

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**

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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



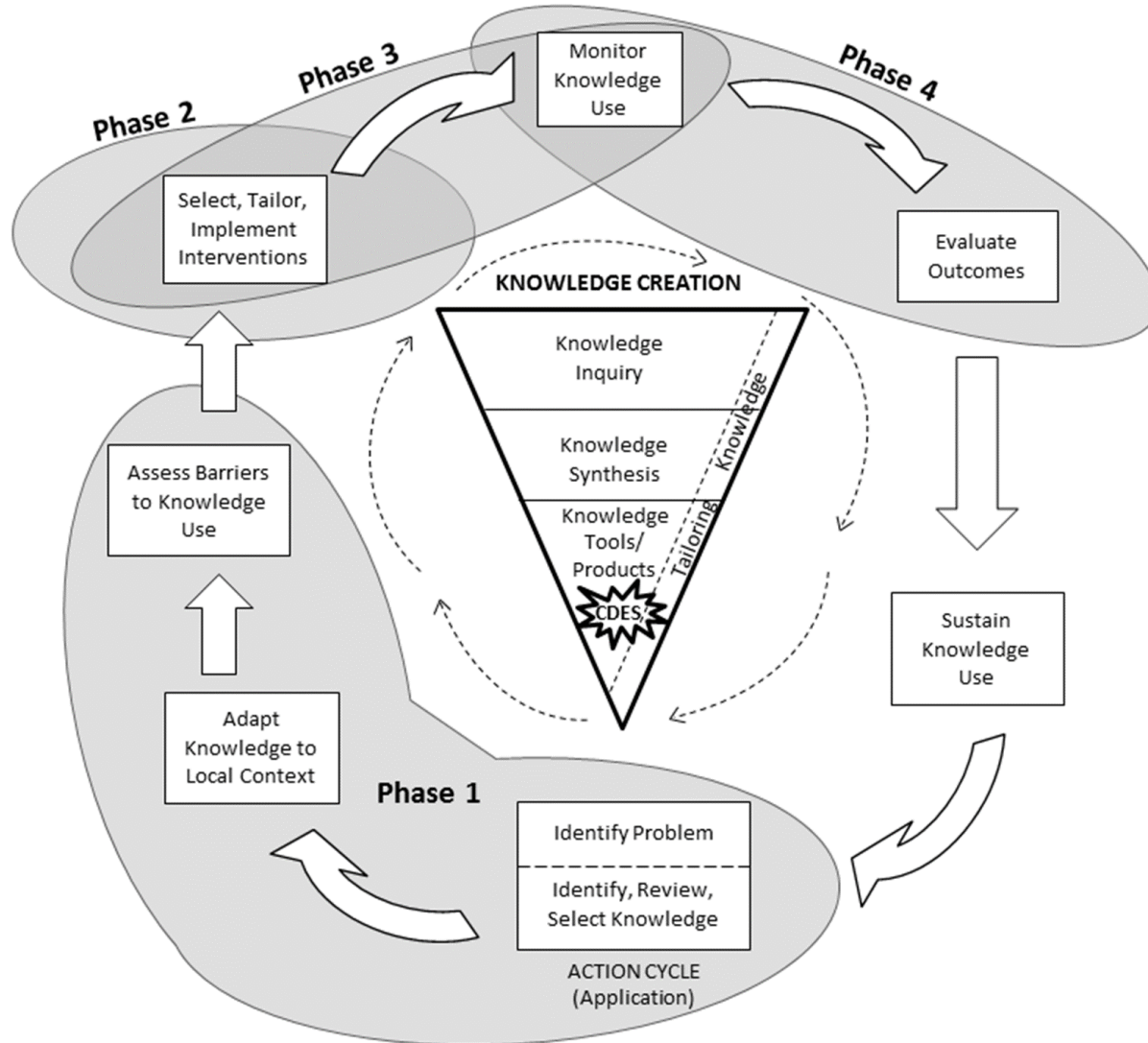
- Curated set of validated screening tools
- Appropriate for use in medical settings
- Recommended for incorporation into electronic health records (EHRs)

<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



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**

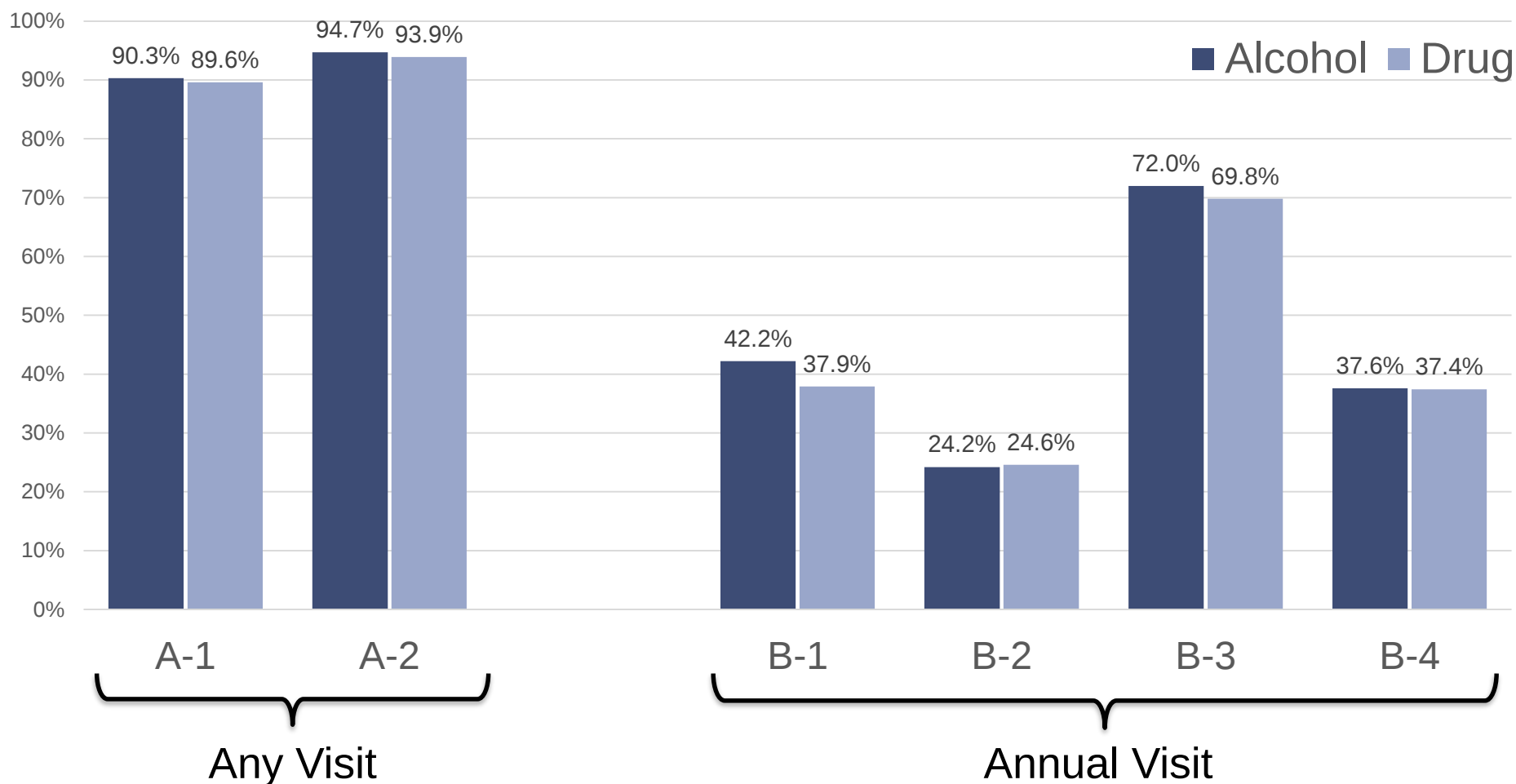
**Robust practice
facilitation** *or* **Usual facilitation**

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%

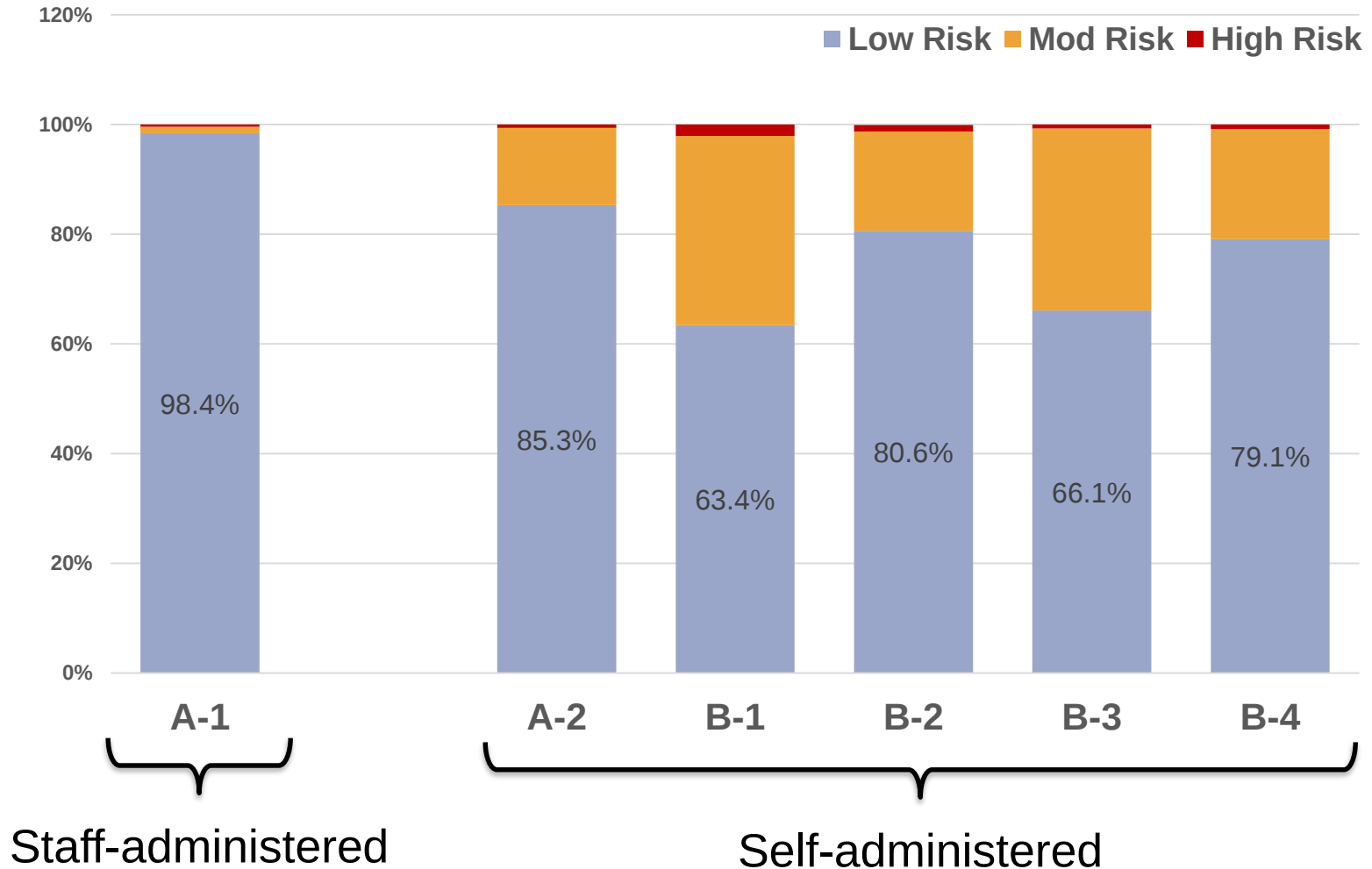
Screening results across all sites:

Drugs

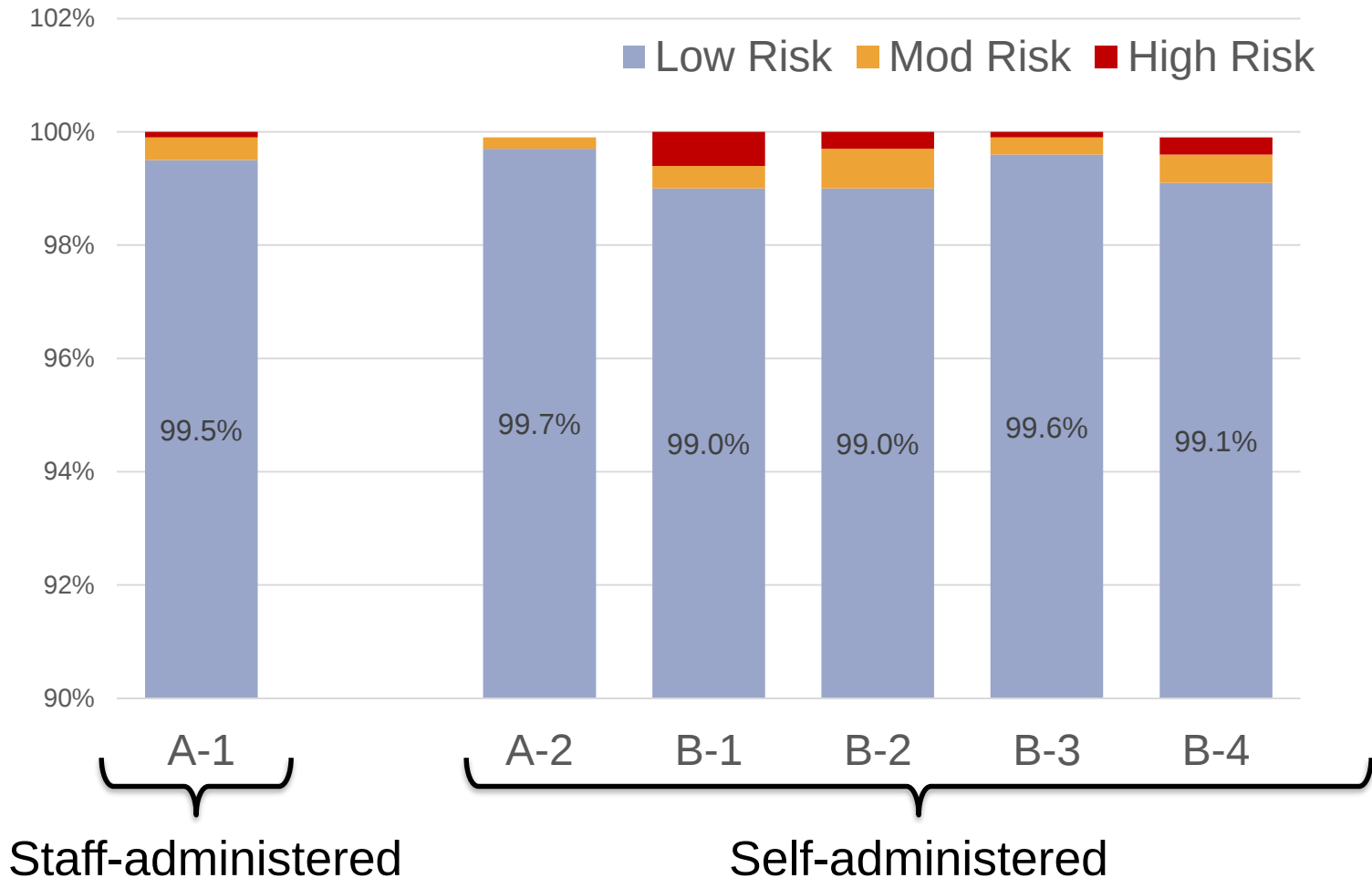
Results among patients who completed screening

	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

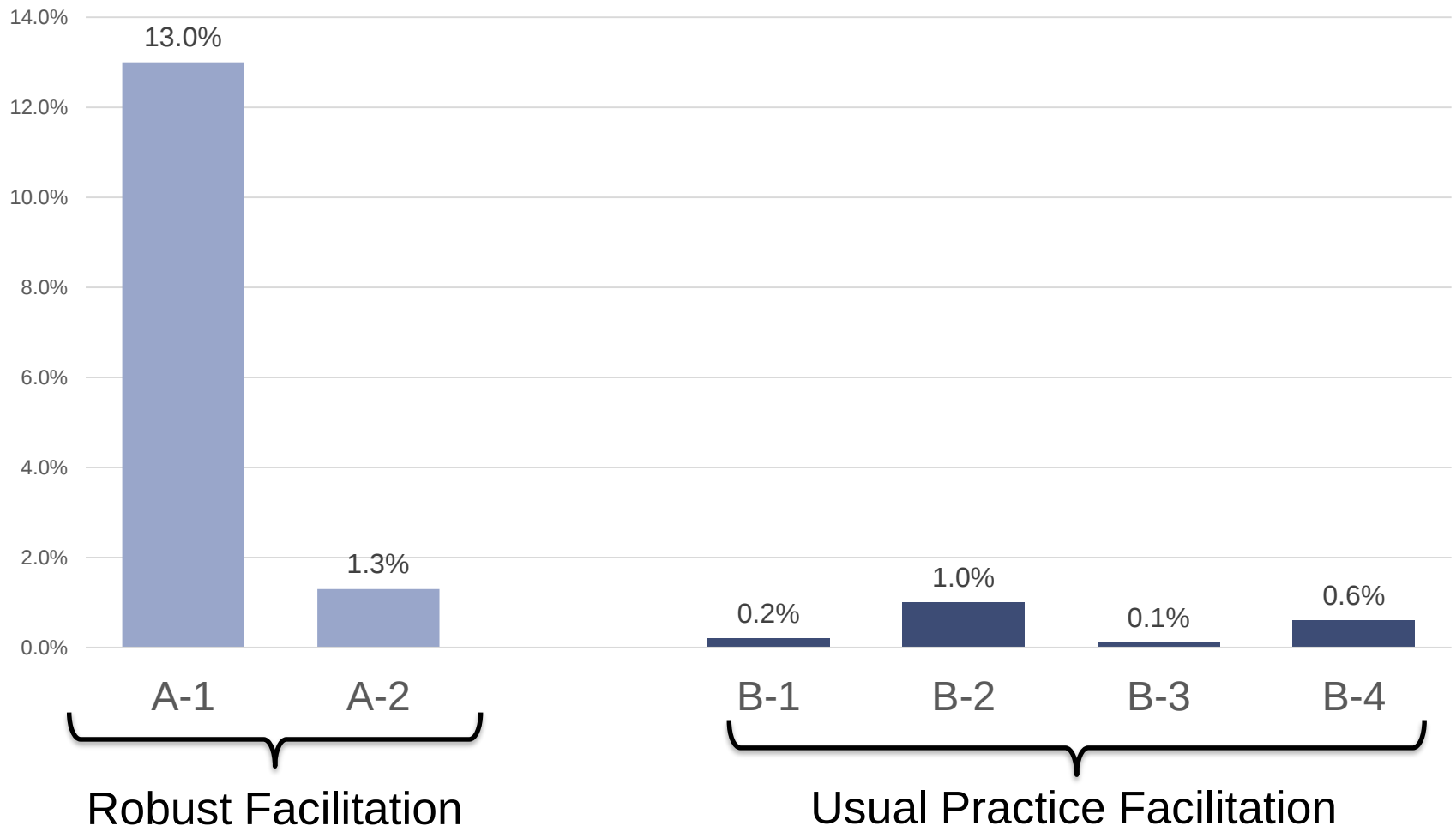


Adoption of EHR clinical decision support (CDS)

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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