

**Improving the Screening for Substance Use Disorders in Emergency Department Patients:
A Quality Improvement Project**

Madison Bakken, Diane Caruso, Gina Howell, Ann Jessup

Department of Nursing, Lenoir-Rhyne University

Author Note

Correspondence concerning this article should be addressed to Diane Caruso,
Dept. of Nursing, Lenoir-Rhyne University, 625 7th Ave NE, Hickory, NC 28601, United States.
Email: diane.caruso@lr.edu

Abstract

This quality improvement project aimed to connect emergency department (ED) patients with substance use disorders (SUD) to community resources for assistance with treatment options. This was achieved by promoting the screening of patients as they presented to the ED by the nurses. This project was conducted through a system change that introduced an information card about the community resources to the ED for distribution to patients with positive SUD screenings. This system change also included modifications to the electronic health record (EHR) that allowed the nurses to document when the information card was offered to patients. An in-service session describing the system change was held for the nurses and included education on SUD screening and strategies to approaching this topic with patients. The outcomes for this project were measured through chart reviews and a qualitative analysis collected from the nurses on the system change.

Keywords: substance use disorders, emergency department, screening, intervention

Contribution to Emergency Nursing Practice

- *What is already known about nurses screening patients for SUD:* Barriers prevent nurses from screening patients for SUD in the ED. Still, this screening is vital in identifying patients with SUD so they can be connected to the appropriate resources.
- *The main finding of this paper is:* Providing nurses with information on the importance of SUD screening, how to overcome the barriers to screening, and an intervention that they can perform when a patient screens positively encourages nurses to screen more consistently in the ED.
- *Recommendations for translating the findings of this paper into emergency clinical practice include:* An intervention such as the distribution of information on available resources allows nurses to quickly intervene when a patient screens positively for SUD. This intervention can potentially encourage a patient with SUD to achieve sobriety.

Improving the Screening for Substance Use Disorders in Emergency Department Patients: A Quality Improvement Project

There are more deaths, illnesses, and disabilities from substance use than from any other preventable health condition (National Institute on Drug Abuse (NIDA), 2012). In the past 17 years, more than 700,000 people have died from an overdose of either drugs or alcohol, and the odds of someone dying from an overdose in 2018 was six times higher than it was in 1999 (Centers for Disease Control and Prevention, 2018). Though an overdose may be the most adverse consequence of substance use, multiple physical, emotional, and relationship consequences can arise (NIDA, 2012). Treatment options such as recovery services, medication-assisted treatment, and anonymous chapters are available for patients with substance use disorders (SUD), but only a fraction of individuals who need special treatment for addiction receive that treatment (NIDA, 2012).

Routine screening can increase the identification of patients with SUD, and this identification can help patients be connected to treatment for rehabilitation (NIDA, 2012). SUD screening should be conducted in all clinical settings because patients with SUD often do not have routine visits with primary care providers (Hawk & D'Onofrio, 2018). Usually, a visit to the ED is the only point of contact that a patient with SUD has with the healthcare system (Hawk & D'Onofrio, 2018). There were 5 million ED visits directly related to SUD in 2011, a 100% increase in the numbers a decade before (Substance Abuse and Mental Health Services Administration, 2014). The number of SUD patients presenting to EDs across the country is at an all-time high (Hawk et al., 2019). ED visits should be used as teachable moments in which an individual presenting with risky health behaviors has these behaviors addressed to encourage change and better health outcomes (Bernstein & D'Onofrio, 2017).

Literature Review

SUD is defined as the uncontrolled use of a substance despite its harmful consequences (American Psychiatric Association, 2013). This complex condition can have severe physical and mental health implications (NIDA, 2012). SUD is also a well-known risk factor for suicide (Hawk et al., 2019). Many individuals who complete death by suicide are intoxicated at the time of their death (Hawk et al., 2019).

The United States Preventative Services Task Force (USPSTF, 2020) recommends that every patient aged 18 or older be screened for SUD annually by being asked questions about harmful drug and alcohol use. Patients with SUD appear to have more ED visits, so actions should be made to better manage these diagnoses in the ED by screening and initiating treatment for rehabilitation with the goal of sobriety (Moulin et al., 2018). This contact in the ED should be utilized as an opportunity for SUD management as it may be the only interaction that the patient has with a healthcare provider (Hawk & D'Onofrio, 2018). Assisting patients with SUD with appropriate treatment modalities not only improves health outcomes for this patient population, but it can also improve the cost of healthcare by decreasing the medical complications of SUD, ED admission rates, and unintentional injuries (Bernstein & D'Onofrio, 2017).

The barriers that nurses report to screening patients and initiating interventions for SUD in the ED include competing priorities, inadequate training, and stigmatization of patients with SUD (Hawk & D'Onofrio, 2018). These barriers can be overcome by improving nurses' knowledge of the importance of SUD screening and making the care of patients with SUD in ED a prioritization (Hawk & D'Onofrio, 2018). Stigma towards patients with SUD can be challenging to address (Clarke et al., 2015). Not only can stigma affect the screening, but it can also affect the delivery of the care provided (Clarke et al., 2015). Through education, nurses can

become aware of this bias towards this patient population and the adverse effects on patient outcomes, and this awareness can develop into change (Clarke et al., 2015).

Educational interventions for nurses on how to assess and work with individuals with SUD have been shown to have a positive impact on the attitudes, knowledge, and confidence of those caring for these patients (Clarke et al., 2015). It is essential to provide the nurses with the resources and the encouragement to intervene after a patient has a positive screening (NIDA, 2012). A brief intervention allows the patient an opportunity to learn about their substance use from an objective third party individual with medical training (NIDA, 2012). This intervention can be in the form of a conversation about substance use and how it can impact overall health, the act of setting a goal for managing their substance use or referring the patient to available resources for treatment (NIDA, 2012).

Therefore, this project aimed to promote consistent screening of ED patients and provide these patients with information on community resources by intervening with the nurses caring for them. This was implemented through a system change that included an educational in-service for the nurses, the introduction of an information card on community resources for patients with SUD, and alterations to the electronic health record (EHR) to allow nurses to document the distribution of this information card. The outcomes for this project were assessed through chart reviews and a qualitative analysis collected from surveys completed by the nurses.

Materials and Methods

This project was a mixed-methods quality improvement project in the form of a system change. This system change included educating nurses on the importance of screening for SUD, distributing an information card to patients with SUD on community resources, and modifying

the EHR to create an area to document when a patient with a positive SUD screening was offered this information card.

Participants

The participants for this project were the registered nurses employed to work full-time, part-time, or per diem in the selected ED, which has 20 beds, including three psychiatric rooms, and serves a rural community in Western North Carolina.

Measures

SUD Screening

The primary outcome was measured to observe if more SUD screenings were charted on ED patients after the project was implemented than those charted one year before the implementation. This was achieved from a chart review that extracted data from the charts of patients that presented to the ED during December 2019 and December 2020.

Information Cards

The secondary outcome assessed whether the nurses documented the distribution of the information cards after a patient had a positive SUD screening. This was achieved through a chart review to evaluate the utilization of the modifications in the EHR. The charts used for this evaluation were those of patients who presented to the ED in December 2020.

Nurse Surveys

This outcome was assessed through a qualitative analysis of the nurses' perceptions of the usability of the information cards and the EHR modifications. This was achieved by collecting qualitative data from anonymous surveys completed by the nurses.

Procedures

Institutional review board (IRB) approval was obtained from Lenoir-Rhyne University and was accepted by the hospital system before the project was implemented. The data from the SUD screenings was extracted from the charts by the ED Nurse Manager. All patient identifiers were removed from the data at that time. The information was stored on a password-protected flash drive that remained in the ED Nurse Manager's office on site, locked in a filing cabinet. It will remain stored for three years before it is destroyed.

SUD Screening

An educational in-service was held with the nurses during an ED staff meeting. The session was recorded so those unable to attend the meeting could view it later. The information in this presentation included the importance of screening for SUD and strategies for therapeutically approaching this topic. The education in this in-service session was adapted from the Resource Guide on Substance Use Screening from the National Institute of Drug Abuse (2012). This guide was designed to assist clinicians who serve adult populations with screening for substance use (NIDA, 2012). The in-service also included revealing the information cards and EHR changes that would take effect during the project's implementation were also presented during this session.

Information Cards

An information card (see Appendix A) was developed in collaboration with the local health department that contained descriptions, contact information, and addresses of various resources available for patients with SUD. These resources included health departments, Alcoholics Anonymous chapters, Narcotics Anonymous chapters, food pantries, shelters, syringe exchange programs, behavioral health services, and medication-assisted treatment programs. The

number for a peer support specialist was also included. The peer support specialist program is comprised of recovered addicts who assist SUD as sponsors, helping patients navigate the available resources and serving as a support system to encourage sobriety. The information card was laminated and folded up to be discreetly stored in a pocket or wallet for potential later use. These cards were held in various ED areas, so they were quickly accessible to the nurses.

The second part of the system change was the modifications to the EHR (see Appendix B). After the SUD assessment in the EHR, a place was provided for the nurse to document if the information card was given to the patient. The selections were “yes” or “no”. A free-text box followed so the nurse could comment on the interaction with the patient when the information card was offered. For example, the nurse could document why the information was not offered or if the patient refused it.

Nurse Surveys

The nurses were sent a link to their work email address that directed them to an anonymous survey. The goal of the survey was to understand the nurses’ opinions of the information cards and the changes to the EHR. The statements included in the survey were: tell me how you felt about using the information cards, provide feedback on the changes to the EHR, and do you think that the information cards will be helpful going forward. A free-text box was provided after each statement for the nurse to respond.

Data Analysis

SUD Screening

Descriptive statistics were used to process the primary outcome. This outcome assessed the number of ED patients screened for SUD who presented to the ED in the month following the project’s implementation. These results were compared to the screenings completed on ED

patients one year before the implementation. Chi-square tests were also used to determine if this project's intervention changed the number of assessments conducted by the nurses after the implementation.

Information Cards

The secondary outcome assessed whether the nurses intervened when the SUD screening was positive by providing patients with the information cards on community resources. The data was collected through a chart review of the patients who presented to the ED in the month following the project's implementation. Descriptive statistics were used to assess how often the nurses offered the information card to patients with a positive SUD screening and documented this intervention in the EHR.

Nurse Surveys

Qualitative data was also taken from the nurses' anonymous surveys on the information cards' useability and the efficacy of the EHR modifications.

Results

SUD Screening

There was an improvement in the average number of patients screened for SUD when they presented to the ED (from 88% in 2019 to 95% in 2020); however, the results of the Chi-square test were not significant based on an alpha value of 0.05, $\chi^2(1) = 0.64, p = .422$. This implies that the observed frequencies were not significantly different than the expected frequencies. The results of the Fisher exact test were not significant based on an alpha value of 0.05, $p = 1.000$; this implies that the observed frequencies were not significantly different than the expected frequencies.

Information Cards

There were 250 information cards available in the ED at the beginning of this project. During the first month of implementation, there were 14 information cards documented in the EHR as being accepted by patients after a positive SUD screening. Four months after implementing this project, there are 174 cards missing from the initial 250 available.

Nurse Surveys

Twelve nurses completed the survey on the useability of the information cards and the modifications to the EHR. Of the twelve nurses who completed the survey, eleven responded that they found the information cards helpful. Eleven of the nurses also approved of the EHR modifications. All twelve nurses responded that they would continue to distribute these cards after the project's conclusion. Some comments made by the nurses referred to the cards as “informative” and “easy to read.” One nurse wrote, “It is beneficial to give patients information through education to help them improve their health and lifestyle.” Another nurse commented, “These patients need these resources, and it was helpful for me to have the information all in one place.”

Discussion

Although this quality improvement project did not result in a significant increase in the screening of ED patients for SUD, according to the chart review, it did provide the nurses with the in-service education session that encouraged the screening and the development of strategies to approach this topic with patients. The in-service session also discussed how to overcome the barriers to screening patients for SUD in the ED, such as competing priorities and the negative stigma attached to this patient population (Hawk & D'Onofrio, 2018).

This project introduced a resource information card to the ED for patients who screened positively for SUD. The card was small and discreet, but it included important information for the patients to utilize. The cards were laminated and were designed for patients to keep in a wallet or purse to use when they were ready for intervention. The patients may not have used the resources immediately after the card was given to them, but it was designed for sustainable patient use. Starting treatment for SUD while a patient is hospitalized can help engage patients in addiction care and link them to treatment in the outpatient setting (Trowbridge et al., 2017).

According to the feedback provided from the surveys, the information cards and changes to the EHR were received well by the nurses. They allowed the nurses to provide patients with an intervention after a positive SUD screening without waiting for an order from a provider. Quick intervention can bring awareness to patients of their substance use with their overall health and well-being (NIDA, 2012). Most of the nurses voiced in the surveys that they would continue to use the cards after the project's conclusion.

Limitations

The most significant limitation to this project was the timing. The COVID-19 pandemic brought many changes and interruptions to healthcare. The peak of the COVID-19 outbreak for this area coincided with the project's implementation, resulting in substantial changes to the workflow and ED staffing, including the utilization of travel nurses in the department to meet staffing needs. The travel nurses were not present for the in-service session where the information cards were presented as they were not employees of the hospital; hence, they did not understand the use of the cards or the community resources available for patients with SUD. The pandemic also resulted in a decrease in the census of ED patients but an increase in the acuity level of the patients seen, creating fewer opportunities for patients to be screened for SUD.

Another potential limitation to this project was the documentation of the distribution of the information cards. There was a significant discrepancy between the number of cards documented in the EHR as being dispensed to the patients and the number of cards missing from the box. It is suspected that if the cards had been accurately documented, there would have been improved evidence of the efficacy of the interventions of this project.

Conclusion

Emergency nurses are responsible for caring for each patient seen in the department, regardless of their medical or social history. ED visits may be the only point of contact that patients with SUD have with healthcare providers. It is essential to take the opportunity provided by each visit to promote healthier behaviors for this patient population. This project showed that screening for SUD in the ED could allow nurses to identify patients who would benefit from information on resources that can promote better health outcomes in the future.

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Appendix A

HEALTH DEPARTMENTS

HIV, STD & Hepatitis C Testing, Hep A & B Vaccinations

Alleghany County 157 Health Services Rd. Sparta, NC 28675 (336) 372-5641	Ashe County 413 McConnell St. Jefferson, NC 28640 (336) 246-9449
Watauga County 126 Poplar Grove Connector Boone, NC 28607 (828) 264-4995	

FOOD PANTRIES & COMMUNITY MEALS

Call for Hours

Solid Rock Food Pantry 71 Womble St. Sparta, NC 28675 (336) 372-6560	Hospitality House 338 Brook Hollow Rd. Boone, NC 28607 (828) 264-1237
Ashe Missionary Baptist Association (Ashe Really Cares) 204 Beaver Creek Rd. West Jefferson, NC 28694 (336) 846-5631	

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na.org

ALCOHOLICS ANONYMOUS CHAPTERS

booneaa.org

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You are not alone.
Help is available.**

MAT PROVIDERS
Medication Assisted Treatment

Stepping Stone of Boone 643 L Greenway Dr. Boone, NC 28607 (828) 265-7078	Ashe Health Dept. 413 McConnell St. Jefferson, NC 28640 (336) 246-9449
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SYRINGE ACCESS PROGRAMS

Syringe access & disposal, Harm reduction counseling
& supplies, Naloxone/Narcan

Olive Branch Ministry
(828) 291-7023

Local Volunteers
(910) 322-6241, (336) 648-5121, (336) 877-6207

BEHAVIORAL HEALTH

Daymark Recovery Services

Alleghany 1650 Hwy 18 S Sparta, NC (336) 372-4095	Ashe 101 Colvard St. Jefferson, NC 28640 (336) 246-4542
Watauga 132 Poplar Grove Connector, Suite #B Boone, NC 28607 (828) 264-8759	

BEHAVIORAL HEALTH & PRIMARY CARE

AppHealthCare (local health department)

Alleghany County 157 Health Services Rd. Sparta, NC 28675 (336) 372-5641	Ashe County 413 McConnell St. Jefferson, NC 28640 (336) 246-9449
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Appendix B

NT - ED Nursing Assessment Note

Date: 10 - Nov - 2020 Time: 11 : 26

Copy Forward Refer to Note Preview Modify Template Acronym Expansion

Social History

Tobacco Status current smoker... former smoker... never smoker unknown if ever smoked

Alcohol Use Status alcohol current... alcohol past... alcohol never used alcohol use unknown

Street Drug/Inhalant/Medication Use Status street drug/inhalant/medication abuse current... street drug/inhalants/medication abuse street drug/inhalants/medication never used unknown

Community Information/Resources Given yes no

Social History Additional Comments