1 (Yes) THEN continue to 6-10:</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. Have you been to a hospital emergency room or department in the past 6 months?</td>
<td>6. Have you been to a hospital emergency room or department in the past 6 months for a <strong>surgical</strong> problem?</td>
</tr>
<tr>
<td>1. Yes</td>
<td>6a. What was the total number of ED visits for a <strong>surgical</strong> problem? {insert #}</td>
</tr>
<tr>
<td>0. No</td>
<td>6b. What was the average number of minutes spent per ED visit for a <strong>surgical</strong> problem? {insert #}</td>
</tr>
<tr>
<td><strong>BRANCH</strong> if 7.6=1 (Yes) THEN:</td>
<td>7. Have you been to a hospital emergency room or department in the past 6 months for a <strong>psychiatric</strong> problem?</td>
</tr>
<tr>
<td>7a. What was the total number of ED visits for a <strong>psychiatric</strong> problem?</td>
<td>7a. What was the total number of ED visits for a <strong>psychiatric</strong> problem? {insert #}</td>
</tr>
<tr>
<td>7b. What was the average number of minutes spent per ED visit for a <strong>psychiatric</strong> problem?</td>
<td>8. Have you been to a hospital emergency room or department in the past 6 months for an <strong>alcohol or drug</strong> problem?</td>
</tr>
<tr>
<td>8a. What was the total number of ED visits for an <strong>alcohol or drug</strong> problem?</td>
<td>8a. What was the total number of ED visits for an <strong>alcohol or drug</strong> problem? {insert #}</td>
</tr>
</tbody>
</table>
8b. What was the average number of minutes spent per ED visit for an **alcohol or drug** problem? {insert text}

<table>
<thead>
<tr>
<th>9. Have you been to a hospital emergency room or department in the past 6 months for <strong>any other medical</strong> problem?</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Yes</td>
</tr>
<tr>
<td>• No</td>
</tr>
</tbody>
</table>

**BRANCH if 7.9=1 (Yes) THEN:**

<table>
<thead>
<tr>
<th>9a. What was the total number of ED visits for <strong>any other medical</strong> problem? {insert #}</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>9b. What was the average number of minutes spent per ED visit for <strong>any other medical</strong> problem? {insert #}</th>
</tr>
</thead>
</table>

**BRANCH if 7.6 or 7.7 or 7.8 or 7.9=1 (Yes) THEN:**

10. When you were treated at the emergency room or department, did the doctor, nurse, or other health worker ever say anything to you about your alcohol use?  
   • Yes  
   • No  
   • Don’t know/Don’t remember

C. Have you been to see a doctor, dentist, nurse, nurse practitioner, physician's assistant, or chiropractor for medical care in an outpatient setting, meaning doctor's office or clinic in the past 6 months?  
   • Yes  
   • No

**BRANCH if C=1 (Yes) THEN continue to 11-15:**

11. Have you been to see a doctor, dentist, nurse, nurse practitioner, physician's assistant, or chiropractor for medical care in an outpatient setting, meaning doctor's office or clinic in the past 6 months for a **surgical** problem?  
   • Yes  
   • No

**BRANCH if 7.11=1 (Yes) THEN:**

11a. What was the total number of outpatient visits for a **surgical** problem? {insert #}
<table>
<thead>
<tr>
<th>11b. What was the average number of minutes spent per outpatient visit for a <strong>surgical</strong> problem? {insert #}</th>
</tr>
</thead>
</table>

12. Have you been to see a doctor, dentist, nurse, nurse practitioner, physician's assistant, or chiropractor for medical care in an outpatient setting, meaning doctor's office or clinic in the past 6 months for a **psychiatric** problem?

- **Yes**
- **No**

**BRANCH if 7.12=1 (Yes) THEN:**

12a. What was the total number of outpatient visits for a **psychiatric** problem? {insert #}

12b. What was the average number of minutes spent per outpatient visit for a **psychiatric** problem? {insert #}

13. Have you been to see a doctor, dentist, nurse, nurse practitioner, physician's assistant, or chiropractor for medical care in an outpatient setting, meaning doctor's office or clinic in the past 6 months for an **alcohol or drug** problem?

- **Yes**
- **No**

**BRANCH if 7.13=1 (Yes) THEN:**

13a. What was the total number of outpatient visits for an **alcohol or drug** problem? {insert #}

13b. What was the average number of minutes spent per outpatient visit for an **alcohol or drug** problem? {insert #}

14. Have you been to see a doctor, dentist, nurse, nurse practitioner, physician's assistant, or chiropractor for medical care in an outpatient setting, meaning doctor's office or clinic in the past 6 months for any **other medical** problem?

- **Yes**
- **No**

**BRANCH if 7.14=1 (Yes) THEN:**

14a. What was the total number of outpatient visits for any **other medical** problem? {insert #}
14b. What was the average number of minutes spent per outpatient visit for any other medical problem? {insert #}

BRANCH if 7.11 or 7.12 or 7.13 or 7.14=1 (Yes) THEN:
15. When you were treated in a clinic or office, did the doctor, nurse, or other health worker ever say anything to you about your alcohol use?
   "Yes
   "No
   "Don’t know/Don’t remember

8. Driving Accidents

These next questions are about driving accidents in the past 6 months.

1. Were you the driver of a car, truck, motorcycle or boat that was involved in a crash in the past 6 months?
   "Yes
   "No

BRANCH if 8.1=1 (Yes) THEN:

1a. How many times were you the driver in a crash where there were no injuries, but only damage to the vehicle? {insert #}

1b. How many times were you the driver in a crash where people, including yourself, were injured but did not die? {insert #}

BRANCH if 1b > 0 THEN:

1c. How many people were injured but did not die? {insert #}

BRANCH if 8.1=1 (Yes) THEN:

1d. How many times were you the driver in a crash where someone died? {insert #}

BRANCH if 1d > 0 THEN:

1e. How many people died in this crash? {insert #}

1f. How many people were injured in this crash, but did not die? {insert #}
9. Legal Issues

These next questions are about legal issues.

1. How many times have you been in contact with the court, criminal justice system, or probation/parole officer in the past 6 months? \{insert \#\}

2. How many times have you had a significant discussion about your legal problems in the past 6 months? \{insert \#\}

3. Have you been arrested for anything in the past 6 months?
   - Yes
   - No

   **BRANCH if 9.3=1 (Yes) THEN:**

4. What were you specifically charged with and how many times? For example, this could include things like robbery, burglary, criminal or property damage, controlled substance or liquor violation, drunk driving, assault, etc...[Do not read list to patient]
   - "Robbery or attempt"
   - "Burglary or attempt"
   - "Criminal Damage or property damage"
   - "Controlled substance/liquor violation"
   - "Drunk driving"
   - "Rape and sexual assault excluding child abuse"
   - "Other assault or attempt"
   - "Larceny or attempt"
   - "Child abuse"
   - "Motor vehicle theft or attempt"
   - "Arson"
   - "Resist/Obstruct officer/ disorderly conduct"
   - "Fatal crime"
   - "Other"

   **BRANCH if 9.4.1=1 (Yes) THEN:**

4a. Number of times: Robbery or attempt in the past 6 months? \{insert \#\}

**BRANCH if 9.4.2=1 (Yes) THEN:**

4b. Number of times: burglary or attempt in the past 6 months? \{insert \#\}
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BRANCH if 9.4.3=1 (Yes) THEN:</strong> 4c. Number of times: criminal damage or property damage in the past 6 months? {insert #}</td>
<td></td>
</tr>
<tr>
<td><strong>BRANCH if 9.4.4=1 (Yes) THEN:</strong> 4d. Number of times: Controlled substance/liquor violation in the past 6 months? {insert #}</td>
<td></td>
</tr>
<tr>
<td><strong>BRANCH if 9.4.5=1 (Yes) THEN:</strong> 4e. Number of times: Drunk driving in the past 6 months? {insert #}</td>
<td></td>
</tr>
<tr>
<td><strong>BRANCH if 9.4.6=1 (Yes) THEN:</strong> 4f. Number of times: Rape and sexual assault excluding child abuse in the past 6 months? {insert #}</td>
<td></td>
</tr>
<tr>
<td><strong>BRANCH if 9.4.7=1 (Yes) THEN:</strong> 4g. Number of times: Other assault or attempt in the past 6 months? {insert #}</td>
<td></td>
</tr>
<tr>
<td><strong>BRANCH if 9.4.8=1 (Yes) THEN:</strong> 4h. Number of times: Larceny or attempt in the past 6 months? {insert #}</td>
<td></td>
</tr>
<tr>
<td><strong>BRANCH if 9.4.9=1 (Yes) THEN:</strong> 4i. Number of times: Child abuse in the past 6 months? {insert #}</td>
<td></td>
</tr>
<tr>
<td><strong>BRANCH if 9.4.10=1 (Yes) THEN:</strong> 4j. Number of times: Motor vehicle theft or attempt in the past 6 months? {insert #}</td>
<td></td>
</tr>
<tr>
<td><strong>BRANCH if 9.4.11=1 (Yes) THEN:</strong> 4k. Number of times: Arson in the past 6 months? {insert #}</td>
<td></td>
</tr>
<tr>
<td><strong>BRANCH if 9.4.12=1 (Yes) THEN:</strong> 4l. Number of times: Resist/Obstruct officer/disorderly conduct in the past 6 months? {insert #}</td>
<td></td>
</tr>
<tr>
<td>4m. Number of times: Fatal crime in the past 6 months?</td>
<td>insert #</td>
</tr>
<tr>
<td>-----------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>4n. Specify:</td>
<td>text</td>
</tr>
<tr>
<td>4m. Number of times: “other” in the past 6 months?</td>
<td>insert #</td>
</tr>
</tbody>
</table>

## 10. Employment and Work Absences

The next questions concern employment and work absences.

1. In the last week, did you do any work for either pay or profit?
   - Yes
   - No

   **BRANCH if 10.1=1 (Yes) THEN:**

2. What is your occupation?
   - Professional specialty and technical
   - Executive, administrative and managerial
   - Sales
   - Administrative support
   - Precision production, craft and repair
   - Machine operators
   - Transportation and material moving
   - Handlers, equipment cleaners, helpers and laborers
   - Service occupations
   - Military
   - Other

   **BRANCH if 10.2.=11 (Other) THEN:**

2a. Specify:_____________________

3. In the past 30 days, how many full days have you missed work because of your own health problems or illness, a family member’s health problem or illness, because of a legal problem, or other problem? {insert #}

**BRANCH if 10.3 >0 THEN:**
<table>
<thead>
<tr>
<th><strong>3a.</strong> How many of these days were due to your own health problems? {insert #}</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3b.</strong> How many of these days were due to a family member’s health problems? {insert #}</td>
</tr>
<tr>
<td><strong>3c.</strong> How many of these days were due to legal problems? {insert #}</td>
</tr>
<tr>
<td><strong>3d.</strong> How many of these days were due to other problems? {insert #}</td>
</tr>
</tbody>
</table>

**BRANCH if 10.3.d >0 THEN:**

3e. Specify:_____________________

---

**THE FOLLOWING QUESTIONS ARE ONLY ASKED AT THE 1 AND 6 MONTH ASSESSMENTS**

**11. Short Inventory of Problems [SIP-2R]**

I’m going to ask you 15 questions about how often or how much you have experienced certain things that are often associated with drinking. Listen to each question carefully. When you give your answer, think about your experiences during the past 6 months.

<table>
<thead>
<tr>
<th><strong>1. During the past 6 months, how often have you been unhappy because of your drinking?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>“Never”</td>
</tr>
<tr>
<td>“once or a few times”</td>
</tr>
<tr>
<td>“once or twice a week”</td>
</tr>
<tr>
<td>“daily or almost daily”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>2. In the past 6 months, how often have you not eaten properly because of your drinking?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>“Never”</td>
</tr>
<tr>
<td>“once or a few times”</td>
</tr>
<tr>
<td>“once or twice a week”</td>
</tr>
<tr>
<td>“daily or almost daily”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>3. In the past 6 months, how often have you failed to do what is expected of you because of your drinking?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>“Never”</td>
</tr>
<tr>
<td>“once or a few times”</td>
</tr>
<tr>
<td>“once or twice a week”</td>
</tr>
<tr>
<td>“daily or almost daily”</td>
</tr>
</tbody>
</table>
4. In the past 6 months, how often have you felt guilty or ashamed because of your drinking?
   - Never
   - Once or a few times
   - Once or twice a week
   - Daily or almost daily

5. In the past 6 months, how often have you taken foolish risks when you have been drinking?
   - Never
   - Once or a few times
   - Once or twice a week
   - Daily or almost daily

6. In the past 6 months, how often have you done impulsive things that you regretted later when you have been drinking?
   - Never
   - Once or a few times
   - Once or twice a week
   - Daily or almost daily

7. During the past 6 months, how much has your physical health been harmed by your drinking?
   - Not at all
   - A little
   - Somewhat
   - Very much

8. During the past 6 months, how much have you had money problems because of your drinking?
   - Not at all
   - A little
   - Somewhat
   - Very much

9. During the past 6 months, how much has your physical appearance been harmed by your drinking?
   - Not at all
   - A little
   - Somewhat
   - Very much

10. During the past 6 months, how much has your family been hurt by your drinking?
    - Not at all
    - A little
    - Somewhat
    - Very much

11. During the past 6 months, how much has a friendship or a close relationship been damaged by your
    - Not at all
    - A little
    - Somewhat
    - Very much
12. During the past 6 months, how much has your drinking gotten in the way of your growth as a person?
   "Not at all
   "A little
   "somewhat
   "very much

13. During the past 6 months, how much has your drinking damaged your social life, popularity, or reputation?
   "Not at all
   "A little
   "somewhat
   "very much

14. During the past 6 months, how much have you spent too much or lost a lot of money because of your drinking?
   "Not at all
   "A little
   "somewhat
   "very much

15. In the past 6 months, have you had an accident while drinking or intoxicated?
   "Not at all
   "A little
   "somewhat
   "very much

THE FOLLOWING QUESTIONS ARE ONLY ASKED AT THE 6 MONTH ASSESSMENT

12. Injury Behavior Checklist

Now I am going to ask if you have been injured in certain ways in the past 6 months. If you answer yes, I will ask you how many times this has happened in the past 6 months, how many times those injuries required treatment by a doctor, and how many times you had been drinking within 2 hours prior to the injury [Include ED Enrollment Visit if falls within past 6 months].

1. During the past 6 months, have you been injured in a physical fight with someone?
   "Yes
   "No

BRANCH if 12.1=1 (Yes) THEN:

1a. How many times were you injured? {insert #}

1b. For how many of these injuries were you treated by a doctor? {insert #}
1c. For how many of these injuries had you been drinking alcohol within 2 hours of the injury?  
\{insert #\}

2. During the past 6 months, have you been injured by cutting yourself?
  "Yes
  "No

BRANCH if 12.2=1 (Yes) THEN:

  2a. How many times were you injured?  \{insert #\}

  2b. For how many of these injuries were you treated by a doctor?  \{insert #\}

  2c. For how many of these injuries had you been drinking alcohol within 2 hours of the injury?  
  \{insert #\}

3. During the past 6 months, have you been injured by a gun, BB gun, or pellet gun?
  "Yes
  "No

BRANCH if 12.3=1 (Yes) THEN:

  3a. How many times were you injured?  \{insert #\}

  3b. For how many of these injuries were you treated by a doctor?  \{insert #\}

  3c. For how many of these injuries had you been drinking alcohol within 2 hours of the injury?  
  \{insert #\}

4. During the past 6 months, have you been injured by being hit by something like a rock or glass?
  "Yes
  "No

BRANCH if 12.4=1 (Yes) THEN:

  4a How many times were you injured?  \{insert #\}

  4b. For how many of these injuries were you treated by a doctor?  \{insert #\}
<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
<th>BRANCH if ( 12.5 = 1 ) (Yes) THEN:</th>
</tr>
</thead>
<tbody>
<tr>
<td>4c. For how many of these injuries had you been drinking alcohol within 2 hours of the injury?</td>
<td>{insert #}</td>
<td>5a. How many times were you injured?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>{insert #}</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5b. For how many of these injuries were you treated by a doctor? {insert #}</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5c. For how many of these injuries had you been drinking alcohol within 2 hours of the injury? {insert #}</td>
</tr>
<tr>
<td>5. During the past 6 months, have you been injured by nearly drowning?</td>
<td>\textquotedblleft Yes\textquotedblright\</td>
<td>6. During the past 6 months, have you been injured by falling?</td>
</tr>
<tr>
<td></td>
<td>\textquotedblleft No\textquotedblright\</td>
<td>\textquotedblleft Yes\textquotedblright\</td>
</tr>
<tr>
<td></td>
<td></td>
<td>\textquotedblleft No\textquotedblright\</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BRANCH if ( 12.6 = 1 ) (Yes) THEN:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6a. How many times were you injured?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>{insert #}</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6b. For how many of these injuries were you treated by a doctor? {insert #}</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6c. For how many of these injuries had you been drinking alcohol within 2 hours of the injury? {insert #}</td>
</tr>
<tr>
<td>7. During the past 6 months, were you injured by being burned by fire, chemicals, electricity, or hot liquid?</td>
<td>\textquotedblleft Yes\textquotedblright\</td>
<td>\textquotedblleft Yes\textquotedblright\</td>
</tr>
<tr>
<td></td>
<td>\textquotedblleft No\textquotedblright\</td>
<td>\textquotedblleft No\textquotedblright\</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BRANCH if ( 12.7 = 1 ) (Yes) THEN:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7a How many times were you injured?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>{insert #}</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7b. For how many of these injuries were you treated by a doctor? {insert #}</td>
</tr>
</tbody>
</table>
For how many of these injuries had you been drinking alcohol within 2 hours of the injury? (insert #)

8. During the past 6 months, were you injured by an animal or serious insect bite?
   - Yes
   - No

   BRANCH if 12.8=1 (Yes) THEN:

   8a How many times were you injured? (insert #)

   8b. For how many of these injuries were you treated by a doctor? (insert #)

   8c. For how many of these injuries had you been drinking alcohol within 2 hours of the injury? (insert #)

9. During the past 6 months, were you injured while driving a car, truck, or bus?
   - Yes
   - No

   BRANCH if 12.9=1 (Yes) THEN:

   9a How many times were you injured? (insert #)

   9b. For how many of these injuries were you treated by a doctor? (insert #)

   9c. For how many of these injuries had you been drinking alcohol within 2 hours of the injury? (insert #)

10. During the past 6 months, were you injured while a passenger in a car, truck, or bus?
    - Yes
    - No

    BRANCH if 12.10=1 (Yes) THEN:

    10a How many times were you injured? (insert #)

    10b. For how many of these injuries were you treated by a doctor? (insert #)
10c. For how many of these injuries had you been drinking alcohol within 2 hours of the injury? \{ insert \# \}

11. During the past 6 months, were you injured while riding a motorcycle, moped, snowmobile, or all-terrain vehicle?
   "Yes
   "No

<table>
<thead>
<tr>
<th>BRANCH if 12.11=1 (Yes) THEN:</th>
</tr>
</thead>
<tbody>
<tr>
<td>11a How many times were you injured? { insert # }</td>
</tr>
<tr>
<td>11b. For how many of these injuries were you treated by a doctor? { insert # }</td>
</tr>
<tr>
<td>11c. For how many of these injuries had you been drinking alcohol within 2 hours of the injury? { insert # }</td>
</tr>
</tbody>
</table>

12. During the past 6 months, were you injured by being hit by a moving vehicle while walking?
   "Yes
   "No

<table>
<thead>
<tr>
<th>BRANCH if 12.12=1 (Yes) THEN:</th>
</tr>
</thead>
<tbody>
<tr>
<td>12a How many times were you injured? { insert # }</td>
</tr>
<tr>
<td>12b. For how many of these injuries were you treated by a doctor? { insert # }</td>
</tr>
<tr>
<td>12c. For how many of these injuries had you been drinking alcohol within 2 hours of the injury? { insert # }</td>
</tr>
</tbody>
</table>

13. During the past 6 months, were you injured by being sexually assaulted?
   "Yes
   "No

<table>
<thead>
<tr>
<th>BRANCH if 12.13=1 (Yes) THEN:</th>
</tr>
</thead>
<tbody>
<tr>
<td>13a How many times were you injured? { insert # }</td>
</tr>
<tr>
<td>13b. For how many of these injuries were you treated by a doctor? { insert # }</td>
</tr>
<tr>
<td>Question</td>
</tr>
<tr>
<td>------------------------------------------------------------</td>
</tr>
<tr>
<td>13c. For how many of these injuries had you been drinking alcohol within 2 hours of the injury?</td>
</tr>
<tr>
<td>14. During the past 6 months, were you injured by playing sports or exercising?</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>BRANCH if 12.14=1 (Yes) THEN:</td>
</tr>
<tr>
<td>14a. How many times were you injured?</td>
</tr>
<tr>
<td>14b. For how many of these injuries were you treated by a doctor?</td>
</tr>
<tr>
<td>14c. For how many of these injuries had you been drinking alcohol within 2 hours of the injury?</td>
</tr>
<tr>
<td>15. During the past 6 months, were you injured by other games or activities?</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>BRANCH if 12.15=1 (Yes) THEN:</td>
</tr>
<tr>
<td>15a. How many times were you injured?</td>
</tr>
<tr>
<td>15b. For how many of these injuries were you treated by a doctor?</td>
</tr>
<tr>
<td>15c. For how many of these injuries had you been drinking alcohol within 2 hours of the injury?</td>
</tr>
<tr>
<td>16. Wrap-Up</td>
</tr>
</tbody>
</table>

That was my last question for today. Thank you for taking the time to complete this questionnaire! As you know, you will be paid for today’s interview. So before you go, I would like to confirm your mailing address so I can ensure your gift card gets to you.

1. Next Appointment Date [mm-dd-yy]

2. Next appointment time [hh:mm]
Number to call: [xxx-xxx-xxxx]

Thank you so much for your time and have a great day.

### 17. Researcher’s Comments

**DO NOT READ TO PATIENT – TO BE COMPLETED BY RA**

1. Quality of interview
   - high quality
   - generally reliable
   - questionable
   - unsatisfactory

2. Time ended [hh:mm]

3. Please write a brief description of the interview or other notes to help you remember. {insert text}