National Drug Abuse Treatment Clinical Trials Network

NYU School of Medicine
NYU LANGONE MEDICAL CENTER

IT'S NOT JUST WHAT YOU DO, IT'S HOW YOU DO IT:

VARIATION IN SUBSTANCE USE SCREENING OUTCOMES WITH COMMONLY USED SCREENING APPROACHES IN PRIMARY CARE CLINICS

Jennifer McNeely, Joseph L. Kannry, Richard N. Rosenthal, Sarah E. Wakeman, Timothy E. Wilens, Sarah Farkas, Angeline Adam, Leah Hamilton, Carmen Rosa, Aimee Wahle, Seth Pitts, John Rotrosen

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Background

- Tobacco, alcohol, and drug use are leading causes of preventable death in the US.
- Screening for alcohol and drug use in primary care is recommended.
- Yet screening has not become part of routine health care.
- Substance use information is not systematically collected in electronic health records.

Mokdad AH, et al. *JAMA* 2004
USPSTF draft recommendation, Aug 2019
D'Amico EJ, et al., *Medical Care* 2005
Friedmann PD, et al., *Arch Intern Med* 2001
Saitz R, et al., *Am J Drug Alc Abuse* 1997

NIDA CTN Common Data Elements

Home Instruments

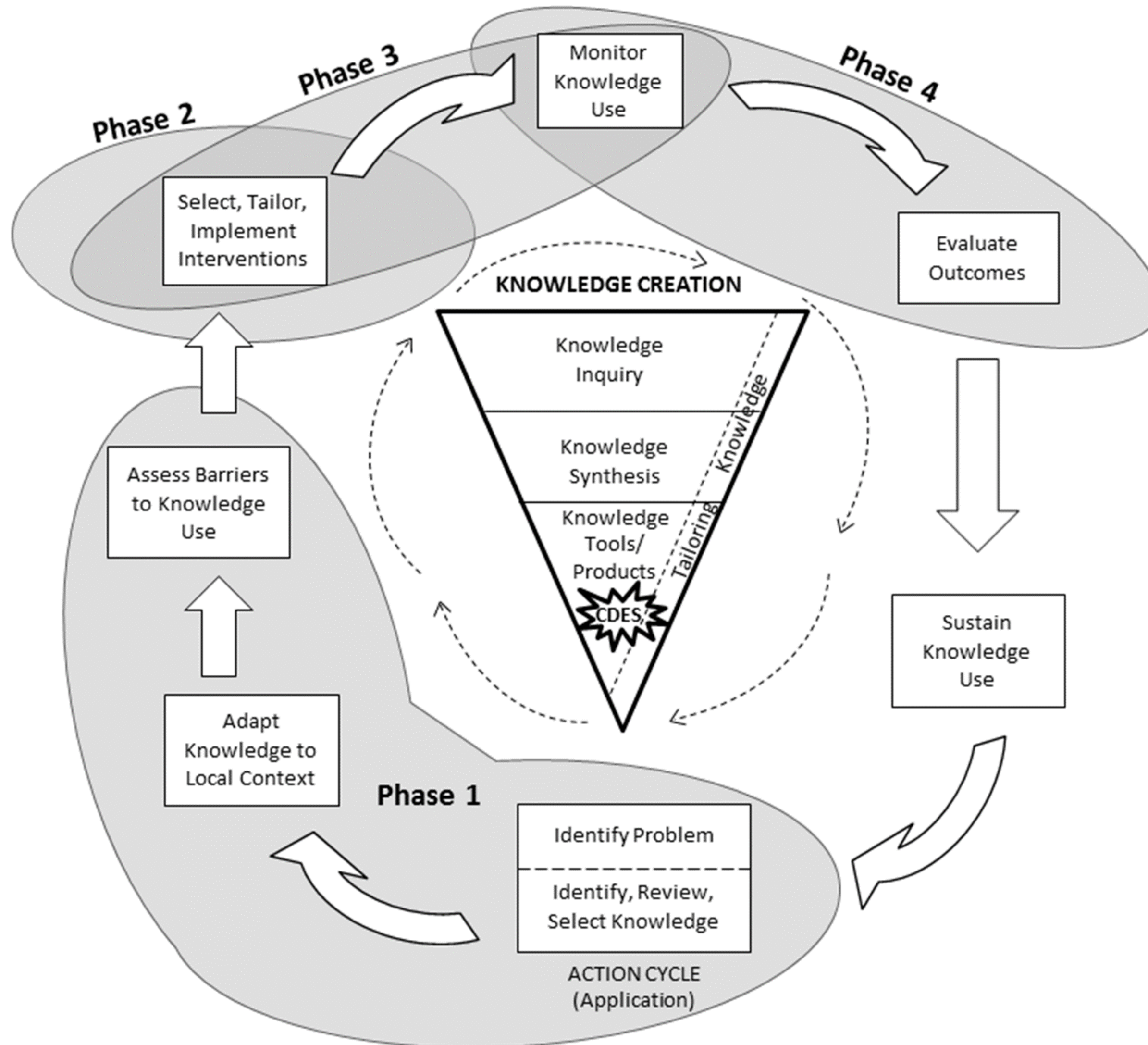
- Curated set of validated screening tools
- Appropriate for use in medical settings
- Recommended for incorporation into electronic health records (EHRs)

https://cde.drugabuse.gov/

CTN-0062 Study

- Objective: Study the feasibility of implementing EHR-integrated screening in primary care clinics
- Study Design: 4-phase implementation study
- Setting: Primary care clinics in academic health systems
    - **Group A** sites (New York City): 2 clinics
    - **Group B** sites (Boston): 4 clinics

Knowledge to Action framework



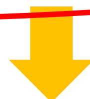
Graham ID et al., J Contin Educ Health Prof 2006

Study Phases

Phase 1 - Identify optimal screening and intervention approaches
- Build CDEs into the EHR

Phase 2 - Usability testing of screening and CDS tools

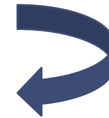
Phase 3 - Implementation
- Measure implementation outcomes after 1 year



Phase 4 - Ongoing screening
- Measure impact at patient, provider, and clinic level after 1-2 years

Screening program components

- Alcohol and drug screening tools
  - Single-item screening questions
  - AUDIT-C, DAST-10



- EHR integration:
  - Screening results, best practice alerts
  - Clinical decision support
  - Self-administered questionnaires (paper, tablet, kiosk)
- Practice facilitation

Implementation outcomes

1. Screening rate
2. Detection of unhealthy use:
   - low-risk, moderate-risk, high-risk

     Unhealthy use
3. Provider adoption of clinical decision support

Summary of Screening Approaches

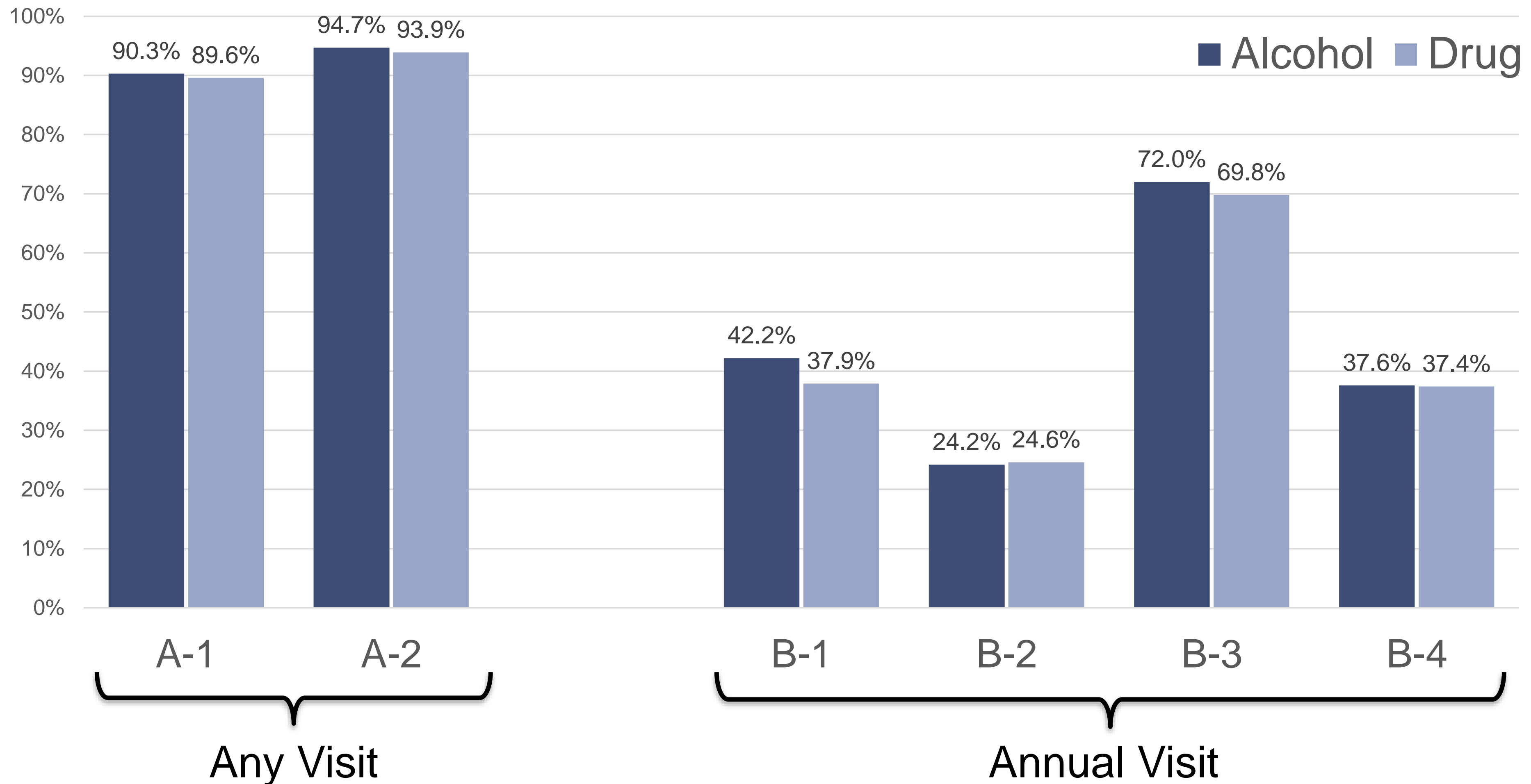
Self-administered	*or*	**Staff-administered**
Any visit	*or*	**Annual visit**
Robust practice facilitation	*or*	**Usual facilitation**

Screening rates across all sites

Number of patients screened ÷ all patients with primary care visits

	Clinic					
	A-1	**A-2**	**B-1**	**B-2**	**B-3**	**B-4**
Alcohol	(15,687/17,373) 90.3%	(24,270/25,632) 94.7%	(3,016/7,139) 42.2%	(2,648/10,932) 24.2%	(18,214/25,311) 72.0%	(2,331/6,207) 37.6%
Drug	(15,558/17,373) 89.6%	(24,064/25,632) 93.9%	(2,708/7,139) 37.9%	(2,689/10,932) 24.6%	(17,670/25,311) 69.8%	(2,324/6,207) 37.4%

Screening rates with annual visit vs. any visit strategy



Screening results across all sites: Alcohol

Results among patients who completed screening

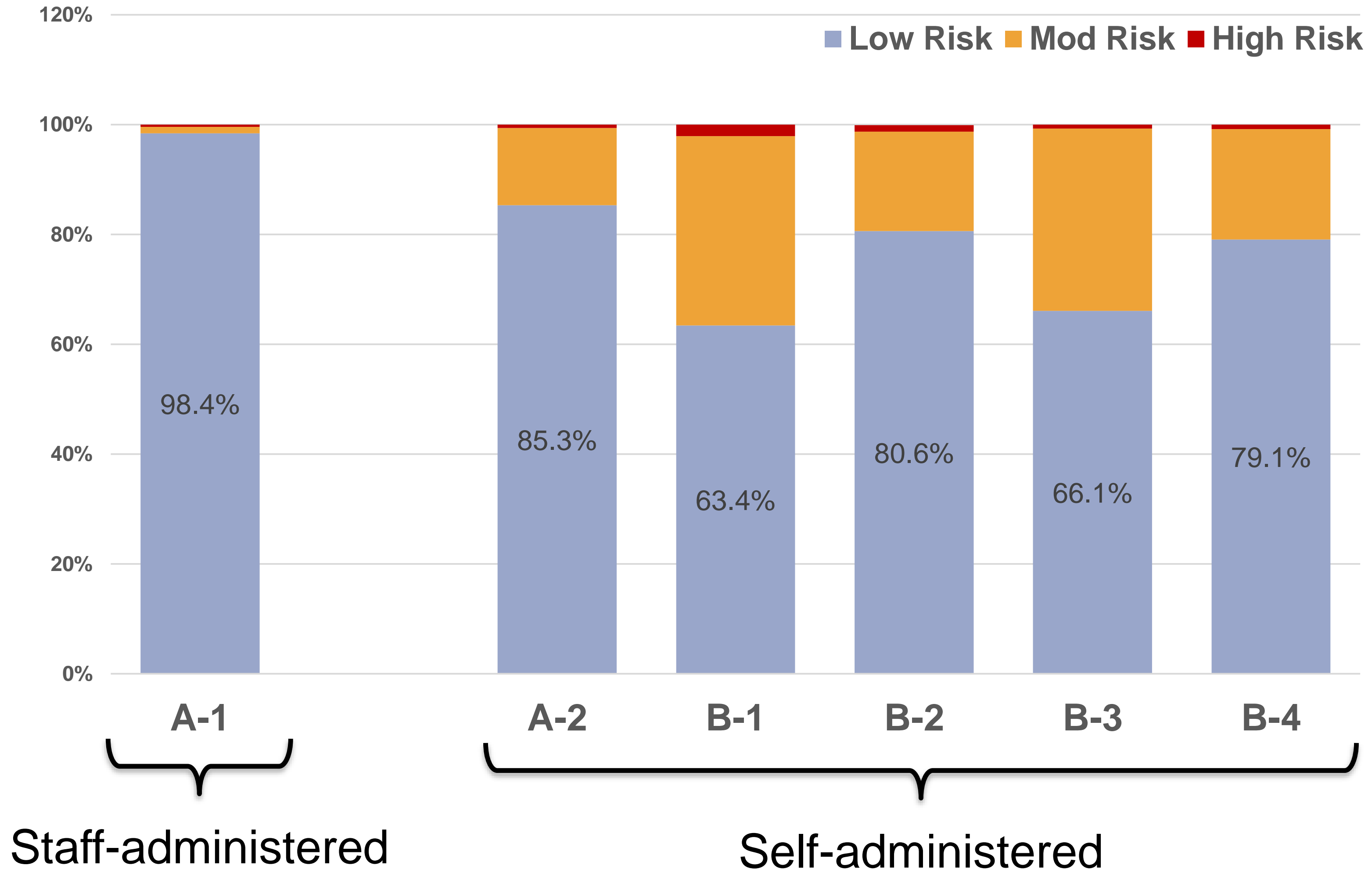
	Clinics					
	A-1	**A-2**	**B-1**	**B-2**	**B-3**	**B-4**
Low risk	98.4%	85.3%	63.4%	80.6%	66.1%	79.1%
Mod risk	1.2%	14.1%	34.5%	18.1%	33.2%	20.1%
High risk	0.4%	0.6%	2.1%	1.2%	0.7%	0.8%

Screening results across all sites: Drugs

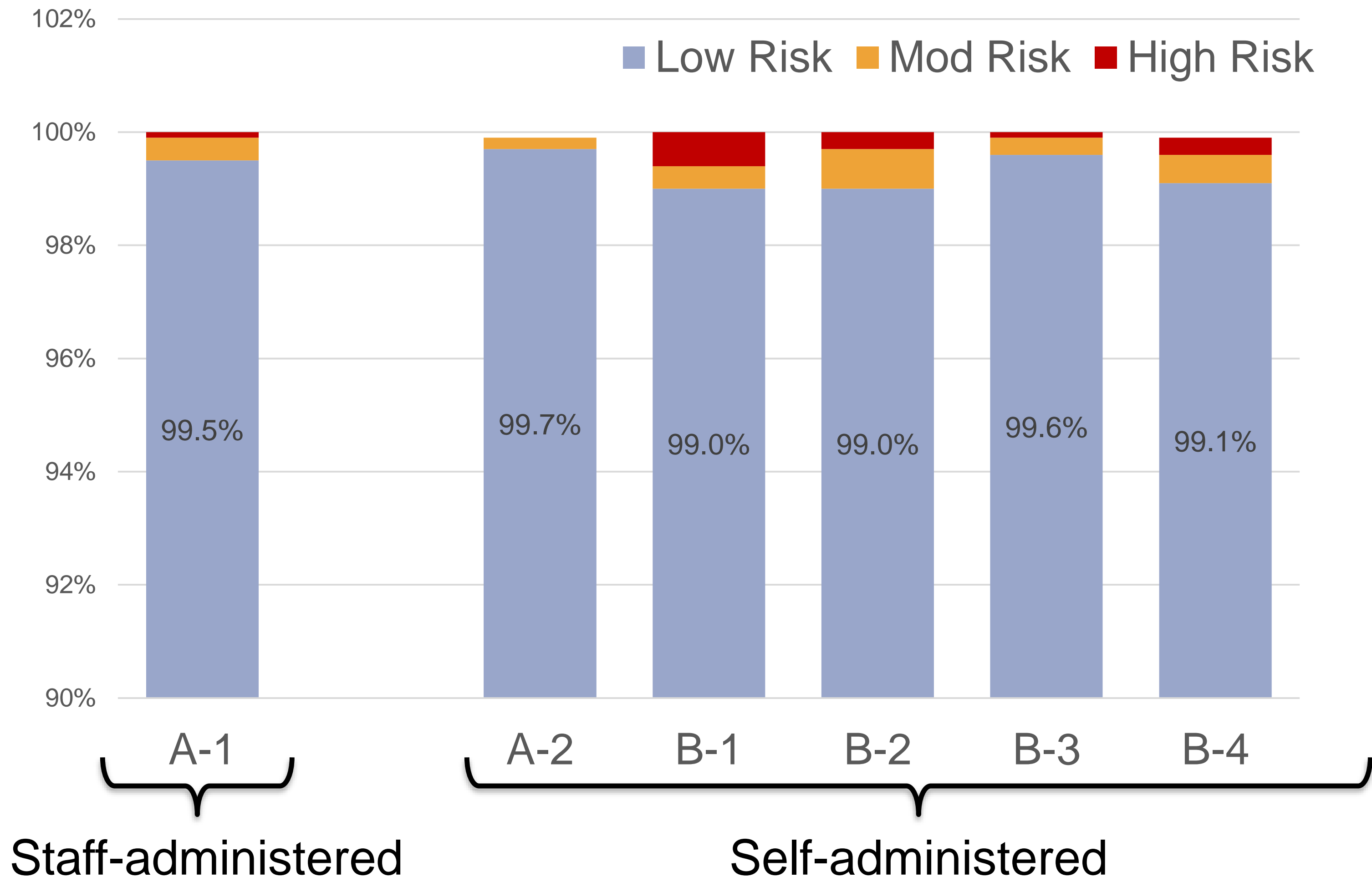
Results among patients who completed screening

	Clinics					
	A-1	**A-2**	**B-1**	**B-2**	**B-3**	**B-4**
Low risk	99.5%	99.7%	99.0%	99.0%	99.6%	99.1%
Mod risk	0.4%	0.2%	0.4%	0.7%	0.3%	0.5%
High risk	0.1%	0.0%	0.6%	0.3%	0.1%	0.3%

Self- vs. staff-administered screening: Detection of Unhealthy Alcohol Use



Self- vs. staff-administered screening: Detection of Unhealthy Drug Use

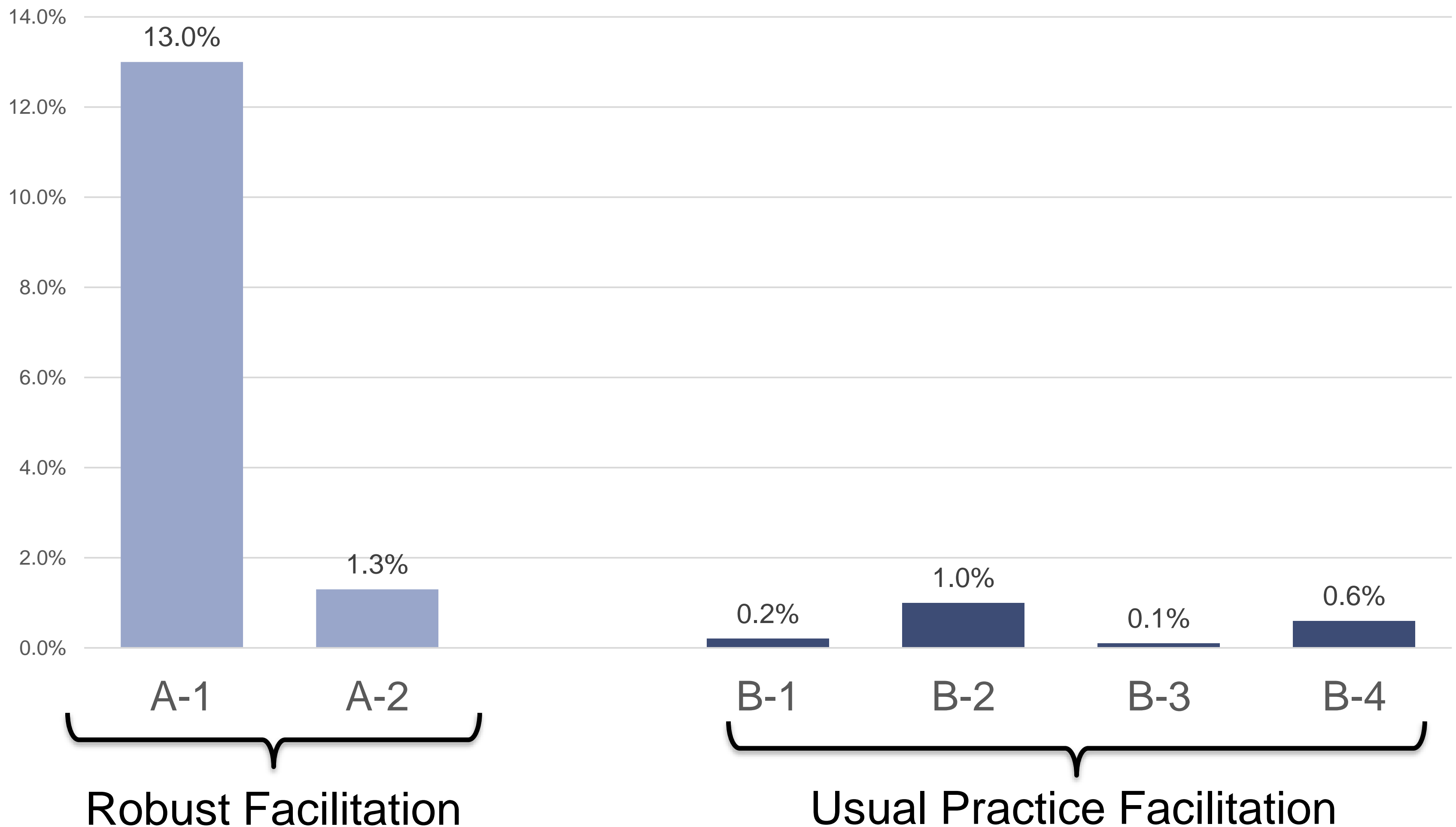


Adoption of EHR clinical decision support (CDS)

Number of uses of CDS ÷ patients screening positive for unhealthy use

	Clinics					
	A-1	**A-2**	**B-1**	**B-2**	**B-3**	**B-4**
Alcohol	(33/253) 13.0%	(48/3,562) 1.3%	(2/1,105) 0.2%	(5/513) 1.0%	(4/6,179) 0.1%	(3/487) 0.6%
Drug	(12/78) 15.4%	(4/64) 6.3%	(2/28) 7.1%	(4/28) 14.3%	(2/70) 2.9%	(0/20) 0.0%

Adoption of CDS for alcohol: Robust vs. usual practice facilitation



Discussion

- Over 12 months, nearly 50,000 patients were screened.
- Relatively few patients screened positive for unhealthy substance use (moderate-high risk).
- Detection of Alcohol >> Drug use.
- EHR-integrated screening was feasible to implement in busy primary care clinics.
- Conducting screening at routine primary care visits resulted in highest screening rate,
- Self-administered approach detected more unhealthy use.
- Use of clinical decision support was low (though somewhat better at sites with robust practice facilitation)

Limitations

- Not a randomized trial – we were not able to control for differences between sites
- Conducted in urban academic health systems
- Did not capture detailed data on outcomes of screening (counseling, referrals, treatment)

Conclusions

- When screening is integrated into medical care, rates of unhealthy alcohol/drug use are much lower than what is reported in a confidential research setting.
- To maximize the penetration of screening, do not restrict it to annual/preventive care visits.
- To maximize the quality of screening, strongly consider using a patient self-administered approach.
- Utilization of CDS to act on a positive screen was low; a team-based approach may be needed to deliver interventions in primary care.

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NYU:
Jennifer McNeely
Sarah Farkas
Patricia Novo
Melanie Harris
Antonia Polyn
John Rotrosen
Rebecca Shore
Angeline Adam
Leah Hamilton
Noa Appleton

Emmes:
Rob Gore-Langton
Aimee Wahle
Seth Pitts
Jaqueline King
Jeremy Wolff
Keaton Somerville
Lauren Yesko

MSHS:
Joseph Kannry
Richard Rosenthal
Catherine Craven
Eva Waite
Lauren Peccoralo
Linda Wang
Aida Vega
Paul Francaviglia
Jessica Jacques
Sharla Hamilton
Bernard Macon

MGH:
Timothy Wilens
Sarah Wakeman
Ben Isenberg
Tamar Kaminski
Grace Herman
Nick Carrellas
Lindsay Rosenthal
Patrick Brady
Elizabeth Shaye Firmin

CCTN:
Carmen Rosa
Carol Cushing
Udi Ghitza
Ron Dobbins

Northeast Node/Penobscot:
Lisa Marsch
Trip Gardner
Noah Nesin
Bethany McLeman
Andrea Meier
Olivia Walsh
Elizabeth Saunders
Alison Carter
Kimberly Clark
Robyn Young
Sarah Moore
Chantal Lambert-Harris
Vijay Amarendran