

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 emergency department 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
- PICO: "Does developing, delivering and evaluating an alcohol SBIRT education program and protocol to emergency nurses and social workers improve knowledge and documentation quality to support practice change?"

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

Project Plan


- Objectives:
 - Revise the EMR to include 10-point alcohol screening tool and alcohol SBIRT documentation for ED nurses & social workers
 - Develop & implement E-Learning Health Stream 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 EMR documentation protocol regarding nurses' & social workers' knowledge of SBIRT and adherence to EMR SBIRT Protocol and documentation
- Setting:
 - 569 bed tertiary hospital: Level I trauma center with approximately 49,000 visits annually; 80 nurses and 4 social workers
- Participants/Sample: (single convenience, non-randomized cohort)
 - 80 nurses, 4 social workers and all 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 EMR 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 (\$200); Patient brochures (free); ED Information Technology services waived
- Project 2016 Timeline:
 - March/April: education launched; April/May: protocol launched; May/June: data evaluation; June/July: 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.

Results

Evaluation

- Educational Module Evaluation (one month completion time)
 - 10-multiple choice questions based on module content
 - Expert panel determining content validity (Scale Content Validity Index Average)
 - Paired sample t-test to note differences between pretest/posttest scores
 - Internal consistency measured using Chronbach's alpha
- Program Evaluation (one month completion time)
 - Nonparametric descriptive statistics
 - Likert scale rating perception of achievement of each objective and teaching effectiveness
- Alcohol SBIRT Protocol and Documentation EMR Evaluation (one month data collection time)
 - 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

Program Evaluation




1. Identify the needs of the population of interest (ED nurses and social workers).
 2. Develop the educational program to address SBIRT.
 3. Determine the appropriate content and format for alcohol SBIRT to address alcohol-related issues.
 4. Assess the effectiveness of the educational program on the knowledge of emergency department nurses and social workers.
 5. Evaluate the impact of the educational program on the use of alcohol SBIRT in the ED.
 6. Assess the impact of the program on the patient population.
 7. Assess the impact of the program on the patient population.

Patient Characteristics Positive SBIRT Scores N=40

Characteristic	N (%)	OR (95% CI)
Sex: Male	36 (90)	0.99 (0.99)
Male: Mean	41	0.91 (0.89)
Male: SD	10	0.91 (0.89)
AUDIT Score < 10 (Low Risk Drinking)	16 (40)	0.91 (0.89)
AUDIT Score 10-19 (Middle Dependence)	16 (40)	0.91 (0.89)
Dependence Assessed to Screen Service for a Patient SBIRT	16 (40)	0.91 (0.89)
Dependence Reassessed to SBIRT for SBIRT	16 (40)	0.91 (0.89)
Chronic Conditions		
Tobacco	16 (40)	0.91 (0.89)
Mental/Behavioral	16 (40)	0.91 (0.89)
Mental/Behavioral Abuse Disorder	16 (40)	0.91 (0.89)
Abused/Abuse	16 (40)	0.91 (0.89)

Protocol EMR Data



Nurses' and Social Worker's Documentation

Documentation	N	%	Mean Score for positive score	SD
Documentation	253	100	22	100
Appropriate screening	253	100	N/A	N/A
SBIRT Score	158	100	22	100
Referral to treatment	40	100		
Referral to Social Worker of positive	40	100		
Patient disposition	40	100		

Practice Implications

- Universal alcohol screening identifies those who may otherwise be undetected until alcohol-related problems are evident
- ED nurses & social workers play a pivotal role in screening and intervening with patients; not only to highlight the consequences of alcohol use, but also to help manage related health problems
- 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
- Recommendations for further study include following up with ED patients at 3 months & 6 months to evaluate for reduction in alcohol consumption or abstinence

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