

A Model to Provide Medication-Assisted Treatment for Opioid Use Disorder in a Rural Residency Clinic

Jeffrey Berry, MD - PGY-3 UW Department of Family Medicine

Veronica Daniel – University of Wisconsin School of Medicine

Jillian Landeck, MD – Faculty UW Department of Family Medicine

Background

- Wisconsin experienced 16.9 opioid-related deaths/100,000 persons in 2017, higher than the national average

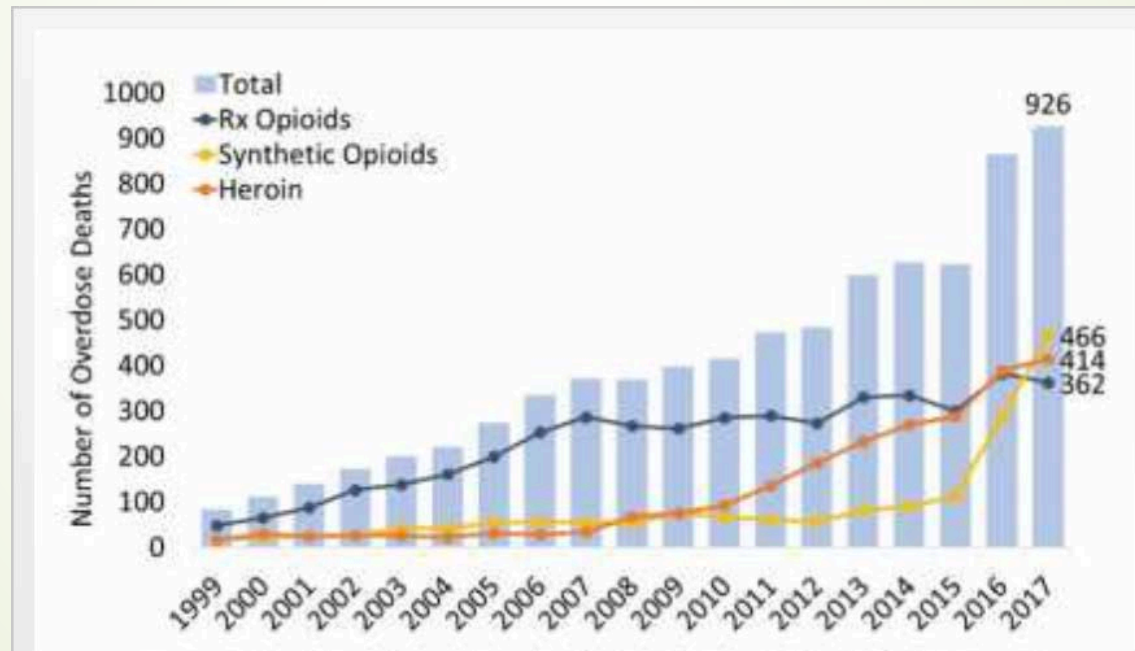


Figure 1. Number of overdose deaths involving opioids in Wisconsin, by opioid category. Drug categories presented are not mutually exclusive, and deaths might have involved more than one substance. Source: CDC WONDER

What is MAT?

- Medication-assisted treatment for moderate-to-severe opioid use disorder
- DSM-V criteria for opioid use disorder
 - 4 or 5 – moderate use disorder
 - 6 or greater – severe use disorder
- Types of MAT
 - Methadone
 - Naltrexone – monthly IM injections (Vivitrol)
 - Buprenorphine/naloxone – daily sublingual (Suboxone, Zubsolv), monthly IM injections (Sublocade)

TABLE 1 Summarized DSM-5 diagnostic categories and criteria for opioid use disorder

| Category | Criteria |
|----------------------------|---|
| Impaired control | <ul style="list-style-type: none">• Opioids used in larger amounts or for longer than intended• Unsuccessful efforts or desire to cut back or control opioid use• Excessive amount of time spent obtaining, using, or recovering from opioids• Craving to use opioids |
| Social impairment | <ul style="list-style-type: none">• Failure to fulfill major role obligations at work, school, or home as a result of recurrent opioid use• Persistent or recurrent social or interpersonal problems that are exacerbated by opioids or continued use of opioids despite these problems• Reduced or given up important social, occupational, or recreational activities because of opioid use |
| Risky use | <ul style="list-style-type: none">• Opioid use in physically hazardous situations• Continued opioid use despite knowledge of persistent physical or psychological problem that is likely caused by opioid use |
| Pharmacological properties | <ul style="list-style-type: none">• Tolerance as demonstrated by increased amounts of opioids needed to achieve desired effect; diminished effect with continued use of the same amount• Withdrawal as demonstrated by symptoms of opioid withdrawal syndrome; opioids taken to relieve or avoid withdrawal |



Does MAT work?

- ▶ Multiple placebo-controlled trials across continents and decades demonstrate the effectiveness of MAT in opioid use disorder
- ▶ Both methadone and buprenorphine result in significant reductions in:
 - ▶ Overdose death
 - ▶ Illicit drug use
 - ▶ Criminal activity
 - ▶ HIV and Hep C incidence
- ▶ These treatments are also associated with improved health status and overall improved quality of life
- ▶ Injectable naltrexone found to have comparable rates of retention and abstinence from heroin compared to buprenorphine or methadone



Challenges of MAT in Rural Primary Care

- ▶ 60% of rural counties lack a physician able to prescribe buprenorphine
- ▶ 2017 article in Ann Fam Med surveyed all rurally located waivered physicians
 - ▶ The 4 most commonly identified barriers to incorporating buprenorphine MAT into clinical practice were:
 - ▶ Concerns about diversion or misuse – 48%
 - ▶ Lack of available mental health or psychosocial support services – 44%
 - ▶ Time constraints – 40%
 - ▶ Lack of specialty backup for complex problems – 32%



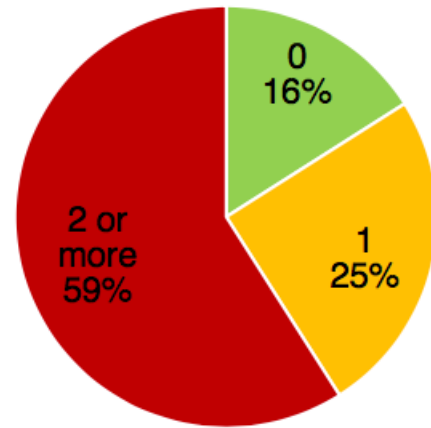
The Belleville MAT program

- ▶ Started offering MAT with buprenorphine/naloxone or monthly naltrexone injections in July 2018
- ▶ By May 2019, 5/9 residents, and 6/6 faculty had buprenorphine waiver
- ▶ Strategies to combat barriers in rural primary care
 - ▶ Lack of available mental health services – partnership with Green County Department of Human Services – AODA treatment, group therapy, CBT, DBT
 - ▶ Time constraints – at-home buprenorphine inductions if clinically appropriate, communication with RN on day of induction using subjective opioid withdrawal scale (SOWS)
 - ▶ Lack of specialty support – Project ECHO, UW Addiction Medicine

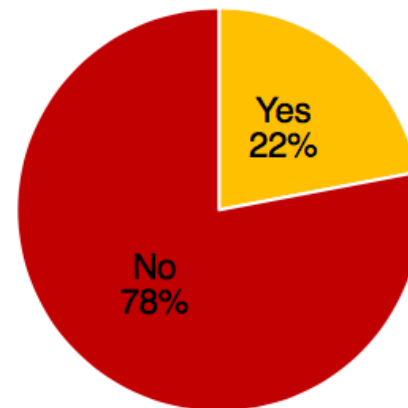
Patient Characteristics

- From July 2018 – May 2019, 32 patients (34 ± 9.9 years; 28% female) were seen for MAT at Belleville Clinic

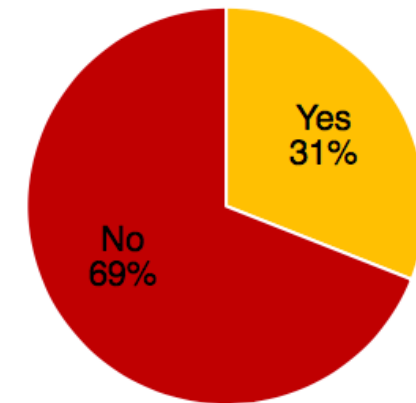
Psychiatric Co-morbidities



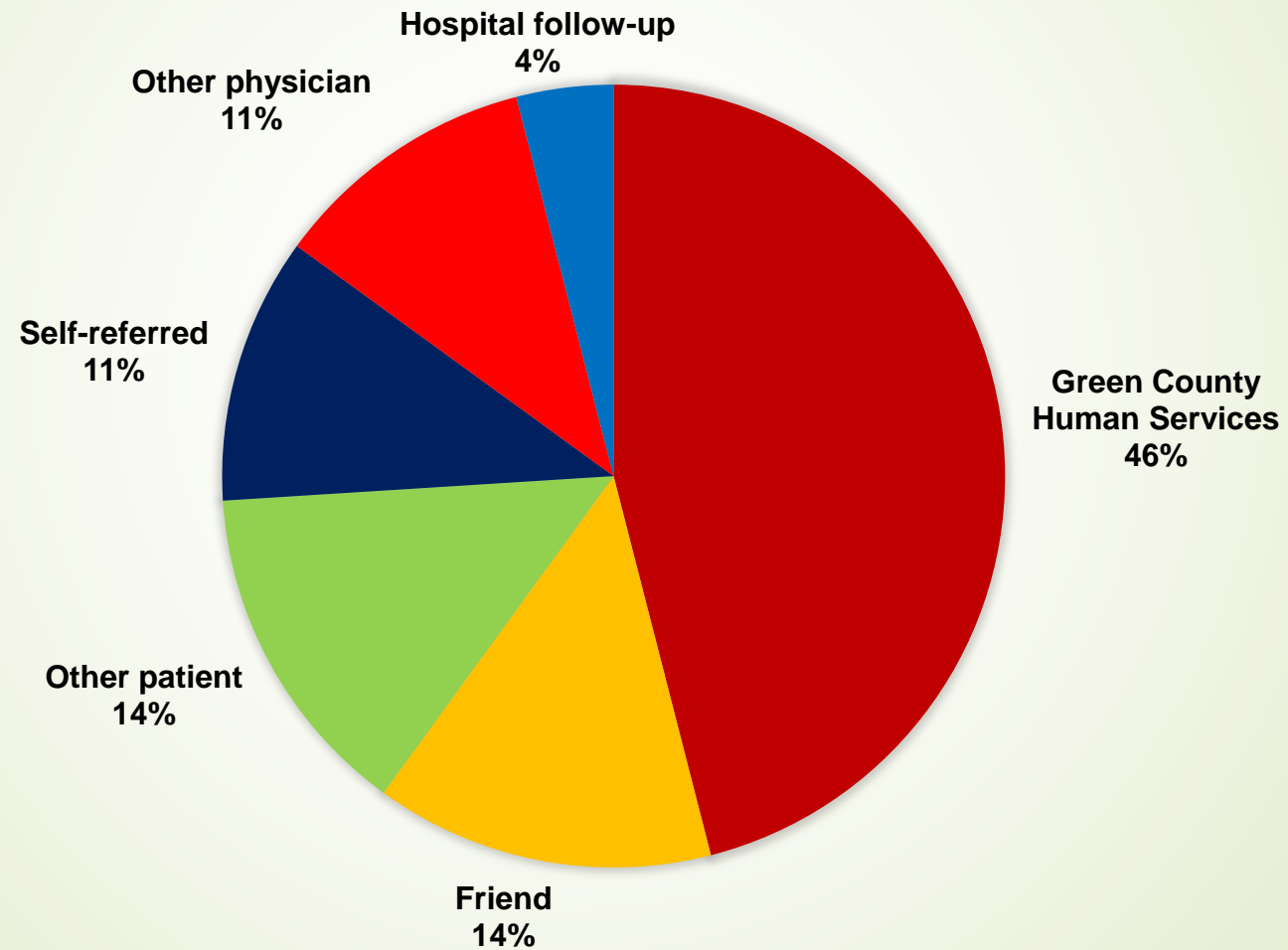
Concurrent Chronic Pain Diagnosis



Co-morbid Hepatitis C



Referral Source





Access to Care

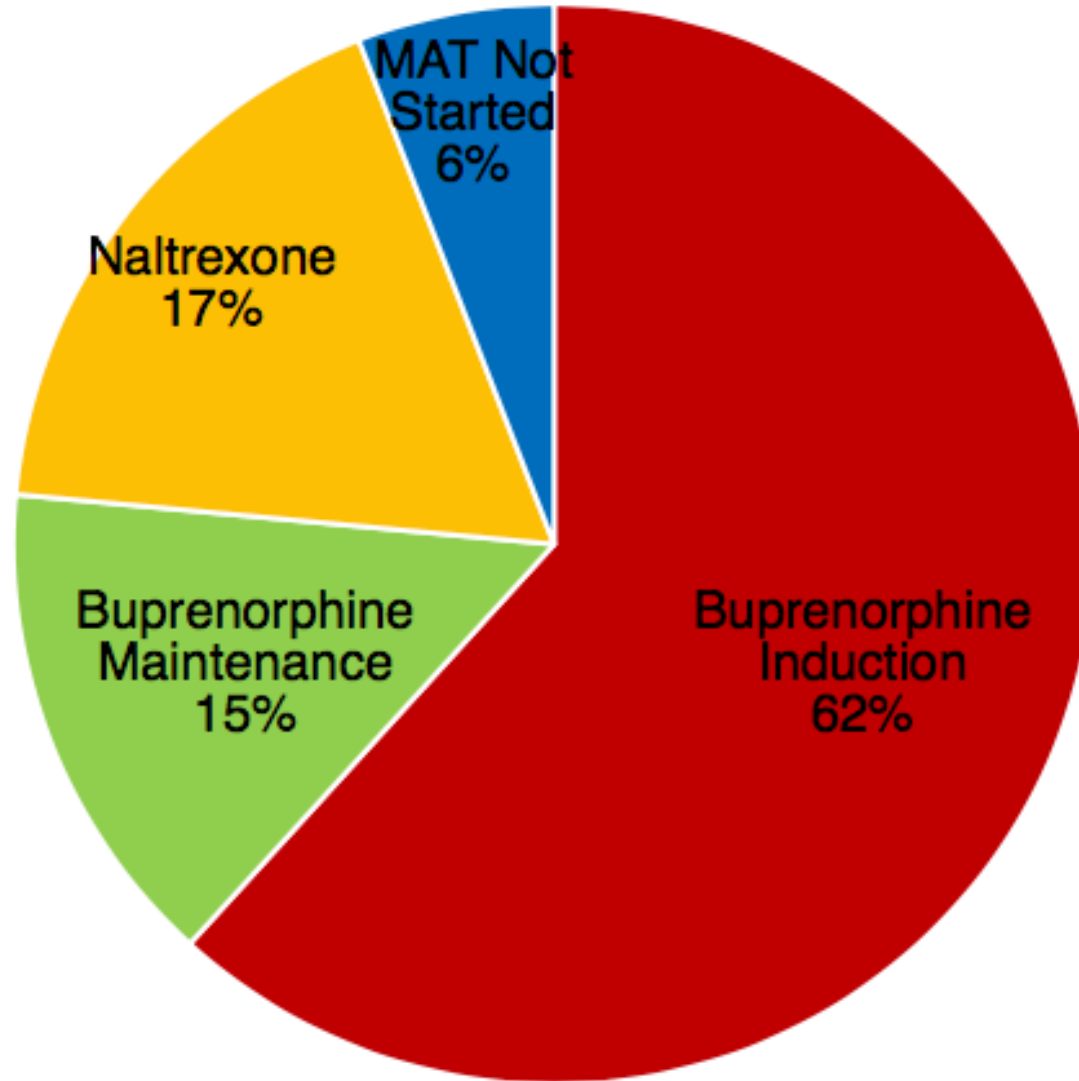
- ▶ Secondary outcome measure was time from first contact with clinic to first appointment to discuss MAT
- ▶ Mean - 10 days \pm 11.5 days
- ▶ Median - 7 days



The Intake Visit

- ▶ Standard note template
 - ▶ Opioid use history, longest period of abstinence, barriers to stop use
 - ▶ Substance use contacts, legal issues, motivators to quit, support system
 - ▶ Other substance use, treatment history
 - ▶ Psychiatric history
- ▶ DSM V criteria for moderate-to-severe opioid use disorder
- ▶ Discussion of MAT options – buprenorphine, naltrexone, referral to methadone clinic
- ▶ Rx for naloxone
- ▶ Referral to Green County AODA program, therapy if indicated
- ▶ Labs – CMP, Hep B, Hep C, HIV, INR, UDS

Intake Visit Treatment Plan



The Home Induction

- Most of the time, at-home buprenorphine induction was offered
- If benzodiazepine use, alcohol use → in-clinic induction
- Need to be in moderate withdrawal before starting buprenorphine
- Induction day scheduled, RN communication with patient using SOWS scale, determination of daily dose
- Physician-supervised protocol
- Follow-up in a few days in clinic

Subjective Opiate Withdrawal Scale (SOWS)

Instructions: We want to know how you're feeling. In the column below today's date and time, use the scale to write in a number from 0-4 about how you feel about each symptom right now.

Scale: 0 = not at all 1 = a little 2 = moderately 3 = quite a bit 4 = extremely

| DATE | | | | | | |
|-------|---------------------------|-------|-------|-------|-------|-------|
| TIME | | | | | | |
| | SYMPTOM | SCORE | SCORE | SCORE | SCORE | SCORE |
| 1 | I feel anxious | | | | | |
| 2 | I feel like yawning | | | | | |
| 3 | I am perspiring | | | | | |
| 4 | My eyes are tearing | | | | | |
| 5 | My nose is running | | | | | |
| 6 | I have goosebumps | | | | | |
| 7 | I am shaking | | | | | |
| 8 | I have hot flushes | | | | | |
| 9 | I have cold flushes | | | | | |
| 10 | My bones and muscles ache | | | | | |
| 11 | I feel restless | | | | | |
| 12 | I feel nauseous | | | | | |
| 13 | I feel like vomiting | | | | | |
| 14 | My muscles twitch | | | | | |
| 15 | I have stomach cramps | | | | | |
| 16 | I feel like using now | | | | | |
| TOTAL | | | | | | |

Mild Withdrawal = score of 1 – 10

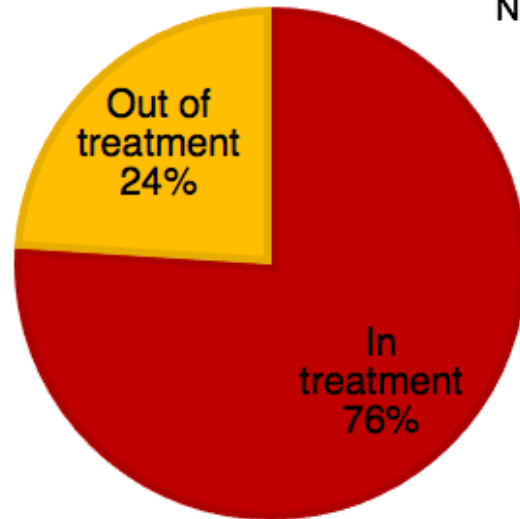
Moderate withdrawal = 11 – 20

Severe withdrawal = 21 – 30

Primary Outcomes

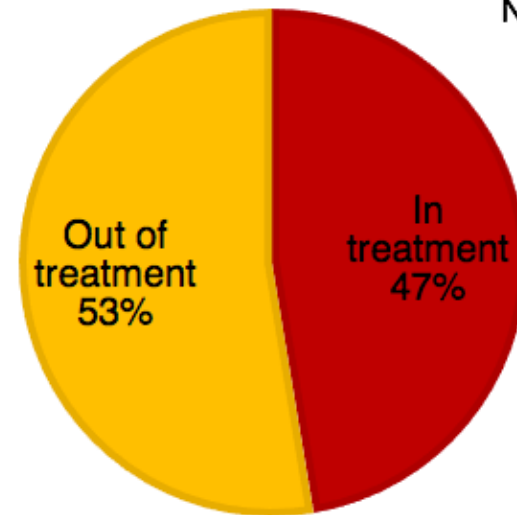
3 MONTH RETENTION RATE

N=25

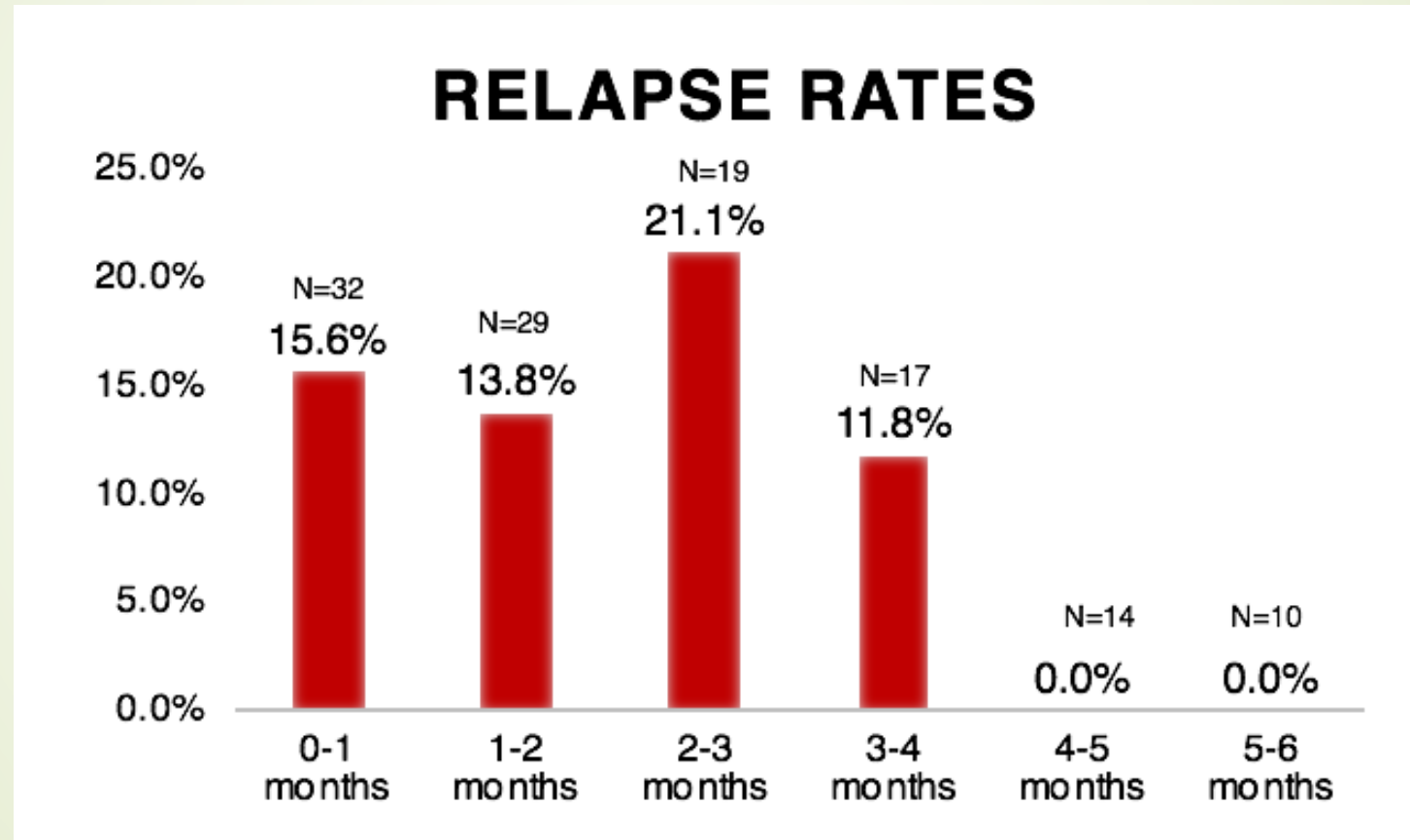


6 MONTH RETENTION RATE

N=19



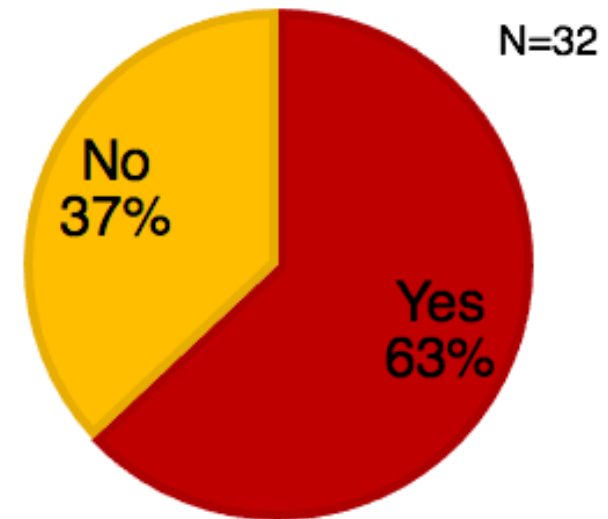
Primary Outcomes



Secondary Outcomes

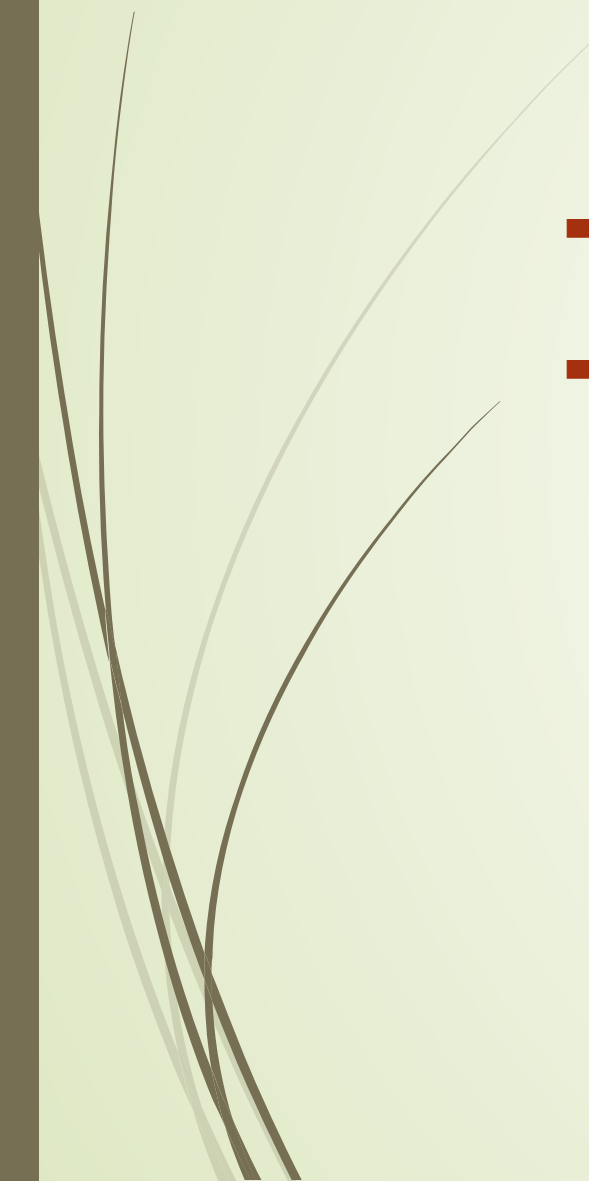
- Access to Care –
mean 10 days,
median 7 days

ENGAGEMENT IN BEHAVIORAL HEALTH



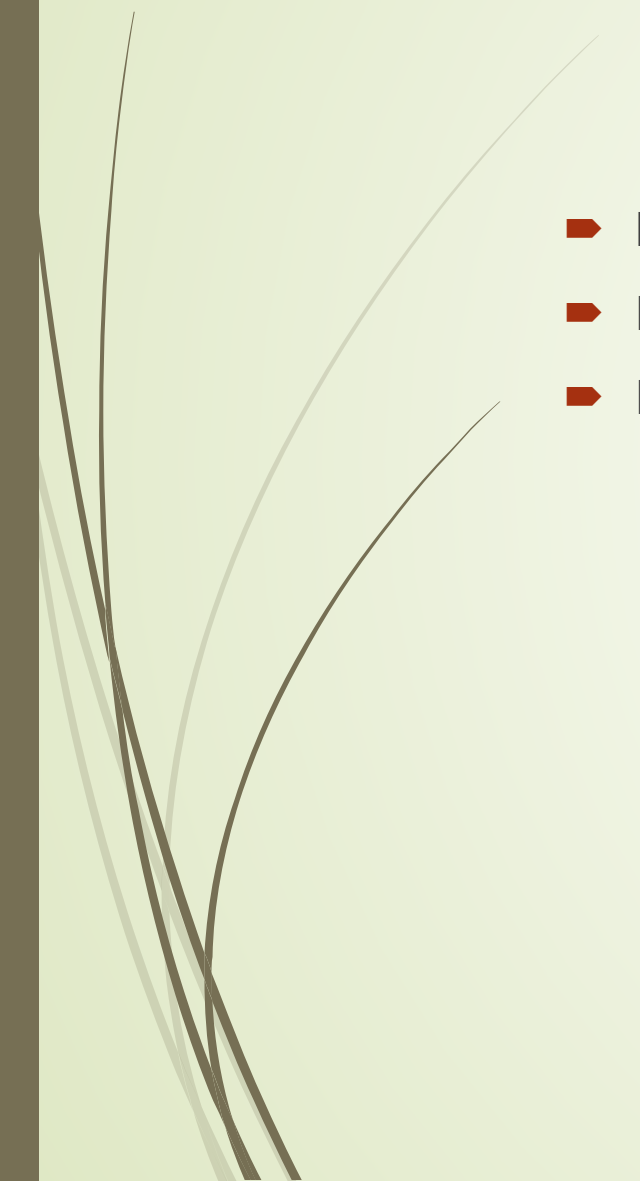


Conclusions

- ▶ This model is efficacious and able to address the barriers to providing MAT in a rural setting
 - ▶ Further longitudinal data will help evaluate quality MAT metrics
- 



Future considerations

- ▶ Further analysis of 3 and 6 month retention rates with higher N
 - ▶ Receipt of primary care services
 - ▶ Hepatitis C treatment in rural primary care
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Sources

National Institute on Drug Abuse (2019, March). Wisconsin Opioid Summary.

Sordo L, Barrio G, Bravo MJ, et al. Mortality risk during and after opioid substitution treatment: systematic review and meta-analysis of cohort studies. BMJ 2017

Nielsen S, Larance B, Degenhardt L, et al. Opioid agonist treatment for pharmaceutical opioid dependent people. Cochrane Database Syst Rev 2016

Mattick RP, Breen C, Kimber J, et al. Buprenorphine maintenance versus placebo or methadone maintenance for opioid dependence. Cochrane Database Syst Rev 2014

Andrilla CHA, Coulthard C, Larson EH. Barriers Rural Physicians Face Prescribing Buprenorphine for Opioid Use Disorder. Ann Fam Med 2017