Screening and Intervention for Alcohol and Drug Use in General Health Care

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Overview of this talk

- Why screen and intervene for substance use in general healthcare settings?
- Should general health care settings be a starting point for addiction treatment?
- Illinois SBIRT: creating a continuum of interventions for substance use
Why screen and intervene for substance use in general healthcare settings?

“Substance abuse is a social problem, not a medical problem.”
Alcohol and drug use cause significant morbidity & mortality

<table>
<thead>
<tr>
<th>Rank</th>
<th>Cause</th>
<th>Total US Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tobacco</td>
<td>435,000 (18.1%)</td>
</tr>
<tr>
<td>2</td>
<td>Poor diet &amp; activity</td>
<td>400,000 (16.6%)</td>
</tr>
<tr>
<td>3</td>
<td>Alcohol use + Alcohol related motor vehicle deaths</td>
<td>85,000 (3.5%)</td>
</tr>
<tr>
<td>9</td>
<td>Illicit drug use</td>
<td>16,700 (0.7%)</td>
</tr>
</tbody>
</table>

1 of 20 deaths

2,200 deaths/yr in Cook County

Mokdad et al. JAMA. 2004;291:1238-1245
“Moderate” alcohol use increases health risk

<table>
<thead>
<tr>
<th>(# drinks/day)</th>
<th>Health Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 0</td>
<td>Fetal neurologic/cognitive effects</td>
</tr>
<tr>
<td>1</td>
<td>Driving-related accidents</td>
</tr>
<tr>
<td>1</td>
<td>Breast cancer (esp. women w/ FH, on ERT)</td>
</tr>
<tr>
<td>1-2</td>
<td>Oral/Upper GI cancers</td>
</tr>
<tr>
<td>2</td>
<td>Cirrhosis in Hepatitis C</td>
</tr>
<tr>
<td>&gt;4</td>
<td>Hepatocellular carcinoma</td>
</tr>
<tr>
<td>&gt;4</td>
<td>Dilated cardiomyopathy</td>
</tr>
<tr>
<td>&gt;1</td>
<td><strong>All cause mortality women</strong></td>
</tr>
<tr>
<td>&gt;2</td>
<td><strong>All cause mortality men</strong></td>
</tr>
</tbody>
</table>

Most health risk & disease from alcohol use (and drug use?) is suffered by non-dependent users.

Alcohol Pyramid

- **Abstinent** (40%)
- **Low Risk Use** (35%)
- **At-Risk + Problem Use** (20%)
- **Dependent Use** (5%)

National Longitudinal Alcohol Epidemiology Study 1992, National Comorbidity Study, 1992
Brief Interventions by general health care providers for at-risk alcohol use

- 10-15 minute conversations, 0-3 follow-up sessions
- “FRAMES”
  > give Feedback about consumption & health risks
  > patient Responsibility for change
  > give Advice about decreasing health risk
  > elicit Menu of strategies / change options
  > maintain Empathetic approach
  > support patient’s Self efficacy, express optimism
Brief intervention (BI) in general health care settings decreases at-risk alcohol use

- Effective in randomized, controlled trials in diverse settings: Hospital inpatient units, primary care offices, emergency departments, & trauma centers

- Outcomes measured
  - ↓ alcohol consumption
  - ↓ hepatic enzymes
  - ↓ sick days
  - ↓ driving after drinking, ↓ new injuries
  - ↓ hospital days
Efficacy of brief intervention in primary care to decrease number of at-risk drinkers

- Meta-analysis by publication year, all RCTs with intention to treat analysis
- Intervention effect measured between 6-12 months

Evidence for BI with other substances

- MTP Research Group et al. 2004. – cannabis (USA)
- Copeland et al. 2001. – cannabis (Australia)
- Heather et al. 2004. – benzodiazepines (UK)
- McCambridge, Strang. 2004. – tobacco and cannabis (UK)
- Berstein et al. 2005. – cocaine and heroin (US)
- Significant literature for tobacco cessation
US Preventive Services Task Force recommends screening & behavioral counseling in primary care settings to reduce alcohol misuse by adults.
Standardized questions are the best screen

• Self-report tests are reliable and valid under most clinical conditions

• Biological tests are expensive, cumbersome, insensitive, difficult to interpret
  – useful adjuncts in employment and medical settings

• Which screening questionnaire to use?
  – Patient characteristics
  – Provider setting characteristics
AUDIT

Screen + brief assessment of alcohol use
10 items, 0-4 points each
Can be self-administered by patient or by staff
Use total score to predict risk level & triage patient to intensity of intervention

Babor FT, WHO/MSD/MSB/01.6a, World Health Organization, 2001
“Asking about drugs and alcohol takes too much time; it’s too complicated.”
One question screening for current at-risk use

Alcohol*:
• How many times in the past year have you had . . .
  5 or more drinks in a day? (for men)
  4 or more drinks in a day? (for women)

Drugs**:
• In the past three months, how often have you used:
  (name each drug type available in community)?

Should general healthcare settings be a starting point for addiction treatment?

“Addicts are hopeless cases.”
Substance dependence disorders (addictions) are brain diseases

- Using drugs repeatedly over time cause fundamental changes brain structure and function
- Long-lasting brain changes in the brain's natural motivational control circuits are responsible for the compulsion to use drugs that is the essence of addiction

Leshner AI, JAMA, 282 (1999): 1314-1316
Addiction treatment is effective

• Goal of addiction treatment is to return to productive functioning
  – reduces substance use by 40-60%
  – reduces crime by 40-60%
  – increases employment by 40%
• Rates of adherence similar to treatment for other chronic diseases such as diabetes, asthma, hypertension
• Every $1 spent for treatment saves up to $12 in reduced health care and crime-related costs

90% of people with active substance use disorders are untreated

23.2 million (9.5%) of US pop. > 12 years old have a current substance use disorder

- 85% Did not feel need for treatment
- 10% Felt need for treatment but did not receive
- 5% Received specialized treatment

69% paid with own or family savings
28% public assistance
45% medicare/medicaid
32% private insurance

National Survey on Drug Use and Health, SAMHSA, 2005
People with substance use disorders seek care in general healthcare settings

<table>
<thead>
<tr>
<th>Distribution of Persons w/ SUD Treated in Ambulatory Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>General medical (ED, MD office)</td>
</tr>
<tr>
<td>Specialty mental health</td>
</tr>
<tr>
<td>Professional human services</td>
</tr>
<tr>
<td>Self-help groups</td>
</tr>
<tr>
<td>Specialty addiction</td>
</tr>
</tbody>
</table>

*Narrow et al. Arch Gen Psychiatry. 1993;50:95-107*
Prevalence of substance dependence disorder among primary care patients

<table>
<thead>
<tr>
<th>Study</th>
<th>Patients</th>
<th># Patients</th>
<th>Alcohol Dependence</th>
<th>Illicit Drug Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fleming</td>
<td>Men &amp; women 18-65 y</td>
<td>21,282</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>(1998)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piccinelli</td>
<td>Men &amp; women 18-65 y</td>
<td>482</td>
<td>2%</td>
<td>-</td>
</tr>
<tr>
<td>(1997)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volk</td>
<td>Men &amp; women mean age 39-47 y</td>
<td>1,333</td>
<td>5-7% women</td>
<td>11-14% men</td>
</tr>
<tr>
<td>(1997)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Prevalence of substance dependence disorder among general hospital admissions

<table>
<thead>
<tr>
<th>Study</th>
<th>Facility</th>
<th>Patient type</th>
<th># Patients</th>
<th>Alcohol Dependence</th>
<th>Illicit Drug Dependence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smothers (2003)</td>
<td>90 Hospitals</td>
<td>18+ y, All Services</td>
<td>2,040</td>
<td>6.3%</td>
<td>10.9% (Drug Use)</td>
</tr>
<tr>
<td>Brown (1998)</td>
<td>Univ Hospital</td>
<td>18-49 y, Med/Surg</td>
<td>374</td>
<td>10.5%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Soderstrom (1997)</td>
<td>Level 1 Trauma</td>
<td>18+ y, Trauma</td>
<td>1,118</td>
<td>24.1%</td>
<td>17.7%</td>
</tr>
<tr>
<td>Canning (1999)</td>
<td>Teaching Hospital</td>
<td>18-85 y, Medicine</td>
<td>2,988</td>
<td>-</td>
<td>4% (Drug Use)</td>
</tr>
</tbody>
</table>
At-risk & dependent use by inpatient service, Stroger Hospital

N = 9,215 (64% of admissions, 7/1/05-6/30/06)

**Cocaine**

- **At-Risk, not dependent**
- **Dependent**

**Heroin**

- **At-Risk, not dependent**
- **Dependent**

**Marijuana**

- **At-Risk, not dependent**
- **Dependent**

**Alcohol**

- **At-Risk, not dependent**
- **Dependent**

Legend:
- Yellow: Dependent
- Blue: At-Risk, not dependent
Prevalence of alcohol dependence by age: Hospitalized patients vs. community

Drug dependence by age: Hospitalized patients vs. community

[Graph showing prevalence of drug dependence by age group.]

Any Drug Dependence Stroger Hospital Patients
Any Drug Dependence in Illinois Community

# Identification & intervention for substance use disorders among general healthcare patients

<table>
<thead>
<tr>
<th>Study</th>
<th>Setting, Patients</th>
<th>Patients Identified by MD Team</th>
<th>Patients with Intervention by MD Team</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moore (1989)</td>
<td>University Hospital + Alcohol screen</td>
<td>7-66%</td>
<td>35%</td>
</tr>
<tr>
<td>Hearne (2002)</td>
<td>General Hospital + Alcohol Use Disorder</td>
<td>20%</td>
<td>8%</td>
</tr>
<tr>
<td>Smothers (2004)</td>
<td>90 General Hospitals + Alcohol Use Disorder</td>
<td>57%</td>
<td>21%</td>
</tr>
</tbody>
</table>
Rationale for Federal SBIRT grants

Screening, Brief Intervention, Referral & Treatment in general health care settings

• Morbidity from alcohol and drug use can be reduced by brief interventions in general health care settings

• Substance Dependence Disorders, like other chronic medical diseases, should be identified in medical settings and referred for specialty care

• Mainstream medical care should become a part of a continuum of early intervention and treatment for alcohol and drug problems
Illinois SBIRT: creating a continuum of interventions for substance use

“There isn’t any treatment available anyway.”
Purpose of Illinois SBIRT Initiative

• Expand the State’s continuum of services for SUD to include SBIRT in general medical & other community settings

• Support appropriate clinical services for nondependent substance users

• Improve linkages among generalist agencies performing SBIRT & specialist substance abuse treatment agencies

• Identify systems & policy changes to increase access to a continuum of services for SUD in generalist & specialist settings
Illinois SBIRT Goals
Cook County Bureau of Health Services

• Implement screening, brief intervention, & referral for addiction treatment in CCBHS facilities
• Establish referral linkages between addiction treatment agencies and CCBHS
• Expand addiction treatment capacity for CCBHS patients
• Train and support CCBHS clinicians to screen and intervene as part of routine health care
• Provide services with reasonable costs
SBIRT model in general healthcare setting

Universal Screening

Brief Assessment

No Use or Low-Risk Use
At-Risk Use
Use with Consequences
Dependence

Health Information
Brief Intervention
Referral to Treatment

Assessment
Illinois SBIRT Interventions

HEALTH COUNSELORS

Screening

Low Risk Use

General Health Information

At-Risk Use

Brief Intervention

Brief Assessment

Use with Consequences

Dependent Use

Assess & Referral

REFERRAL AGENT

PEER MENTORS

Brief Treatment

Chemical Dependency Treatment

CCBHS Hospitals & Health Centers

COMMUNITY CARE COORDINATORS

State Licensed Treatment Providers
Brief treatment

- Initiated with SBIRT funds
- 12 state funded treatment agencies participated
- One-to-one sessions by certified counselor
- Face-to-face, by phone, at hospital
- Individualized schedule (most often weekly)
- Motivation enhancement primary counseling strategy
- Option for patients:
  - less severe addiction disorders
  - refused traditional treatment
  - waiting for traditional treatment
# Screening & intervention in CCBHS

42 months (3/30/04 – 9/30/07)

<table>
<thead>
<tr>
<th>All Patients N = 84,183</th>
<th>Emergency &amp; Trauma N (% of screened)</th>
<th>Hospital N (% of screened)</th>
<th>Ambulatory N (% of screened)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Risk</td>
<td>9,249 (66)</td>
<td>41,503 (76)</td>
<td>7,271 (84)</td>
</tr>
<tr>
<td>At-Risk Use or Use with Consequences Received BI</td>
<td>3,208 (23)</td>
<td>8,370 (16)</td>
<td>1,115 (13)</td>
</tr>
<tr>
<td>Dependent Use Received BI, offered Referral</td>
<td>1,574 (11)</td>
<td>4,554 (8)</td>
<td>251 (3)</td>
</tr>
<tr>
<td>Accepted Treatment Referral (% of Dependent)</td>
<td>1,266 (9)</td>
<td>3,524 (6)</td>
<td>122 (1)</td>
</tr>
</tbody>
</table>
Readiness Ruler: How ready are you to make a change in your use?”

- Marijuana
- Alcohol, Cocaine
- Heroin

Not ready  Unsure  Ready

Average response of patients dependent on that substance
State funded treatment within 30 days of discharge from Stroger Hospital, n=1,2975

<table>
<thead>
<tr>
<th>Factors independently associated with beginning treatment</th>
<th>Began treatment n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did not want referral while hospitalized, n=292</td>
<td>6 (2)</td>
</tr>
<tr>
<td>Accepted referral while hospitalized, n=983</td>
<td>216 (22)</td>
</tr>
<tr>
<td>High level of motivation to change, n=788</td>
<td>190 (24)</td>
</tr>
<tr>
<td>Previous treatment within 3 years, n=308</td>
<td>92 (30)</td>
</tr>
<tr>
<td>Referred to brief treatment (with or without referral to traditional treatment modality), n=275</td>
<td>94 (34)</td>
</tr>
<tr>
<td>Less than 14 days to treatment appointment, n=640</td>
<td>178 (28)</td>
</tr>
</tbody>
</table>

Sample of dependent patients discharged from Stroger Hospital matched with State-funded treatment data base (2004-2005)
Trend in % of referred patients beginning treatment over first 12 months of SBIRT program

Test for trend across months for all three measures: P<.001
Interim Methadone Program

• Initiated with SBIRT funds
• Patient referred from CCBHS accepted and receives medication next morning
• Receive transportation fare while in program
• 120 days to transfer to a methadone maintenance “home” or other treatment option

May 2006 – September 2007
541 patients referred (average 32/month)
63% initiated treatment
Patient self-report at baseline & 6 months after SBIRT intervention n=902

<table>
<thead>
<tr>
<th>“In the last 30 days…”</th>
<th>Baseline</th>
<th>6 Months</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feelings of stress due to substance use – Not at All</td>
<td>14%</td>
<td>53%</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Reduction in important activities due to substance use – Not at All</td>
<td>23%</td>
<td>69%</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Emotional problems due to substance use - Not at All</td>
<td>21%</td>
<td>67%</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Rating of overall health – Fair/Poor</td>
<td>73%</td>
<td>46%</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Average days of alcohol use</td>
<td>7.8</td>
<td>4.4</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Average days of alcohol use to intoxication/5 or More Drinks</td>
<td>3.2</td>
<td>1.8</td>
<td>.009</td>
</tr>
<tr>
<td>Average days of cocaine/crack use</td>
<td>3.8</td>
<td>1.2</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Average days of marijuana use</td>
<td>2.8</td>
<td>1.6</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Average days of heroin use</td>
<td>5.4</td>
<td>1.8</td>
<td>&lt; .001</td>
</tr>
</tbody>
</table>

SBIRT data from Illinois Health Survey Lab. 2007
## Organization Cost of SBIRT Services in Stroger Hospital

<table>
<thead>
<tr>
<th>Cost per Screen</th>
<th>Cost per Brief Intervention</th>
<th>Cost per Referral</th>
</tr>
</thead>
<tbody>
<tr>
<td>$16.28</td>
<td>$33.89</td>
<td>$190.55</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cost Category</th>
<th>Cost</th>
<th>Cost Category</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel</td>
<td>$474,469</td>
<td>Volunteers</td>
<td>$0</td>
</tr>
<tr>
<td>Material</td>
<td>$24,250</td>
<td>Material Donated</td>
<td>$0</td>
</tr>
<tr>
<td>Building</td>
<td>$34,386</td>
<td>Equipment</td>
<td>$3,439</td>
</tr>
<tr>
<td>Occupancy</td>
<td>$39,528</td>
<td>Information System</td>
<td>$55,176</td>
</tr>
<tr>
<td>Liability Insurance</td>
<td>$7,145</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total Cost of Program</td>
<td>$638,393</td>
</tr>
</tbody>
</table>

Activity Based Costing method. SBIRT data 7/1/05-6/30/06.
Improved Health Care Quality
Tobacco cessation counseling for patients admitted to Stroger Hospital above national average with SBIRT Program

% Patients Who Received Counseling

National Average

- Patients with Heart Attack
- Patient with Heart Failure
- Patients with Pneumonia

SBIRT Health Counselors begin Tobacco Use Screening & Counseling

Data from Quality Assurance Department of Stroger Hospital and US Department of Health and Human Services
Guidelines for Management of Hospitalized Opioid-Dependent Patients

John H. Stroger, Jr. Hospital of Cook County
Bradley Langer, MD, Medical Director

With Support from the Illinois SBIRT Initiative
Funded by the Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Treatment
H. Westley Clark, MD, JD, MPH, CAS, FASAM, Director
Do You Know All Your Health Risks?

Learn about the risks of tobacco, alcohol, and other drug use.

You can talk with your doctor, a peer mentor, or counselor. For more information call 312-864-4434.
Screening Patients for Tobacco, Alcohol, and Other Drug Use?

Our professional staff is available to offer screening, brief intervention support, and referrals to specialized care.

To reach a health counselor or peer mentor call:

- Stroger Hospital
  - 312-864-4448
- Provident Hospital
  - 312-572-2672
- Oak Forest Hospital
  - 708-633-2630
- Ambulatory Clinics
  - 312-864-4434
Many partners…

United States Center for Substance Abuse Treatment Grant Number TI15968

**Illinois SBIRT Initiative Partners**
- Illinois Department of Human Services Division of Alcoholism & Substance Abuse
- Cook County Bureau of Health Services
- Chestnut Health Systems, Inc. - Illinois Health Survey Lab
- Illinois TASC Inc.
- Great Lakes Addiction Technology Transfer Center

**CCBHS Team**

Building a continuum of interventions for substance use

Challenges, unanswered questions

• Reimburse for screening and interventions in general health care settings
• Adapt specialty addiction care to meet needs of a new cohort of patients
• Change clinician perception of role compatibility (among generalists and specialists)
• Create organizational and professional common ground for collaboration between general health care and addiction providers (patients = clients)
• Learn how best to combine or sequence interventions