

SCREENING, BRIEF INTERVENTION, AND REFERRAL TO TREATMENT BY EMERGENCY NURSES: A REVIEW OF THE LITERATURE



Authors: Jennifer Vipond and Heidi A. Mennenga, PhD, RN, CNE, Brookings, SD

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Contribution to Emergency Nursing Practice

- The current state of scientific knowledge on screening, brief intervention, and referral to treatment by emergency nurses is limited.
- The main finding of this review of the literature indicates this method can be implemented successfully with improved patient outcomes.
- Key implications for emergency nursing practice from this review of the literature are (1) screening, brief intervention, and referral to treatment may be an appropriate standard of care in the emergency department; and (2) emergency nurses should consider taking an active role in implementing screening, brief intervention, and referral to treatment.

Abstract

Introduction: Emergency nurses could assume a unique role in the screening process and provide patient education regarding the consequences of harmful alcohol use. Screening, brief intervention, and referral to treatment is an evidence-based method used to identify drinking behaviors that may

have a negative impact on people's lives and reduce abuse or dependence on alcohol.

Methods: A systematic review of the literature was conducted to evaluate both the effectiveness as well as the feasibility of nurse implementation of screening, brief intervention, and referral to treatment in the ED setting.

Results: The use of screening, brief intervention, and referral to treatment in the emergency department following nurse implementation resulted in a decrease in the drinking behaviors that may have negative effects. Emergency nurses were able to implement screening, brief intervention, and referral to treatment effectively, although some challenges occurred, such as nurse buy-in and limited funding support.

Discussion: The emergency department is an integral location for the implementation of screening, brief intervention, and referral to treatment because it can decrease injuries and readmissions due to the use of alcohol. Nurses play a key role in implementation because of their unique relationship with their patients. This review of the literature indicated that screening, brief intervention, and referral to treatment can be effective in the emergency department and successfully implemented by emergency nurses.

Key words: Alcohol use; Screening; Emergency nurses

Jennifer Vipond is an undergraduate Nursing Student at South Dakota State University, Brookings, SD.

Heidi Mennenga is Associate Professor, South Dakota State University, Brookings, SD.

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For correspondence, write: Heidi A. Mennenga, PhD, RN, CNE, 46374 188th Street, Castlewood, SD 57223; E-mail: Heidi.Mennenga@sdstate.edu.

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Alcohol, when consumed in excess, can be harmful and can lead to dangerous situations. Approximately 88,000 people die each year from causes related to alcohol. In 2014, 9,967 deaths were related to drunk driving.¹ In 2016, 23.4% of people aged 18 and older have had at least 1 day of heavy drinking.² Furthermore, from 2006 to 2014, alcohol-related visits to emergency departments increased by more than 60% and increased the length of stay by approximately 50 minutes, further straining the ED resources and staff that could be used otherwise.^{3,4} Screening, brief intervention, and referral to treatment (SBIRT) is a method used to identify behaviors of substance abuse—including alcohol

abuse—and provides referral and treatment options for persons who consume substances in excess.⁵ The purpose of this article is to present a review of the literature regarding the use of SBIRT to be implemented by emergency nurses for ED patients presenting with alcohol abuse.

Overview of Screening, Brief Intervention, and Referral to Treatment

When people are untreated for substance-abuse disorders, they are at a higher risk for several alcohol-related diseases. SBIRT is a method used to identify persons with substance-use disorders and reduce abuse or dependency on substances. When specifically used for alcohol abuse, people are screened using a variety of different tools and assessed for drinking behaviors that may cause negative effects; this is determined by how many drinks are consumed per day. The screening process determines the severity of substance use and the appropriate treatment, if indicated.⁵ Low-risk drinking for women is the consumption of no more than 3 drinks per day and no more than 7 drinks in a single week; for men, low-risk drinking is no more than 4 drinks per day and no more than 14 drinks in 1 week.⁶ A single drink contains 0.6 ounces of pure alcohol, which is equivalent to 12 ounces of beer, 8 ounces of malt liquor, 5 ounces of wine, or 1.5 ounces of 80-proof liquor.⁷ Brief intervention focuses on using motivational interviewing to increase awareness of the substance-use disorder and determine the person's motivation to change the behavior. Referral to treatment allows for persons who need extensive treatment to be appropriately matched with services.⁵ The emergency department is an especially relevant place to implement SBIRT owing to the high number of admissions due to alcohol consumption. Because of the high level of trust between nurses and their patients, nurses are important assets when carrying out the screening process of SBIRT.

Methods

This review of the literature focused on the use of SBIRT by emergency nurses. In 2018, a systematic review of the following databases was completed: PubMed, Cumulative Index of Nursing and Allied Health Literature (CINAHL), and Cochrane Library. Articles that were published between 2010 and 2018 were included. In addition, the articles had to be written in English and research conducted in the United States or countries with similar health care systems.

Articles were excluded if they were conducted in health care settings other than emergency departments or if SBIRT was implemented by health care providers other than nurses. The search yielded a total of 9 articles that met the inclusion/exclusion criteria. All 9 articles focused on the implementation of SBIRT by nurses in the emergency department; 4 articles focused on the effectiveness of SBIRT in the emergency department, and 5 articles evaluated whether ED nurses were able to implement SBIRT into their practice effectively.

Results

A summary of all articles that focused on effectiveness of SBIRT in the ED setting as well as feasibility of nurse implementation are found in [Table 1](#). Results of the literature review were largely positive, indicating that use of SBIRT effectively reduced negative drinking behaviors in the persons who were screened, and emergency nurses were able to implement the method successfully. Four studies suggested decreased negative drinking behaviors upon follow-up with patients after SBIRT implementation.⁸⁻¹¹ An additional 5 studies illustrated that although there were challenges, emergency nurses were able to implement SBIRT effectively in their practices.¹²⁻¹⁶

EFFECTIVENESS OF SBIRT

The use of SBIRT by emergency nurses showed a reduction in negative drinking behaviors in all 4 studies. Results of the studies also showed a reduction in future screening scores, maximum drinks during a single occasion, and number of days drinking during each week.⁸⁻¹¹ One study also indicated a decrease in impaired driving following the implementation of SBIRT.¹¹

Cherpitel and colleagues⁸ conducted a randomized controlled trial with a sample of 446 persons randomly assigned into 3 groups. Two groups were screened regarding self-reported drinking; the third group received motivational intervention by a nurse trained in SBIRT. The researchers found a significant decrease in the Rapid Alcohol Problems Screen (RAPS4) score, drinking days per week, and greatest number of drinks on 1 occasion in the third group. This study illustrates that SBIRT was effective when the method was fully implemented.⁸ Another randomized controlled trial conducted by Sommers and colleagues¹¹ divided participants into 3 groups: a brief intervention group, a control group, and a noncontact control group. Screening scores were found to be significantly

lower in the intervention group compared with the control group up to 6 months later.¹¹

Désy and coworkers⁹ conducted a quasi-experimental study comparing a control group with individuals who had received implementation of SBIRT by emergency nurses. Although not statistically significant, follow-up calls at least 9 months after the initial screening showed a 70% decrease in number of alcoholic drinks in the intervention group, whereas a decrease of 20% was seen in the control group.⁹

During follow-up telephone surveys in a study done by Gormican and Hussein,¹⁰ most patients did not recall being screened initially or were unsure if they had received an intervention. However, when rescreened, a 68% lower score was shown in the group that had originally received an intervention. Overall, the study suggested that a follow-up after the intervention increased the effectiveness of SBIRT.¹⁰

Although all studies showed positive results regarding the effectiveness of SBIRT, results may not last over extended periods of time. The study by Cherpitel and colleagues⁸ showed that positive effects of SBIRT implementation were maintained at long-term follow-up. However, the randomized controlled trial by Sommers et al¹¹ showed a short-term improvement, but the results did not persist after a period of 9 months. The other 2 studies did not assess for long-term results, so it is unknown whether the intervention led to lasting improvement in negative drinking behaviors.^{9,10}

IMPLEMENTATION OF SBIRT

Results from the studies focusing on nurse implementation were predominantly positive, but barriers to implementation were also discussed. Nurse implementation of SBIRT was measured in several ways, including the emergency nurses' attitudes toward SBIRT; confidence in their roles; and percentage of eligible patients who received the screening, referral, and intervention.

One study focused on the emergency nurses' attitudes toward implementation of SBIRT and perceptions of caring for patients who use drugs and alcohol. Screening tools were used before and after the nurses were trained in the implementation of SBIRT. There were statistically significant improvements post-training in nurse perceptions of role adequacy, motivation, role legitimacy, role support, and work satisfaction. Nurses also reported an improvement in their attitudes toward patients who engage in negative drinking behaviors.¹²

Three additional studies measured how many of the eligible patients received SBIRT implementation by

emergency nurses.¹³⁻¹⁵ A retrospective observational cohort analysis of a protocol documented which factors were associated with failure to implement SBIRT per protocol.¹⁵ The trial indicated that emergency nurses were able to correctly identify and electronically document patients at risk for alcohol and drug abuse. However, the execution was shown to be lower than in previous studies. Johnson and colleagues¹³ programmed the screening questions into their existing computer triage tool to detect drinking behaviors that may have negative effects in patients who presented to the emergency department. Of the eligible patients, 96% were screened for alcohol use. This study found that high rates of screening were feasible, especially when the screening process was very brief and the screening tool was integrated into the existing electronic triage tool.¹³ McKenna et al¹⁴ also reviewed screening rates by emergency nurses following nurse education on implementation of SBIRT. Within 18 months of implementing the SBIRT program, 534 patients admitted to the emergency department were eligible for screening. Of these, 442 received screening, and 32 screened positive for negative drinking behaviors. All 32 patients received brief interventions, consisting of consultation with social workers and referral for additional treatment, as needed. This study also found that implementation of the screening process into the existing electronic medical record was an important key to success.¹⁴

Venkat et al¹⁶ conducted a qualitative analysis of SBIRT implementation in the emergency department of a single care center. Following implementation, nurses responded to a questionnaire that included semistructured short-answer questions. Nurses responded with comments including "patients genuinely want assistance" and "we have succeeded in keeping this project alive by the many dedicated people involved who understand that there is an epidemic in the community with substance use and abuse." Another nurse stated, "It is a great feeling of success for a health care worker to be able to provide a warm handoff to a treatment facility to start the patient on his or her journey of recovery." Barriers to SBIRT implementation included difficulty getting patients placed for rehabilitation, lack of education on patients who required detoxification, lack of funding, and low staff buy-in due to the long screening tool used. Overall, the study found that emergency nurses were able to identify at-risk drinking and drug use, but there were significant challenges with the incorporation of motivational interviewing and generation of revenue for the support of SBIRT. The study subjects would support continuing the project, as they believed it was important for emergency nurses to extend their role beyond the hospital setting and put more focus on long-term health issues of patients.¹⁶

TABLE 1
Summary of articles included in literature search

Author, title, and year	Research design	Sample	Results
Désy P, Howard P, Perhats C, Li S. Alcohol screening, brief intervention, and referral to treatment conducted by emergency nurses: an impact evaluation. 2010.	Quasi-experimental	91 ED patients, aged 19-69 years old	Alcohol consumption decreased by 70% in intervention group compared with 20% in typical care. A decrease in drinking frequency in both groups. Intervention group (20%) had ED readmissions compared with typical care (31%).
Gormican EK, Hussein ZS. SBIRT (screening, brief intervention, and referral to treatment) among trauma patients: a review of the inpatient process and patient experience. 2017.	Quality improvement	79 ED patients	Most of the patients did not remember being screened or receiving brief interventions by social workers. However, a rescreening showed 68% of patients who were surveyed had a lower score than at initial screening.
Cherpitel CJ, Korcha RA, Moskalewicz J, Swiatkiewicz G, Ye Y, Bond J. Screening, brief intervention, and referral to treatment (SBIRT): 12-month outcomes of a randomized controlled clinical trial in a Polish ED. 2010.	Randomized controlled trial	446 ED patients, aged 18 years and older	A brief motivational interview implemented in the ED improved drinking outcomes 1 year later, with only those in the intervention group reporting significant improvement in every outcome variable from the original screening to the 12-month follow-up.
Sommers MS, Lyons MS, Fargo JD, et al. ED-based brief intervention to reduce risky driving and hazardous/harmful drinking in young adults: a randomized controlled trial. 2013.	Randomized controlled trial	476 ED patients aged 18-44 who screened positive for impaired driving and hazardous drinking	The intervention group showed improved results compared with the control group after 6 months, but these results did not last up to 12 months. SBIRT implementation reduced impaired driving and hazardous drinking in young adults, but its effects did not persist long term.
Slain T, Rickard-Aasen S, Pringle JL, et al. Incorporating screening, brief intervention, and referral to treatment into emergency nursing workflow using an existing computerized physician order entry/clinical decision support system. 2014.	Retrospective, observational cohort analysis of a protocol	47,693 ED visits	Electronic documentation of patients with negative alcohol behaviors and/or drug use was feasible by emergency nurses, but SBIRT execution and revenue collection were challenging.

continued

TABLE 1
Continued

Author, title, and year	Research design	Sample	Results
Johnson JA, Woychek A, Vaughan D, Seale JP. Screening for at-risk alcohol use and drug use in an ED: integration of screening questions into electronic triage forms achieves high screening rates. 2013.	Descriptive	145,394 ED patients	Electronic reports showed an 89% screening rate 30 days after implementation of SBIRT. This rate gradually increased over time and stabilized at approximately 97%.
Venkat A, Shank G, Rickard-Aasen S, Pringle JL, Johnjulio W. Screening, brief intervention and referral to treatment implementation in the ED. 2017.	Qualitative analysis	31,525 ED patients and 5 ED nurse respondents	Emergency nurses were able to identify patients who showed signs of negative drinking behaviors, but barriers included opinions of SBIRT appropriateness in the ED, need for continuous staff reinforcement, and reimbursement difficulties.
Mckenna C, Gaines B, Hatfield C, et al. Implementation of a screening, brief intervention, and referral to treatment program using the electronic medical record in a pediatric trauma center. 2013.	Quality improvement	534 injured patients aged 12 years and older	Within 18 months of implementing the SBIRT program, 534 patients were admitted to the emergency department. Of these, 442 received screening, and 32 screened positive for negative drinking behaviors. Each of these 32 patients received a brief intervention and referral for additional treatment as needed.
Mitchell AM, Kane I, Lindsay DL, et al. Educating emergency department registered nurses (EDRNs) in screening, brief intervention, and referral to treatment (SBIRT): changes in attitudes and knowledge over time. 2017.	Prospective cohort	62 ED nurses and other staff working in the emergency department	There were significant improvements from pre-training to post-training of SBIRT in nurse perceptions of role adequacy, motivation, role legitimacy, role support, and work satisfaction. Nurses also reported an improvement in their attitudes toward patients who engage in negative drinking behaviors.

Discussion

The results of this literature review showed mostly positive outcomes regarding use of SBIRT in the emergency department. There was a decrease in drinking behaviors that may have negative impact on patients following implementation of SBIRT in the emergency department, although these results may not persist long term. Results also illustrate that emergency nurses were able to implement SBIRT effectively, although some challenges included nurse compliance and limited funding.

SBIRT was shown to be effective in the short term, as the implementation led to a reduction in screening scores, number of drinks per occasion, and number of drinking days per week within at least the first 9 months. Although Cherpitel et al⁸ found that the positive results of SBIRT were maintained long term, contradicting results were shown in the study by Sommers et al,¹¹ in which the results did not persist up to a year. These were the only 2 studies that measured long-term results, and they showed varying results, so this may be an area for further research. Methods for these future studies could include multiple follow-ups within different time frames such as 6 months, 1 year, and 2 years. Although this would be a more time-intensive study, it would show whether the effects of SBIRT persist past 12 months, and, if not, the next step would be to explore different strategies to improve lasting effects. Gormican and Hussein¹⁰ recommended follow-up with patients who have received a brief intervention, as this may increase effectiveness over time.

Implementation of SBIRT by emergency nurses, although shown to be feasible, comes with several challenges. The issue of low staff buy-in may be improved by providing more education about SBIRT to nurses prior to implementation so they understand its importance. As time and workload may also be concerns with implementation, the most effective strategy was to implement the screening tools into the existing ED admission questions in the electronic medical record. That way, nurses could rely on computer prompts as a reminder to screen every patient who presents to the emergency department for alcohol use.

Nurses were also shown to have greater buy-in and enthusiasm for SBIRT when shorter screening tools were used. A time-consuming screening process may not be appropriate for a fast-paced emergency department where medical interventions are needed immediately. Tools that only contain 3 or 4 questions, such as AUDIT-C or RAPS4, may improve nurse opinions about SBIRT and allow patients to get the care they need as soon as possible. However, few studies have compared the effectiveness of

different screening tools, so further research could be conducted regarding this topic. If screening tools with up to 5 questions are just as effective as those with many time-consuming questions, it would be logical to use the shorter screening tools, as it might improve nurse views of SBIRT and take up less time upon patient presentation to the emergency department. In addition, it is important to consider the timing of SBIRT, when it should be implemented, and who would implement the screening process.

Although results were largely positive, it is worth noting limitations of some of the studies. Small sample sizes and considerable discrepancies in the amount of alcohol consumption in the participants of some studies led to less statistically significant variation in results between control and intervention groups.^{8,9,11} Gormican and Hussein¹⁰ also found that as many of the ED patients had sustained a traumatic injury, concussion, or were on some sedation during the brief intervention, they did not remember discussing their alcohol use with the nurse, so the intervention may not have been effective. It was recommended that the timing of the conversation is considered, perhaps occurring later in the admission process or closer to the time of discharge and when a family member or trusted friend is present.

Implications for Emergency Nursing Practice

Nurses play an important role in the implementation of SBIRT because of their unique relationships with their patients. However, using SBIRT also requires a certain level of trust between the patient and the nurse, with the goal of the nurse receiving accurate, honest information from the patient. Nurses are an important asset when screening for alcohol use because they are part of a highly trusted profession.¹⁷ Nurses in the emergency department typically spend time with their patients and already provide patient education when needed.¹⁸ SBIRT may be an appropriate standard of care in the emergency department but requires nurses to engage in the implementation.¹⁸

Conclusion

Implementation of SBIRT has the potential to change the conversations about alcohol use and decrease the health effects of drinking too much alcohol.¹⁸ The studies included in this review of the literature indicated SBIRT, when implemented by nurses in the emergency department, was able to improve negative drinking behaviors effectively in patients who received brief interventions and referrals to

treatment. Results also showed that emergency nurses were important assets in implementation of SBIRT and were able to identify patients at risk for alcohol abuse and refer them to treatment as needed. Although some challenges exist with effectiveness and implementation of SBIRT, the emergency department is shown to be an important location to screen for drinking behaviors that may have negative impact on people's lives, and emergency nurses play a crucial role in the implementation process.

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