

A photograph of a broken wine glass. The glass is shattered, with several sharp fragments scattered around it. A vibrant red liquid, likely wine, is spilled from the broken bowl of the glass, creating a large, irregular splash on the white surface. The background is plain white, which makes the red liquid and the clear glass shards stand out prominently.

# ALCOHOL AND INJURIES

Emergency Department Studies in  
an International Perspective



World Health  
Organization

## CHAPTER 12 : IMPLEMENTING BRIEF INTERVENTIONS: A SERIES OF FIVE PAPERS

### 12.1 – Evolution of an Emergency Department-Based Collaborative Intervention for Excessive and Dependent Drinking: from one Institution to Nationwide Dissemination, 1991-2006

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#### **Mixed Blessings: Opportunity and Challenge in the Nation's Emergency Departments**

ED patients are 1.5–3.0 times more likely to report excessive drinking or alcohol-related consequences than primary care patients (Cherpitel, 1999). More than 10% met formal criteria for alcohol dependence (Lowenstein, 1998), and 25% screened positive on the Alcohol Use Disorders Identification Test (AUDIT) in a study that used a probability sample (Cherpitel, 1995). In a five year follow-up study, alcohol-intoxicated ED patients had twice the mortality rate as a non-intoxicated comparison group (Davidson, 1997). In another study, providers identified less than one third of the 31% who were dependent drinkers as having a current problem, and less than one-fourth of those identified received treatment referrals, despite the location of an assessment and placement facility for specialized treatment adjacent to the ED (Bernstein et al., 1996).

Emergency physicians have ample opportunity to encounter ED patients at risk for injury and other alcohol-related consequences. However, both preventive and chronic care are typically considered outside the mission of emergency medicine despite the fact that alcohol dependence or excessive drinking is at the root of many presenting problems. Injured patients are often stitched up and discharged without addressing either excessive or dependent alcohol use, and the excessive drinker who lacks the stigmata of 'alcohol on breath' is very likely to leave the ED undetected.

In this chapter we share the evolution of a strategy to incorporate public health principles into ED services to improve quality of care for patients with high risk and/or dependent drinking.

#### **Project ASSERT: From Interesting Idea to Demonstration Project**

Project ASSERT was established to improve Alcohol, Substance Abuse Services, Education and Referral to Treatment. Since 1994 it has served more than 50 000 patients at the Boston Medical Center ED, where Health Promotion Advocates (HPAs) screen for substance abuse and offer brief intervention and access to primary care, preventive services, and substance abuse treatment. Project ASSERT was derived from evidence supporting the role of community health workers as case finders, culture brokers, educators and access facilitators in underserved areas

(Swider 2002, Brownstein et al., 2006), and motivational interviewers in a strategy for behavior change (Miller & Rollnick, 1991). Fifty years ago a landmark study at Massachusetts General Hospital provided inspiration for change. In a controlled trial, Dr Chafetz enrolled 200 middle-aged, homeless, dependent drinkers to test a non-confrontational brief intervention delivered by trained residents and social workers. As a result, 42% of the intervention group compared to 1% of the controls kept five alcohol treatment appointments (Chafetz, 1962).

If the intervention worked so well with alcoholics from Boston's notorious Scollay Square, why not give it a try in a comparable ED? Project ASSERT was established in 1994 at Boston City Hospital with a demonstration grant from the US Center for Substance Abuse Treatment (CSAT) (Bernstein et al., 1997).

### **Phase One: the CSAT grant years, 1994-1997 – 25, 541 ED patients served**

Working with residents and social workers, Dr Chafetz improved the care of patients presenting with alcohol- and drug-related illnesses and injuries. Why, then, did Project ASSERT employ HPAs (Health Promotion Advocates) – community outreach workers hired to do “in reach” in the ED under the direction of clinical staff? The HPA role was established in recognition of time constraints, overcrowding, and resource limitations in the modern ED; the need for a stable core of dedicated, experienced personnel with substance abuse treatment and community resource contacts; and protected time to educate and motivate patients to make healthier choices.

#### **– Case finding strategy**

HPAs performed universal screening, brief intervention and referral to treatment (SBIRT) at the patient bedside 16 hours daily and interviewed patients about access to primary care, preventive clinical screening, seat belt use, smoking, substance abuse, and experience of violence and depression. Alcohol and drug screening questions were embedded in the screening interview and included 1) last-year illicit drug use, 2) consumption of alcohol in the last 24 hours and admission of a drinking problem, 3) episodes of binge drinking, and 4) report of alcohol- or drug-associated injury within the last year. This health promotion approach, education and referral to medical services, was readily accepted by patients who otherwise might have felt stigmatized by an exclusive emphasis on substance use.

#### **– ED-based brief intervention strategy**

When patients screened positive for excessive and dependent drinking or illicit drugs, the HPAs utilized a motivational interviewing strategy, *Brief Negotiation Interview* or BNI developed with Dr Stephen Rollnick. The BNI is a behavior change strategy to establish trust, reduce resistance, and promote choice, and contains the following elements: 1) asking patient permission to discuss alcohol or drug use, 2) exploring pros and cons of substance use, 3) promoting reflection about discrepancies between current life circumstances and future goals, 4) assessing readiness to change, 5) identifying patient strengths and prior successes, 6) providing a menu of options, and 7) negotiating a specific action plan.

Among 7,118 patients screened by Project ASSERT during 12 months in 1995–1996, we found 41% positive for excessive or dependent drinking or drug use (31% female, 61% Black, 11% Hispanic), 61% without a regular doctor, 80% smokers, 8% reporting alcohol- or drug-related injury, and 24% mildly/moderately depressed. Among enrollees, 10% accepted referral to detox, 41% to outpatient, acupuncture, or central intake for placement into specialty treatment, 34% to Alcoholics Anonymous (AA) or Narcotics Anonymous (NA), and 47% to primary care. At 3-month follow-up, half had kept referral appointments, and more than half reported reduced drinking, drug use and related consequences (Bernstein et al., 1997).

When Boston City Hospital and Boston University Medical Center Hospital merged in 1996, the future of ASSERT was uncertain. With supporting data, petitions, and testimony from ED nurses, physicians, and patients, Project ASSERT won the Mayor of Boston's Customer Service Award. The Boston City Council passed a resolution recommending funding, and shortly thereafter, Project ASSERT became a line item in the ED budget.

### **Phase Two: the evolution of the Project ASSERT model from 1997 to the present**

The hospital change from city to private funding, and the ASSERT funding change from a grant to institutional, created new challenges. Central Intake, which provided outpatient addiction services, was relocated in a hard-to-find spot several blocks from the ED, with reduced staff, hours, and accessibility. These changes forced Project ASSERT to implement an aggressive, time-consuming referral process requiring hourly calls to a long list of facilities to locate beds and negotiate on behalf of patients with private or managed care insurance for prior approval. In addition, HPAs had to track down medical staff to complete medical and psychiatric clearance examinations when required. ED physicians documented Project ASSERT consultations in the medical record and the facility billed for these services. When beds were unavailable, HPAs provided low-impact case management until placement in treatment was found.

From 1999–2005, Project ASSERT provided services to 27,101 patients: 32% female; 46% Black, 16% Hispanic; 27% without primary care, 28% unable to afford medications, 61% smoked, 24% always used a seat belt, 31% with an alcohol- or drug-related injury, and 20% mildly or moderately depressed. Among the 15,786 who drank in excess of National Institute of Alcohol Abuse and Alcoholism guidelines (NIAAA, 2005) or used drugs within 30 days, 44% were placed in detox, 9% in outpatient programs, and 42% referred to AA or NA. An average of 3 out of 4 patients requesting inpatient detox programs were placed daily. The patients for whom no bed was available were encouraged to return until a bed opened up. Moreover, 11,315 patients who screened negative for substance abuse were referred for primary care, and 42% received an array of other mental health and preventive referrals.

Compared to Phase One, more referrals in Phase Two were made directly to detox and primary care and fewer to central intake and outpatient addiction programs. Overall, Project ASSERT allocated greater resources for crisis care for dependent drinking than for excessive drinking. The majority of Phase Two patients were referred to Project ASSERT directly by ED staff. There was simply only limited time for screening room-to-room for excessive drinking.

– *HPAs are necessary but not sufficient.*

The Project ASSERT model requires active participation of clinical staff on a number of levels. ED providers have gotten better at detecting and referring patients to Project ASSERT when the visit is obviously alcohol-related. However, unless providers utilize validated screening questions instead of relying on ‘smell of alcohol on breath’ or profiling obvious alcohol-related visits, they will continue to miss hidden dependent drinking, and they will only rarely detect excessive drinking. Recognizing that our original intent to broaden the base of treatment for alcohol problems by providing real-time universal screening and intervention across the spectrum of excessive to dependent drinking had not yet been realized, we increased our efforts to enlist ED providers in alcohol screening and motivational intervention.

– *The 14-site ED Study: A vehicle for developing a truly collaborative SBIRT model*

As a result of participation in National Alcohol Screening Day, the National Institute of Health’s National Institute of Alcohol Abuse and Alcoholism (NIAAA) awarded a series of grants\* to develop a standardized SBIRT curriculum for ED providers (including physicians, registered nurses, nurse practitioners, emergency medical technicians, and physician assistants), and to conduct a controlled trial of SBIRT with ED patients. The curriculum consisted of 1) a brief slide show describing evidence for the efficacy of SBIRT, 2) videos in which ED providers demonstrate intervention skills with simulated patients, 3) scripted scenarios for practicing skills, 4) pocket-sized plastic cards with NIAAA screening guidelines, a graphic display of typical drinks, and the intervention algorithm, and 5) a web site designed for independent learning ([www.ed.bmc.org/sbirt](http://www.ed.bmc.org/sbirt)). Prior to training, and at 3 and 12 months post-training, a survey instrument developed by D’Onofrio and colleagues. (D’Onofrio et al. 2001) was administered to 402 ED clinicians (21% nurses, 60% physicians, 7 % nurse practitioners or physician assistants, and 12% social workers), with 74% reporting <10 hours prior professional alcohol-related education ever. At the 3-month follow-up interview, scores significantly improved over baseline for self-reported confidence in ability and responsibility to intervene and actual utilization of SBIRT skills. However, scores decreased at the 12 month interview. Practitioners appear to need a more supportive infrastructure to maintain SBIRT-related skills and attitudes. Significant barriers were time limitations, lack of referral resources and reimbursement. We hypothesize that resources such as computerized screening, addition of ancillary support personnel like the HPAs, and a booster training session might increase SBIRT utilization. A core group of SBIRT champions at each site were critical to successful SBIRT implementation.

– *Going Live with ED-based SBIRT*

A pre- and post-training comparison tested whether the trained providers across the 14 sites could utilize SBIRT skills to effect drinking behavior change among their patients (Academic ED SBIRT Research Collaborative, 2007). From April–August 2004, about 26% of the 7,746 ED

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\* The Academic Emergency Medicine Alcohol SBIRT Research Collaborative: Boston University, Brown University, Charles R. Drew University, Denver Health Medical Center, Emory University, Howard University, Tufts University, University of California, San Diego, University of Medicine and Dentistry of New Jersey, University of Michigan, University of New Mexico, University of Southern California, University of Virginia, and Yale University.

patients screened were drinking above the NIAAA guidelines. Among screen-positive patients, 1104 enrolled – 566 were recruited during the six-week control period prior to training, and 538 enrolled during the intervention period immediately following training. Both control and intervention groups received a brochure listing local treatment resources. A trained clinical provider delivered the brief ED-based BNI to the intervention group. At the 3-month follow-up interview, 63% of patients (n = 699) called in to the Interactive Voice Recognition system at the University of Connecticut. The dependent drinkers in the intervention and control groups did not differ significantly on outcome variables at follow up. However, among excessive drinkers, the intervention group reported an average of 3.25 fewer drinks per week than controls and 0.72 fewer drinks per heavy drinking occasion, and compared to 18% of the control group, 28% of the intervention group was no longer drinking in excess of NIAAA guidelines.

### **Phase Three: a paradigm shift is needed**

In the 1960s there was a paradigm shift in primary care as physicians began to accept responsibility to help patients adopt a healthy life style, i.e., changes in diet, smoking and exercise to reduce cholesterol levels and cardiovascular risk. It is now standard of care for physicians to address these issues. Emergency Medicine is in the early stages of a similar shift regarding unhealthy drinking and drug use. The American College of Emergency Physicians (ACEP) and the Emergency Nurses Association (ENA) have strong policy statements supporting SBIRT. Recently the American College of Surgeons made it an essential requirement that level I trauma centers screen and have the capability to provide an intervention for patients identified as problem drinkers (Committee on Trauma 2006). There are now a number of tool kits, web sites and strategies to assist ED providers to acquire SBIRT skills ([www.ed.bmc.org/sbirt](http://www.ed.bmc.org/sbirt))

Documented success with our peer educator protocol (Bernstein et al., 2005) has sparked two large-scale efforts to disseminate the Project ASSERT collaborative model. In 2005, New York City's Department of Health and Mental Hygiene provided funding to train clinical staff at five EDs, support infrastructure development, and hire HPAs. The Massachusetts Department of Public Health has recently funded a five year project in collaboration with Massachusetts ACEP and ENA to implement Project ASSERT at six EDs throughout the state. These two initiatives include systems changes to increase collaboration between emergency care providers, behavioral health and substance abuse specialists, and primary care practitioners, and to build long term sustainability.

From more than 12 years of Project ASSERT practice, and training more than a thousand ED providers, we have learned that a collaborative model works best when HPAs are fully integrated into the ED staff and consistently available at critical hours when patients with problems are likely to present. We encourage ED clinicians, when time is available, to address unhealthy alcohol and drug use, but changes in clinical practice cannot be sustained without 1) institutional support, 2) changes in reimbursement structures to allow the ED to bill for addiction services or increased intensity of the visit, 3) parity with medical services supporting physical health for reimbursement for mental health and substance abuse services, and 4) access to quality mental health and substance abuse treatment.

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