UG3 EMBED

Pragmatic trial of user-centered clinical decision support to implement **EM**ergency department-initiated **B**uprenorphin**E** for opioid use **D**isorder

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Assistant Professor of Emergency Medicine
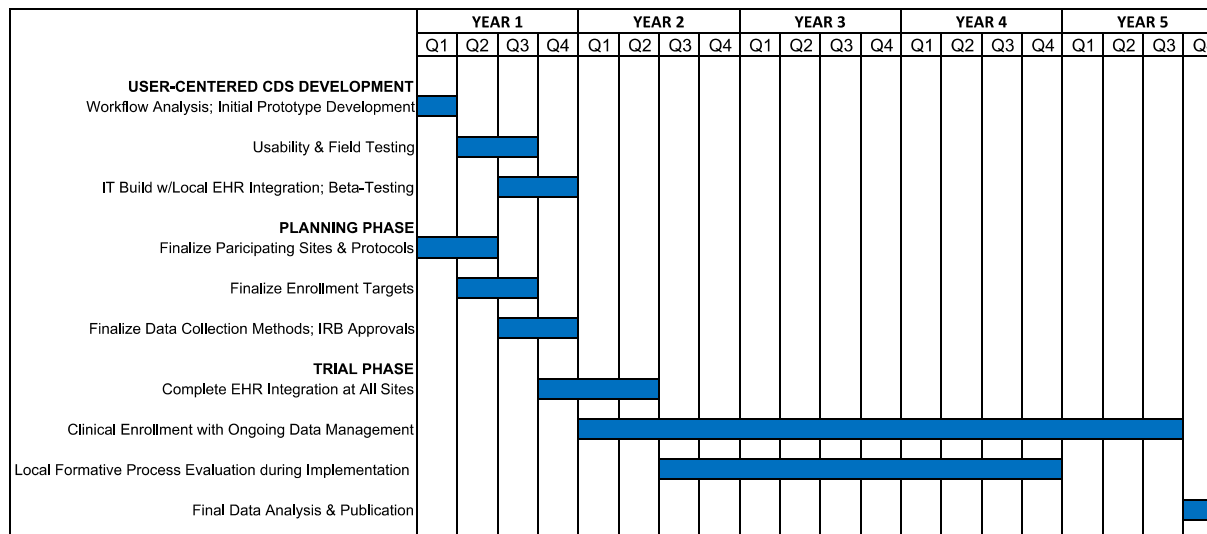*Clinical Informatics Fellowship Director*

Brief High-Level Overview for NIH Collaboratory Steering Committee Meeting
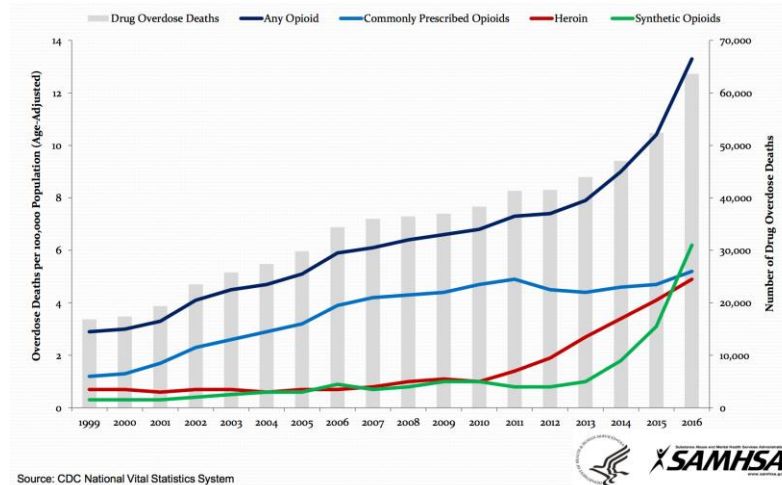May 14, 2018, Bethesda, MD

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Overview

- Multicenter (across 3 healthcare systems), pragmatic, stepped wedge implementation trial to evaluate the effect of user-centered clinical decision support (CDS) for ED patients with opioid use disorder (OUD) upon rates of ED-initiated buprenorphine (BUP) and referral for ongoing medication for addiction treatment (MAT) in <u>two phases</u>:
  - UG3 planning phase (Year 1, pre-trial)
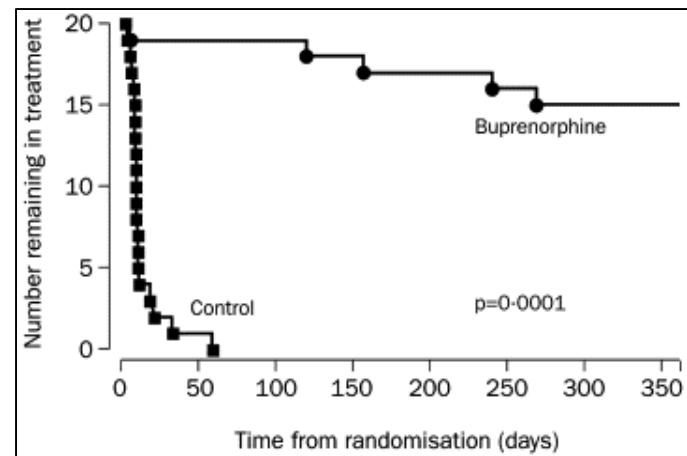 - UH3 implementation phase (Years 2-5, trial)

Background: OUD

- Opioid use disorder (OUD): Dependence on prescription opioids and heroin

- Major public health problem: 3 million Americans have or have had OUD

- Less than 1 in 5 in treatment

- Devastating toll on Americans, their families, and their communities

- Deaths quintupled since 1999 (42,000 in 2016)

Background: MAT

- Medication for addiction treatment (MAT): effective in primary care
- Buprenorphine/naloxone (BUP), partial opioid agonist combined with an antagonist
  - Treatment for OUD that decreases withdrawal, craving, and opioid use
  - DATA 2000 Restrictions to prescribing
- Emergency department (ED)
  - may be only access to care for many opioid users
  - often at vulnerable time: overdose, withdrawal, seeking treatment
  - ED-initiated BUP with referral to MAT doubles rate of engagement in addiction treatment
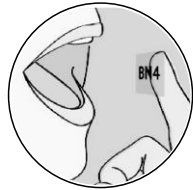 - Paradigm shift to chronic, relapsing condition

Kakko. Lancet 2003.

Innovating Opioid Use Disorder treatment in the Emergency Department

Identify
the right patients for BUP

Treat
OUD patients with optimal systems and processes

Refer
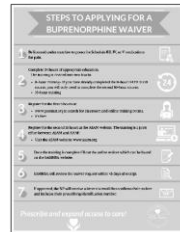patients to Medically Assisted Treaatmnt

① The opioid epidemic is increasing the number of OUD patients in the Emergency Department, resulting in greater resource, time, and care pressures on ED staf
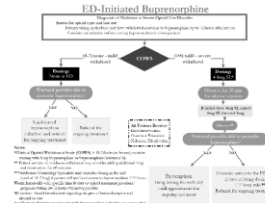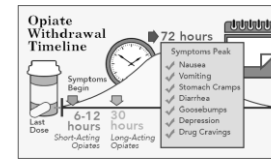
② BUP + MAT is an ef ective but complicated treatment to initiate in the ED, but it is more ef ective than the current care for OUD in the ED. As opposed to methadone, BUP can help patients rebuild their lives

③ There are a limitied number of MDs waivered in DATA 2000 (a requirement to prescribe BUP)
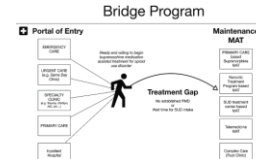
④ There are many processes that make prescribing and initiating BUP in the ED time and labor intensive

⑤ - DSM 5 OUD Checklist
- Clinical Opiate Withdrawl Scale
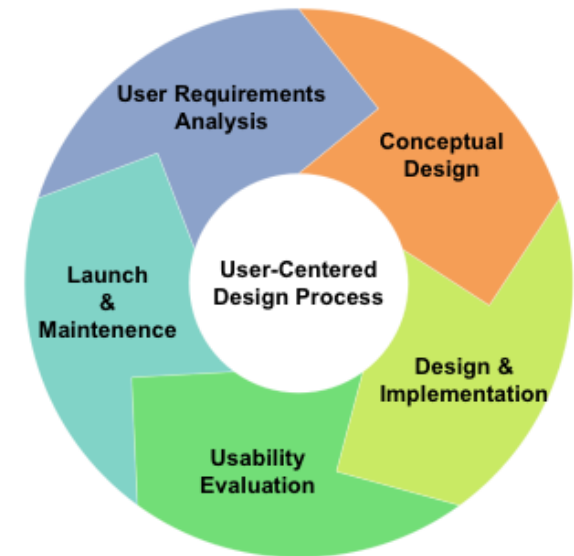- BUP Referral Form for OUD
- Rx dosage amount and protocol

⑥ In the ED, there is a lack of availability of referral for treatment and lack of integration of referral into care/ workflow. As a result of these factors, there is less use of BUP + MAT, and patients risk missing referrals and treaments

Project EMBED: EMergency department initiated BuprenorphiE for opioid use Disorder

This project intends to improve the way emergency departments identify, treat, and refer Opioid Use Disorder (OUD) patients. Buprenorphine/ naloxone (BUP) treatment initiated in the ED has proven to be ef ective for OUD. However, there are a number of challenges to start BUP in the ED. The goal of this work is to develop a clinical decision support system that addresses the hardships of providing care in a busy emergency department while delivering integrated and impactful treatment for patients.
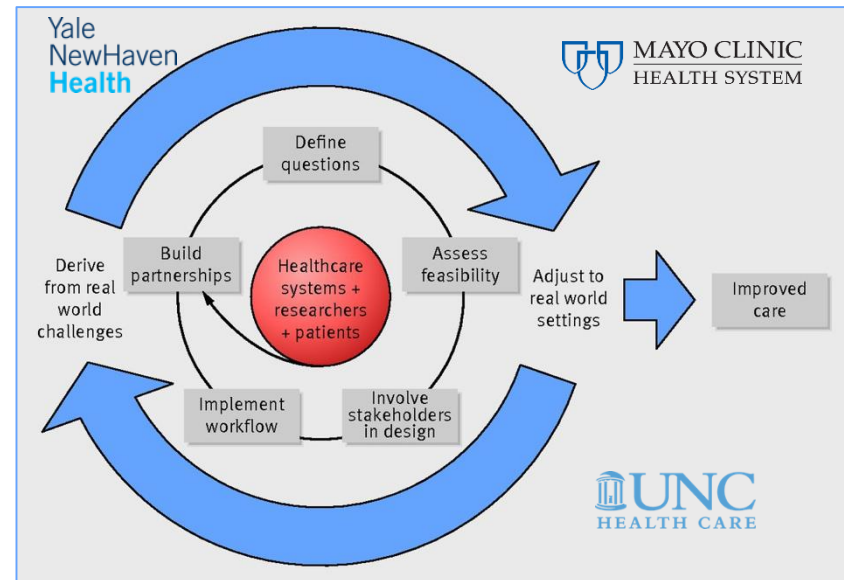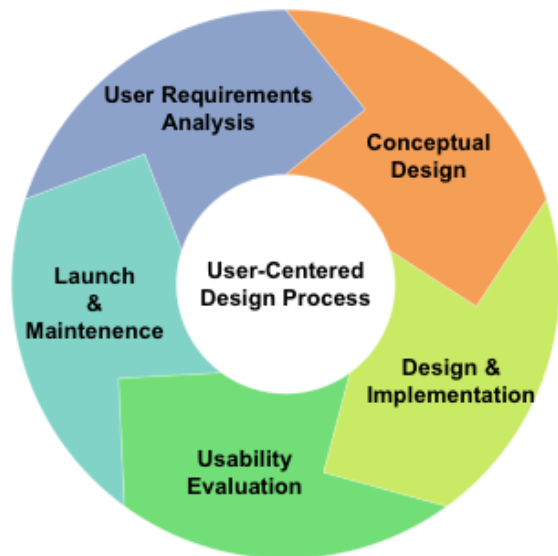
Background: HIT

- Poor health IT (HIT) usability is major source of frustration with clinicians

- Electronic health record (EHR) usability is a fundamental barrier to implementation of evidence-based medicine

- IT should be designed to meet user needs

- User-centered design
  - streamline workflows
  - address barriers to adoption
  - embed ED-initiated BUP into routine ED care
  - optimize adoption, dissemination, implementation, and scalability

Aims: UG3

- **UG3 Aim 1.** Develop a pragmatic, user-centered CDS for ED-initiated BUP and referral for MAT in ED patients with OUD which will automatically identify and facilitate management of potentially eligible patients.

- **UG3 Aim 2.** Establish the infrastructure for the proposed trial.

UH3 phase

- **UH3 Aim 1.** Compare the effectiveness of user-centered CDS for BUP to usual care on implementation outcomes in ED patients with OUD.

- Long-term goal of wide-scale adoption of ED-initiated BUP and referral to MAT by leveraging and integrating substance use disorder, design, IT, and data coordination innovation, expertise, and experience

UH3 STUDY DESIGN SCHEMATIC & TIMELINE

Thank you.

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