

# Computer self-administered screening for substance use in a university health center: a feasibility pilot

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# Background

- Substance use is a leading health problem on college campuses

Hingson R et al., Ann Rev Public Health, 2005

- Most university students utilize student health services

Schaus JF, et al. J Stud Alcohol and Drugs, 2009

- Screening and brief intervention (SBI) is not standard care at most university health centers

Nelson TF et al., Alc Clin Exp Res, 2010

- This represents a missed opportunity for early intervention





# Barriers to screening

- Student health centers face similar barriers to substance use screening as other primary care settings
- Less continuity of the patient-provider relationship  
(Schaus JF, et al. Journal of studies on alcohol and drugs, 2009)
- Students may fear consequences of disclosure
- Recent efforts have focused on technology-delivered interventions for college students  
(Kypri K et al. Archives of internal medicine, 2009)
- Integration with regular medical care could increase SBI reach and efficacy  
(Sullivan LE et al., Am J on Addictions, 2011)



# Objectives of this pilot study

1. Assess the **feasibility** and **acceptability** of computer-delivered substance use screening in a university health center.
2. Measure the prevalence of unhealthy drug and alcohol use among health center patients.



# Study Activities

1. Focus group with students (N=10)
2. Training sessions w/ staff (1 hour x2)
3. Implementation for 3 weeks (N=337)
4. In-depth individual interviews with staff and providers



## Study site

- Health center of large urban university
- 11,000 visits/month
- 50% undergraduates
- Primary and preventive care, mental health, wellness services
- Some alcohol screening, no drug screening



# Screening tools

- **Substance Use Brief Screen (SUBS):**

- 4-item screener
- Past-year tobacco, alcohol, illicit drug, prescription drug use
- Validated for computer self-administration in primary care patients

McNeely et al., Am J Medicine 2015

- **ACASI ASSIST**

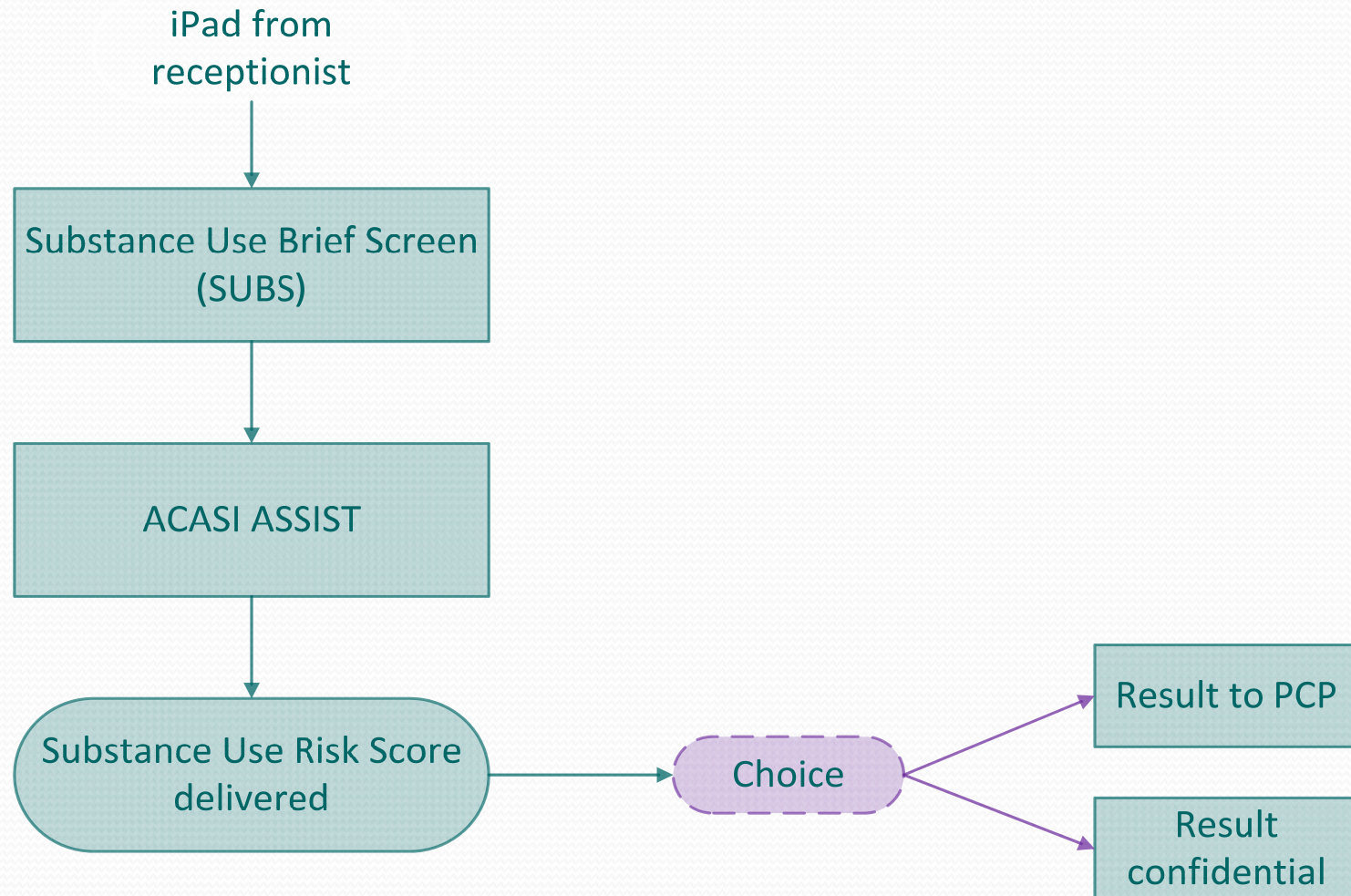
- Audio computer assisted self interview (ACASI) version of the WHO ASSIST
- Adapted to include prescription drug misuse (stimulants, opioids)
- Generates substance-specific risk stratification
- Validated in primary care patients

McNeely et al., Addiction 2015 (in press)

McNeely et al., J Substance Abuse Treatment 2014



# Screening Approach





**Hi!**

We're testing out these iPads as a new way of collecting health information from patients of the health center.

**This is part of a research study, which we'd like to tell you more about.**

◆ NEXT

# Choice to share results with PCP

## Thank you for agreeing to participate! Why should you fill out this questionnaire?

We give this questionnaire to all of our patients, because tobacco, alcohol, or other drugs can affect your health and the medications you take. It is important to be honest in answering these questions. At the end of the questionnaire you will receive your results and will be given the option of sharing and discussing those results with your medical provider.

### Option 1

If you decide to share your results, they will be used only by your medical provider(s). This information can help them to give you better medical care.

### Option 2

If you decide not to share your results, no one in the clinic will see your responses. Your anonymous data will be used in research only.

◆ NEXT



# Substance Use Brief Screen (SUBS)

## Instructions:

Please check one circle for each question

	3 or more days in the past 12 months	1 or 2 days in the past 12 months	Never in the past 12 months
◆ In the past <u>12 months</u> , on how many days did you use <b>tobacco</b> ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
◆ In the past <u>12 months</u> , on how many days did you have <b>4 or more alcoholic drinks</b> in a day, including wine or beer?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
◆ In the past <u>12 months</u> , on how many days did you use any <b>illegal drug</b> , including marijuana?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
◆ In the past <u>12 months</u> , on how many days did you use any <b>prescription medications "recreationally"</b> (just for the feeling, or using more than prescribed)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Consider a "drink" to be a:

- **Can or bottle of beer** (12 ounces)
- **Glass of wine** (5 ounces), or **wine cooler** (12 ounces)
- **Shot of hard liquor** like gin, vodka or whiskey (1.5 ounces).

"**Recreationally**" means taking medications **just for the feeling** or experience they cause, **to get high**, or taking them **more often** or at **higher doses** than prescribed.

**Prescription Medications** are those that are prescribed to you or to someone else.

◆ **NEXT**

# ASSIST

In the past three months, how often have you used **hallucinogens** (Ecstasy, LSD, acid, mushrooms, PCP, Special K, etc.)?

- Never       Once or Twice       Monthly
- Weekly       Daily or Almost Daily

◆ BACK

◆ NEXT

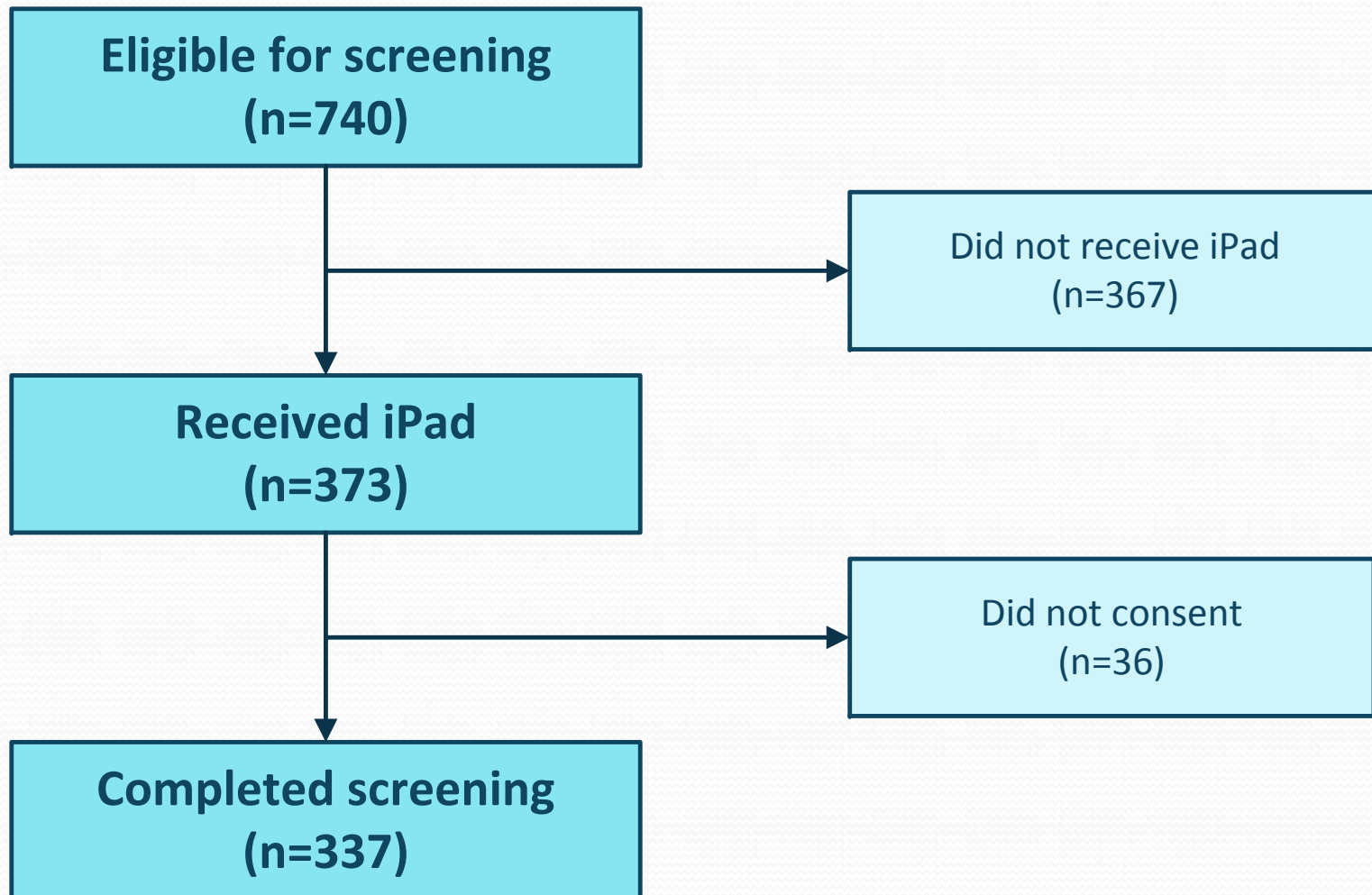


# Feasibility and adoption

- All primary care providers participated  
(1 team of 4 providers)
- Enrolled for 15 consecutive days
- Met target enrollment (N=337)



# Eligibility and Participation



# Participant characteristics (N=337)

<b>Characteristic</b>	
<b>Age (years)</b>	
Mean, SD	23, SD=5
Median	21
Range	18-53
<b>Gender</b>	
Female	64%
Male	35%
Transgender / Other	1%
<b>Current education program</b>	
Undergraduate	60%
Master's	28%
Doctoral	11%
Other	1%

# Prevalence of past year substance use (N=337)

<b>Substance Class</b>	<b>(%)</b>
<b>Tobacco</b>	35.0
<b>Alcohol*</b>	72.7
<b>Illicit Drugs</b>	43.0
<b>Prescription Drugs</b>	7.7

\* Alcohol 4 or more drinks in a day



# Lifetime use, current use, and risk level (ASSIST)

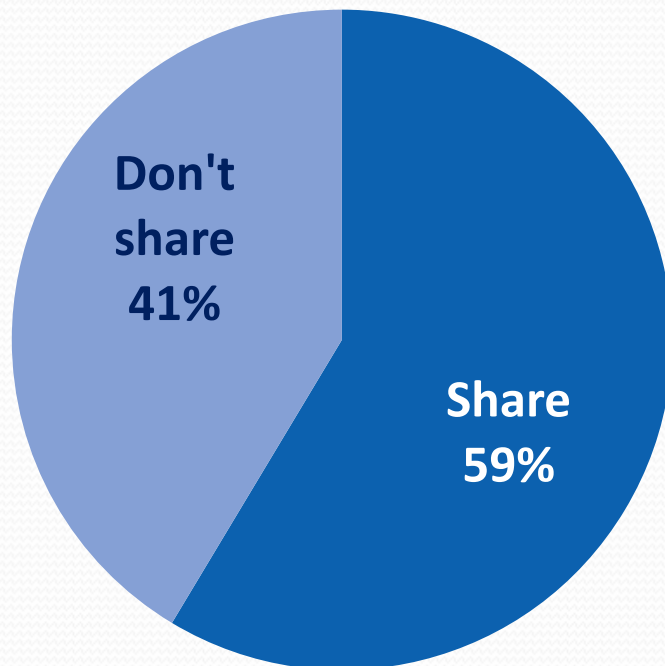
<b>Substance</b>	<b>Lifetime use (%)</b>	<b>Current use (%)</b>	<b>Moderate risk (%)</b>	<b>High risk (%)</b>
<b>Tobacco</b>	N/A	28.1	16.4	2.4
<b>Alcohol</b>	N/A	70.0	14.4	1.3
<b>Illicit drug(s)</b>	43.1	31.8	17.2	0.3
<b>Prescription drug(s)</b>	18.9	6.4	3.4	0.0

# Specific drug classes

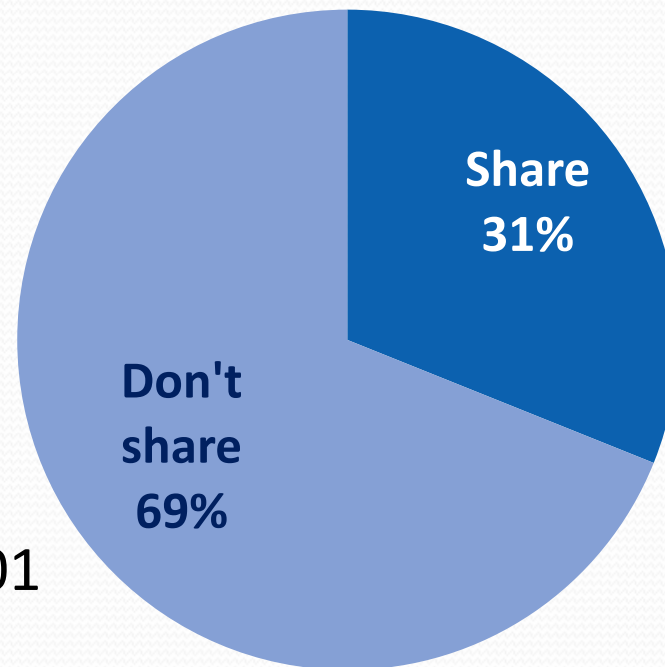
Substance	Lifetime use (%)	Current use (%)	Moderate risk (%)	High risk (%)
Cannabis	42.8	31.3	16.7	0.3
Hallucinogens	15.0	3.6	0.9	0.0
Rx stimulants	13.2	4.5	2.7	0.0
Cocaine	12.3	4.5	0.6	0.0
Sedatives	11.4	2.7	0.9	0.0
Inhalants	6.0	1.5	0.6	0.0
Rx opioids	4.2	0.6	0.3	0.0
Heroin	1.5	0.0	0.0	0.0
Methamphetamine	1.5	0.0	0.0	0.0
Other	1.2	0.9	0.0	0.0
Any drug except MJ	26.4	10.5	4.4	0.0
Injection drug use	0.3	0.0	N/A	N/A

# 49% elected to share results with the medical provider

No unhealthy use



With unhealthy use



$p < 0.01$





# Limitations

- Choice regarding disclosure does not reflect usual practice
- Did not explore what motivates students to share results with the medical provider
- No measure of the frequency or content of the medical provider's intervention
- Pilot involved only a subset of providers and patients
- Some missing data (25 cases for alcohol ASSIST score)



# Discussion

- Self-administered screening appears to be feasible
- High prevalence of moderate-risk use, primarily tobacco, alcohol, marijuana
- Students with unhealthy use of drugs and alcohol are less willing to disclose to their medical provider
- Questions for further research:
  - How can we reach unhealthy users who did not want to discuss it with their provider?
  - How can we better utilize the medical visit to provide interventions?





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