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Including a Screening and Brief Alcohol Intervention Program in the Care of the Obstetric Patient

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ABSTRACT

Alcohol is the drug most commonly abused by pregnant women and the leading cause of preventable birth defects across the United States. Screening, Brief Intervention, and Referral for Treatment is a program developed by the Emergency Nurses Association that has demonstrated success in treating patients who have alcohol use disorders. This interventional program can be useful to perinatal nurses caring for pregnant women with alcohol use disorders in a variety of settings.

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Alcohol use disorder is a major problem in the United States crossing all social, economic, and cultural boundaries. Those who abuse alcohol may engage in high-risk and violent behaviors that can result in devastating outcomes for individuals, families, and society. Some of the most severe outcomes of alcohol use disorder include death, illness, and disruption of the family structure (Bailey & Sokol, 2008; Betz & Li, 2007; Cherpitel, 2007). Additionally, women who are considering pregnancy or are already pregnant and abuse alcohol pose a risk to not only themselves, but also to their unborn children. Approximately 1 of every 100 children in the United States is born with fetal alcohol spectrum disorder (FASD), a disorder directly related to alcohol consumption during pregnancy (Sampson et al., 1997). Infants with FASD are often born prematurely and with low birth weights, costing $5 to 6 billion more than normal birth weight infants (Flynn & Chermack, 2008; Green, 2007). This article provides an overview of a new screening and intervention program promoted by leaders in the Emergency Nurses Association (ENA) known as "Screening, Brief Intervention, and Referral for Treatment" (SBIRT) for use in the treatment of patients with alcohol use disorders (ENA, 2008).

In the United States, alcohol is the drug most commonly abused by pregnant women and is one of the leading preventable causes of infant birth defects including retardation and developmental disorders (American Academy of Pediatrics, Committee on Substance Abuse and Committee on Children With Disabilities [AAP], 2000; Randall, 2001). According to U.S. data collected over 2006 to 2007, 11.6% of pregnant women reported drinking alcohol during their pregnancy, and 3.7% reported binge drinking during pregnancy (Substance Abuse and Mental Health Service Administration, Office of Applied Studies, 2008). In fact, binge drinking prepregnancy is highly associated with continued drinking during pregnancy (Naimi, Lipscomb, Brewer, & Gilbert, 2003). While these statistics are significant, most of the data comes from self-report. Since self-report of alcohol consumption is highly underreported, the actual percent of women drinking during pregnancy is likely to be much higher than reported (Sommers, Dyehouse, Howe, Wekselman, & Fleming, 2002).

One of the Healthy People 2010 goals is to have 100% elimination of binge drinking and 94% abstinence from drinking during pregnancy for the health of the pregnant woman and the future of our

Screening, Brief Intervention, and Referral for Treatment provides resources for nurses to screen for alcohol disuse, brief interventions, and referral for treatment.

children (Suellentrop, Morrow, Williams, & D'Angelo, 2006; U.S. Department of Health and Human Services, 2000). Perinatal nurses can help to reach this goal by providing early screening and interventions for women at risk for alcohol use disorder. Alcohol use disorder refers to patients who abuse alcohol or are dependent on alcohol and includes a spectrum of alcohol problems ranging from at-risk drinking to dependence (American Psychiatric Association, 2000; Berk, Bernstein, Bernstein, Coletsos, & D'Onofrio, 2004).

Effects of Alcohol on Pregnancy

It is well documented that alcohol is toxic to fetal neurological development; however, the amount of alcohol required to cause birth defects is controversial (AAP, 2000; Hantsch & Seger, 2004; Henderson, Kesmodel, & Gray, 2007). While some authors report that the amount of alcohol ingestion required to cause fetal abnormalities has not been determined (AAP), other researchers have reported that pregnant women who ingest more than 5 ounces of alcohol per day have an associated 40% risk of delivering an infant with birth defects (Abel, 1997; Yip, 2002). Alcohol is also known to cause complications with pregnancy. Maternal complications can include spontaneous abortion, preterm labor, and intrauterine fetal demise (Gauthier, Drews-Botsch, Falek, Coles, & Brown, 2005; Strandberg-Larsen et al., 2008).

The most well known consequence of drinking alcohol during pregnancy is FASD or alcohol-related birth defects (Habal & Sauter, 2006; Randall, 2001; Shankar, Ronis, & Badger, 2007). Fetal alcohol spectrum disorder is considered the most common cause of preventable mental retardation in the United States and comprises a myriad of behavioral and biological disorders including behavioral difficulties (ranging from minor behavior problems to long-term sustained learning and behavioral problems), intrauterine growth retardation, cranial facial anomalies, and abnormalities that affect the central nervous, cardiovascular, urogenital, and gastrointestinal systems (see Table 1; Bailey & Sokol, 2008; Berk & Henderson, 2004; Habal & Sauter; Shankar et al.; Wattendorf & Muenke, 2005). In addition, children with FASD often require long-term educational support such as special education teachers, specialized school counselors, speech and language therapists, occupational therapists, and support staff throughout their formative years (Flynn & Chermack, 2008; Green, 2007).

Table 1: Fetal Alcohol Spectrum Disorder Birth Defects

Central nervous system
• Cognitive impairment
• Sensory impairment
• Language impairment
• Delayed motor development and poor coordination
• Seizure disorder
• Hyperactivity, attention disorder
• Abnormal myelination
• Microcephaly
• Corpus callosum agenesis
Craniofacial abnormalities
• Epicanthal folds
• Flat nasal bridge
• Small palpebral fissures
• "Railroad track ears"
• Upturned nose
• Smooth philtrum
• Thin upper lip
• Small head circumference
• Ptosis of eyelids
• Flat midface
• Head, eyes, ears, nose, and throat problems
• Hearing problems
Cardiovascular
• Ventricular and atrial septal defects
• Tetralogy of fallot
• Great vessel abnormalities
Urogenital
• Hydronephrosis
• Renal dysplasia
• Hyperspadias
Gastrointestinal
• Absent abdominal wall

Source: Wattendorf and Muenke (2005) and Habal and Sauter (2006).

Brief Intervention for Alcohol Use Disorder

The SBIRT initiative is being promoted by leaders in emergency nursing in an effort to screen all emergency department (ED) patients for alcohol use disorder and to provide a brief intervention and referral for treatment. This initiative can be useful for perinatal nurses that are equally committed to provide screening and interventions for pregnant patients with alcohol use disorders (Babor et al., 2007; Bernstein et al., 2007; Desy & Perhats, 2008; D'Onofrio, Pantalon, Degutis, Fiellin, & O'Connor, 2005). The positive effect of brief interventions has been well documented in the literature. In a systematic review of 22 randomized control trials (RCTs) conducted on the effect of brief alcohol interventions, subjects in the intervention group had an average lower overall alcohol consumption of 38 g (approximately three alcoholic drinks) after the intervention (Kaner et al., 2008). Additionally, there have been many RCTs and non-RCTs conducted across the country that demonstrated significant reductions in alcohol use after a brief motivational interview (Bertholet, Daeppen, Wietlisbach, Fleming, & Burnand, 2005; Bien, Miller, & Tonigan, 1993; Fleming, Barry, Manwell, Johnson, & London, 1997; Gentilello et al., 1999; Sommers et al., 2006). Finally, there have also been several studies on the effect of brief intervention for alcohol use conducted solely on the pregnant population (Chang et al., 2005; O'Connor & Whaley, 2007).

In a 2007 study of 53 Public Health Foundation Enterprises Management Solutions Special Supplemental Nutrition Program for Women, Infants, and Children in Los Angeles and Orange Counties, pregnant women were assessed for alcohol use disorders in an effort to determine if providing brief interventions would make a difference in their drinking habits (O'Connor & Whaley, 2007). The findings revealed that women in the brief intervention group were five times more likely to refrain from drinking by the third trimester. In addition, there were significantly more positive newborn outcomes, and fetal mortality rates were three times lower among the mothers in the brief intervention group. In two other similar studies on effects of brief alcohol intervention counseling for pregnant women, the brief intervention for alcohol use was directly related to a decrease in alcohol consumption among all pregnant women with one study reporting the most dramatic decrease in alcohol use among those women who abused alcohol most severely (Chang et al., 2005; Ingersoll, Floyd, Sobell, Velasquez, & Project CHOICES Intervention Research G, 2003).

One of the Healthy People 2010 goals is to have 100% elimination of binge drinking and 94% abstinence from drinking during pregnancy.

The SBIRT program consists of screening, brief intervention, and referral for treatment. This program is available to all health care providers free of charge on the ENA Web site at http://www.ena.org/ipinstitute/SBIRT/ToolKit/Pages/toolkit.aspx. A summary and reference for implementing the SBIRT intervention is provided in Figure 1.

Screening

The ENA has provided a simple pocket guide to assist the nurse in conducting a brief screening and intervention for patients with alcohol use problems (ENA, 2008; Figure 1). Initial screening should begin with a simple question such as, "How often have you had an alcoholic beverage in the past year?" If the patient does not drink, then the screening is over. However, if there is a positive response, then the clinician should determine if the patient drinks above the standards recommended by the National Institute on Alcohol Abuse and Alcoholism (NIAA, 2005). If the patient reports drinking habits above the national recommendations, then further screening is suggested. The nurse will then need to determine if the patient is a "nondependent" drinker or a "dependent" drinker. Since brief interventions are designed and tested on the nondependent drinker population, patients who score in the dependent drinker level should be referred for professional alcohol counseling (ENA).

The CAGE questionnaire is a useful screening tool that takes just a minute to complete. It consists of four simple questions aimed at quickly identifying a patient with alcohol use problems: Have you ever felt the need to *C*ut down on your drinking? Felt *A*nnoyed by criticism of your drinking? Had *G*uilty feeling about drinking? Taken a morning *E*ye-opener? The CAGE tool has good sensitivity and specificity levels and uses two positive responses out of a total of four questions to identify a patient with alcohol use disorder (Bradley, Boyd-Wickizer, Powell, & Burman, 1998; Castells & Furlanetto, 2005; Dhalla & Kopec, 2007; Malet, Schwan, Boussiron, Aublet-Cuvelier, & Llorca, 2005). The SBIRT program suggests using one positive response on the CAGE test to identify a patient who is a nondependent drinker. A patients who report a positive response to the first question on the CAGE questionnaire or has two or more positive responses on

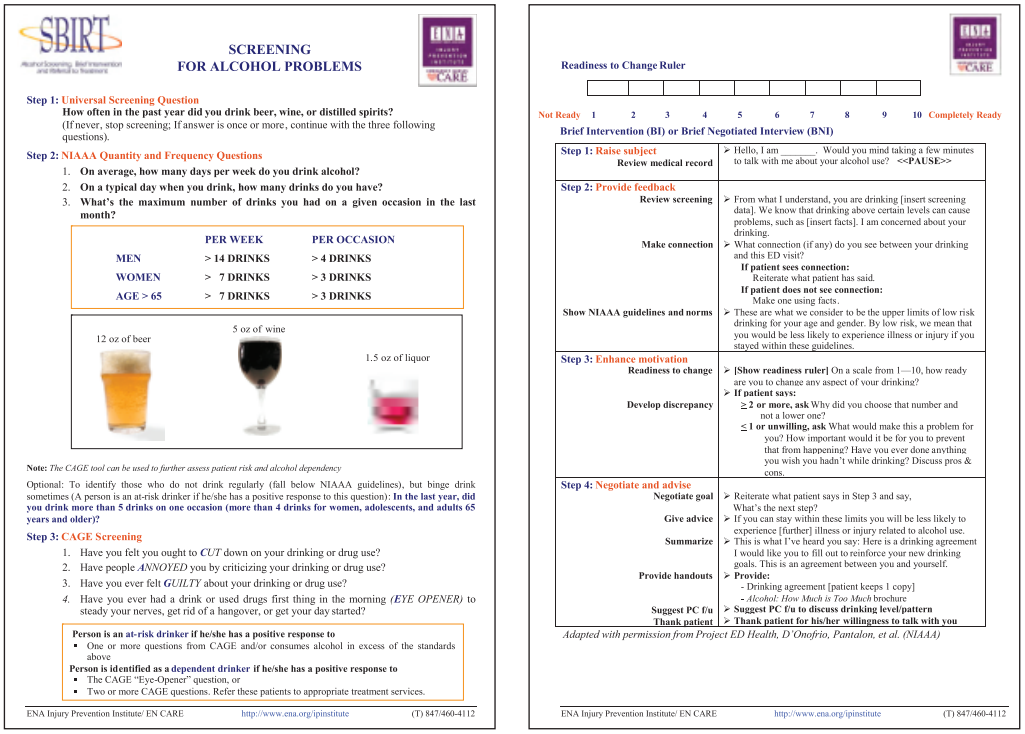
the CAGE test may be a dependent drinker and should be referred for professional alcohol counseling. This patient would not be appropriate for a brief intervention. Once a patient has been identified as having a nondependent alcohol use disorder, a brief intervention is initiated.

Brief Intervention

The theory behind providing a brief motivational interview is that the patient, as a result of the interview with the nurse, will become self-motivated to address her alcohol problems. The nurse must approach the patient in a nonjudgmental, compassionate manner if the interview is to be effective. The interview questions are designed to allow the patient to discuss her relationship with alcohol and how alcohol has affected her life and the lives of the people around her. These questions should provide an opportunity for the patient to become introspective about her drinking and hence come to an understanding of how alcohol is interfering with her life. At the end of this interview, the patient is provided with written information about responsible alcohol use and recommendations, how to begin dealing with alcohol problems, and referred for further counseling and assistance. The nature of the referral ranges from private and public alcohol treatment centers to Alcoholics Anonymous groups in her area.

The FRAMES model, first introduced by Miller and Rollnick in the early 1990s (Miller & Rollnick, 1991, 2002) is the most widely recommended and easy to use format for performing a brief motivational interview. The questions below have been reformatted to reflect content useful for pregnant patients.

1. F: Feedback of personal risk. Compare the patient's level of drinking patterns with pregnancy recommended abstinence. She may not be aware that any level of drinking during pregnancy is actually risky.
2. R: Responsibility for personal control. Stress the responsibility of the patient to make the change for the health of her baby.
3. A: Advice to change. Give direct advice (not insistence) to change her drinking behavior.



SBIRT

SCREENING FOR ALCOHOL PROBLEMS

EN CARE

Step 1: Universal Screening Question

How often in the past year did you drink beer, wine, or distilled spirits?
(If never, stop screening; If answer is once or more, continue with the three following questions).

Step 2: NIAAA Quantity and Frequency Questions

1. **On average, how many days per week do you drink alcohol?**
2. **On a typical day when you drink, how many drinks do you have?**
3. **What's the maximum number of drinks you had on a given occasion in the last month?**

	PER WEEK	PER OCCASION
MEN	> 14 DRINKS	> 4 DRINKS
WOMEN	> 7 DRINKS	> 3 DRINKS
AGE > 65	> 7 DRINKS	> 3 DRINKS

Note: *The CAGE tool can be used to further assess patient risk and alcohol dependency*

Optional: To identify those who do not drink regularly (fall below NIAAA guidelines), but binge drink sometimes (A person is an at-risk drinker if he/she has a positive response to this question): **In the last year, did you drink more than 5 drinks on one occasion (more than 4 drinks for women, adolescents, and adults 65 years and older)?**

Step 3: CAGE Screening

1. Have you felt you ought to *CUT* down on your drinking or drug use?
2. Have people *ANNOYED* you by criticizing your drinking or drug use?
3. Have you ever felt *GUILTY* about your drinking or drug use?
4. Have you ever had a drink or used drugs first thing in the morning *(EYE OPENER)* to steady your nerves, get rid of a hangover, or get your day started?

Person is an at-risk drinker if he/she has a positive response to
- One or more questions from CAGE and/or consumes alcohol in excess of the standards above

Person is identified as a dependent drinker if he/she has a positive response to
- The CAGE "Eye-Opener" question, or
- Two or more CAGE questions. Refer these patients to appropriate treatment services.

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Readiness to Change Ruler

Not Ready 1 2 3 4 5 6 7 8 9 10 Completely Ready

Brief Intervention (BI) or Brief Negotiated Interview (BNI)

Step 1: Raise subject **Review medical record**	➢ Hello, I am _____. Would you mind taking a few minutes to talk with me about your alcohol use? **<<PAUSE>>**
Step 2: Provide feedback **Review screening**	➢ 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.
Make connection	➢ What connection (if any) do you see between your drinking and this ED visit? **If patient sees connection:** Reiterate what patient has said. **If patient does not see connection:** Make one using facts.
Show NIAAA guidelines and norms	➢ These are what we consider to be the upper limits of low risk drinking for your age and gender. By low risk, we mean that you would be less likely to experience illness or injury if you stayed within these guidelines.
Step 3: Enhance motivation **Readiness to change**	➢ **[Show readiness ruler]** On a scale from 1—10, how ready are you to change any aspect of your drinking?
Develop discrepancy	➢ **If patient says:** **≥ 2 or more, ask** Why did you choose that number and not a lower one? **≤ 1 or unwilling, ask** What would make this a problem for you? How important would it be for you to prevent that from happening? Have you ever done anything you wish you hadn't while drinking? Discuss pros & cons.
Step 4: Negotiate and advise **Negotiate goal**	➢ Reiterate what patient says in Step 3 and say, What's the next step?
Give advice	➢ If you can stay within these limits you will be less likely to experience [further] illness or injury related to alcohol use.
Summarize	➢ This is what I've heard you say: Here is a drinking agreement I would like you to fill out to reinforce your new drinking goals. This is an agreement between you and yourself.
Provide handouts	➢ **Provide:** - Drinking agreement [patient keeps 1 copy] - *Alcohol: How Much is Too Much* brochure
Suggest PC f/u	➢ **Suggest PC f/u to discuss drinking level/pattern**
Thank patient	➢ **Thank patient for his/her willingness to talk with you**

Adapted with permission from Project ED Health, D'Onofrio, Pantalon, et al. (NIAAA)

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Figure 1. The Alcohol Screening, Brief Intervention, and Referral to Treatment.

Note. Used with permission from the Emergency Nurses Association (ENA) and the ENA Injury Prevention Institute/EN CARE. The Alcohol Screening, Brief Intervention and Referral to Treatment (SBIRT) Implementation Toolkit was developed by the ENA Injury Prevention Institute/EN CARE. You may download the toolkit at http://www.ena.org/ipinstitute/SBIRT/ToolKit/Pages/toolkit.aspx. For a hard copy please email ipinstitute@ena.org

4. M: Menu. Menu of ways to reduce/stop drinking—identify when she is likely to drink and solicit alternate ways that she might handle social situations.
5. E: Empathy. Use a style of interaction that is understanding and involved. Remain positive and encouraging and avoid being judgmental or preachy.
6. S: Self-efficacy. Elicit and reinforce self-motivating statements and self-talk such as, "I am confident that I can stop drinking." Encourage the patient to develop strategies, implement them, and commit to change.

The FRAMES model is incorporated in the SBIRT program by using a four-step approach adapted for the pregnant population.

1. Step 1: Raise the subject. Introduce yourself and ask the patient if she is willing to spend a few minutes discussing her alcohol use.
2. Step 2: Provide feedback. Review the results of the screening test. Make an attempt to help the patient see the connection between her alcohol use and her pregnancy. Show the patient the NIAA (2005) recommended guidelines for responsible alcohol use and discuss how she exceeded the recommended guidelines and review the consequences alcohol poses to her unborn child.
3. Step 3: Readiness to change. Show the patient the readiness to change rule and ask how motivated she is to change her drinking behavior on a scale from 1 to 10. If she indicates she is not ready, ask why. If she indicates she has low motivation to change, ask her what would make her chose a lower or higher number. Try to engage the patient in a conversation about why she has low readiness to change scores.
4. Step 4: Negotiate and advise. If the patient says that she is ready to consider changing her behavior, ask her what she would like to do next? Give her advice about normal and acceptable alcohol ingestion (using NIAA guidelines). Advise her about the reduced risk of harm to herself, her unborn child, and innocent victims if she continues on the path of responsible drinking behaviors.

a. Ask the patient to sign an agreement to reinforce her drinking goals for the future. Make sure the patient realizes that the agreement is between "herself and herself." Signing an agreement solidifies her commitment to change her drinking behavior (Figure 2).

Successful screening and intervention can result in children being born without complications.

b. Finally, provide written handouts that include the drinking agreement, brochures about alcohol, and ways to decrease intake (The brochure "Alcohol: How much is Too Much" is available for free with the ENA SBIRT Toolkit at http://www.ena.org), and give her referrals for alcohol self-help groups (e.g., Alcoholics Anonymous) and private counselors.

Be prepared to answer questions. This brief intervention can take as little as 15 minutes or as long as 60 minutes. However, the intervention is not meant to be a counseling session. The idea of the motivational interview is to make patients aware of their alcohol problems and to get them started on a regimen of responsible behavior.

Discussion

Screening, Brief Intervention, and Referral for Treatment has been used successfully with many ED patients and can be an exciting tool for perinatal nurses to incorporate in their care of pregnant patients with alcohol use disorders. In order to support other nurses in using the toolkit, the ENA makes the toolkit available to all nurses by downloading it from the Internet (http://www.ena.org; ENA, 2008). There are a few barriers that perinatal nurses may face when initially incorporating the SBIRT tool with their pregnant patients. Motivational interviewing is a skill that takes a little time to learn and may be a somewhat intimidating for nurses when they first begin to master the skill. By watching the videos made available by the ENA, having a motivated and supportive staff to encourage the use of motivational interviewing, and making a commitment to the intervention will help perinatal nurses master the skill of motivational interviewing.

Implementing the intervention, although designed to take only 15 minutes, may indeed take more time in the beginning as nurses master the skill. Some patients will require an interview that lasts more than 15 minutes and may indeed require more time from the nurse. Finally, the topic of drinking during pregnancy is a sensitive topic and may be an uncomfortable topic for both the patient and the nurse. The nurse will become more comfortable with the topic as screening for

Institutional Logo

Drinking Agreement

Date: _____

I, _____, agree not to drink during my pregnancy.

Signature: _____

Witness: _____

_____

Institutional Logo

Drinking Agreement

Date: _____

I, _____, agree to the following drinking limit:

Number of drinks per week:_____

Number of drinks per occasion: _____

Signature: _____

Witness: _____

Figure 2. Drinking agreement.

Note. Used with permission from the Emergency Nurses Association (ENA) and the ENA Injury Prevention Institute/EN CARE. The Alcohol Screening, Brief Intervention and Referral to Treatment (SBIRT) Implementation Toolkit was developed by the ENA Injury Prevention Institute/EN CARE. You may download the toolkit at http://www.ena.org/ipinstitute/SBIRT/ToolKit/Pages/toolkit.aspx. For a hard copy please email ipinstitute@ena.org

alcohol use disorders becomes routine for all patients.

Conclusion

The use of SBIRT for pregnant patients with alcohol use disorder arms the perinatal nurse with a valuable tool she can use to prevent the potential complications alcohol poses to the mother and her unborn child. If a single perinatal nurse used the screening and intervention discussed above on one mother and if that intervention resulted in one child being born free of complications, that nurse made a difference for a healthier world.

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