Ariana Abid, MD
Bhavna Bali, MD
Nicholas Chien, MD
Shawn Cohen, MD
Jeremiah Fairbanks, DO
Marc Kimball, MD
Jordana Laks, MD, and Morgan Younkin, MD MPH
James R. Latronica, DO
Angad Madan, DO
Claudia Moore, MD
Brendan Sullivan, DO
David Tracy, MD

# FELLOW LIGHTNING ROUND

# Quality Improvement: Creating an Opioid Withdrawal Protocol For the Inpatient Setting

Ariana Abid Addiction – Family Medicine Fellow
Michelle Bholat, MD, Family Medicine
Stephen Shoptaw, PhD, Addiction Research
Patrick Dowling, MD, Family Medicine

# Background

SUD patients are associated with:

- ↑ readmissions
- ↑ AMAs
- ↑ co-morbidities
- ↑ Length of stay and cost
- = Up to 25% of hospitalized patients

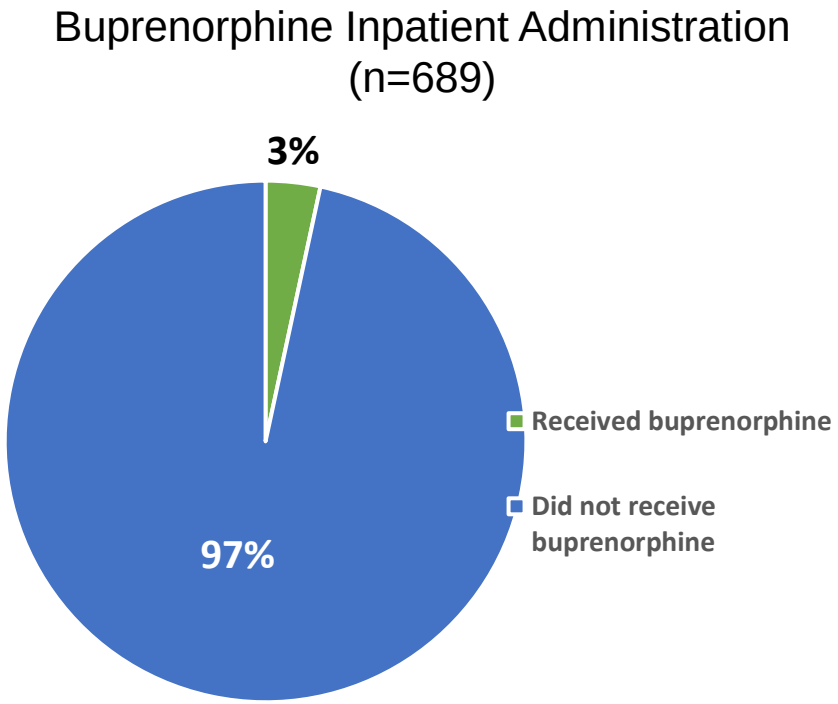
All of the above impacts HCAHP scores/Quality of Care

Benefits of Treatment w/Buprenorphine

- ↓ **mortality by 50%**
- ↓ decrease acquisition of HIV infection
- ↓ decrease crime
- ↑ increase rate of retention in rehab programs

# Background and Methods

- Baseline data:
  - OUD patients with more than 4 unplanned readmissions in the last 30 days for 2019 was 22/427 with OUD related diagnoses.
  - Average length of stay was 7 days.
  - Number leaving AMA was 17 out of 427 patients with OUD-related diagnoses.
  - We are in progress of obtaining # of inpatient opioid overdoses and buprenorphine scripts on discharge
- Goals:
  - 1. Improve treatment for >90% of patients admitted with OUD-related diagnosis
  - 2. Increasing administration of buprenorphine via a COWS protocol that is hospitalist-friendly.
  - 3. Reduce readmissions and AMAs, increase provider comfort with identifying and addressing opioid withdrawal.



# Conclusion

Root Cause Analysis

- There is currently no opioid withdrawal protocol or policy in place to treat medical patients
- There are no order sets for opioid withdrawal treatment in the hospital EMR

Solution

- Create a COWS protocol with buprenorphine for addressing opioid withdrawal in medical patients (implementation starts June)
- Build order sets in EMR
- Any disputed areas will be discussed in breakout meetings
- Educate nursing, pharmacy, and medical staff in opioid withdrawal treatment, OUD, and use of order sets

Metrics for Measuring change: After 6 months of implementation…

- OUD- related diagnoses, # AMA, readmissions, # buprenorphine administered inpatient and on discharge,
- survey hospitalists to assess with comfort after implementation

# Outpatient Buprenorphine Microinduction for Pain
# "A Safe Method To Transition High Risk Patients"


Bhavna Bali, M.D.
Addiction Medicine Fellow PGY4

PennState Health
Children's Hospital

# Basics of Micro Dosing

**Principles (Dosing schedules vary):**

1.) Start buprenorphine at low doses and overlap it with opioid use

2.) Buprenorphine dose increased in small increments over time

3.) Once sufficient dose of buprenorphine reached, there is tapering or abrupt cessation of opioid

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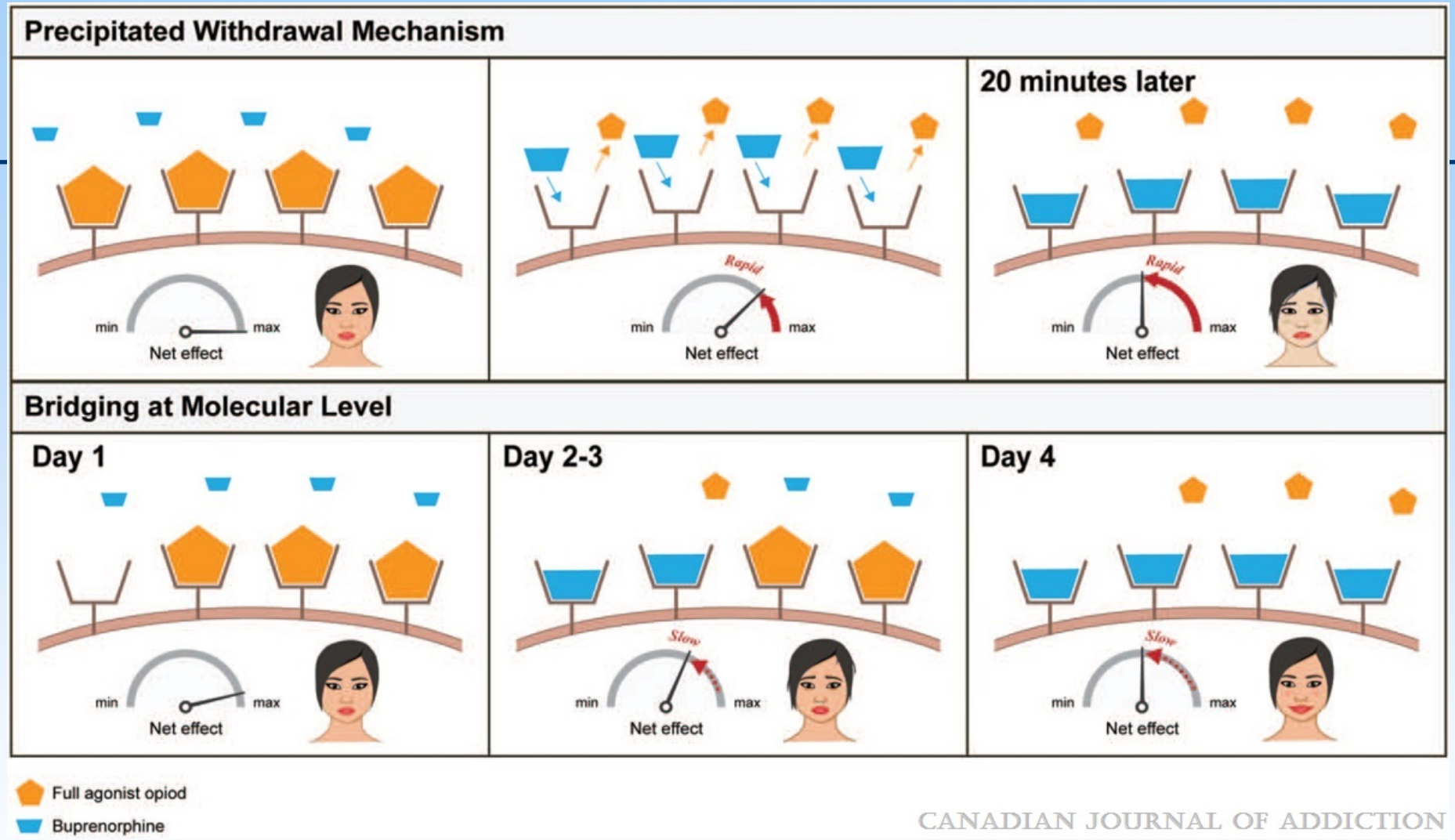


A Review of Novel Methods To Support The Transition From Methadone and Other Full Agonist Opioids To Buprenorphine/Naloxone Sublingual In Both Community and Acute Care Settings. Ghosh, Sumantra Monty; Klaire, Sukhpreet; Tanguay, Robert; Manek, Mandy; Azar, Pouya Canadian Journal of Addiction10(4):41-50, December 2019. doi: 10.1097/CXA.0000000000000072

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# Patient Scenario

- 35F with RA, fibromyalgia, TUD, recent MVC→ chronic pancreatitis, L1 burst fracture
- Referred by surgical oncology due to “running out of script early and requesting higher doses of pain medication”
- C/C: *“ I’m always in pain, but its worse in my stomach. I’m almost out of my pain medications”*
- Currently on 300 MME (Oxycodone 30mg q4 hr Oxycodone 5 mg q6-8 hr)
- Did not meet criteria for OUD per DSM5
- Diagnosed with **Physiological Opioid Dependance with high risk of developing Opioid Use Disorder**

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# Home Micro Induction Instructions

| Dosing (Suboxone 2/0.5 and 8/2 mg) | Symptoms |
|---|---|
| **Day 1**: Last dose Opioids 6 pm, apply Butrans patch (20 mcg/hr~450 mcg in 24 hr)→ [keep on 1 week] | "Pain all over, worse in my stomach, feel like I am going to withdraw" |
| **Day 2**: 1 mg suboxone q 2 hr, [Total 4 mg] | "Still not moving much, besides stomach pain other pain is a little better than yesterday" |
| **Day 3**: Day 2 dosing (4 mg) + 4mg AM, 4 mg PM [Total 12 mg] | "Better spirits, pain improved, but still having abdominal pain" |
| **Day 4**: 8 mg AM, 4 mg Afternoon, 4 mg PM; can take additional 4 mg with afternoon or evening dose [16-24 mg] | "Able to get out of bed and look for mattresses, happy I didn't have severe withdrawals like I normally do" |
| **Day 5-7**: 8mg TID [24 mg daily]<br>Day 7: Butrans patch removed | * UDS positive for fentanyl |
| **Day 8** (1/18/21): 8mg TID [24 mg daily]-----RTC | I had "minimal withdrawals," but Suboxone is not controlling my pain |

PennState Health
Children's Hospital

RUSH

# Expanding Addiction Medicine Education Beyond A Traditional Fellowship: Local and National Endeavors

Nicholas Chien, MD
Addiction Medicine Fellow
Emergency Medicine Physician
Rush University Medical Center

# Creating Content From the Comfort of Home

RUSH

**Prevention and Treatment of Opioid Overdose using Naloxone**

**Free** On-Demand **CME Course** for health care providers: physicians, nurses, pharmacists.

Learners will review epidemiology and risk factors for opioid overdose, recognize signs of opioid overdose, and learn to respond to and treat opioid overdose.

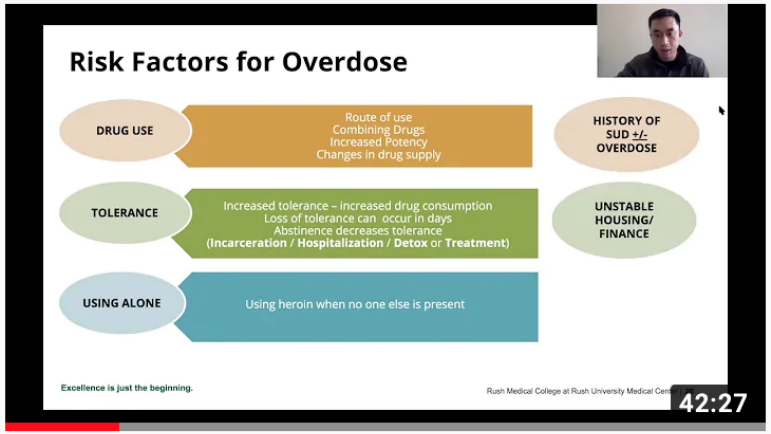
**Click here or use the QR code for registration and additional CME credit information.**

**Tools**:

- MacBook Pro
- Zoom Software
- GoPro Hero Black 7

**Content:**

- Opioid overdose physiology / epidemiology
- Risk factors and signs of opioid overdose
- Strategies to Address Overdose
- Live demonstration of ALL active naloxone products
- Overdose Prevention Pocket Guide

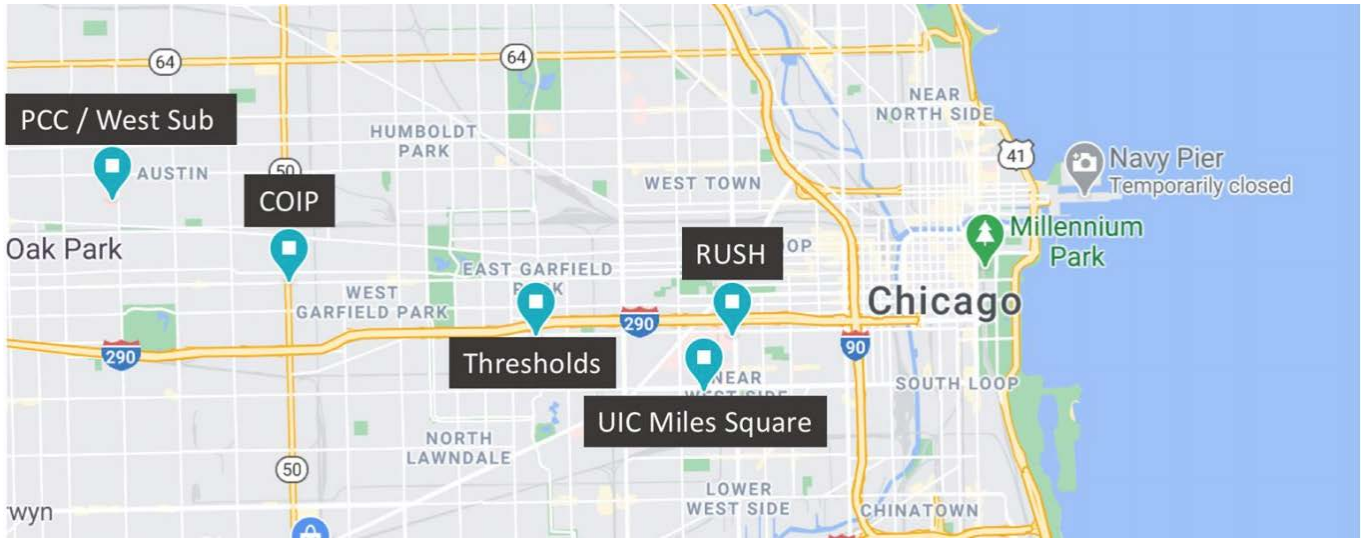



Prevention and Treatment of Opioid Overdose

219 views • 1 month ago

Nicholas Chien

# Building Partnership With A Community Rotation Site




THRESHOLDS

PCSS Providers Clinical Support System

FAQS NEWS E-N

ABOUT | EDUCATION & TRAINING | X-WAIVER | MENTORING

Home / Calendar of Events /

Team-Based Care to Address Psychiatric and Physical Health Co-morbidities in Persons with Opioid Use Disorders: Responding to Chicago's Opioid Crisis

April 13, 2021

**Outreach**:

- 1262 registered attendees
- 528 live attendees

# Multidisciplinary and Cross-Institution Collaboration

Blended Session

## Public Safety Response to Intoxication and Agitation: Clinical and Justice Perspectives

Friday, April 23, 2021 4:30 PM – 5:30 PM ET

ASAM VIRTUAL.2021
April 22 - 24

Non-presenting author: Ruchi M. Fitzgerald, MD FAAFP – Rush University

Presenter: Nicholas Chien, MD – Rush University Medical Center

Presenter: Ethan Cowan, MD, MS, FACEP – Icahn School of Medicine at Mount Sinai

Presenter: LaTanya S. Jenifor-Sublett, BA – Heartland Alliance Health

Non-presenting author: T Celeste Napier, PhD – Rush University Medical Center

Presenter: Elise Wessol, DO – Carle Addiction Recovery Center

# Fellowship Provides The Platform For Educational Excellence

**Addiction medicine fellowship provides**:

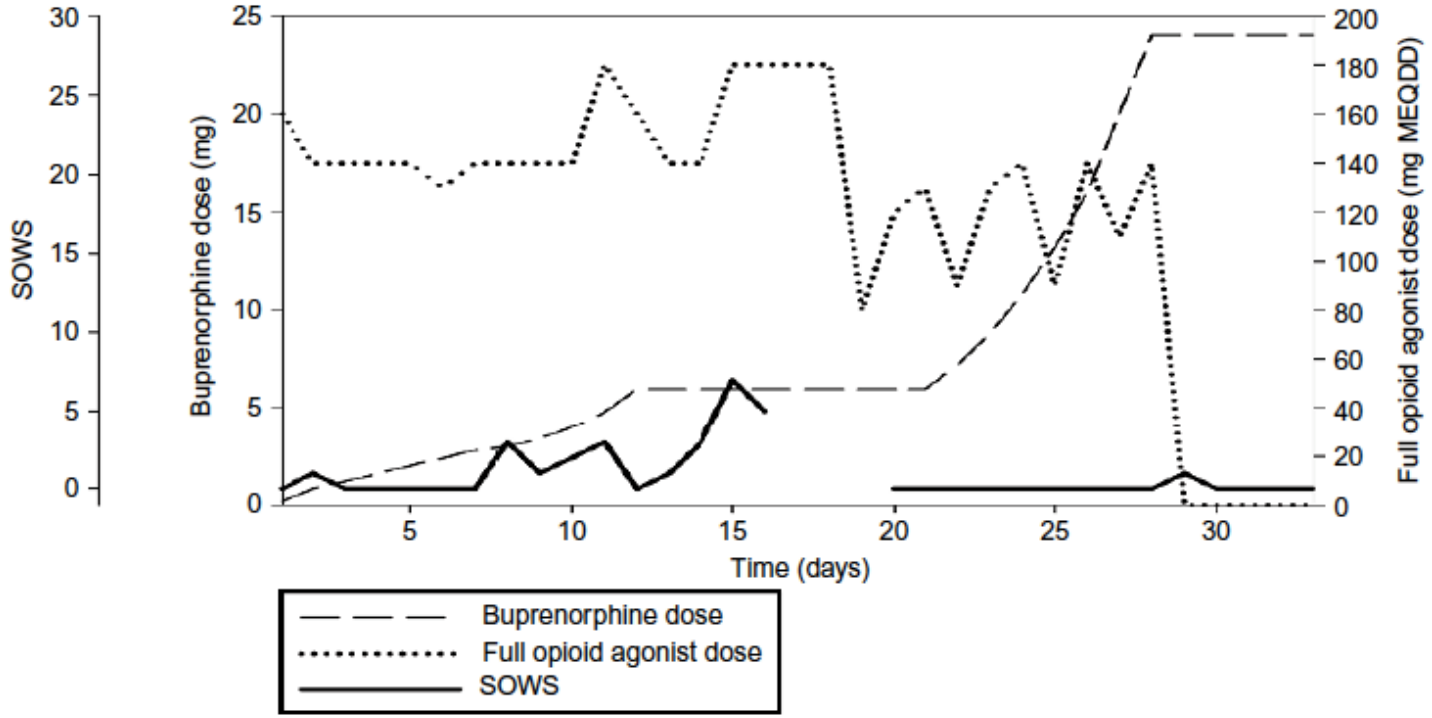
- *Community* that sparks inspiration and innovation
- *Network* of like-minded and renowned educators
- *Mentorship* and guided supervision
- Multidisciplinary and cross-institution *collaboration*
- *Engagement* at the national level
- Countless *opportunities* for education

# Simplifying buprenorphine microinduction in the outpatient setting

Shawn Cohen MD
Addiction Medicine Fellow at Yale

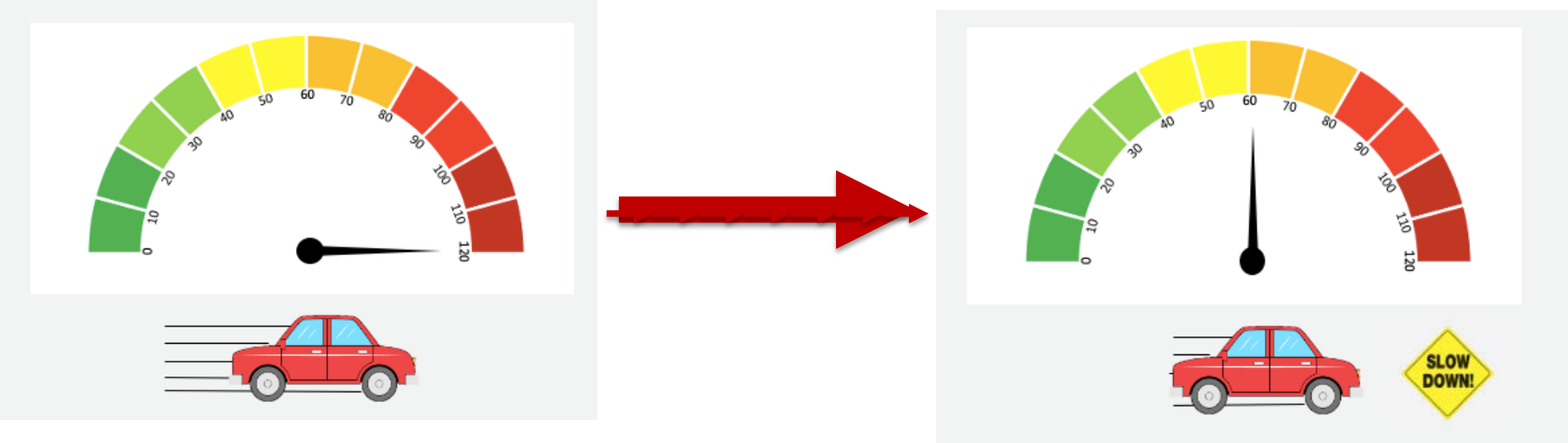
YALE PROGRAM IN ADDICTION MEDICINE

# What is the microinduction?

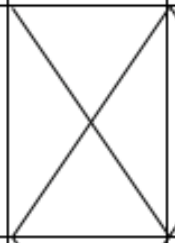
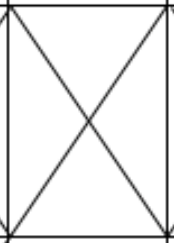
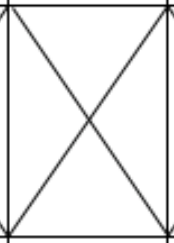
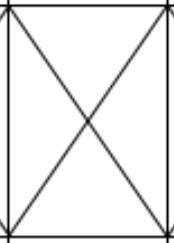
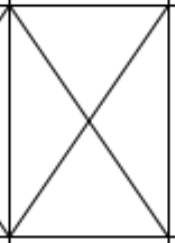
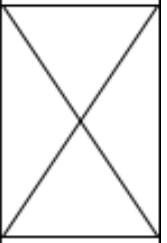
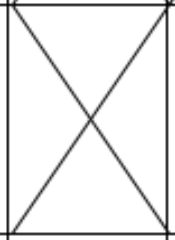



Hämmig, *Suchttherapie*, 2010
Hämmig, *Subst Abuse and Rehabil*, 2016

# How we explain it



# Handout for patients and providers

| | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 | Day 6 | Day 7 |
|---|---|---|---|---|---|---|---|
| **Buprenorphine dose** | 0.5mg daily | 0.5mg BID | 1mg BID | 2mg BID | 4mg BID | 4mg TID | 8mg BID |
| **Strip size** | 2mg | 2mg | 2mg | 2mg | 2mg | 2mg | 8mg |
| **Morning dose** |  |  |  |  |  |  |  |
| **Afternoon Dose** |  |  |  |  |  |  |  |
| **Night dose** |  |  |  |  |  |  |  |
| **Full agonist** | Continue | Continue | Continue | Continue | Continue | Continue | STOP |

# Partnering with community pharmacy

genOa healthcare®

# Questions?

shawn.cohen@yale.edu

Tweetorial

YALE PROGRAM IN ADDICTION MEDICINE

# Safe Station Initiative

Jeremiah Fairbanks, DO

University of Minnesota Addiction Medicine Fellow

UNIVERSITY OF MINNESOTA

Driven to Discover℠

# Goals

- Connect front line providers (MFD/HEMS) to community based peer recovery services through Twin Cities Recovery Project and UMN
- Low threshold individualized SUD treatment directed toward underserved and predominantly African American communities
- Address stigma in MFD and HEMS through education
- Evidence based approach

# Services Offered

- Substance Use
  - Culture specific peer recovery, Comprehensive assessment for CD program, referral for pharmacotherapy
- Psychosocial
  - Housing, vocational support, food, safety, legal
- Medical (non-psychiatric)
  - HIV testing, referral to care (ED, UC, PCP)
- Mental Health
  - Referral to psychiatry/psychotherapy

# Process:

## Contact

- HEMS/MFD referral post-triage (24/7, 30-minute response)

## Initial Needs assessment

- Telephonic/virtual assessment of immediate needs
- Person-centered, driven by recovery capital assessment
- Housing, Naloxone, sobering, stabilization

## Connection with MOUD/Clinical

- Immediate, low-threshold care for SUD/OUD
- Rule 25/comp assessment if interested (24-72 hours)

## Ongoing peer support to include

- Individual and group peer sessions, housing/voc/MH/social

# Evidence-Based Practice

- Data Collection
  - Measure program's effectiveness
  - Impact of peer support/safe station model
  - Impact on stigma within MFD

# Naloxone Co-Prescribing Across a Large Health System

MARC D. KIMBALL, MD

ADDICTION MEDICINE FELLOW – MMC/USVA TOGUS

# The Problem

Opioid Overdose Deaths have **Decreased** the US Life Expectancy

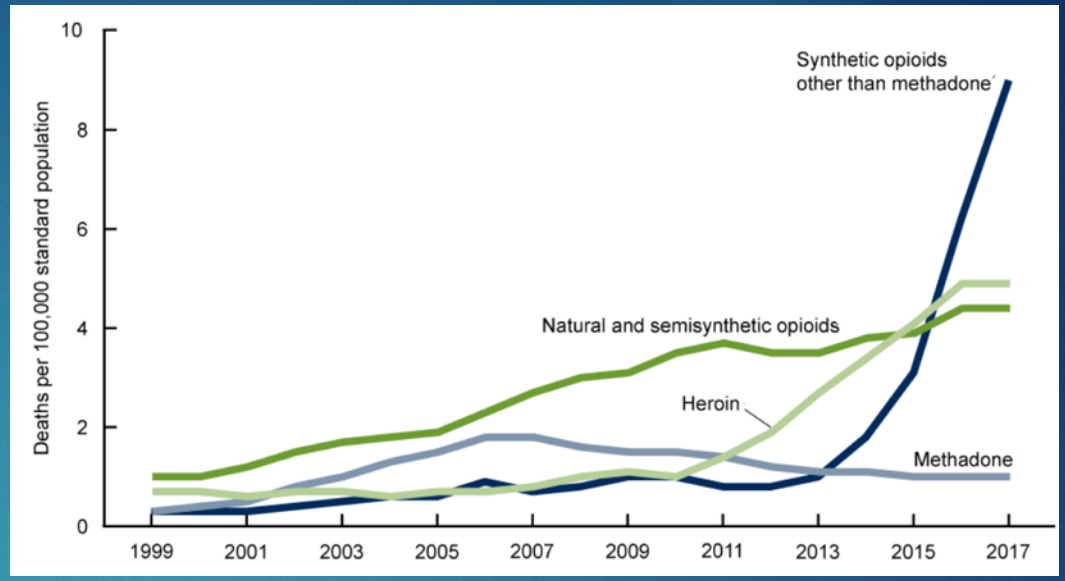
Naloxone is proven to curb mortality from opioid overdose

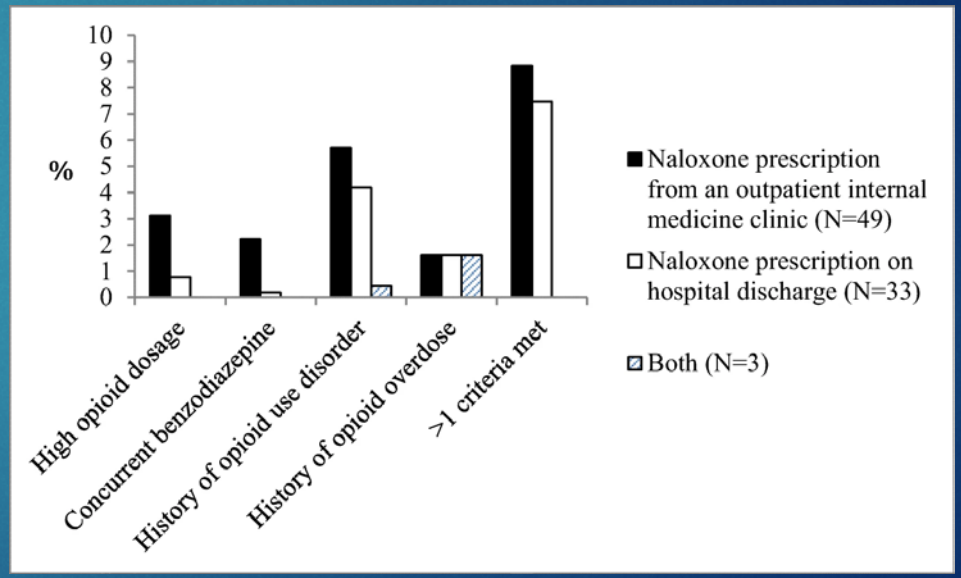
CDC issued guidelines for Co-Prescribing

MMC Internal Medicine Clinic

~6% of eligible patients had naloxone on their medication list

We saw similar rates at all sites across MaineHealth




Kispert et al. "Differences in Naloxone Prescribing by Patient Age, Ethnicity, and Clinic Location Among Patients at High Risk of Opioid Overdose." JGIM. 2019

# Naloxone Committee Actions

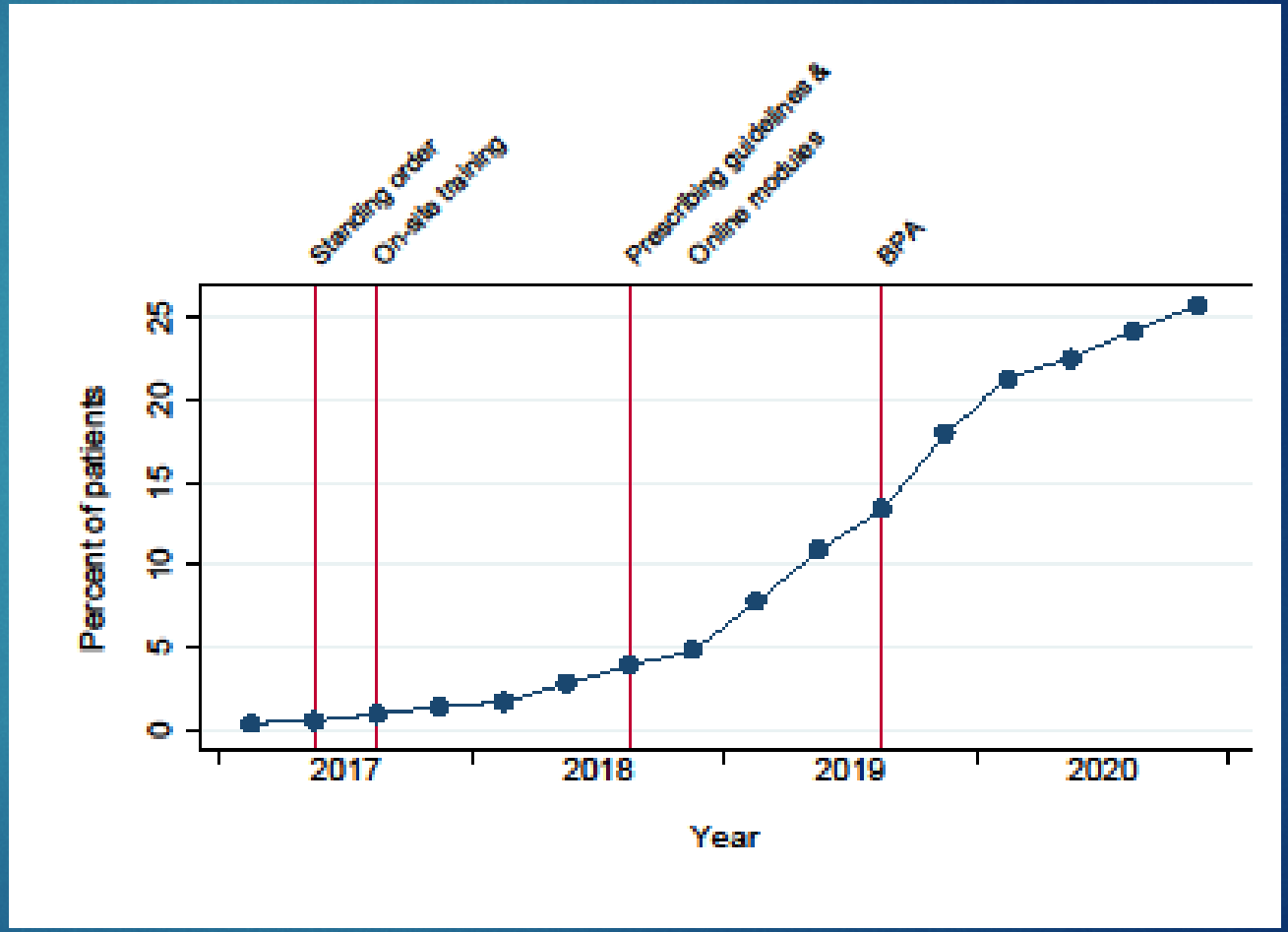
- Q2 2017 – Implementation of Naloxone Standing Order
- Q3 2017 – On Site Naloxone Training Provided
- Q3 2018 – Development of MaineHealth Opioid Prescribing Guidelines
- Q3 2018 – Development of Online Educational Modules
- Q3 2019 – Implementation of Best Practice Advisory (BPA)

# Results

Overall change was 23% (8.6 Fold Increase)

Largest Uptake was related to BPA (12%)

Second Largest Uptake was Online Modules/Guidelines (7%)



# The Western Maine Health Phenomenon

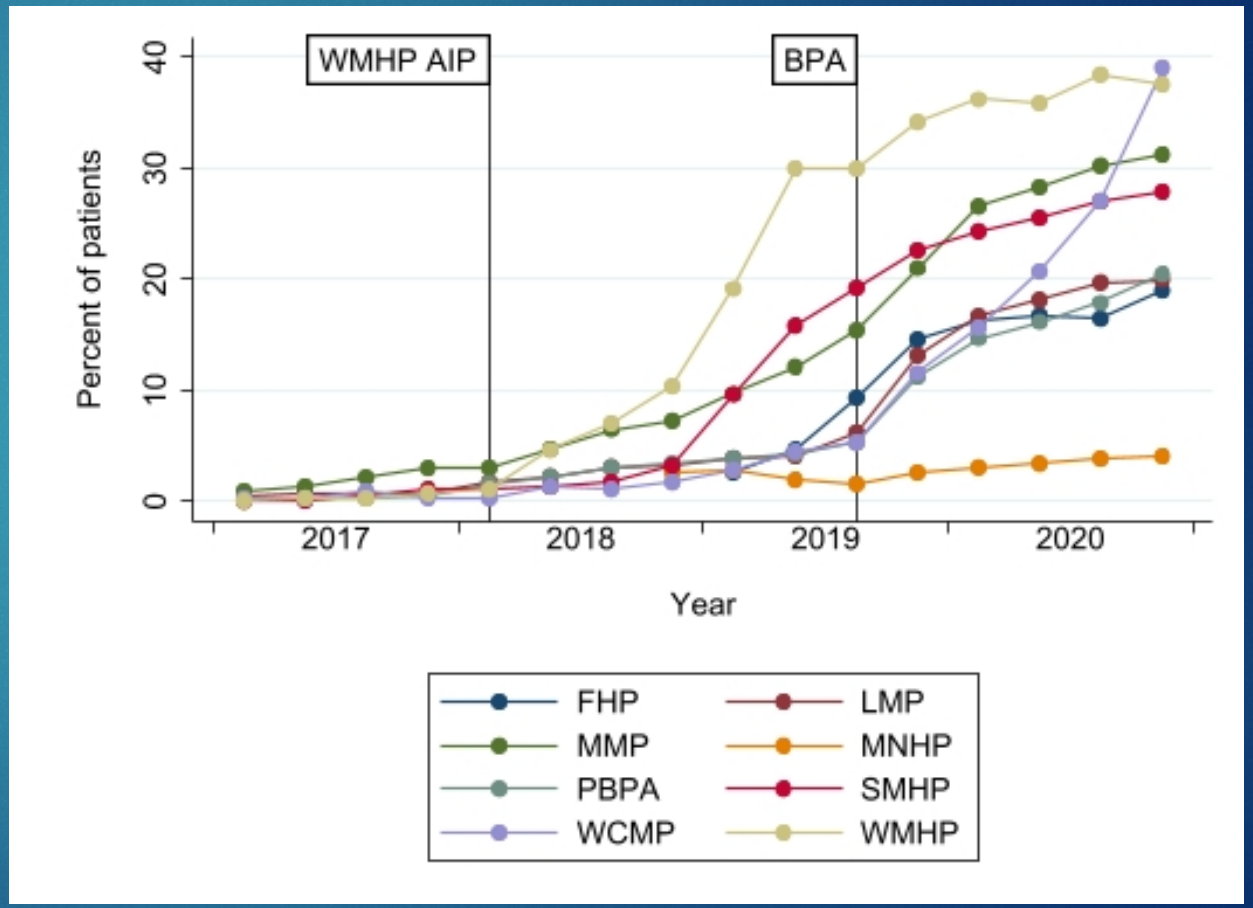
Stratified Data

WMHP had an anomalous 30% increase

Unrelated to anything the Naloxone Committee was doing

WMHP stated they made Naloxone Co-prescribing an Annual Implementation Plan (AIP) Goal

Empowered front-line providers to solve problem. Distributed Naloxone from DPH



# Outpatient benzodiazepine taper in a low barrier setting

Jordana Laks, MD, MPH, Morgan Younkin, MD, MPH, and Jessica Taylor, MD

Grayken Addiction Medicine Fellowship
Boston Medical Center

ACAAM Virtual Annual Meeting
Fellow Lightning Round
June 9, 2021

# Clinical setting: low barrier “bridge clinic”

- Rapid access to substance use disorder treatment & harm reduction
  - Walk-in and scheduled appointments available 6 days per week
- Convenient location within a safety net hospital in Boston, MA
- Institutional working relationships with:
  - Inpatient Addiction Consult Service
  - Street-level drop-in harm reduction center
  - Office-based addiction treatment within primary care
  - Outpatient psychiatry clinic for patients with co-occurring severe mental illness and SUD
  - Emergency department-based SUD and detoxification treatment referral program
- Staffing
  - Consistent nursing presence
  - Rotating pool of 10 physicians, 1 nurse practitioner, and Addiction Medicine fellows

Komaromy M, Tomanovich M, Taylor JL, et al. Adaptation of a System of Treatment for Substance Use Disorders During the COVID-19 Pandemic. J Addict Med. 2020 Dec 8.
Harris M, Johnson S, Mackin S, et al. Low Barrier Tele-Buprenorphine in the Time of COVID-19: A Case Report. J Addict Med. 2020 Jul/Aug;14(4):e136-e138.

# Identified need for a benzodiazepine taper protocol

- Experience with a small number of individualized outpatient benzodiazepine tapers for patients with benzodiazepine use disorder
  - Required a high amount of ad-hoc care coordination
  - Heterogenous practice patterns among clinicians
  - Variable outcomes in taper completion, adherence, and patient experience
- High prevalence of other co-occurring substance use disorders, including OUD
- Few local treatment options:
  - Acute detox for short benzodiazepine taper (<1 week)
  - Extended tapers generally available only for patients with a pre-existing prescribing clinician
- While most readily available local treatment is a short “detoxification” taper, literature review supports benefits of extended duration tapers

McDuff DR, Schwartz RP, Tommasello A, et al. Outpatient benzodiazepine detoxification procedure for methadone patients. J Subst Abuse Treat. 1993 May-Jun;10(3):297-302.

# Development of a Benzodiazepine taper protocol

- Inclusion criteria:
  - Diagnosis of benzodiazepine use disorder with patient goal of cessation via taper
  - Observation of benzodiazepine withdrawal & symptom capture on ≤ 40mg diazepam within first 24 hours
- Exclusion criteria:
  - Current benzodiazepine prescriber, concurrent alcohol withdrawal, unable to present to clinic daily
- Taper protocol
  - Initial & stabilization phases (days 1-3):
    - Max diazepam 40 mg total daily, guided by CIWA-Ar, initial in-clinic dosing
    - Avoid dose increase beyond day 3
    - Seen daily during stabilization with single-day prescriptions
  - Duration 4-6 weeks
  - Decrease dose by 20% every 5-7 days
  - Prescription duration extended sequentially to 7 day max, guided by treatment adherence
  - Extension of taper may be considered in consultation with Addiction Psychiatry clinic
- Safety and monitoring
  - Baseline & at least weekly urine toxicology panel including fentanyl and benzodiazepine GC/MS

# Next Steps

- Protocol is approved by Medical Director and clinical staff
- Monitoring and QI of:
  - Patient interest
  - Treatment retention
  - Treatment outcomes
  - Clinician and patient experience
- Continued coordination with local addiction treatment programs
- Share protocol and lessons learned with other low-barrier clinics

# Overview



## The Problem(s)

**2017 → 70,237 Overdose Deaths**

- 70% included Opioids
- Leading Cause of Accidental Death

**Treatment: 29.9% *(not great!)***

Up from 22.5% in 2015 *(getting there…)*

**Prescription Coverage**

Variable By State



PennState Health Children's Hospital

# Prior Authorization

**IM buprenorphine (Sublocade)**
- ↑ retention, satisfaction[2]
- May be necessary for people who use fentanyl[3]

**Health Affairs (2009)[4]**
- ↑ physician dissatisfaction/burnout
- ↑ non-patient care time spent
- ↑ costs (tens of billions of dollars

**Non-adherence & Adverse Outcomes?[6]**
Statistically significant

**Cost Savings?[5]**
- Largest studies are in Psych diagnoses
- Modest (in some cases several dollars per patient per year)

**Necessary evil**
Cost control mechanism (including “step therapy”)

Use has **ballooned** since inception, even in recent past

# Medicaid Enrolment

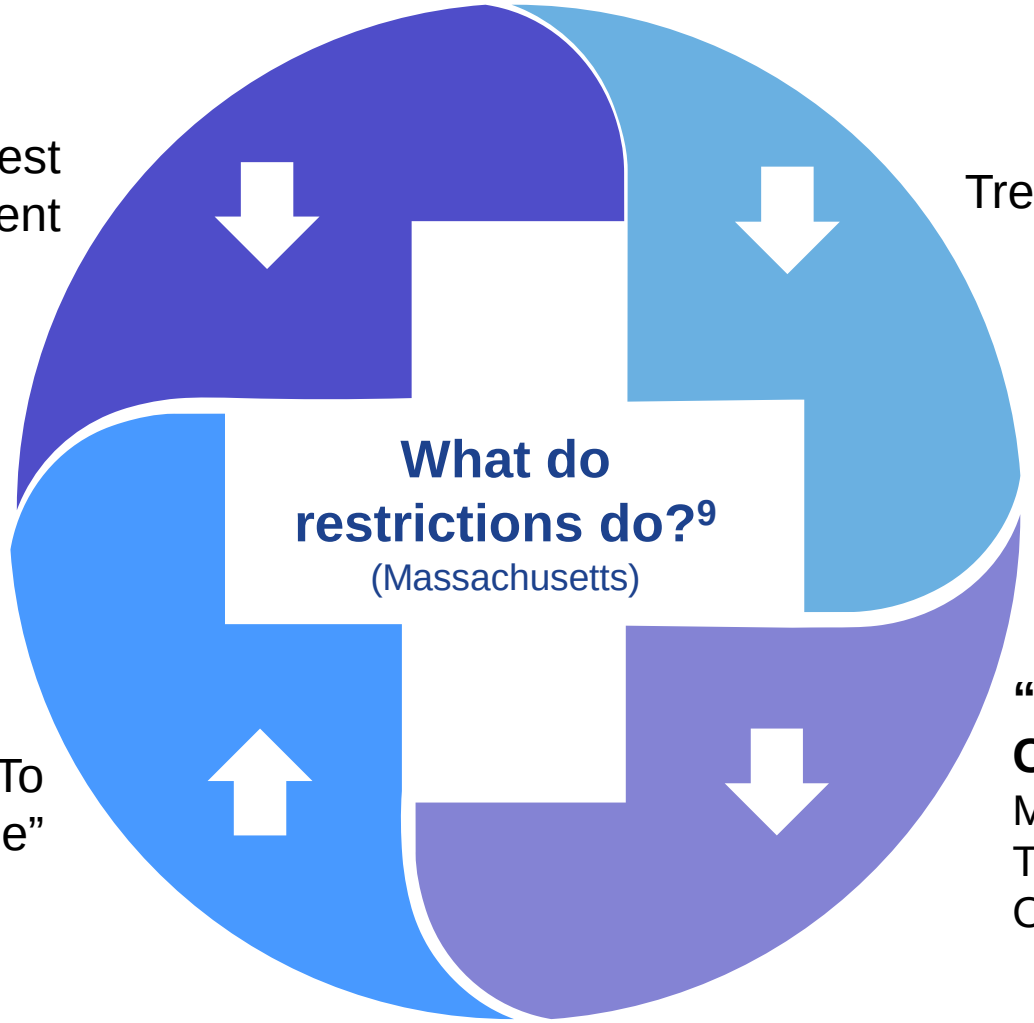
Can we measure effects on health outcomes specifically with regard to OUD?
**YES!**

In “Expansion States”[7]

- ↑ MOUD treatment enrollment overall **(+20%)**
- ↑ MOUD treatment enrollment by Medicaid beneficiaries **(+113%)**

Vermont Retrospective[8]
**↑ MOUD treatment = lower overall health care expenditures**

# Medicaid Formularies



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# Overarching Theme

↑ Medicaid Expansion

↓ Formulary Restrictions

↓ Prior Authorization

=

↑ **MOUD TREATEMENT**

=

↓ Deaths and Poor Outcomes

↓ Overall Healthcare Costs



PennState Health Children's Hospital

# Introduction:

**Angad Madan, DO**
Metrohealth/Case Western, Cleveland, OH

- Majority of Americans believe that “rehabilitating or treating the person” is the most appropriate response to nonviolent offenses. (Herron and Brennan, 2020)

- Greater public interest in creating collaborative approaches such as drug treatment courts to address these issues.

- Jail setting: public health opportunity, allows individuals not seen by healthcare system to receive screening, diagnosis, and treatment.

- Concerning statistics per SAMHSA:
  - 24 to 36% of individuals with heroin use d/o pass through correctional facilities annually. (SAMHSA, 2019)
  - Within 3 months of release, 75 % of formerly incarcerated individuals with OUD relapse to opioid use
  - Prisoners/inmates released back to community between 10 and 40 times more likely to die of opioid overdose than general population

- However, was found nationally there was “gross underutilization of MAT in community corrections programs”

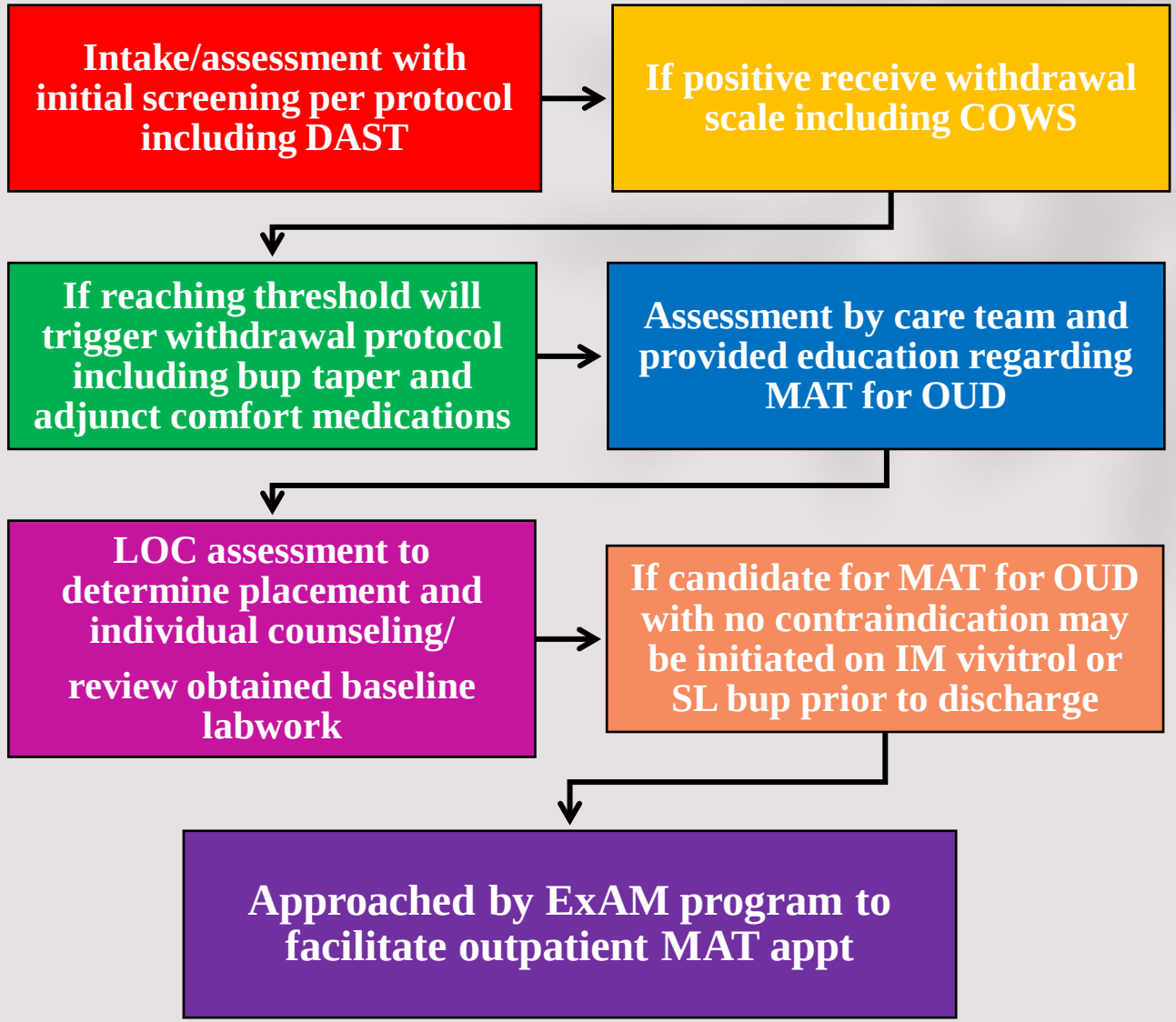
- Only about 2 to 10 percent of persons with OUDs on probation or parole received MAT.

- Concerns above highlight major need to identify and provide comprehensive care for inmates with OUD in jail setting.

# Methods:

- Role of care team using a single unified EMR (Epic) at the CCJ to deliver effective patient care for inmates with OUD
- Upon intake/assessment: receive initial screening including DAST, if positive then receive COWS screening
- If COWS reaches threshold, trigger withdrawal protocol including bup taper with comfort medications (i.e., clonidine, bentyl, Zofran, etc.)
- Provide education regarding the different MAT options and locations for continued treatment.
- Patient has LOC assessment to determine placement; also, individual counseling for SUD offered while in jail
- Base line lab work is obtained (i.e., CBC, BMP, LFT, HIV, and hepatitis screening).
- Patient may be initiated on IM vivitrol or suboxone prior to discharge provided no contraindications.
- Approached by ExAM program to facilitate outpatient MAT to continue long term treatment for SUD

(ExAM program stands for Expanding Access to MAT and is collaborative grant program with CCCC to identify/assess inmates with OUD and connect them with MAT; goals include increasing engagement in treatment and reducing length of incarceration and mortality.)



# Results:

**Records from CCJ were reviewed pertaining to MAT including vivitrol and buprenorphine. The results discussed include total number of inmates receiving such MAT.**

**Buprenorphine (October 2019 to March 2021)**

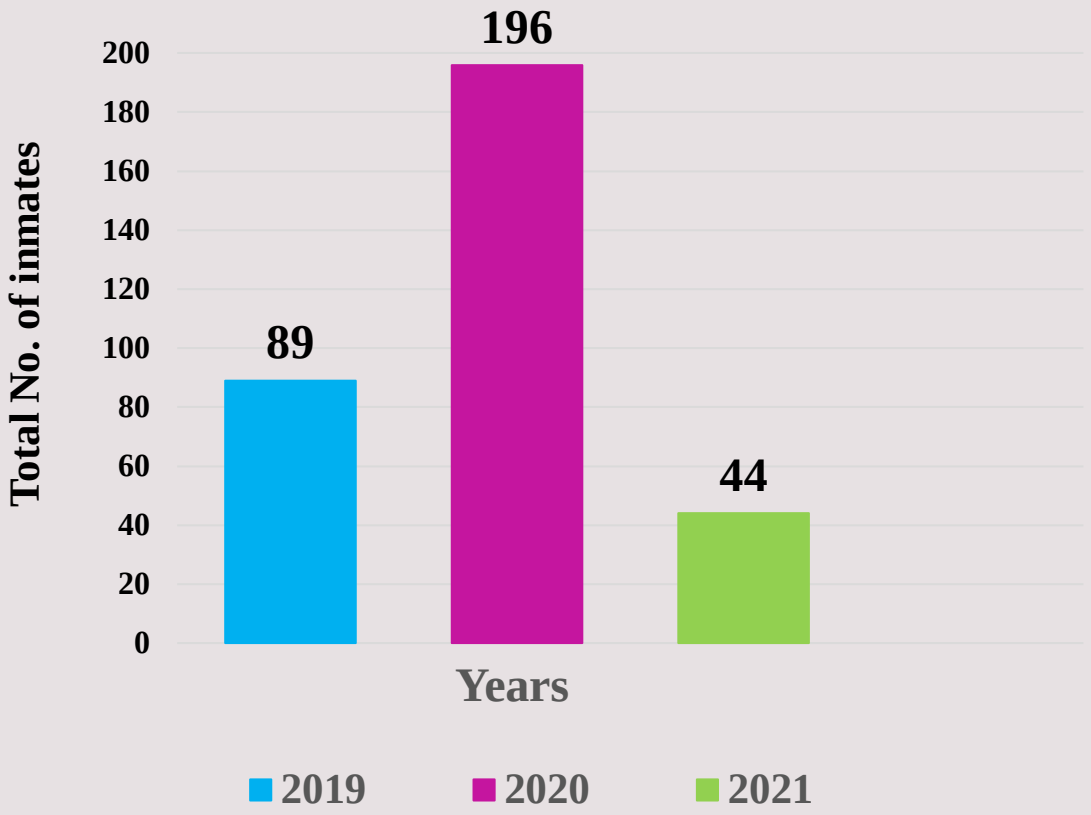
- **In 2019, 27 inmates were treated with this.**
- **In 2020, 441 inmates were treated with this.**
- **In 2021, 135 inmates were treated with this.**

**Vivitrol (January 2019, to March 2021)**

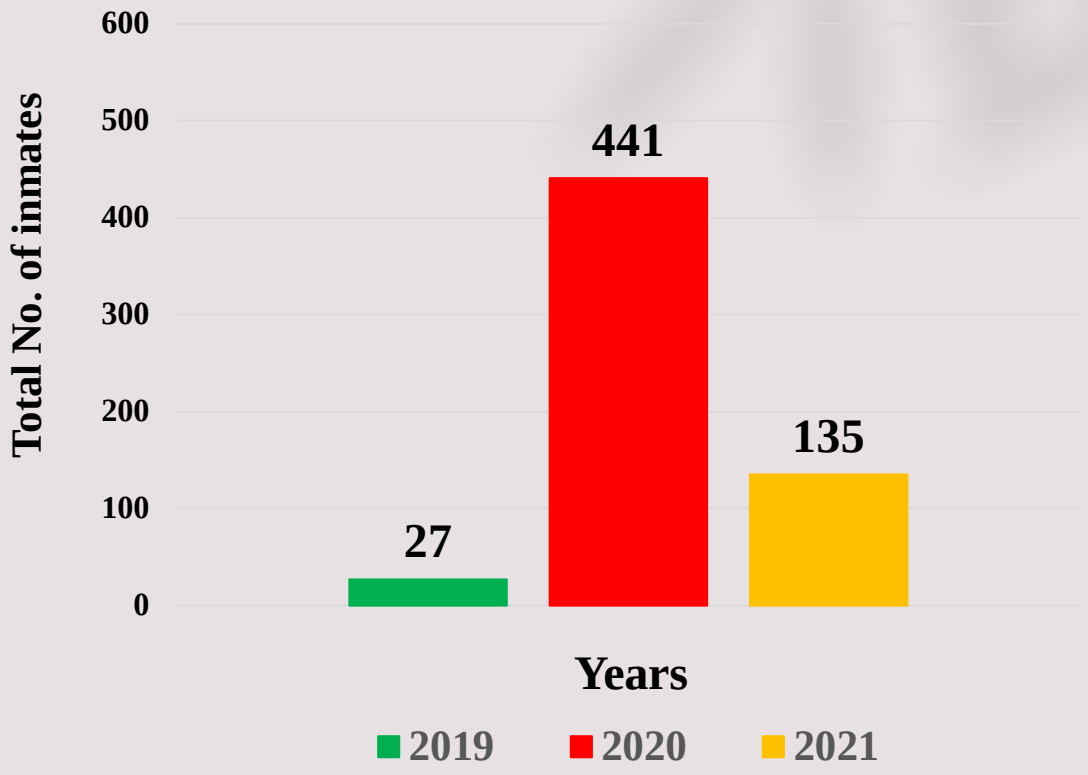
- **In 2019, 89 inmates were treated, and average inmate received 3 injections**
- **In 2020, 196 inmates were treated, and average inmate received 7.8 injections**
- **In 2021, 44 inmates were treated, and average inmate received 8.5 injections**

# Results:

**Vivitrol (January 2019 to March 2021)**




***Buprenorphine (October 2019 to March 2021)***



# Conclusion:

- The role of MAT programs in a correctional setting has the potential to have a significant impact on public health in the community at large. An increasing public interest for rehabilitation among this population has been helpful in generating such changes.

- One such effort pertaining to opioid use disorder is the innovative MAT program at the CCJ in collaboration with Metro health with application and use of a single unified EMR (Epic) to facilitate the treatment of inmates from initial intake to release through a process involving screening, withdrawal treatment, counseling, level of care assessment/placement, initiation of MAT, and linkage to long term treatment.

- A coordinated intake and evaluation process is effective and feasible and results in an increase in MAT delivery to inmates which has been known to reduce morbidity and mortality.

- A future area of discussion could include the significant impact of COVID on MAT delivery in the jail setting and on inmates with SUD.

# PEth Testing and Liver Transplant Evaluations

# A case report

**Claudia Moore, MD**
**Addiction Medicine Fellow – presenter**

**Claudia Moore MD, Alëna Balasanova MD, VaKara Meyer Karre MD**

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# The case

34 yo man seen on hospital day 4 for evaluation/treatment of decompensated cirrhosis; required transfer to higher level of care given severity of illness; some encephalopathy present

- MELD on admission 38, Creatinine 1.94

Reported history of single lapse in alcohol use with single glass of wine more than 5 weeks prior to admission; history confirmed by family

Consistent history through multiple providers

As part of evaluation for liver transplant PEth ordered

- Resulted on hospital day 10
  - PEth 16.0/18/1:  1608 ng/ml

# History

Alcohol: Abstinence reported for ~8 months with single lapse; prior diagnosis of severe alcohol use disorder

Confounders reported by patient and supported by family

- Kombucha (home brewed and store bought)
- Mouthwash containing ethanol
- Cooking wine containing ethanol / white wine in sauces
- Medications in ICU (none reported to contain ethanol but unclear of possible diluent interference)
- Hand Sanitizer used liberally by staff, visitors, patient

Lab Collection / Transport (report by reference lab denied any suspected laboratory issues)

# Laboratory Testing

PEth

- Hospital day 4: 1608 ng/ml
  - Unexpectedly high given timeline from patient and team's clinical experience
  - >200 ng/ml is consistent with chronic or heavy alcohol use
  - Window of detection 2-4 weeks typically
  - Rare mention in literature of levels >1000 ng/ml
  - Unclear if critical illness, renal injury play part in prolonged metabolism / interference

- Hospital day 10: 636 ng/ml

Urine Drug Screen (-)

Blood Ethanol (-) on admission

MCV 101.1

# Hospital Course and Follow Up

Liver transplant on hospital day 20

Discharged on hospital day 47

Readmission 1 month later with concern for rejection

- Historical inconsistencies, familial concern  for return to drinking
- PEth 512 ng/ml upon readmission
- After multiple discussions agreed there was a return to drinking and alcohol use prior to initial admission

# Improving Rates of HIV/Hepatitis C Screening and Naloxone Co-prescription

Presented By: Brendan Sullivan, DO
Addiction Medicine Fellow
St. Joseph Mercy, Ann Arbor, MI

ST. JOSEPH MERCY ANN ARBOR
SAINT JOSEPH MERCY HEALTH SYSTEM

BeRemarkable.

# Introduction

2.4 million people living with Hepatitis C during 2013-2016

1.2 million people living in the US had HIV at end of 2018

- 1 in 7 did not know

Based on CDC recommendations, all adults should be tested one time for HIV/Hepatitis C and people who inject drugs should be tested regularly

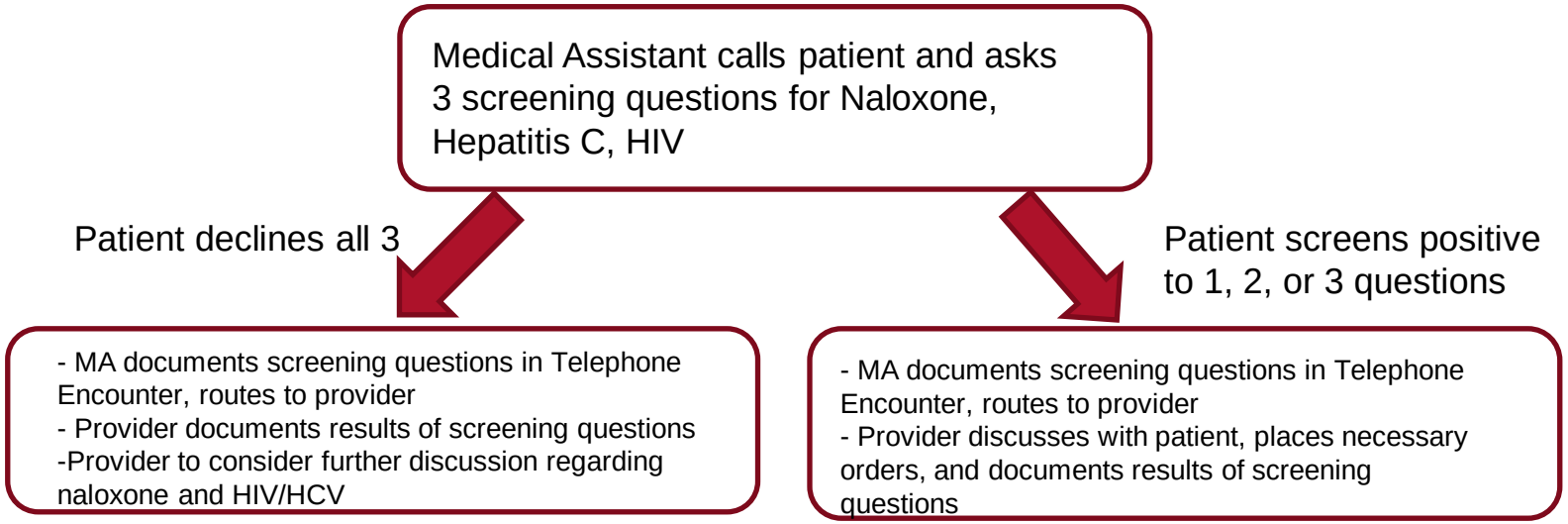
In 2019, CDC stated that 9 million more naloxone prescriptions could have been dispensed if every patient with a high-dose opioid prescription were offered

In 2019-2020, implementation of a new progress note in our clinic incorporated these screening questions, though documentation was still around 58% for naloxone screening and 25% for HIV/Hepatitis C

- 2nd cycle of Quality Improvement project

https://www.cdc.gov/hepatitis/hcv/index.htm
https://www.cdc.gov/hiv/default.html
https://www.cdc.gov/media/releases/2019/p0806-naloxone.html

# Intervention



# Results

88 day pre-intervention period compared to 82 day post-intervention
57/185 patients screened by MA's (31%)

| Documentation | Naloxone (Primary Opioid Dependence) | Hepatitis C | HIV |
|---|---|---|---|
| Pre-Intervention | 48/65 (73.8%) | 96/156 (61.5%) | 94/156 (60.3%) |
| Post-Intervention | 82/102 (80.4%) | 128/185 (69.2%) | 127/185 (68.6%) |

| Positive Responses/Positive Documentation | Naloxone | Hepatitis C | HIV |
|---|---|---|---|
| Pre-Intervention | 39/48 (81.3%) | 21/96 (21.9%) | 16/94 (17.0%) |
| Post-Intervention | 56/82 (68.3%) | 27/128 (21.1%) | 23/127 (18.1%) |

| Order Rate | Naloxone | Hepatitis C | HIV |
|---|---|---|---|
| Pre-Intervention | 36/39 (92.3%) | 25/21 (119%) | 22/16 (138%) |
| Post-Intervention | 51/56 (91.1%) | 23/27 (85.2%) | 20/23 (87.0%) |

# Discussion

Data did not meet run chart rules (not shown), showing a random pattern of change

Overall, documentation rates have improved from 1 year ago!

- Naloxone: 58% to 80%
- Hepatitis C: 25% to 69%
- HIV: 25% to 69%

80% of patients are declining HIV/Hepatitis C screening

- 2 cases of Hepatitis C were detected from 48 tests

Rates of prescribing naloxone to patients who want it: >90%

David Tracy, MD
Charles Emerman, MD
Jon Siff, MD

# Nicotine Patch Prescription Fulfillment Rate for Emergency Department Patients

# Introduction

- Background for study
  - About 20% of ED patients report cigarette use
- Importance of ED initiation
  - National organizations advocate initiation of SBIRT in the ED
- Prior work
  - Many prior studies use trained counselors
- Reason for this study
  - Evaluate prescription fills for nicotine replacement therapy

# Methods

Retrospective chart review

Identified ED patients prescribed NRT-P from Jan 2018 to Oct 2019

Data gathered on age, gender, purpose of ED visit, presence of chronic heart or lung problems, comorbid SUD

Dispense data collected through e-prescribing network

Subsequent visits reviewed to evaluate for smoking cessation

# Results

598 patients prescribed NRT-P; 500 with follow up data

Comparison of patients with follow-up data and without

Follow-up patient data

- Avg age 43.5
- 43.5% female
- 35% chronic lung disease
- 14% cardiac disorder
- 32% SUD
- Presenting complaint 19% pulmonary, 16% cardiac
- Prescriber: 62% attending physician, 17.6% APP, 20.4% resident

About ½ patients fill their prescriptions

More likely to fill prescription if female or hx chronic lung disease


## Discussion

- Fill rate data and interpretation
- Comparison with other studies

## Limitations

- Dispense queries dependent on subsequent patient encounters
- Dependence on EHR for accuracy of medical comorbidities
- NRT-P obtained by other means, ie over the counter purchase

## Conclusion

- About ½ filled NRT-P prescriptions
- Female patients and those with chronic lung disease were more likely to do so
- Further research