

Implementing Interprofessional Alcohol Screening, Brief Intervention & Referral to Treatment (SBIRT) in the Emergency Department: An Evidence-Based Quality Improvement Initiative

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Purpose

- To develop, deliver and evaluate an alcohol SBIRT educational program, and implement an alcohol SBIRT protocol for ED nurses and social workers
- Alcohol abuse is the 3rd leading cause of preventable death contributing to over 200 diseases and injury-related health conditions
- Many use the ED as sole source of medical care and SBIRT may provide a window of therapeutic opportunity or “teachable moment”
- Alcohol-related injuries and deaths
 - 60-70% homicides
 - 69% fatal burn injuries
 - 60% drowning deaths
 - 40% fatal falls
 - 40% suicides
 - 38% motor vehicle fatalities
- SBIRT identifies, reduces and prevents alcohol abuse by:
 - Identifying patients with alcohol abuse problems
 - Providing patients with solid strategy to reduce or eliminate use
 - Referring patients to appropriate services for treatment

Project Plan

- Objectives:
 - Revise the EHR to include 10-point alcohol screening tool and alcohol SBIRT documentation for ED nurses & social workers
 - Develop & implement E-Learning alcohol SBIRT educational module for ED nurses & social workers
 - Evaluate learning outcomes via pretest/posttest & program evaluation
 - Evaluate ED nurses & social worker’s alcohol SBIRT documentation
- Project Type:
 - Quality improvement initiative, quasi-experimental design to measure effects of educational module and EHR documentation protocol regarding nurses’ & social workers’ knowledge of SBIRT and adherence to EHR SBIRT Protocol and documentation
- Setting:
 - 569 bed tertiary hospital: Level I trauma center with approximately 49,000 visits annually
 - Participants: (single convenience sample, non-randomized cohort)
 - 80 nurses, 4 social workers
 - ED patients meeting inclusion (English speaking, >18, GCS 15, ESI Triage Score 3, 4, or 5)
- Sources of Data:
 - 10-question Alcohol Use Disorders Identification Test (AUDIT) validated screening tool
 - 10-question multiple choice ED alcohol SBIRT knowledge pretest/posttest reviewed by 6 content experts for content validity
 - 5-question Likert scale survey rating perceptions of achievement of objectives and teaching effectiveness
 - Nurse/Social worker EHR documentation (inclusion criteria, AUDIT scoring, referral for positive screens, brief intervention, reasons brief intervention not done, referral to treatment)
- Budget:
 - Printing: SBIRT cue cards for nurses/social workers (\$250); Patient brochures (free); ED IT services waived
- Project 2016 Timeline:
 - March/April: education launched; April/May: protocol launched; May/June: data evaluation; June/July/August: results dissemination
- Ethics/Human Subjects Protection:
 - Loyola IRB Exempt LU#208338; No anticipated safety risk to staff/patients; data de-identified; confidential on secure server.

Practice Implications

- The team of ED nurses and social workers, working collaboratively may be the first & only health care providers to recognize unhealthy alcohol behaviors and have an influence on behavior change
- Developing/implementing an educational module for ED nurses & social workers is an efficient & effective mechanism to provide education about alcohol SBIRT
- Revising the EHR to include an alcohol SBIRT protocol provides a standard mechanism for documentation
- Universal alcohol SBIRT should be included as a standard practice for all ED patients

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Evidence-Based Initiative



- Effectiveness of SBIRT
 - Reductions in alcohol consumption
 - Fewer repeat injuries, ED visits & repeat hospitalizations
 - Fewer traffic incidents & DUI arrests
 - Potential to increase adherence to alcohol treatment
 - Ranked 4th preventative service by USPPSTF
- Theoretical Model
 - Roger’s Diffusion of Innovations
 - RE-AIM: Reach, Efficacy, Adoption, Implementation, Maintenance
- Site Needs/Feasibility
 - Organizational needs assessment revealed practice gap with no current routine alcohol screening

Evaluation

- Educational Module Evaluation
- 10-multiple choice questions based on content
 - Expert panel determining content validity (Scale Content Validity Index Average)
 - Internal consistency measured using Chronbach’s alpha
 - Paired sample t-test to note differences between pretest/posttest scores
- Program Evaluation
- Nonparametric descriptive statistics
 - Likert scale rating perception of achievement of each objective and teaching effectiveness
- Alcohol SBIRT Protocol and Documentation EMR Evaluation
- Nonparametric descriptive statistics; AUDIT score; risk stratification; patient characteristics
- Compliance Monitoring:
 - Linked to performance evaluation; work-time allowance; CE credit; weekly email reminders
- Stakeholder Support/Sustainability:
 - Team support; SBIRT embedded in EMR; SBIRT champions identified; ongoing training

Results

Pretest/Posttest & Program Evaluation

Validity & Reliability:
SUVI/AVE of 1.00 per expert panel
Internal consistency: Cronbach’s alpha coefficient .95

Pretest/Posttest
Pretest Scores
20% = 100% (M=57.31; SD=15.12)

Posttest Scores
80% = 100% (M=90.9; SD=8.48)

Statistically significant difference
(t 66)=15.9, p<.001 between scores

- Describe scope of the problem of unhealthy alcohol consumption
- Explain overarching purpose of alcohol SBIRT
- Summarize supporting evidence/support for alcohol SBIRT in reducing alcohol-related harm
- Discuss steps of alcohol SBIRT procedure in the ED
- Discuss skills necessary to effectively conduct alcohol SBIRT with patients
- Rate level of relevance this program has on your practice
- Rate level of impact this program will have on your practice

Protocol EMR Data

Patient Characteristics Positive SBIRT Scores N=40

Characteristic	N	(%)
Sex, Male	32	(80%)
Mean Age	43	
Mean AUDIT Score	16	
AUDIT Scores 8-19 (Harmful Drinking)	27	(68%)
AUDIT Scores 20-40 (Possible Dependence)	13	(32%)
Disposition: Admitted to Trauma Service for In-Patient SBIRT	18	(45%)
Disposition: Remained in ED for SBIRT	22	(55%)

Chief Complaint	N	(%)
Trauma	25	(63%)
Musculoskeletal	6	(15%)
Behavioral/Substance Abuse Disorder	6	(15%)
Abdominal Pain	3	(7%)

Nurses’ and Social Worker’s Documentation

Nurse Documentation	N	%	Social Worker Documentation	N	%
Inclusion criteria	2531	100	Brief intervention for positive score	22	100
Agree/refuse screening	2531	100	Reason if brief intervention not done	N/A	N/A
AUDIT score	518	100	Referral to treatment	22	100
Referral to Social Worker if positive	40	100			
Patient disposition	40	100			