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

Rank	Cause	Total US Deaths
1.	Tobacco	435,000 (18.1%)
2.	Poor diet & activity	400,000 (16.6%)
3.	Alcohol use +	85,000 (3.5%)
	Alcohol related motor vehicle deaths	16,700 (0.7%)
9.	Illicit drug use	17,000 (0.7%)

1 of 20 deaths

2,200 deaths/yr in Cook County

Mokdad et al. JAMA. 2004;291:1238-1245

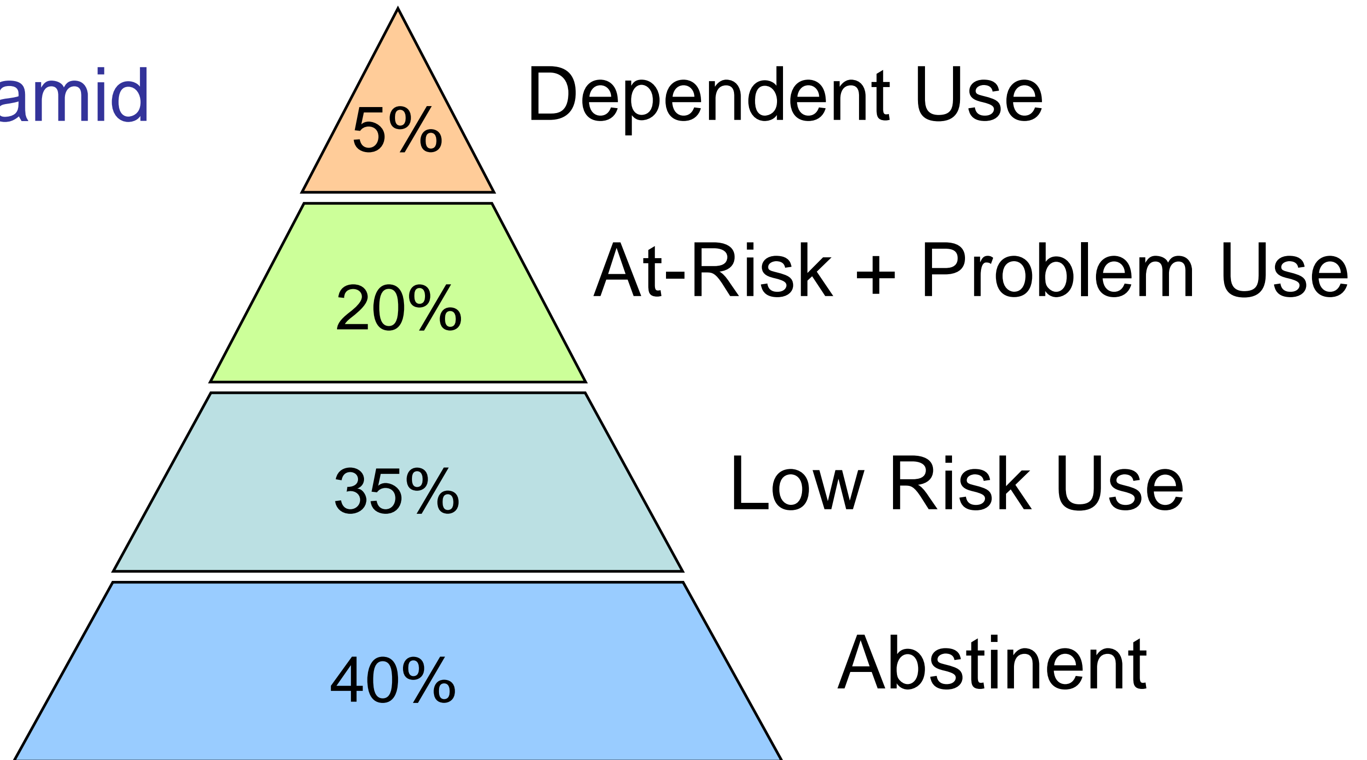
“Moderate” alcohol use increases health risk

(# drinks/day)	Health Risk
> 0	Fetal neurologic/cognitive effects
1	Driving-related accidents
1	Breast cancer (esp. women w/ FH, on ERT)
1-2	Oral/Upper GI cancers
2	Cirrhosis in Hepatitis C
>4	Hepatocellular carcinoma
>4	Dilated cardiomyopathy
>1	**All cause mortality women**
>2	**All cause mortality men**

Gunzerath et al. Alcohol Clin Exp Res. 2004;28:829-847.

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

Alcohol Pyramid



National Longitudinal Alcohol Epidemiology Study 1992, National Comorbidity Study, 1992

Brief Interventions by general health care providers for at-risk alcohol use

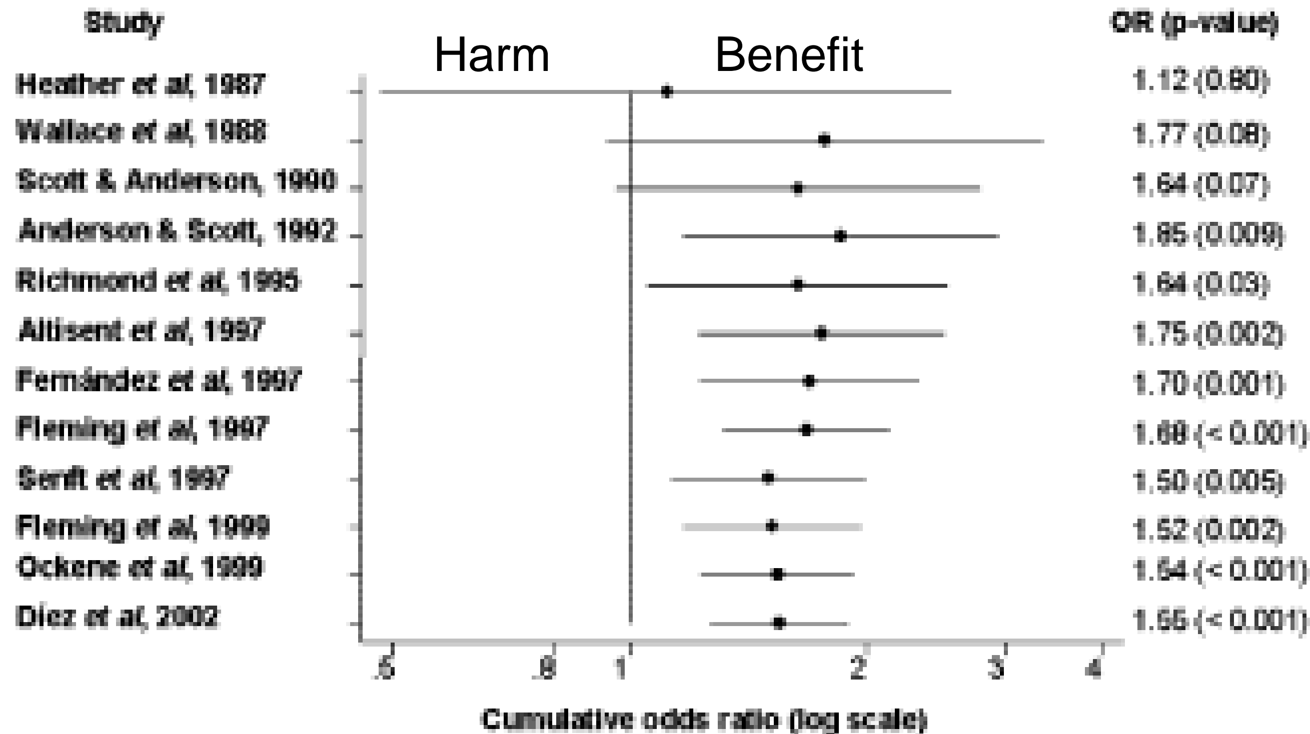
- 10-15 minute conversations, 0-3 follow-up sessions
- "FRAMES"

> give **Feedback** about consumption & health risks
> patient **Responsibility** for change
> give **Advice** about decreasing health risk
> ellicit **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



OR = 1.6

NNT = 9

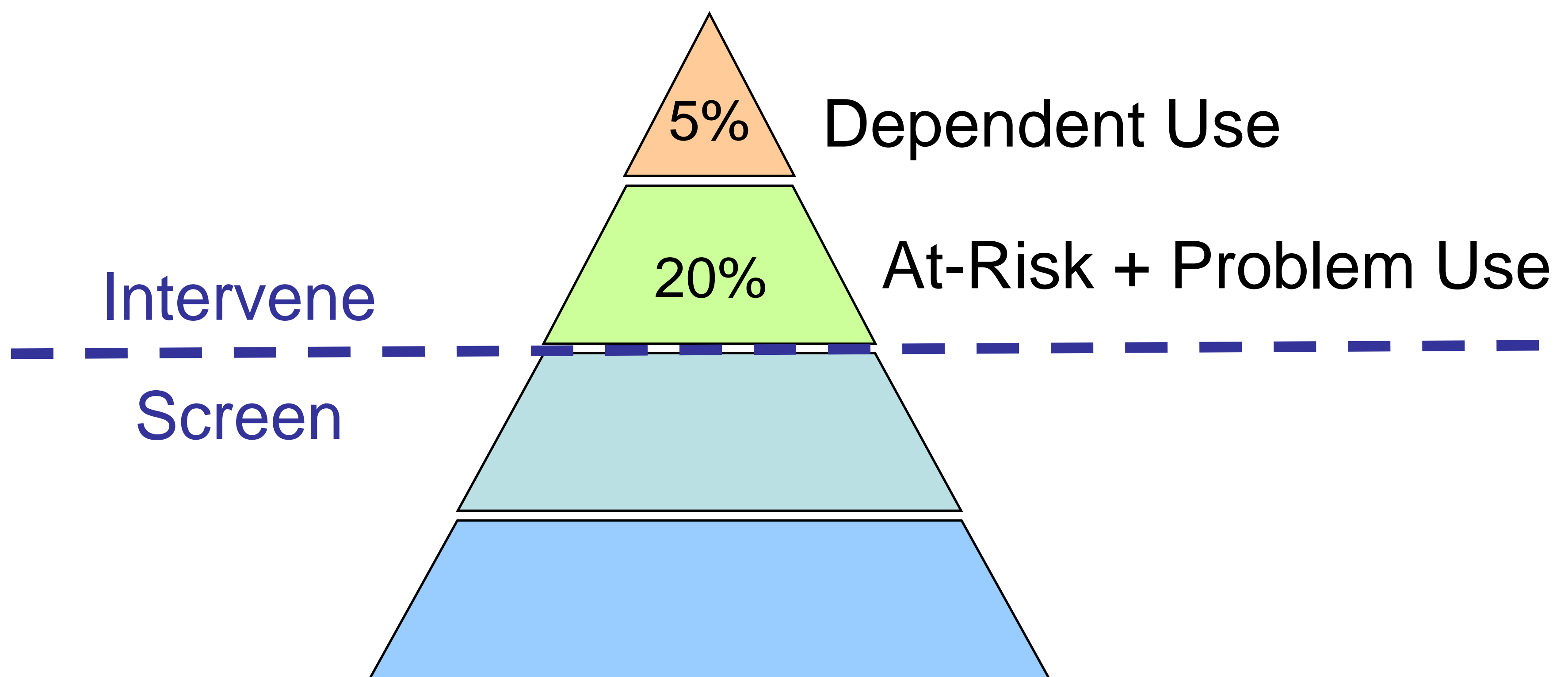
- Meta-analysis by publication year, all RCTs with intention to treat analysis
- Intervention effect measured between 6-12 months

Ballesteros et al. Alcohol Clin Exp Res. 2004;28:608-618

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

Box 4

The Alcohol Use Disorders Identification Test: Interview Version

Read questions as written. Record answers carefully. Begin the AUDIT by saying "Now I am going to ask you some questions about your use of alcoholic beverages during this past year." Explain what is meant by "alcoholic beverages" by using local examples of beer, wine, vodka, etc. Code answers in terms of "standard drinks". Place the correct answer number in the box at the right.

1. How often do you have a drink containing alcohol?
   (0) Never [Skip to Qs 9-10]
   (1) Monthly or less
   (2) 2 to 4 times a month
   (3) 2 to 3 times a week
   (4) 4 or more times a week

2. How many drinks containing alcohol do you have on a typical day when you are drinking?
   (0) 1 or 2
   (1) 3 or 4
   (2) 5 or 6
   (3) 7, 8, or 9
   (4) 10 or more

3. How often do you have six or more drinks on one occasion?
   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

   Skip to Questions 9 and 10 if Total Score for Questions 2 and 3 = 0

4. How often during the last year have you found that you were not able to stop drinking once you had started?
   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

5. How often during the last year have you failed to do what was normally expected from you because of drinking?
   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?
   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

7. How often during the last year have you had a feeling of guilt or remorse after drinking?
   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?
   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

9. Have you or someone else been injured as a result of your drinking?
   (0) No
   (2) Yes, but not in the last year
   (4) Yes, during the last year

10. Has a relative or friend or a doctor or another health worker been concerned about your drinking or suggested you cut down?
   (0) No
   (2) Yes, but not in the last year
   (4) Yes, during the last year

Record total of specific items here

If total is greater than recommended cut-off, consult User's Manual.

“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)?

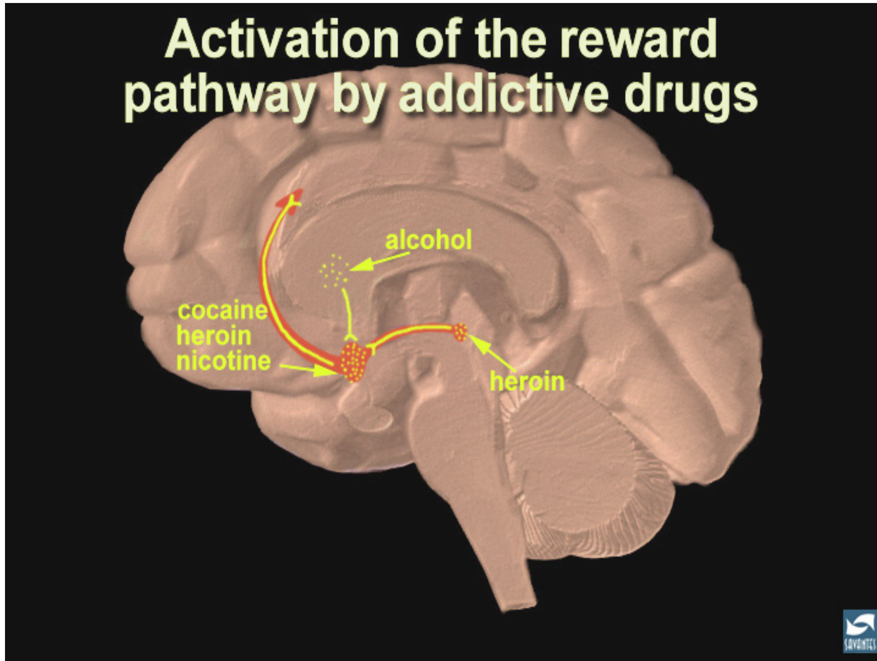
**National Institute on Alcohol Abuse and Alcoholism. Clinician's Guide. 2005.*

***World Health Organization. ASSIST Guidelines for Use in Primary Care. 2003.*

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

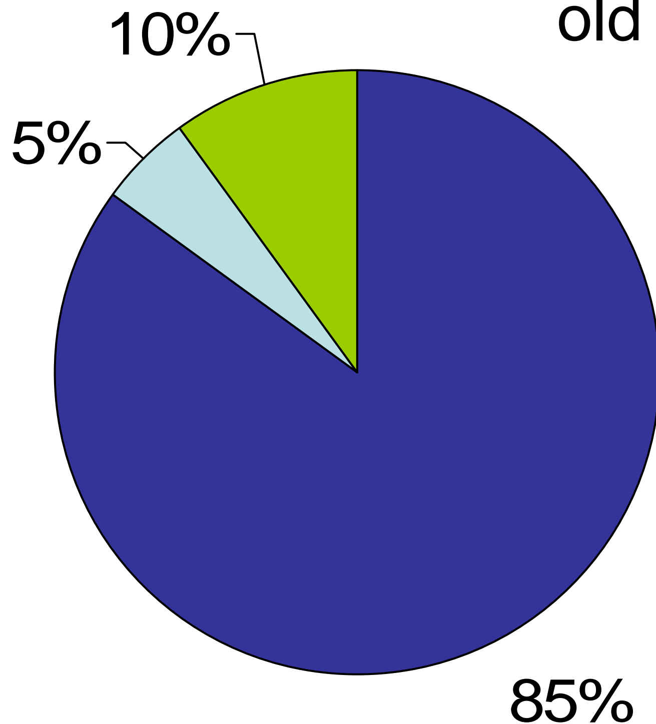
Addiction treatment is effective

- 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

McLellan AT, Lewis DC, O'Brien CP, Kleber HD, JAMA, 284 (2000): 1689-1695
NIDA, Principles of Drug Addiction Treatment: A Research-Based Guide, NIH Bethesda, MD, July 2000

90% of people with active substance use disorders are untreated

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



- Did not feel need for treatment
- Felt need for treatment but did not receive
- 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

Distribution of Persons w/ SUD Treated in Ambulatory Settings

Setting	%
General medical (ED, MD office)	43.3%
Specialty mental health	42.6%
Professional human services	19.0%
Self-help groups	7.9%
Specialty addiction	6.3%

Narrow et al. Arch Gen Psychiatry. 1993;50:95-107

Prevalence of substance dependence disorder among primary care patients

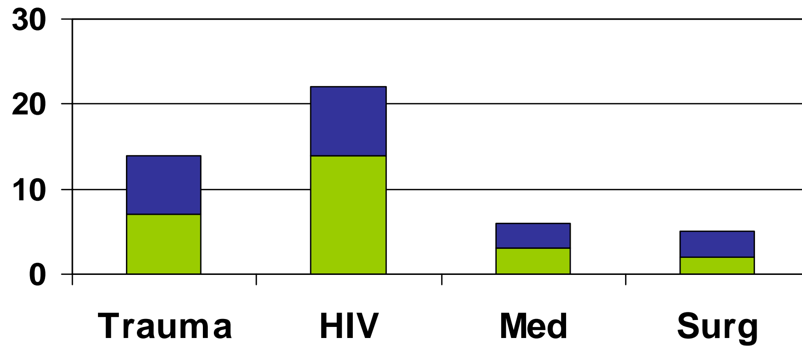
Study	Patients	# Patients	Alcohol Dependence	Illicit Drug Use
Fleming (1998)	Men & women 18-65 y	21,282	5%	5%
Piccinelli (1997)	Men & women 18-65 y	482	2%	-
Volk (1997)	Men & women mean age 39-47 y	1,333	5-7% women 11-14% men	-

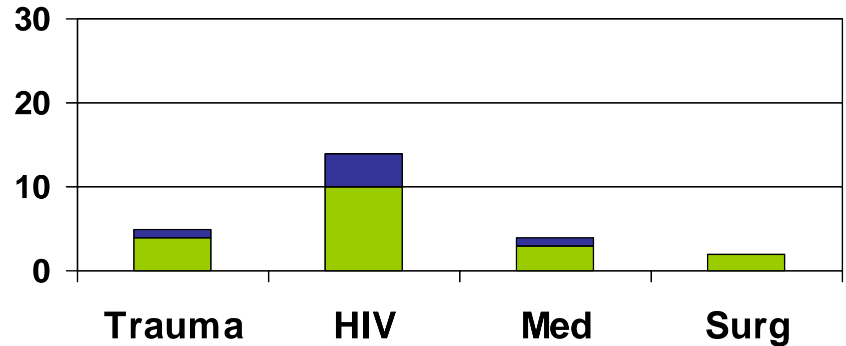
Prevalence of substance dependence disorder among general hospital admissions

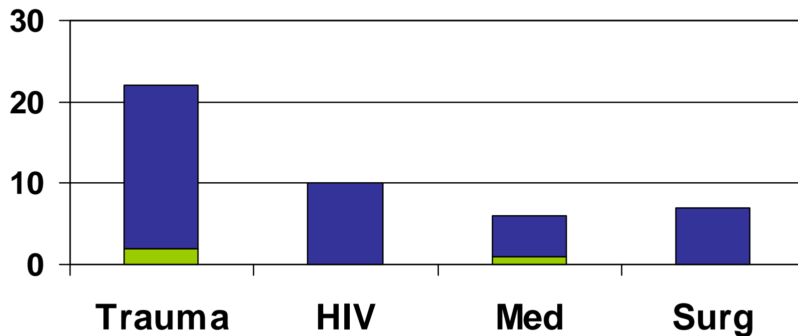
Study	Facility Patient type	# Patients	Alcohol Dependence	Illicit Drug Dependence
Smothers (2003)	**90 Hospitals 18+ y, All Services**	**2,040**	**6.3%**	***10.9% (Drug Use)***
Brown (1998)	**Univ Hospital 18-49 y, Med/Surg**	**374**	**10.5%**	**2.5%**
Soderstrom (1997)	**Level 1 Trauma 18+ y, Trauma**	**1,118**	**24.1%**	**17.7%**
Canning (1999)	**Teaching Hospital 18-85 y, Medicine**	**2,988**	**-**	***4% (Drug Use)***

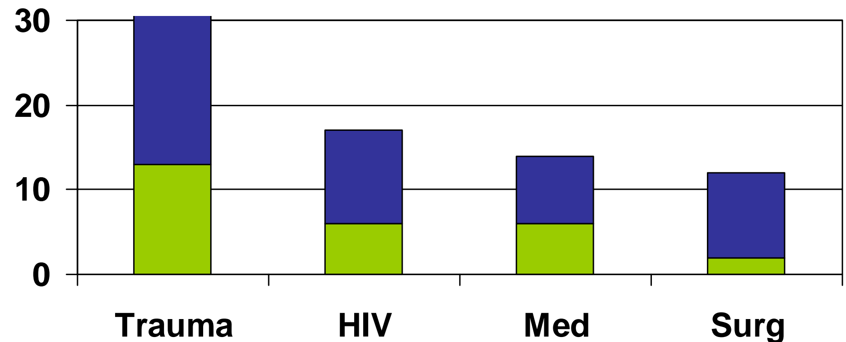
At-risk & dependent use by inpatient service, Stroger Hospital

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

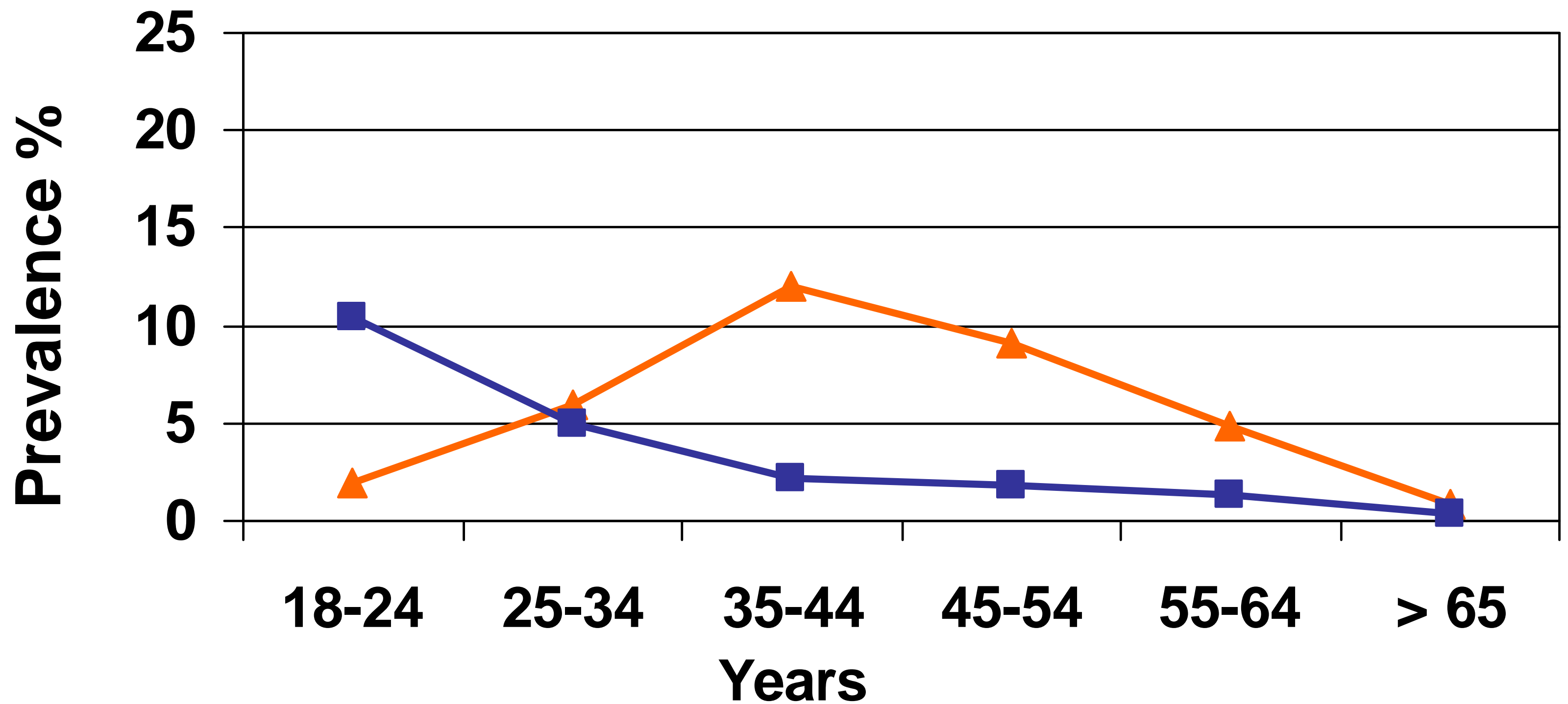








Prevalence of alcohol dependence by age: Hospitalized patients vs. community

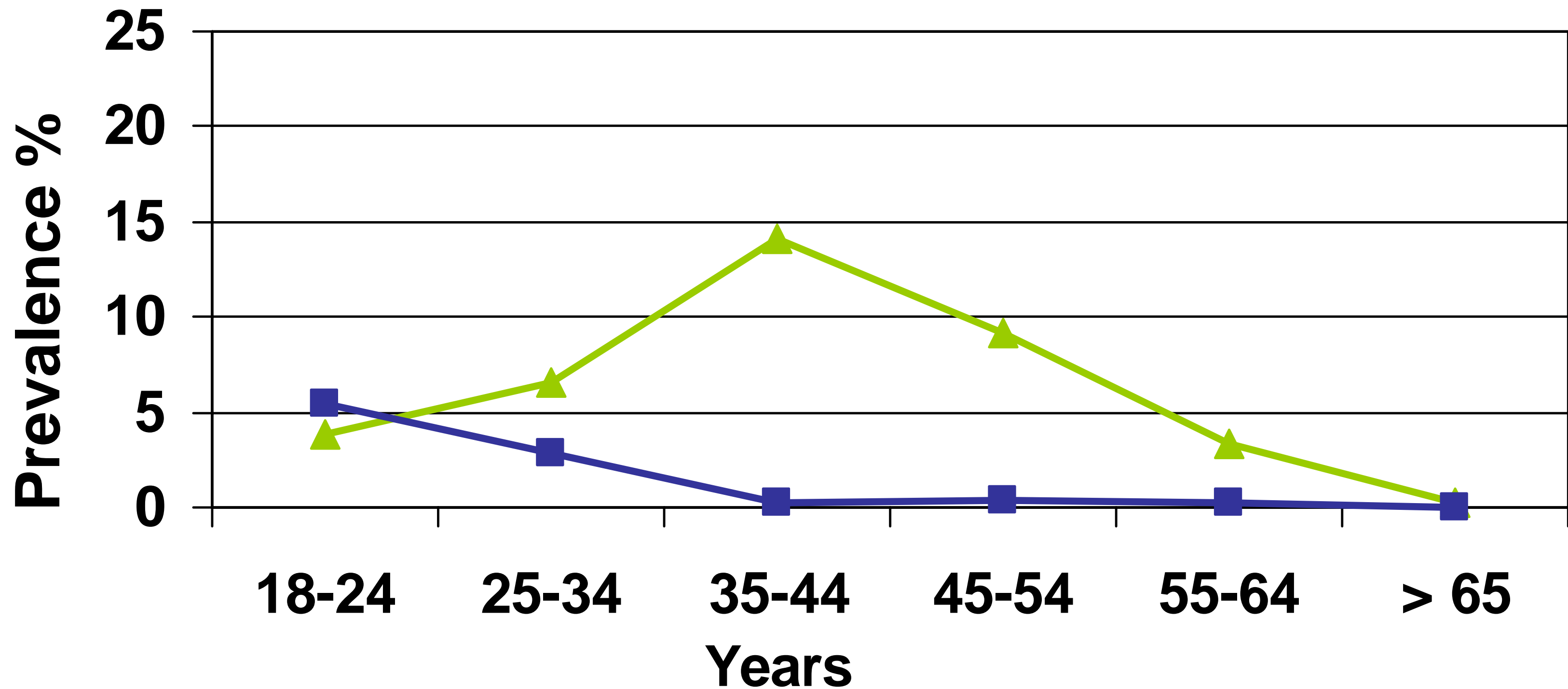


Alcohol Dependence Stroger Hospital Patients

Alcohol Dependence in Community Members, Illinois

Illinois SBIRT data 2005-2006. Illinois Household Survey 2003.

Drug dependence by age: Hospitalized patients vs. community



Any Drug Dependence Stroger Hospital Patients

Any Drug Dependence in Illinois Community

Illinois SBIRT data 2005-2006. Illinois Household Survey 2003.

Identification & intervention for substance use disorders among general healthcare patients

Study	Setting, Patients	Patients Identified by MD Team	Patients with Intervention by MD Team
Moore (1989)	**University Hospital** + Alcohol screen	**7-66%**	**35%**
Hearne (2002)	**General Hospital** + Alcohol Use Disorder	**20%**	**8%**
Smothers (2004)	**90 General Hospitals** + Alcohol Use Disorder	**57%**	**21%**

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.”

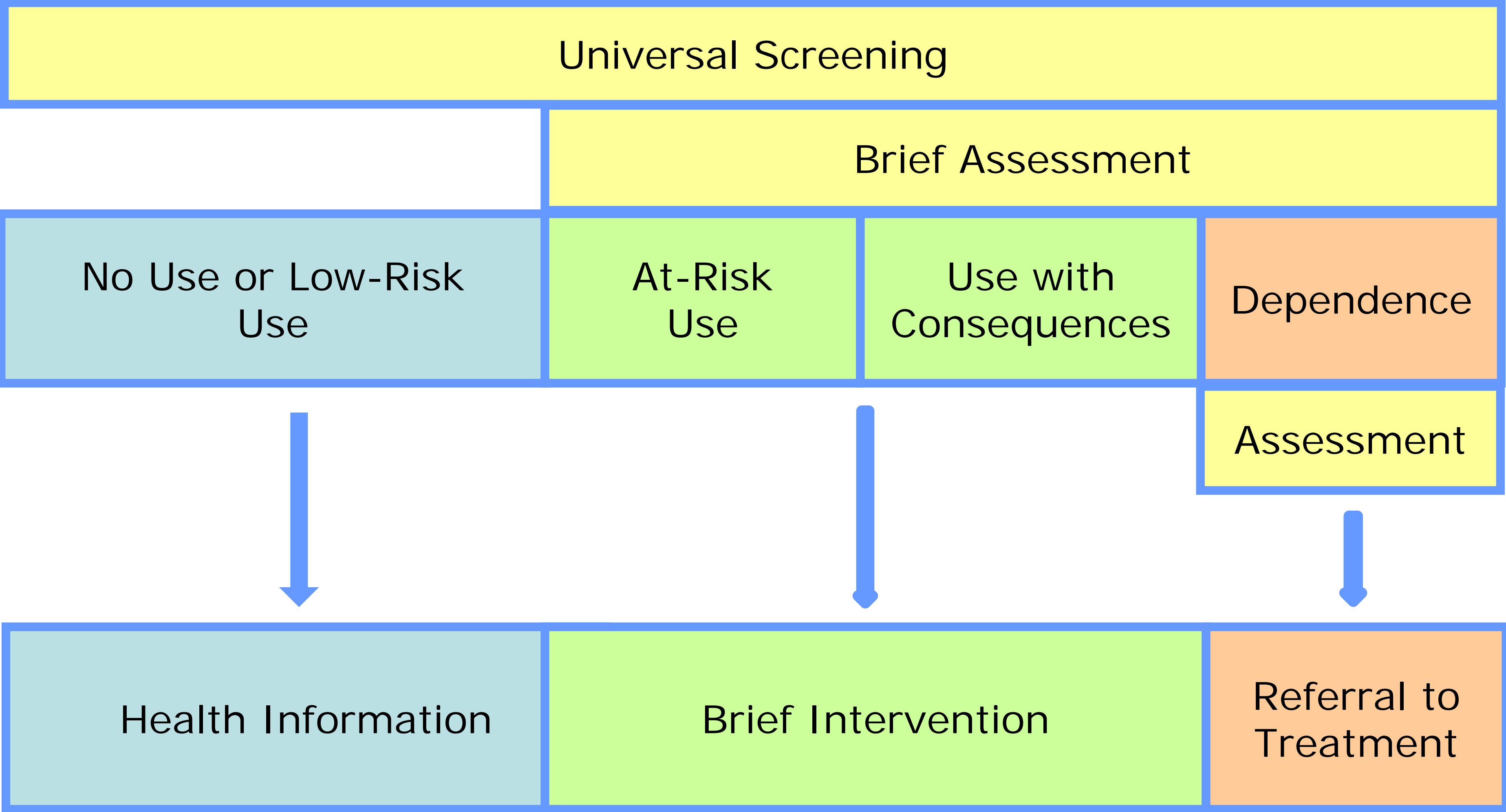
Purpose of Illinois SBIRT Initiative

- 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

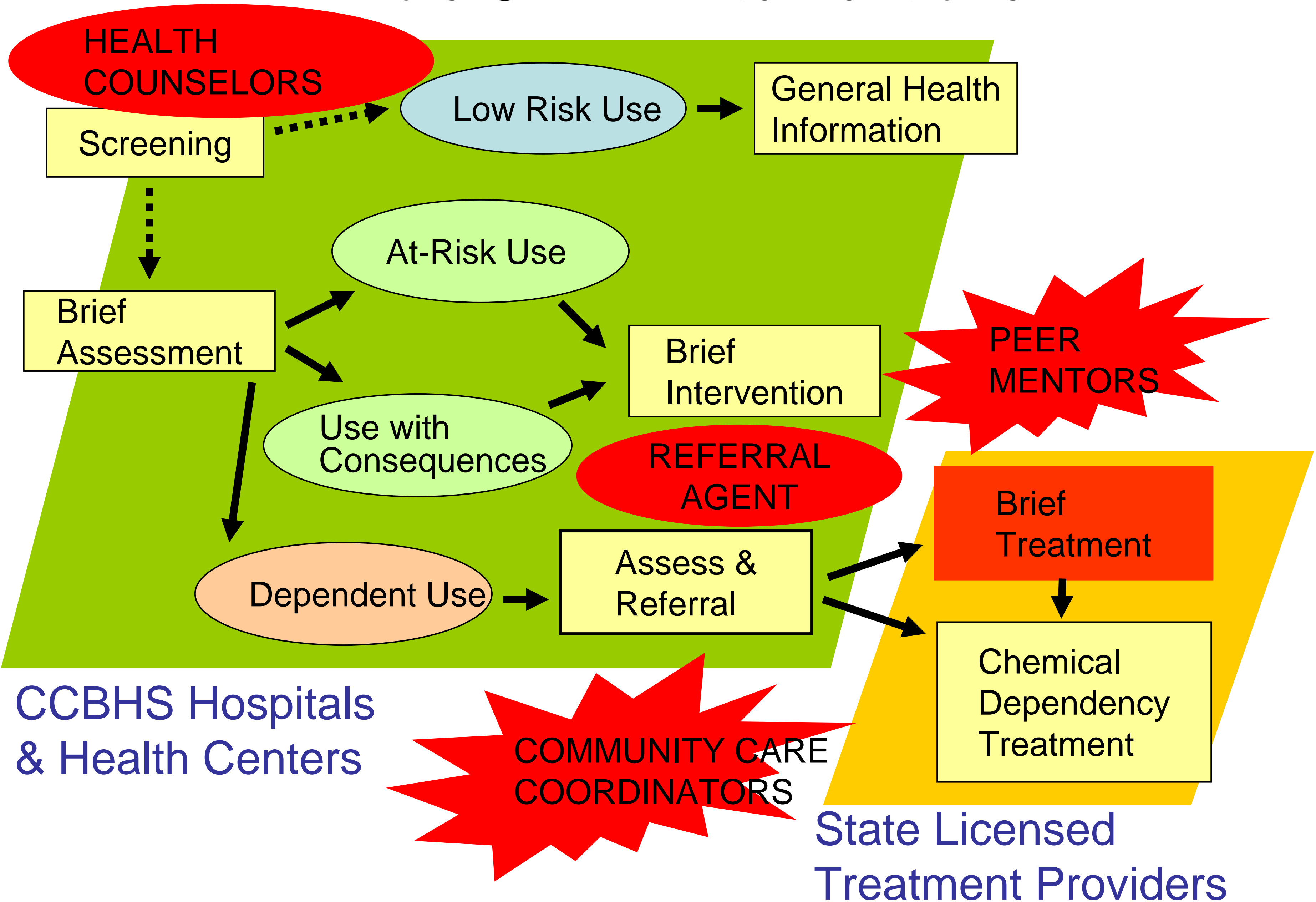
Illinois SBIRT Goals
Cook County Bureau of Health Services

- 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



Illinois SBIRT Interventions



Brief treatment

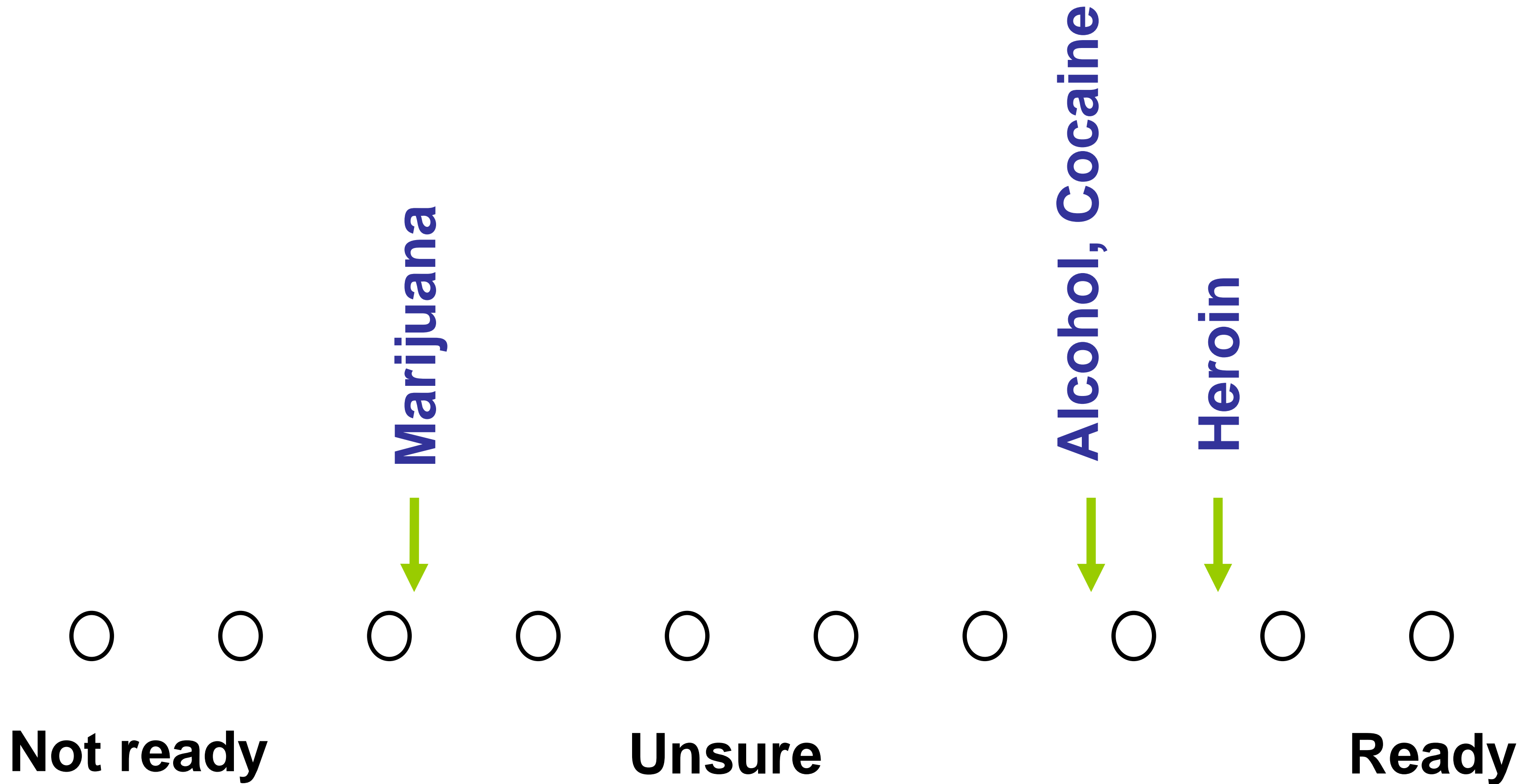
- Initiated with SBIRT funds
- 12 state funded treatment agencies participated
- One-to-one sessions by certified counselor
- Face-to-face, by phone, at hospital
- Individualized schedule (most often weekly)
- Motivation enhancement primary counseling strategy
- Option for patients:
  - less severe addiction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

Screening & intervention in CCBHS

42 months (3/30/04 – 9/30/07)

All Patients N = 84,183	Emergency & Trauma N (% of screened)	Hospital N (% of screened)	Ambulatory N (% of screened)
Low Risk	9,249 (66)	41,503 (76)	7,271 (84)
At-Risk Use or Use with Consequences Received BI	3,208 (23)	8,370 (16)	1,115 (13)
Dependent Use Received BI, offered Referral	1,574 (11)	4,554 (8)	251 (3)
Accepted Treatment Referral (% of Dependent)	1,266 (9) (80%)	3,524 (6) (77%)	122 (1) (49%)

Readiness Ruler: How ready are you to make a change in your use?”



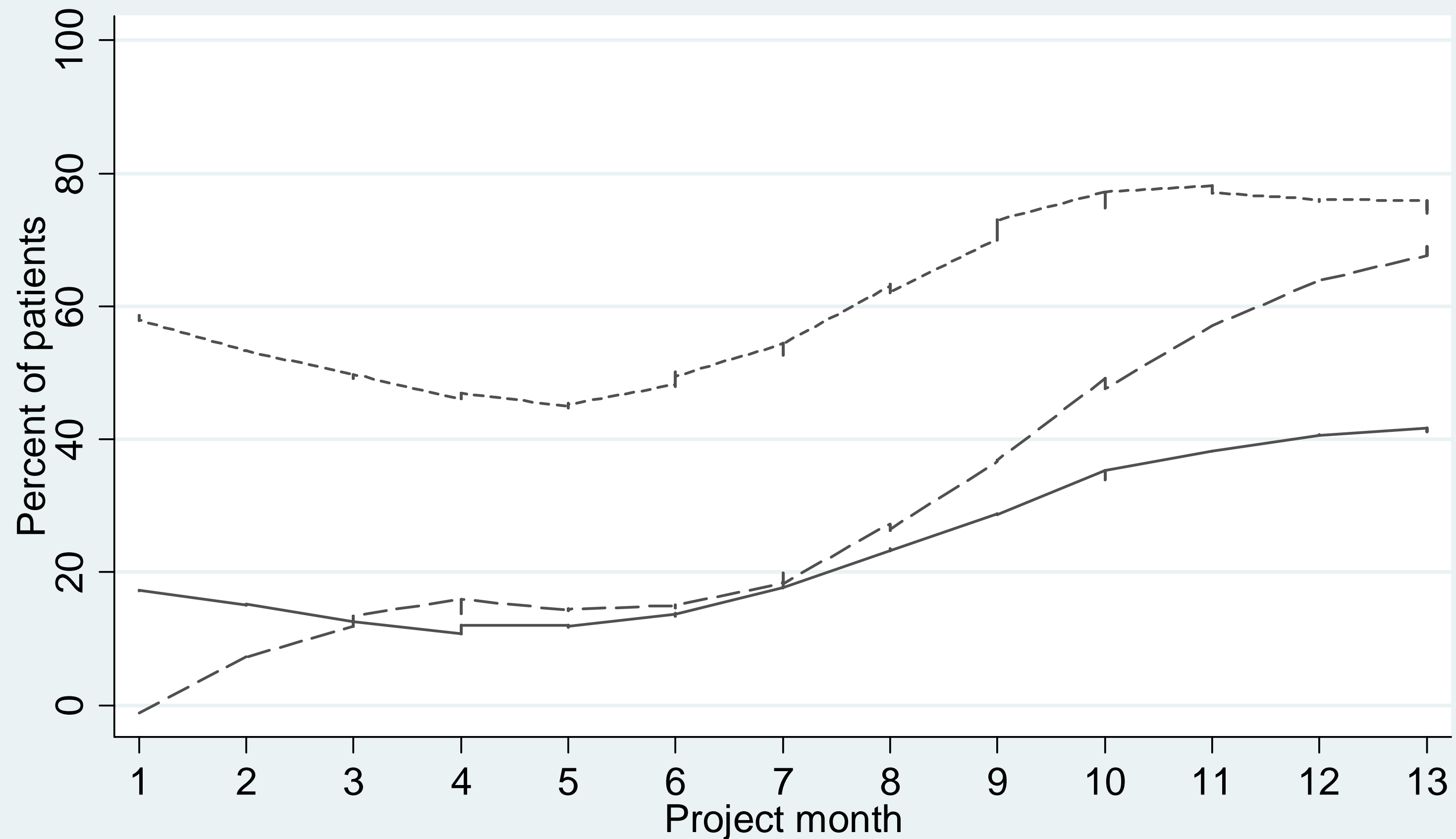
Average response of patients dependent on that substance

State funded treatment within 30 days of discharge from Stroger Hospital, n=1,2975

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

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



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

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

SBIRT data from Illinois Health Survey Lab. 2007

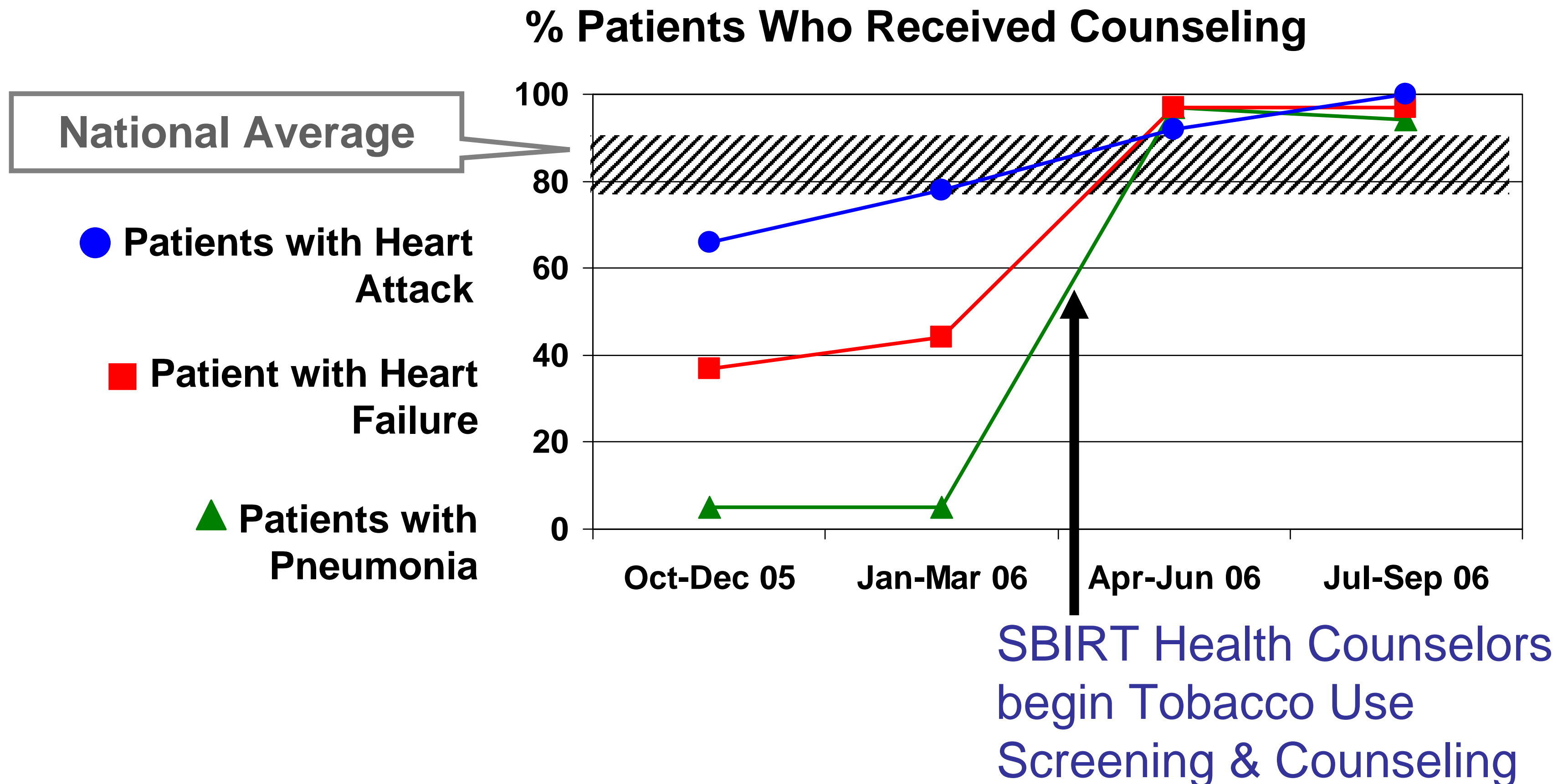
Organization Cost of SBIRT Services in Stroger Hospital

Cost per Screen	Cost per Brief Intervention	Cost per Referral
$16.28	$33.89	$190.55

Personnel: $474,469	Volunteers: $0
Material: $24,250	Material Donated: $0
Building: $34,386	Equipment: $3,439
Occupancy: $39,528	Information System: $55,176
Liability Insurance: $7,145	
Total Cost of Program: $638,393	

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



Data from Quality Assurance Department of Stroger Hospital and US Department of Health and Human Services

Illinois
SBIRT
Initiative

Screening, Brief Intervention, Referral, and Treatment

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

COOK COUNTY
BUREAU OF
HEALTH SERVICES

Illinois Department of Human Services Division Of Alcoholism & Substance Abuse
Funded by the United States Center for Substance Abuse Treatment Grant Number TI15968

we ask

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.

Illinois
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Screening,
Brief Intervention,
Referral, and
Treatment

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	**Oak Forest Hospital** 708-633-2630
Provident Hospital 312-572-2672	**Ambulatory Clinics** 312-864-4434

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Screening, Brief Intervention, Referral, and Treatment

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

Leadership: Valerie Burgest, Gloria Wright, William Trick, Michael Clay, David Goldberg, Patrika Smith. Data system: Aasheesh Lal, Manjula Ramiah, Gil Cagbanua, Yolanda Duplessis. Health Counselors: Fernanda Arce, Saul Calderone, Jacqueline Caradine, Henry Colquitt, John Czernick, Deanna Delaney, Michael Green, Beverly Hall-Moss, Joyce Hardney, Salvador Hernandez, Jay Lewis, Robert Lloyd, Ana Lopez, Alvin Polk, Renee Radosz, Maria Serrano, Chris Thomas, Virginia Ward, Cedric Whitten, Kay Williams, Sean Williams. Peer Mentors: Yvonne Baker, Joel Barron, Gloria Benson, Jerome Bond, Alecia Brown, Sandy Burgo, Darlene Butler, Joann Clay, Patricia Crowell, Lois Dirks, Debra Duncan, Deidria Earls, Wardell Flucker, Christine Garner, Estella Goolsby, Vincent Johnson, Roberto Laureano, Jael, Lorenzi, Warren Lownes, Charlie Mabry, Arnetta Matthews, Evelyn Mendez, Urrainer Moffitt, John Morin, Donald Morman, Mae Parnell, David Parker, Tawona Pope, Yolanda Prescott, Michael Reese, Frank Rice, Socorro Saavedra, Kenya Smith, Lois Soto, Ada Villanueva, Craig Williams , James Zastro

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