

Integration of substance use screening into primary care and electronic health records: CTN-0059 and CTN-0062

JENNIFER MCNEELY, MD, MS

Background

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

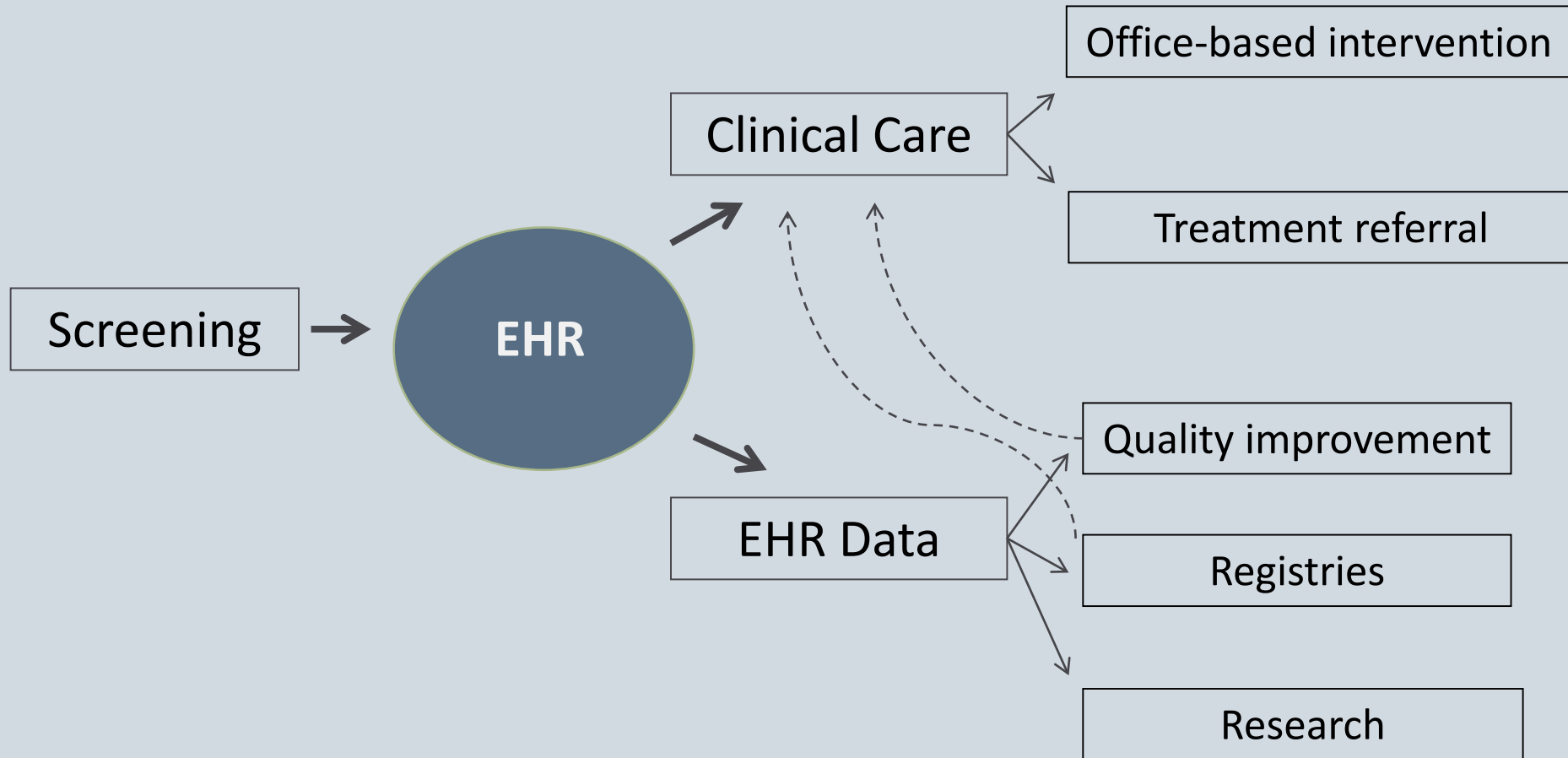
Mokdad AH, et al. *JAMA* 2004

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

Collecting substance use information can transform clinical care and research



Initiatives in the NIDA CTN

1. Screening tool development: TAPS Tool (CTN-0059 study)
2. Health care data science task force: Common data elements (CDEs)
3. Feasibility of EHR-integrated screening (CTN-0062)

TAPS Tool

- 2-part screening + brief assessment
- Tobacco, alcohol, and six classes of drugs:
 - Past-year use
 - Current problem use
 - Substance use disorder
- Interviewer-administered and computer self-administered versions
- Validated in 2,000 primary care patients
- Accurate, feasible, and well accepted

McNeely et al., Annals Int Med 2016

Gryczynski et al., Journal of Gen Int Med 2017

Wu et al., Contemp Clin Trials 2016



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

<https://cde.drugabuse.gov/>

Putting it together: CTN-0062

A Phased-Implementation Feasibility and
Proof-of-Concept Study to Assess
Incorporating the NIDA CTN Common Data
Elements into the Electronic Health Record in
Large Primary Care Settings
(CDE-EHR-PC Study)

Overview of CTN-0062

Study Design: 4-phase implementation study on EHR-integrated screening for substance use in primary care

Framework: Knowledge to Action (KTA) model

Setting: Primary care clinics in large health systems

- Mount Sinai Health System (MSHS) (NY): 2 clinics
- Massachusetts General Hospital (MA): 4 clinics
- Oregon Health and Science University (OR): Phase 1 only
- Penobscot Family Health Centers (ME): 3 clinics (ancillary study)

Specific Aims

1. Program the NIDA CTN CDEs and clinical decision support (CDS) into EHRs
2. Study the process of implementation of screening and referral using EHR-driven CDEs and CDS in primary care clinics.
3. Evaluate the impact of implementation on:
 - Patient level outcomes (diagnosis, treatment referral)
 - Medical staff level outcomes (delivery of screening and interventions)
 - Systems level outcomes (feasibility and logistics)

Study Phases

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



Phase 2 - Usability testing of screening and CDS tools
- Implementation planning at Wave 1 Clinics



Phase 3 - Implementation at Wave 1 Clinics
- Measure implementation outcomes



Phase 4 - Implementation at Wave 2 Clinics
- Measure impact at patient, provider, and systems level

Phase 1: Selecting the screening approach

- Choose screening tools and location in the EHR
- Program prototype
- Interviews and focus groups with key stakeholders (MDs, medical assistants, patients, administrator)
- Determine mode of delivery and workflow

Phase 2: Usability Testing

- Collaboration with clinical informatics and human-computer interactions experts.
- Simulated clinical scenarios, patients with moderate- and high-risk alcohol/drug use
- Testing with each end-user group:
 - Medical providers: 3 rounds of testing at lead site
 - Patients: 2-3 rounds of testing at lead site
 - Streamlined usability testing at other sites
- Analyzed screen, audio, and video recordings

Phase 2: Implementation Preparation

- Bi-weekly meetings with clinical leaders
- Training with all primary care providers, medical assistants, and social workers
- List of treatment providers to accept referrals
- Patient education materials (posters, handouts)
- Manual on EHR tools and clinic procedures

Phase 3: Screening in Wave 1 Clinics

- 'Go-live' of screening Jan 2017 in lead clinic
- Outcomes measured using EHR data:
 - Primary outcome = adoption of screening (% of patients screened)
 - Other main outcomes = adoption of CDS and behavioral health referrals; substance use prevalence

Phase 3: Measuring Additional Implementation Outcomes

- Baseline survey on substance use attitudes w/ medical staff (MAs, PCPs)
- Patient surveys on acceptability of screening (conducted quarterly)
- Provider focus groups on the appropriateness and feasibility of screening
- Workflow observations to assess the fidelity to the screening approach
- Chart reviews to assess the quality of documentation of screening and interventions

Successes so far

- Diversity of practices and screening approaches
- Study activities at MGH are integrated into larger program for transforming care system-wide
- At MSHS, created an expectation that screening is part of the medical visit
- EHR tools are appreciated by those who use them
- Data reports are helping to guide implementation activities
- Opportunity to deploy patient self-administered screening approaches
- Expansion to rural FQHC network for the ancillary study

Challenges

- Skepticism about SBI and drug screening
- Competing projects and priorities in the clinic, lack of financial incentives
- Patient and staff discomfort with substance use
- Demonstrating value to staff and medical providers
- Reaching busy faculty and residents for education
- Limited behavioral health resources on-site, complex referral processes, poor communication

Electronic health records

- Existing 'social history' fields with alcohol/drug information
- Very limited flexibility
- Not designed to facilitate behavioral health care or team-based care
- Practice alert burnout
- Providers use the EHR differently

Quality of screening

- Unexpectedly low prevalence of alcohol and drug use:
 - Staff: Is reporting negative screens a way of avoiding the conversation?
 - Patients: Are patients uncomfortable reporting use?
 - PCPs: With positive screens as a rare event, how to reinforce this as part of regular care?
- Can a patient self-administered approach help?

Summary

- Primary care clinics are under enormous pressure, with multiple competing priorities.
- This study seeks to implement a streamlined and sustainable approach to screening, by integrating it into the EHR and working with clinic staff to facilitate its uptake.
- Success with introducing screening into the workflow may not translate to quality screening and clinical interventions
- Patient self-administered screening will be explored as one strategy for improvement

Thanks to the 0062 study team!

NYU:

Jennifer McNeely
Sarah Farkas
Patricia Novo
Melanie Harris
Christy Chollak
Andrea Polyn
Angeline Adam
John Rotrosen

OHSU:

Traci Rieckman
Dennis McCarty
Marie Payment

MSHS:

Richard Rosenthal
Joseph Kannry
Lauren Peccoralo
Eva Waite
Aida Vega
Paul Francaviglia
Jessica Jacques

MGH:

Timothy Wilens
Sarah Wakeman
Grace Herman
Nick Carrellas
Lindsay Rosenthal
Ben Eisenberg
Tamar Kaminsky

CCTN:

Carol Cushing
Carmen Rosa
Udi Ghitza
Ron Dobbins

EMMES:

Rob Gore-Langton
Jeremy Wolf
Aimee Wahle
Keaton Somerville
Lauren Yesko