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# **Effective Strategies to Engage and Retain Individuals with an OUD – Combining MAT & Psychosocial Services**

David Loveland, PhD

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# Engaging Kayla

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- You work with a crisis response team and receive a 911 call about a 30-year old women, named Kayla, who has overdosed at her parents' house located in a urban community
  - Teaming up with EMS – you arrive at the house and find Kayla unconscious on the bathroom floor with a syringe and bags of heroin lying next to her
  - EMS staff revive Kayla with naloxone, however, she remains disoriented and unable to ambulate on her own, resulting in transportation to a local hospital ED



# Engaging Kayla

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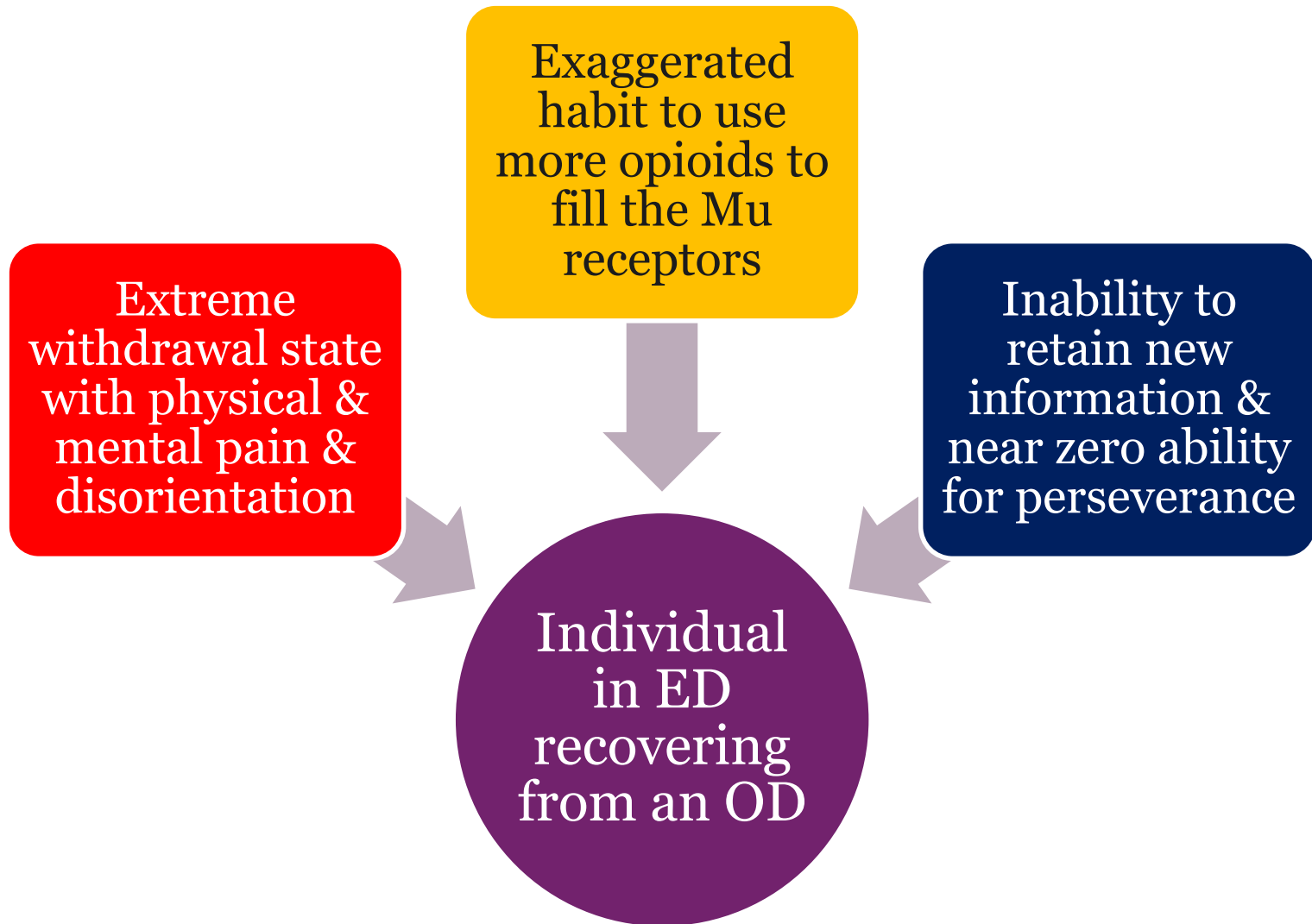
- Kayla is stabilized at the ED after an hour of monitoring & screening (e.g., toxicology); she receives medical clearance for discharge within another hour
  - Kayla’s diagnosis is opioid poisoning, which prompts the medical team to recommend residential treatment
  - Kayla reports that she has not used any heroin or other drugs for six months, which corresponds with the duration of her active probation

***You want to engage Kayla before she leaves the ED – what are your challenges that are unique to this situation?***



# Challenges of Engaging People in the ED

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# Behavioral Principles for Engagement

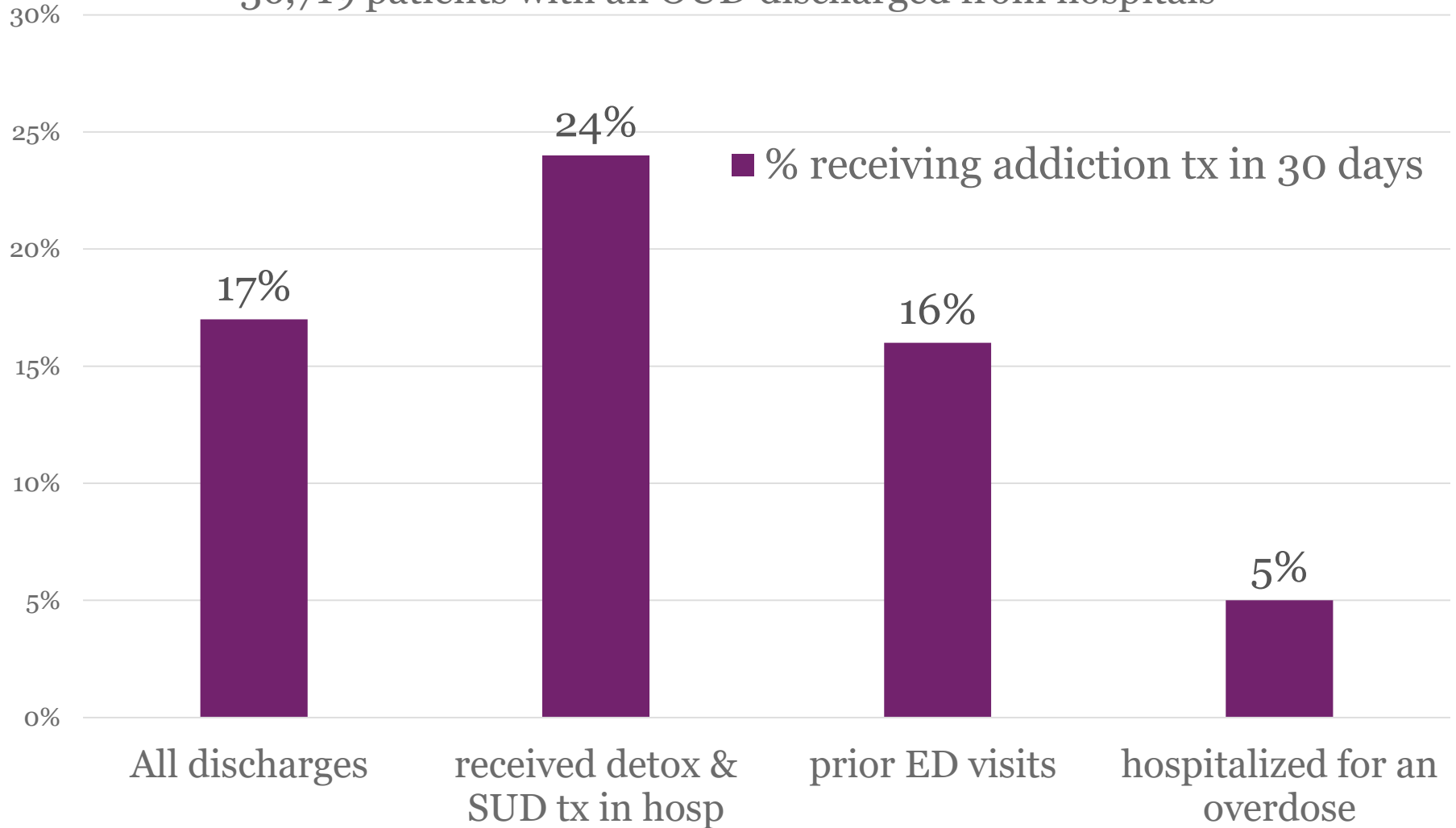
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- **Rule 1:** Powerful habits dominate human behavior during states of mental exhaustion
  - ✓ People binge eat when mentally exhausted, such as at night or while attempting to diet,
  - ✓ Relapses to tobacco, alcohol & other drugs occur more in negative mental states that create exhaustion, such as anxiety or pain,
  - ✓ Couples have more arguments when distressed or feeling overwhelmed
  
- **Step 1:** Increase ego strength to avoid habits by providing active listening, simple steps, and inspiration
  - ✓ Individuals can be inspired to avoid powerful habits if given simple options that can occur quickly and based on their values and goals, not their deficits or diagnoses



# % Engaged in Tx after Hospitalization for OUD Related Condition in U.S. 2010 to 2014

36,719 patients with an OUD discharged from hospitals



Naeger et al., 2016, ,



# The Cycle of Hospitalizations and ED Contacts for Individuals with an OUD

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**8%** increase in Hospitalization rates for OUD related events every year since 2003

**24%** of patients hospitalized for an OUD event are re-hospitalized in 90 days

**20%** or fewer of discharges engage in addiction treatment

**50%** of patients with an OUD who encounter an ED will have another ED event within 12 months

**20%** of individuals with an OUD receive addiction tx in the U.S. & **8%** receive medications



# Outcomes for Individuals with OUD

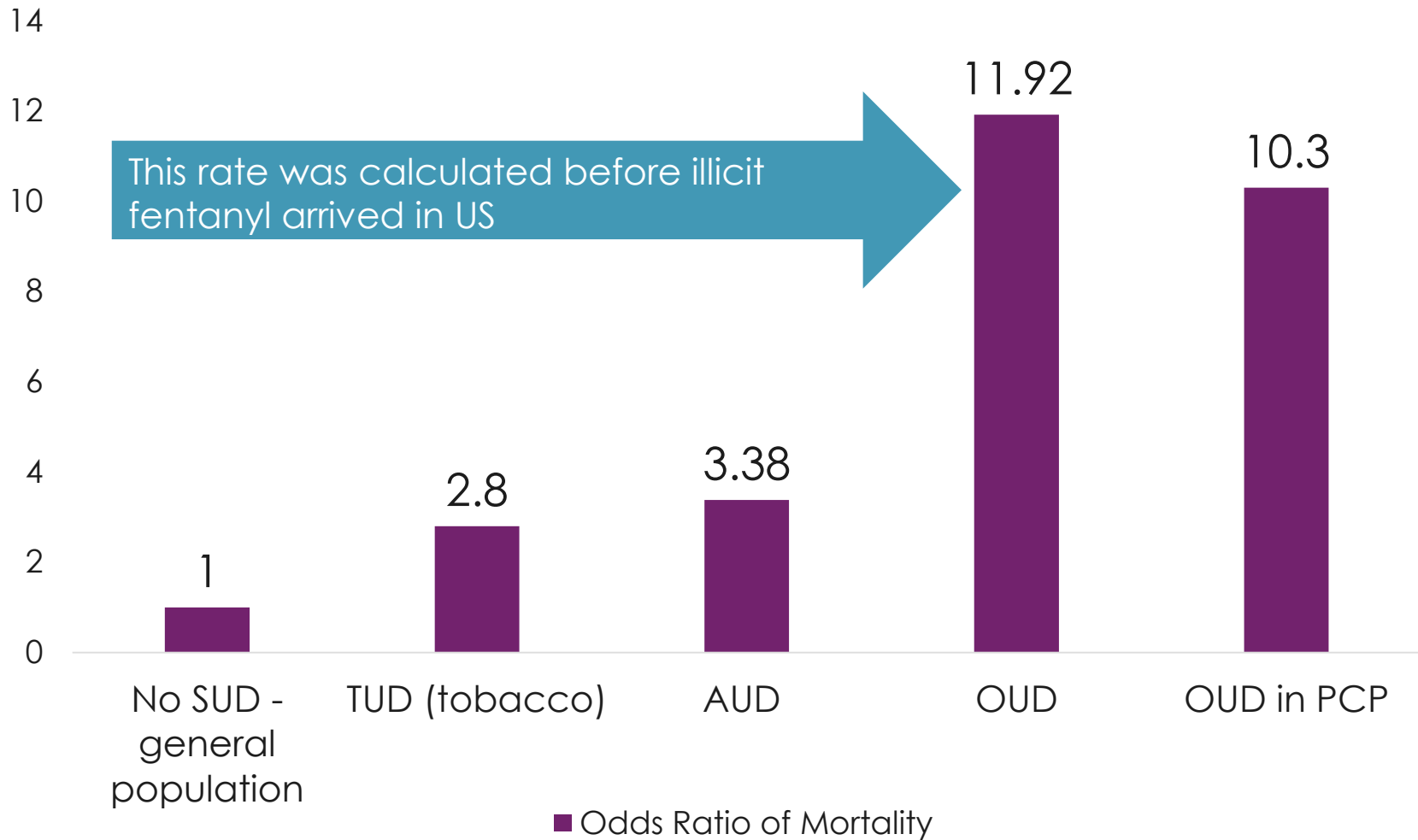
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- Hser and colleagues (2015) reviewed 28 longitudinal studies on individuals with an OUD who were mostly selected from treatment
  - 9 studies from the U.S. and
    - 9 from Europe (mostly U.K.),
    - 2 from Australia, & 2 from Asia
  - U.S. studies included cohorts from 1952 to 2013
    - All studies, except one, were completed before 2010
  - The overall mortality rate was 6 to 20 times higher than the general population
    - 25% to 50% were deceased at 20 years past the baseline, with the U.S. rate closer to 25%





# U.S. Mortality Odds Ratio by SUD type



# How to engage Kayla?

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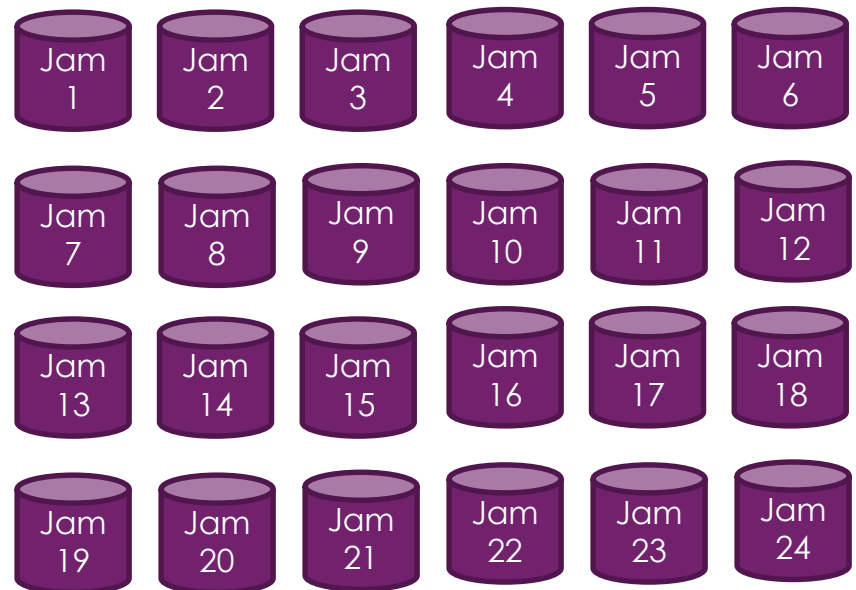
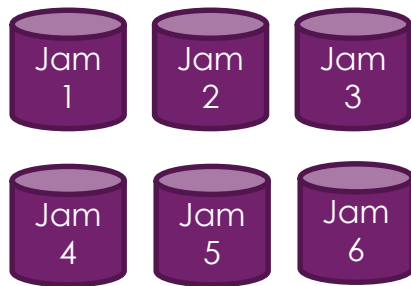
- What interventions could you use to engage Kayla while she is still in the ED or when she leaves?
- *Consider Kayla's mental, emotional and physical states – what statements would be engaging to her and what statements would be disengaging?*



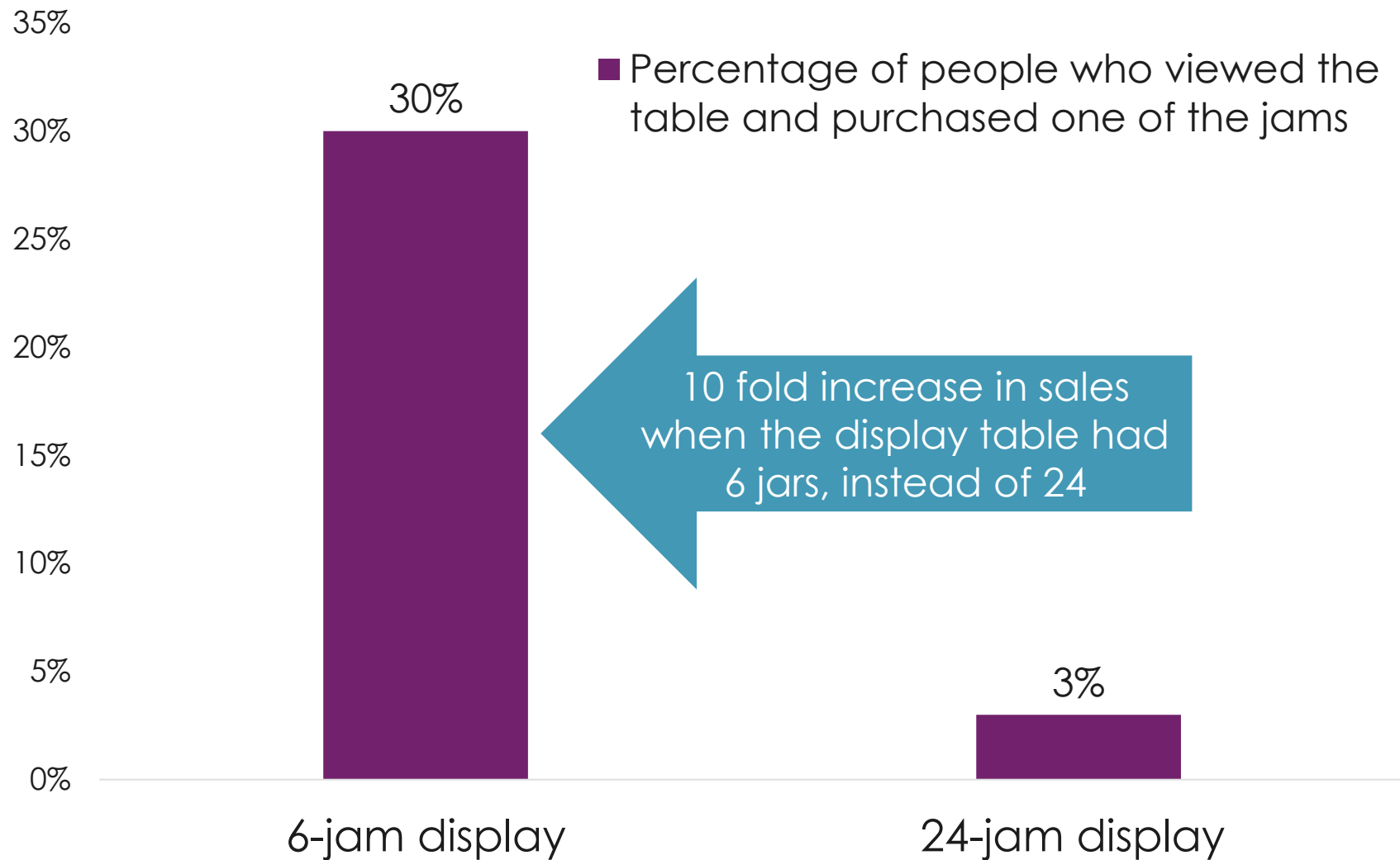
# The Dilemma of Choices

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You are walking into a supermarket & encounter a display table with gourmet jams for you to taste & purchase (the jams are on sale). On some days the table has 24 options of jam, and on other days the table has 6 options; which display leads to more sales of jam – the 6 or 24 display? (Ivengar & Lepper, 2000)



# The Dilemma of Choices

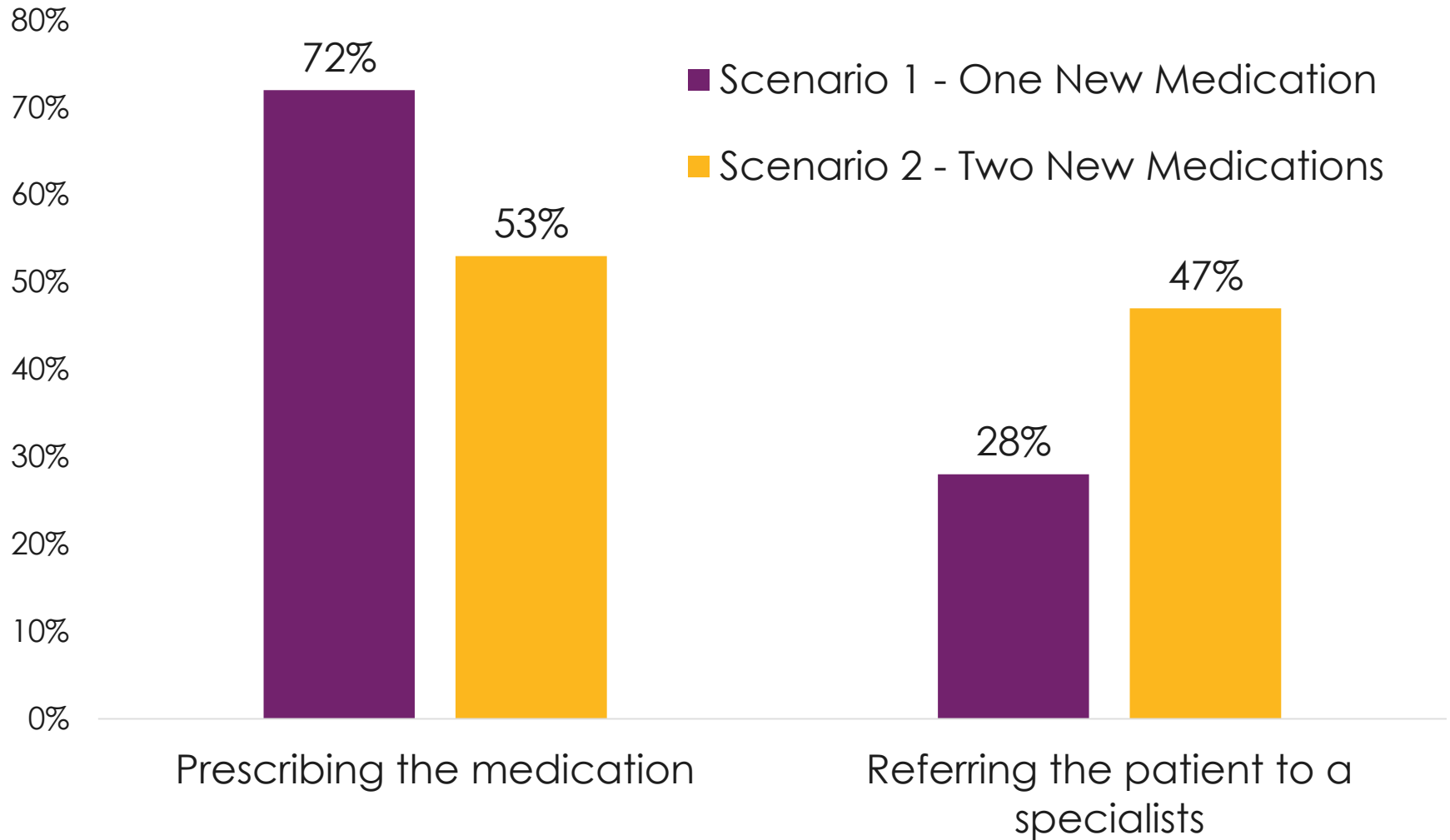


# The Dilemma of Choices

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- Family physicians are asked one of two hypothetical situations (randomized to one of two conditions; Redelmeier & Shafir, 1995)
  - Scenario 1: *a new, effective medication, XYZ, is available for one of your male patients suffering from osteoarthritis – how likely are you to either prescribe the medication to your patient or refer him to a specialist?*
  - Scenario 2: *there are two new, effective medications, XYZ<sub>1</sub> & XYZ<sub>2</sub>, available for one of your male patients suffering from osteoarthritis – how likely are you to either prescribe the medication to your patient or refer him to a specialist?*

# The Dilemma of Choices



# Information Overload


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- The two studies are part of a wide range of research on decision fatigue or how information overload can undermine our ability to achieve simple objectives
  - Decision fatigue undermined the sales of jams in the first study and led doctors to refer their patient to a specialist, instead treating the person in their office
  - In both situations, decision fatigue led to the default behavior, which was to avoid a new task, even when the objective was desired by the shoppers and doctors

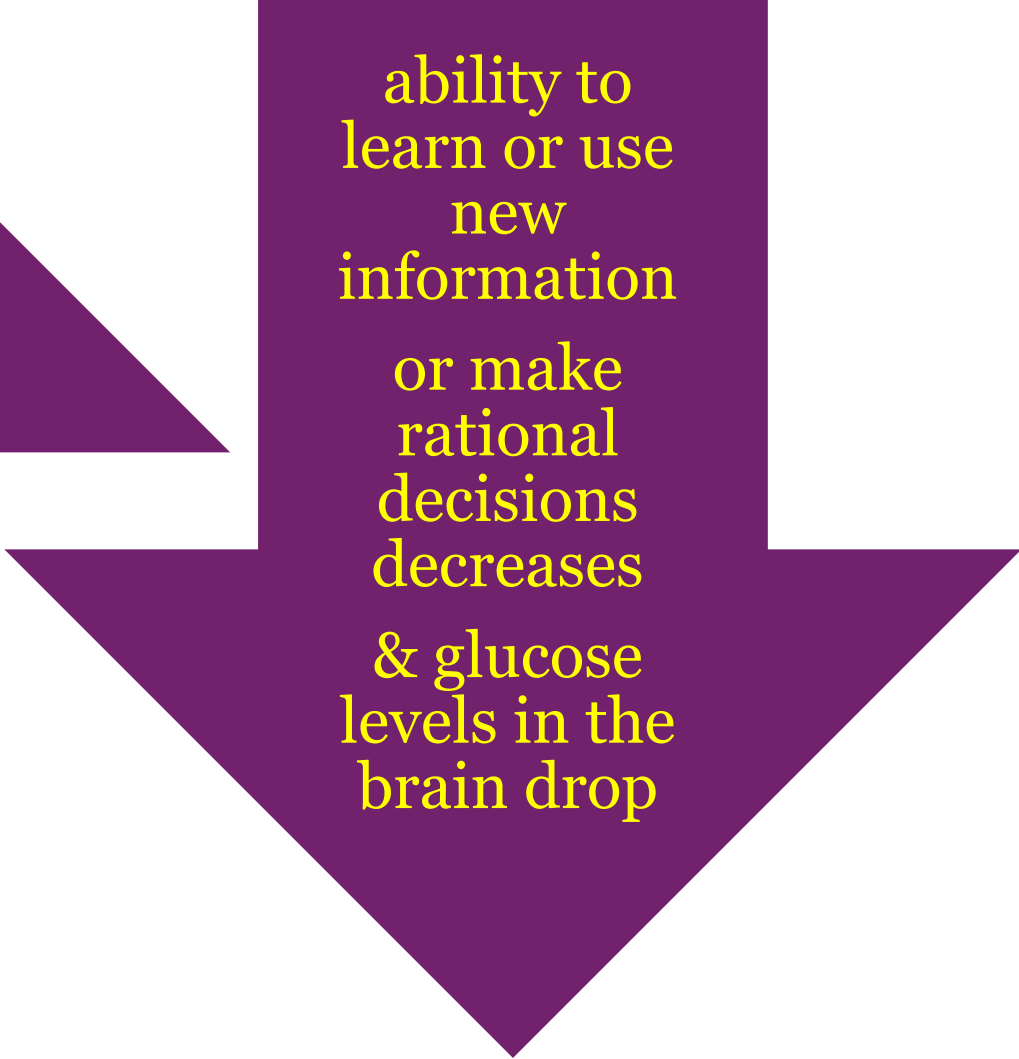


# Ego Depletion and Decision Fatigue

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as stress  
depression,  
anxiety,  
substance  
abuse,  
shame, guilt,  
frustration,  
feeling  
overwhelmed  
or  
anger  
increases



ability to  
learn or use  
new  
information  
or make  
rational  
decisions  
decreases  
& glucose  
levels in the  
brain drop



# Engaging Kayla

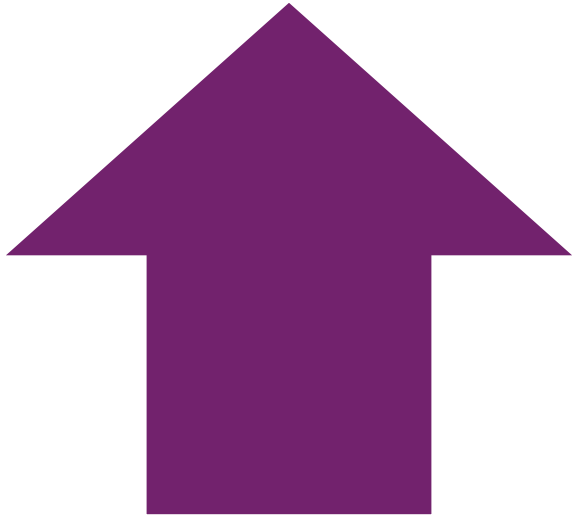
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- The medical staff have recommended that Kayla enter a residential treatment program or some type of intensive addiction treatment
  - Considering Kayla’s denial of heroin use, how likely is it that you will convince her to engage in residential treatment?
  - How does Kayla view the option of residential tx and is the recommendation engaging or disengaging?
  - Kayla is going to walk out of the ED in about 15 minutes – what can you say that is engaging?

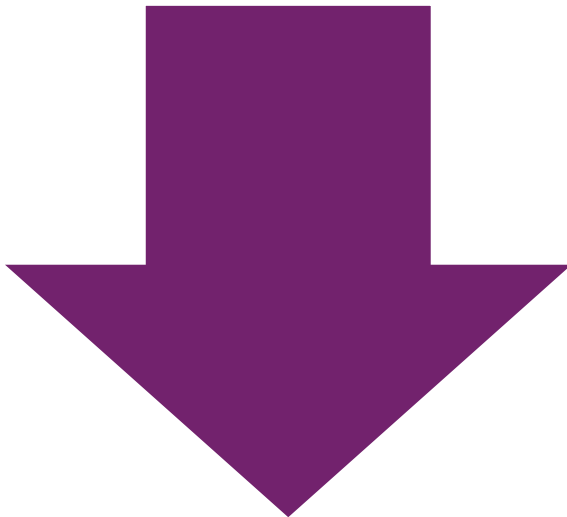


# Engaging and Disengaging Techniques

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Engaging words include affirmations, self-defined values, indications of fast relief, solution focused activities & focus on future-goals (hope)



Disengaging words include attributes & personality characteristics, focus on past failures (despair), a disease orientation & indications of increase pain or work before relief is given



# Engaging Words for Kayla

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- Tammy, a CRS staff member working with a local COE, intercepts Kayla as she is being medically cleared in the ED (Tammy met first with the medical team)
  - Tammy provided Kayla with the following statement followed by an open-ended question:
    - *Hello Kayla, my name is Tammy and I am part of the medical team and I can help you discharge from the hospital: what would help you the most right now and how can I be of assistance?*
  - Kayla provides the following response in a panicked voice:
    - *I'm not suppose to be here; I need to get out of here and get back to my house; there is nothing wrong with me and I don't want your help*



# Engaging Words for Kayla

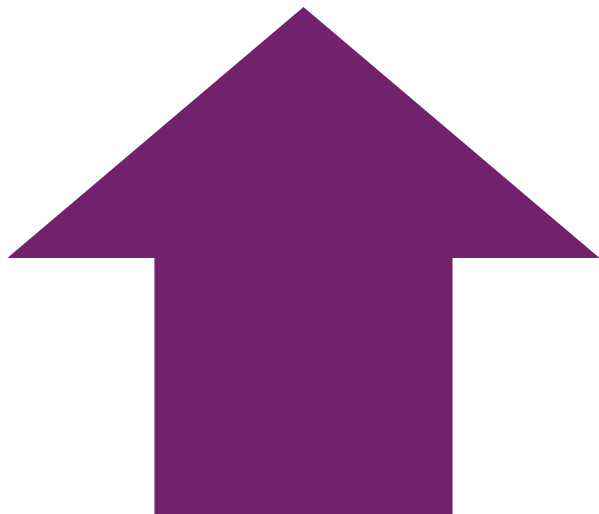
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- Tammy, provides the following reflections:
  - *This seems overwhelming right now and pretty shocking that you ended up in the ED;*
  - *We can get you out of the ED today; so would it be okay with you if I ask a few more questions to get you on your way?*
- ❖ Describe the two statements made by Tammy – would these two statements help?

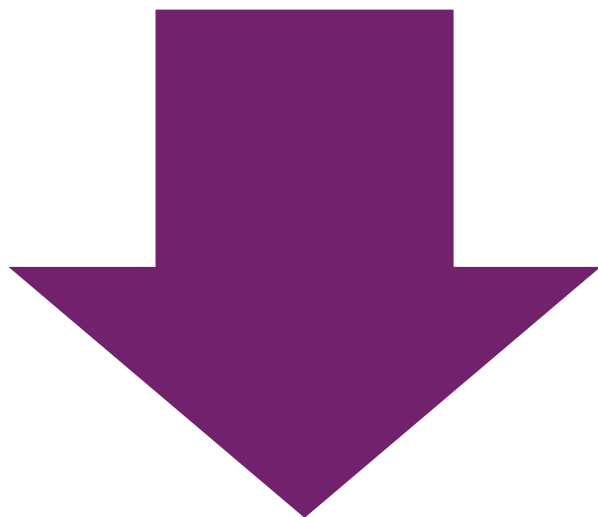


# Solution Focused Questions

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Solution focused questions are useful in the early stages of engagement because they can help people identify existing skills/behaviors that they can use to achieve early objectives



Disease or deficit-based questioning tends to increase negative emotional states, which in turn lowers confidence & memory. Focusing on the person's deficits will increase ego depletion & trigger avoidance behaviors

# Principles of Engagement

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- **Rule 2:** It is easier to recall an existing behavior or habit than to recall a new behavior
  - People rely on existing habits, because they have not developed another habit than can replace the existing one
  - People rarely recall new behaviors when feeling distressed
- **Step 2:** use a solution focus when helping people to identify strategies to initiate movement
  - Teach people to pull up existing behaviors/skills that they have used effectively in the past
  - Coach people to think through past experiences when they were able to avoid drugs and what helped



# Ego Depletion and Decision Fatigue

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- Help people overcome decision fatigue or ego depletion by teaching them to pull up existing skills that they have used in the past
  - Individuals are more likely to recall existing skills than to learn new ones, so provide fast help by coaching people to repeat existing skills
  - The technique is known as solution focused questioning or solution focused therapy (SFT)
  - Find out what already works for the person and have them repeat it until they can learn new skills



# Solution Focused Questions

## Deficit Based Questions

How many days were you depressed in the past 30

How many drinks do you consume on an average day

How many appointments have you missed in the past year

## Solution Focused Questions

Tell me about the days you were able to achieve your goals even when feeling sad

What techniques did you use to avoid drinking

What helps when you are able to attend your appointments in the past





# Solution Focused Questions for Kayla

- Tammy could ask one of the following questions:
  - ✓ *when you have been in a difficult situation like this before, what helped?*
  - ✓ *What would help you right now to make this a better outcome; what would help you to feel more secure?*
  - ✓ *What helped you in the past when you felt like you do now?*
- ❖ Kayla informs Tammy that she could be in trouble with her probation officer if he finds out she is in the ED because of a heroin OD; she could lose her children and she has been trying to avoid heroin & pills for nearly six months to get her children back



# Do

Active listening to identify goals & needs

Identify Values & strengths

Provide affirmations

Solution focused questions to identify existing skills

Focus on one simple objective using a detailed plan

# Don't

Provide advice or direct the client without listening

Focus on failures or diagnoses

Provide praise or assess past problems/mistakes

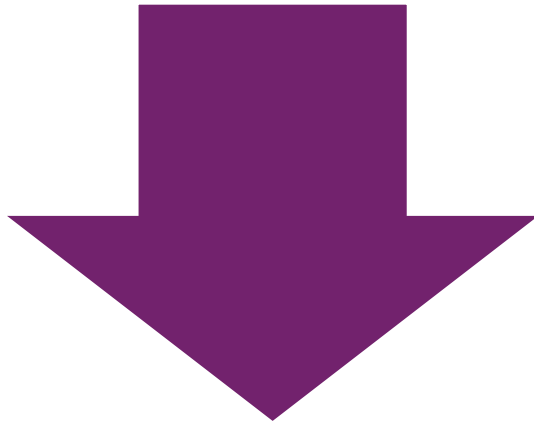
Focus on stopping symptoms or misery

List multiple steps to address



# The Dilemma of Choices – Pros & Cons

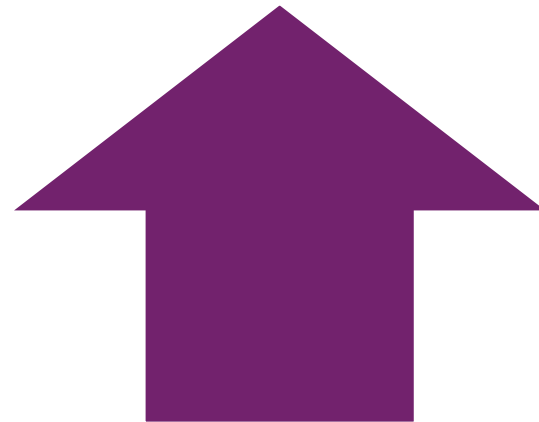
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Is the risk of losing \$20  
the same intensity  
emotionally as the  
benefit of winning \$20

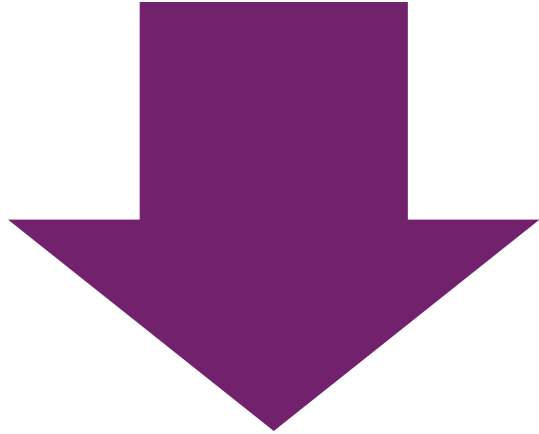


Would you be willing to  
play a game where you  
had a 50/50 chance of  
winning or losing \$20?



# The Dilemma of Choices – Pros & Cons

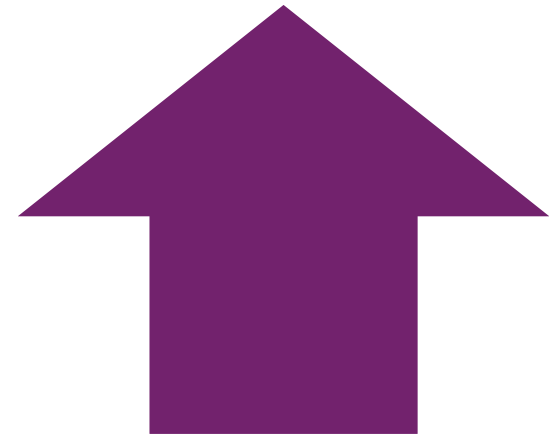
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The risk of losing what we have is seen as more painful than the benefit of winning the same amount – research has shown most people will decline to play a game with 50/50 odds



We are more likely to hold on to bad investments, unhealthy relationships & unhealthy behaviors when there is a perceived 50/50 chance of a better option



# Engaging Kayla

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- Kayla reveals to Tammy that she relapsed about two months ago, starting on alcohol & pills for several weeks to help with her nerves and finally returning to heroin over the past two weeks
  - Tammy keeps asking solution focused questions in between reflections to find a pathway to treatment that Kayla would consider
  - Kayla reports that she does not want detox because the program will force her into residential treatment; however, she was able to avoid pills and heroin while on suboxone for four months



# Engaging Kayla

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- Kayla & her husband were arrested a year ago for pill distribution, which led to her present situation
  - Kayla turned state's evidence on her husband to avoid prison, accepted a plea deal with 30 days in jail & probation to try & regain custody of her children
    - ✓ Kayla had entered an Office-Based Opioid Treatment (OBOT) program when she was arrested – her jail stay ended the treatment
  - Kayla's husband was physically and mentally abusive to her for many years, in addition to supplying her drugs
- Identify some of Kayla's affirmations & values that you could use to keep her engaged



# Two Strategies for Engaging People with an OUD in the ED

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People with an OUD leaving an ED, have a powerful habit to use opioids, regardless of how close they were to death, and limited memory to follow instructions

The habit to use illicit opioids can be muted by providing individuals with buprenorphine or methadone as well as providing a peer or case manager who can guide the person to treatment

# Provide CRS/Peers in ED Settings

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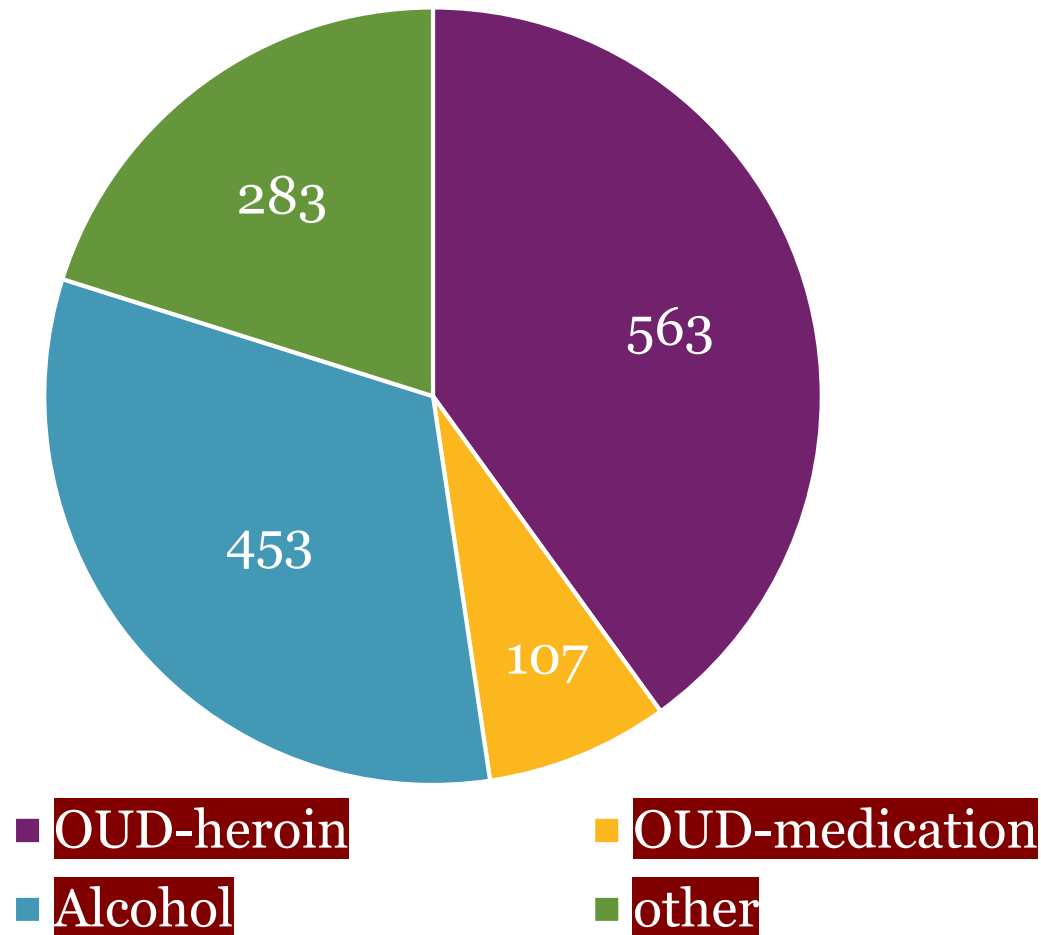
- Dr. Charles Barbera and his team at Reading Hospital provide CRS staff (peers) to all individuals with an OUD who enter the ED
  - ✓ The peers are housed in the ED and are engaged upon an automatic flag in the electronic health record
    - ❖ the “order” for a peer occurs automatically & without asking patients,
  - ✓ The automated system of peers led to significant increases in engagement in treatment after patients left the ED
  - ✓ Data have been updated to June 30, 2019





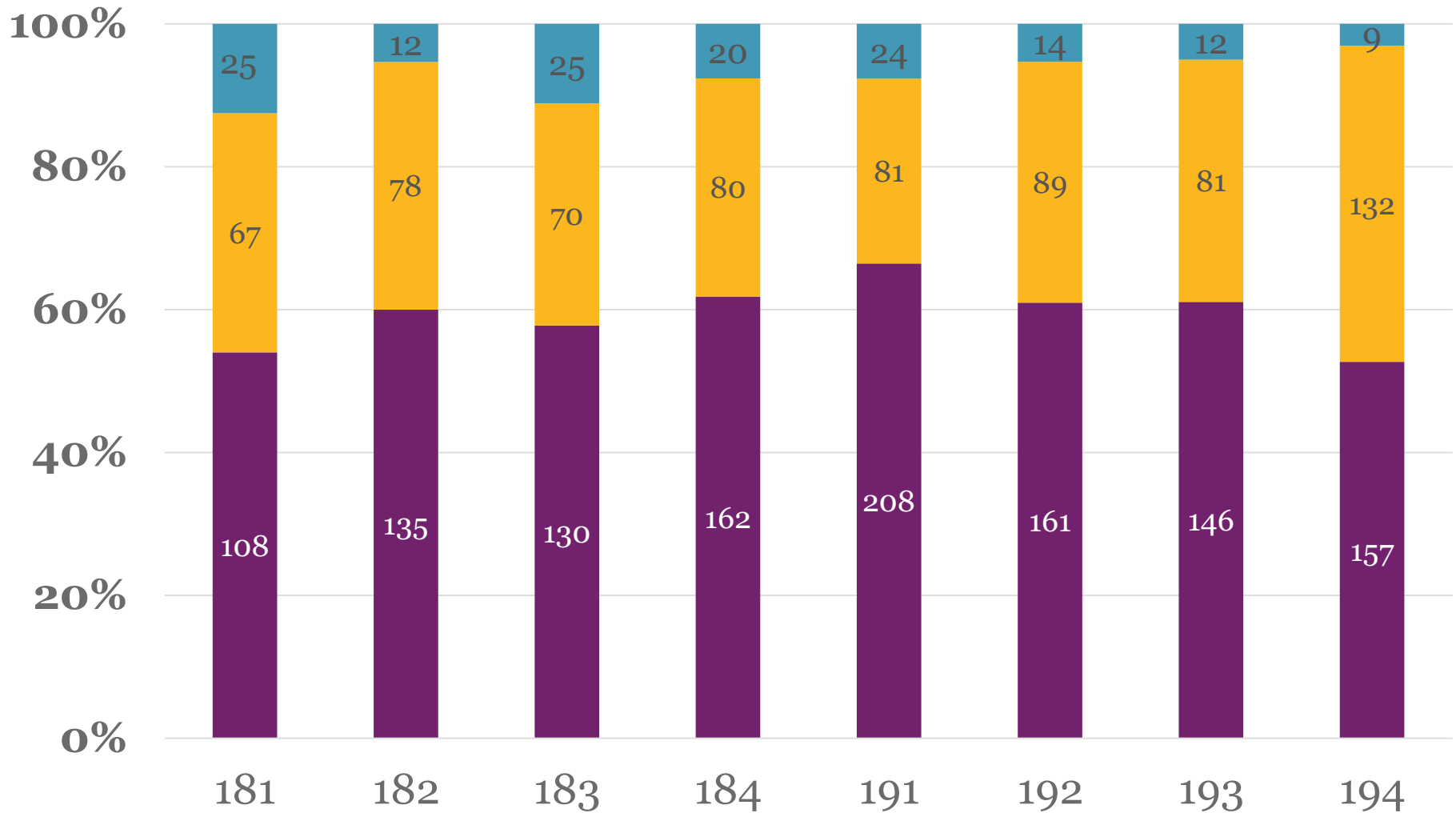
# SUD Diagnosis – last six quarters

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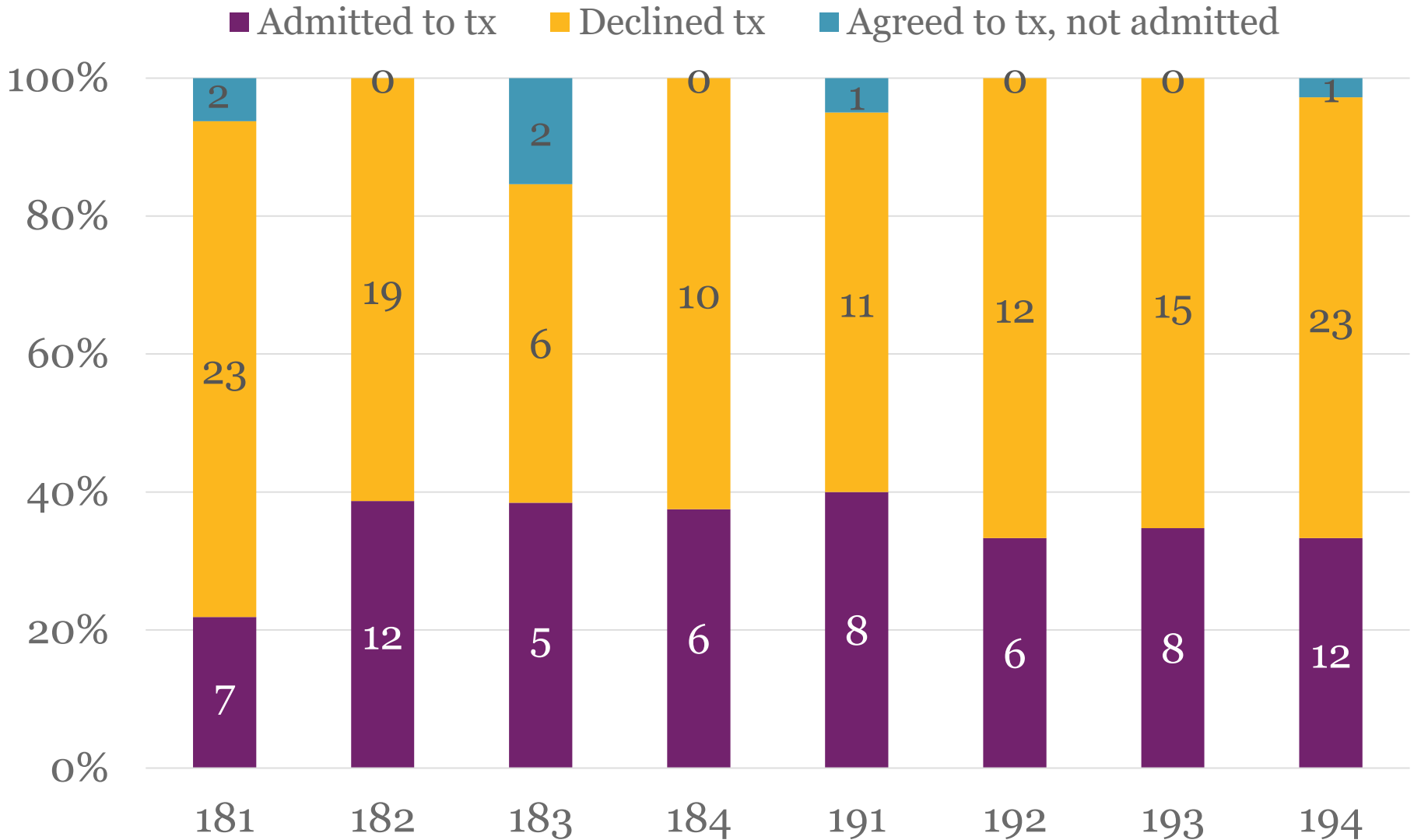


# Trends in FY2018 – FY2019

■ Admitted to tx   ■ Declined tx   ■ Agreed to tx, not admitted



# Trends in FY2018 – 2019 for OD Survivors

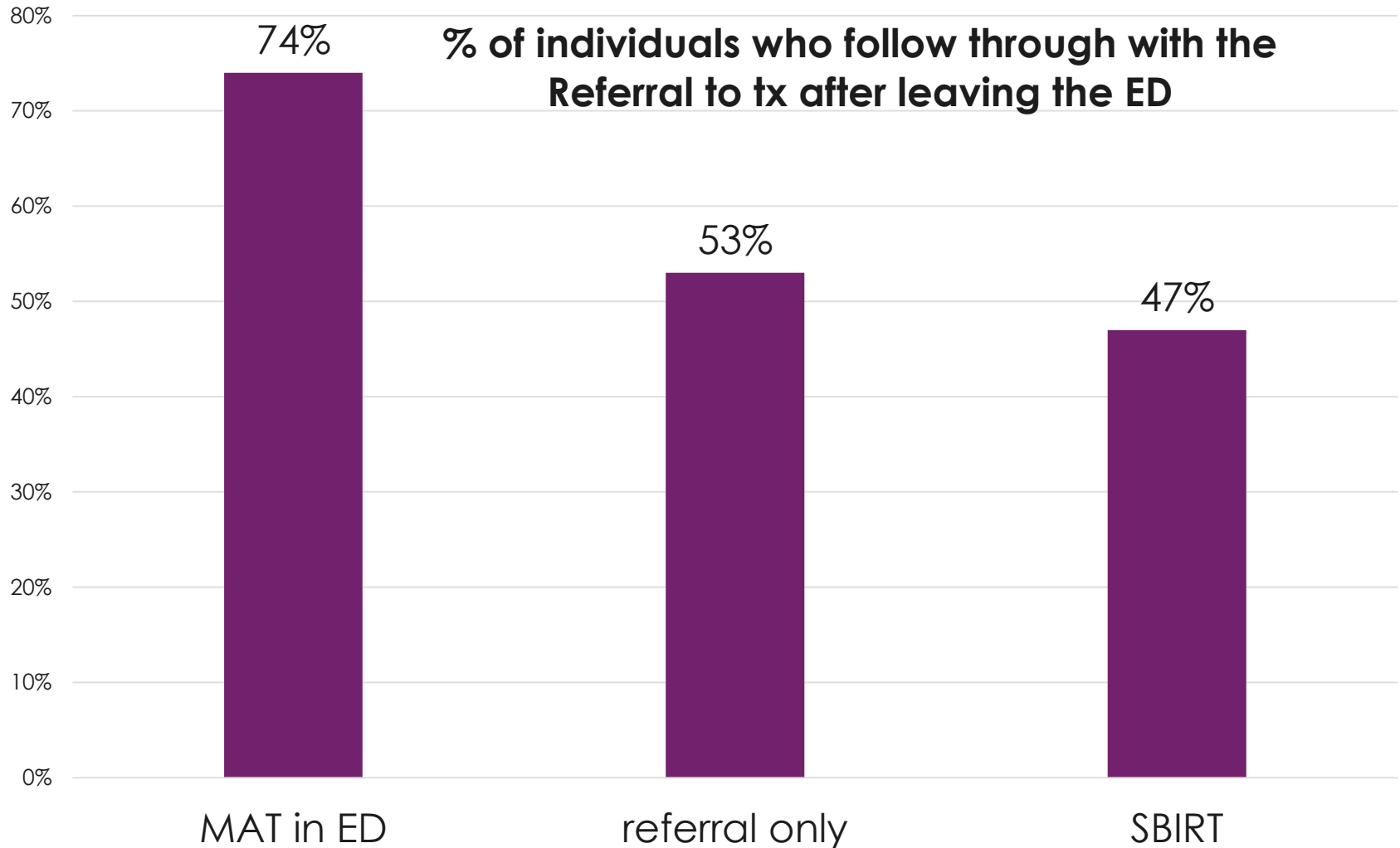


# Providing Buprenorphine in the ED

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- Researchers at Yale tested a rapid tx model for people entering an ED who were identified as having an OUD
  - Individuals were randomized to one of three methods for referring them to addiction treatment after they left the ED, including:
    1. Immediate initiation of buprenorphine in the ED with a warm handoff to an OBOT for ongoing tx,
    2. A Screening, Brief-Intervention and Referral to Tx (SBIRT) protocol – an evidenced-based engagement protocol based on motivation interviewing, or
    3. A referral only group – individuals were provided with a referral to an addiction treatment program upon discharge

# Initiating Buprenorphine in the ED



# Initiating Buprenorphine in the ED

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- The Yale study demonstrated that initiating buprenorphine in the ED can lead to significantly high engagement rates
  - At two months post ED, individuals who received buprenorphine in the ED, had lower substance use & higher tx retention than the two groups who were referred to tx, without initiating buprenorphine in the ED
  - However, the Yale study included only 10 weeks of buprenorphine followed by a taper;
    - at 6 and 12 months, all three groups had higher substance use patterns & lower tx retention, including the exp group (D’Onofrio et al., 2017)

***The takeaway message is to keep people on the buprenorphine***



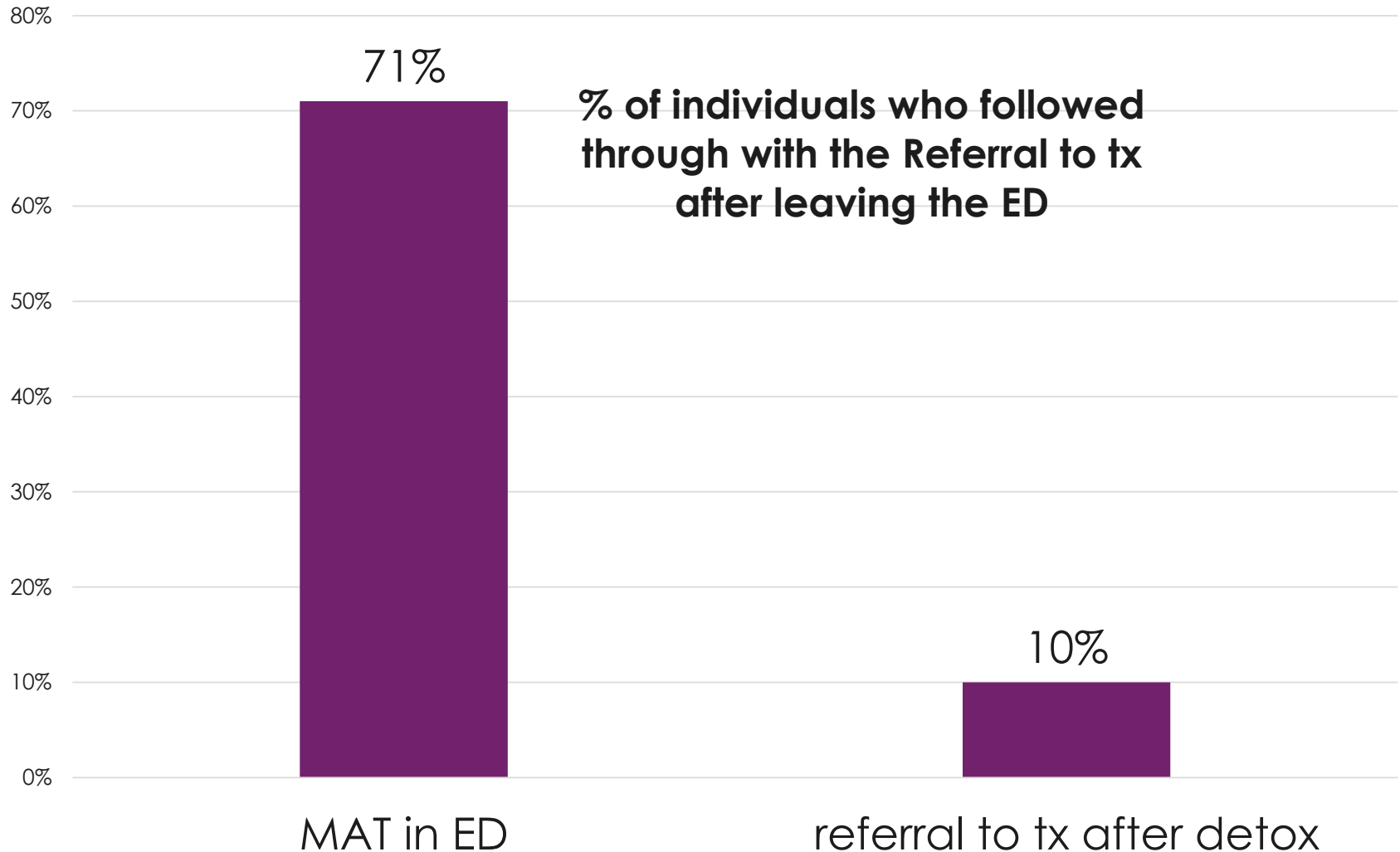
# Providing Buprenorphine in the ED

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- Researchers in Boston tested a similar rapid tx model for people entering an ED who were identified as having an OUD
  - 113 Individuals were randomized to receive either buprenorphine induction in the ED or a 5-day detoxification with buprenorphine in the hospital
  - Both groups were referred to treatment after discharge and those assigned to the ED induction group received daily dosage of buprenorphine until they enrolled in an OBOT



# Initiating Buprenorphine in the ED





# Initiating Buprenorphine in the ED

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- The Boston study found the same positive results in that initiating buprenorphine in the ED can lead to significantly high engagement rates
  - However, the study also found that many of the individuals who effectively engaged in the OBOT after the ED withdrew soon after engaging in treatment
    - At 1 & 6 months post discharge, the experimental group had the same high IV heroin use patterns as those who were in the detox condition
  - The group had high rates of IV heroin use & needed more than an OBOT, such as OTP methadone

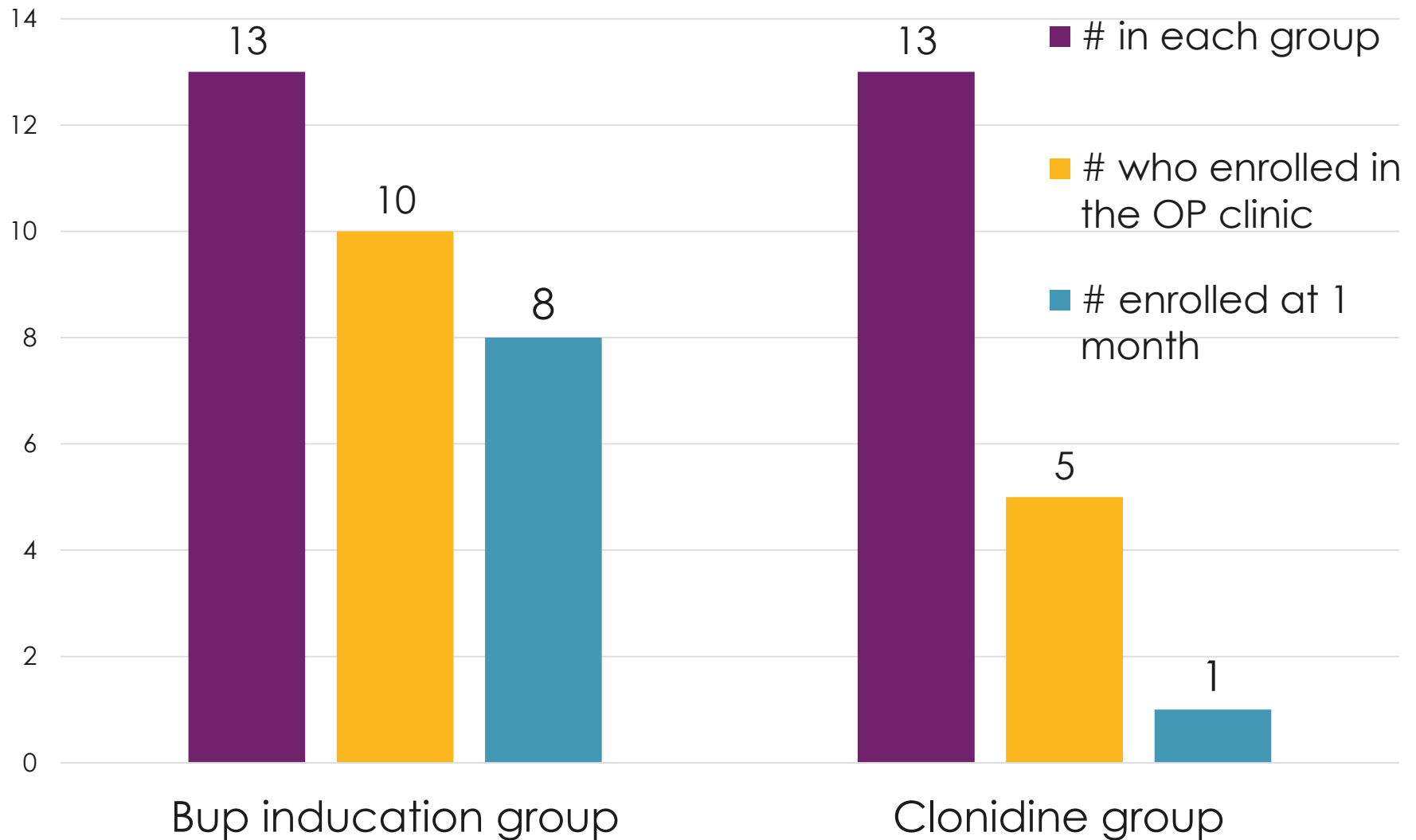


# Initiating BUP in Hospital Setting

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- Researchers at an urban ED in Toronto, Canada randomized patients experiencing opioid withdrawal symptoms to one of two conditions:
  1. Receive 8 to 12 mg buprenorphine + 5-day supply of buprenorphine at discharge
  2. Receive clonidine + 5-day supply of clonidine at discharge
- Both groups were referred to the Hospital's outpatient clinic on the same campus at discharge

# Initiating BUP in Hospital Setting

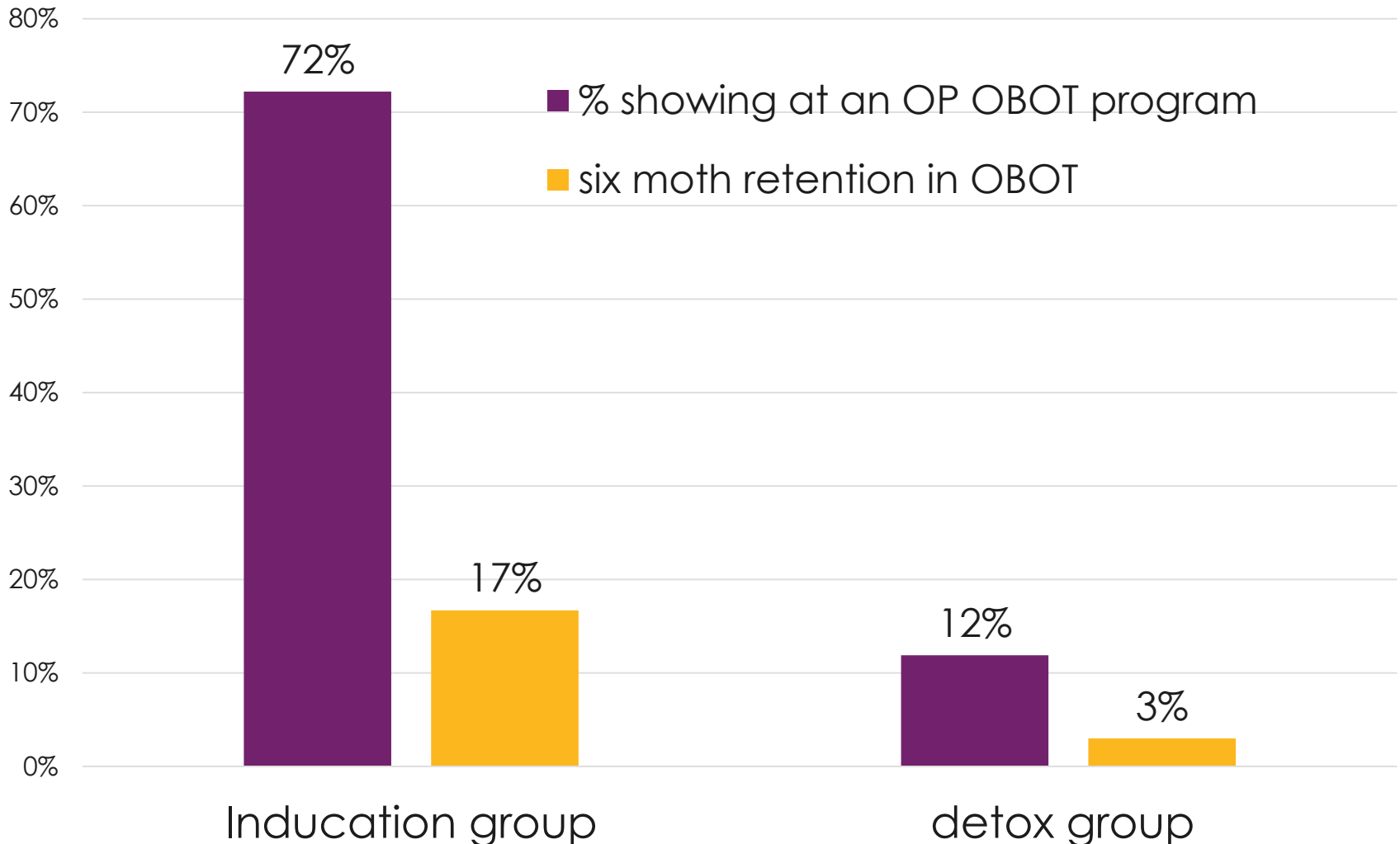


# Initiating BUP in Hospital Setting

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- Researchers at an urban medical hospital initiated a protocol for patients with an OUD who were hospitalized, but not seeking treatment for their OUD (Liebschutz et al., 2014)
  - Individuals needing detoxification for their OUD were randomized to one of two tx protocols in the hospital
    - Standard detoxification protocol using buprenorphine and referral to an OBOT upon discharge (or other D&A program)
    - Induction to buprenorphine maintenance in the hospital and referral to an OBOT upon discharge

# Initiating BUP in Hospital Setting



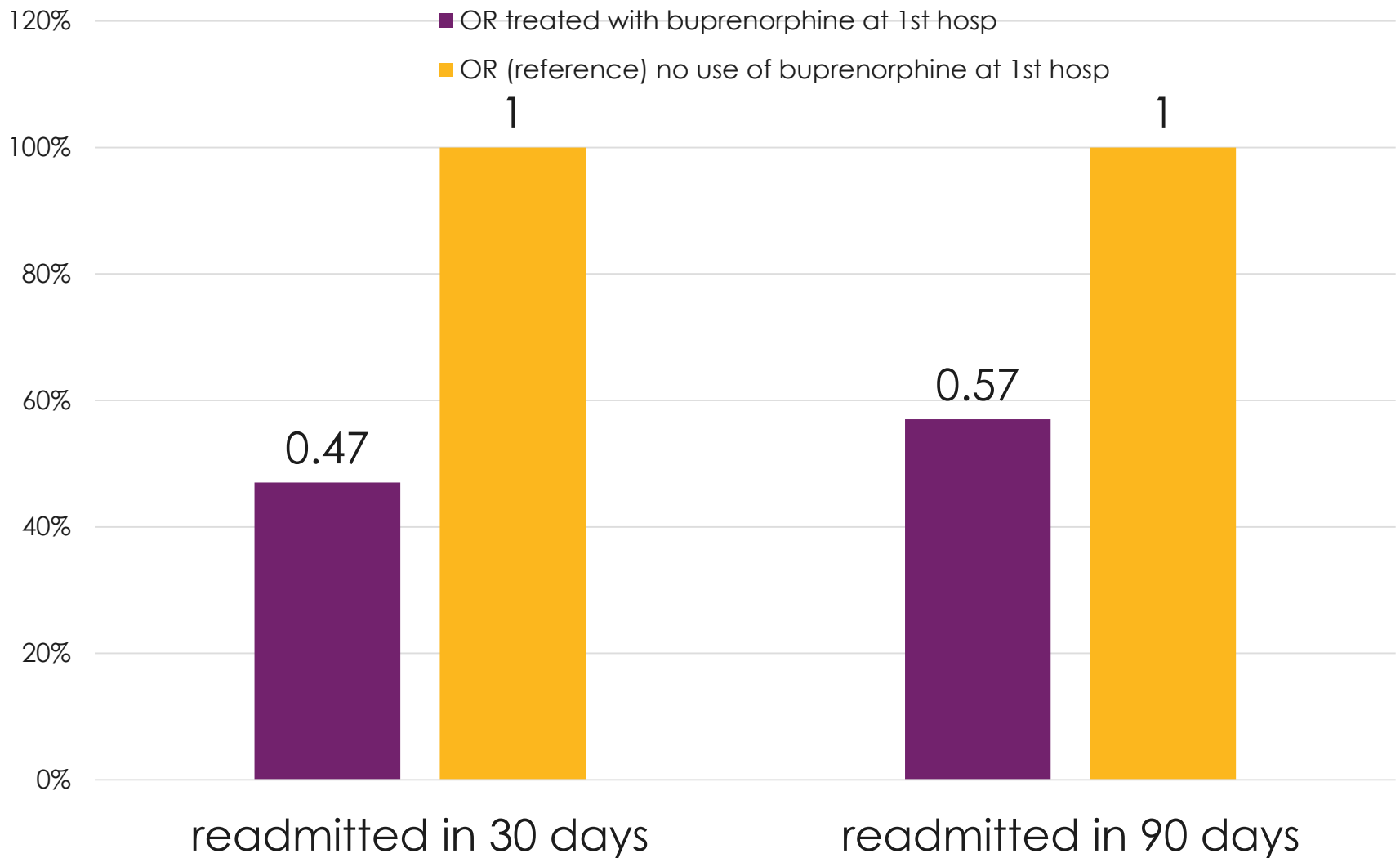
# Initiating BUP in Hospital Setting

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- Researchers tracked the hospital readmission rates of 470 adults with an OUD who were hospitalized for a medical reason (e.g., bacterial or viral infections, overdose, physical trauma)
  - 18% were re-hospitalized to the same hospital in 30 days of discharge &
  - 32% had returned to the same hospital in 90 days
  - Those who were treated with buprenorphine during the first hospitalization were half as likely to be re-admitted



# Initiating BUP in Hospital Setting



# Initiating BUP in a UPMC Hospital

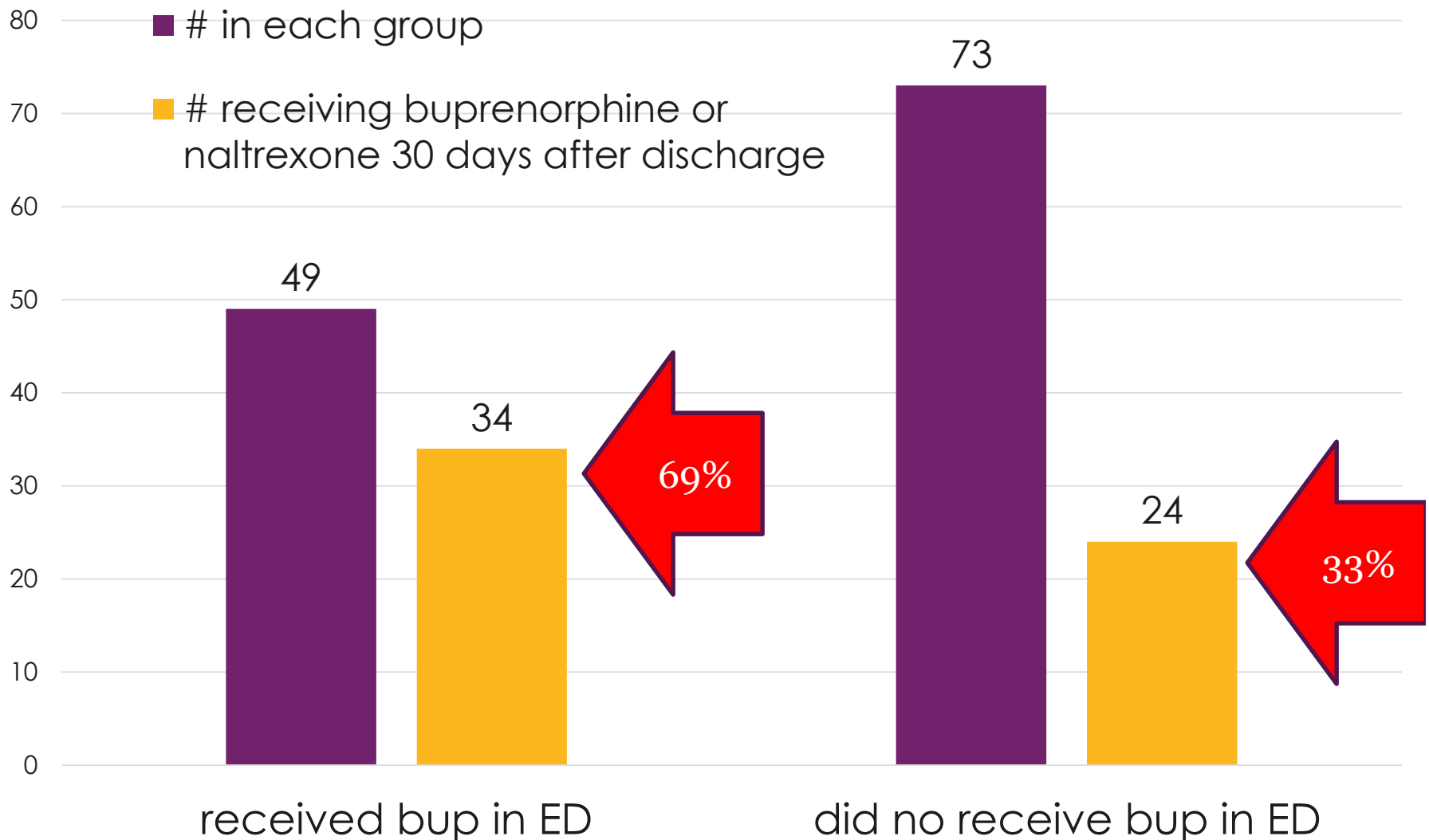
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- Dr. Michael Lynch worked with UPMC ED Physicians to develop a buprenorphine induction protocol for patients in opioid withdrawal, including those who have recovered from an overdose
  - The protocol mirrors the procedures developed at Yale and other research hospitals for buprenorphine induction in the ED
  - Individuals are referred to regional MAT clinics after discharge, with some receiving other services, such as
    - ✓ contacts with peers,
    - ✓ Centers of Excellence (COEs), and
    - ✓ access to addiction treatment services (e.g., residential treatment)





# Initiating BUP in a UPMC Hospital EDs



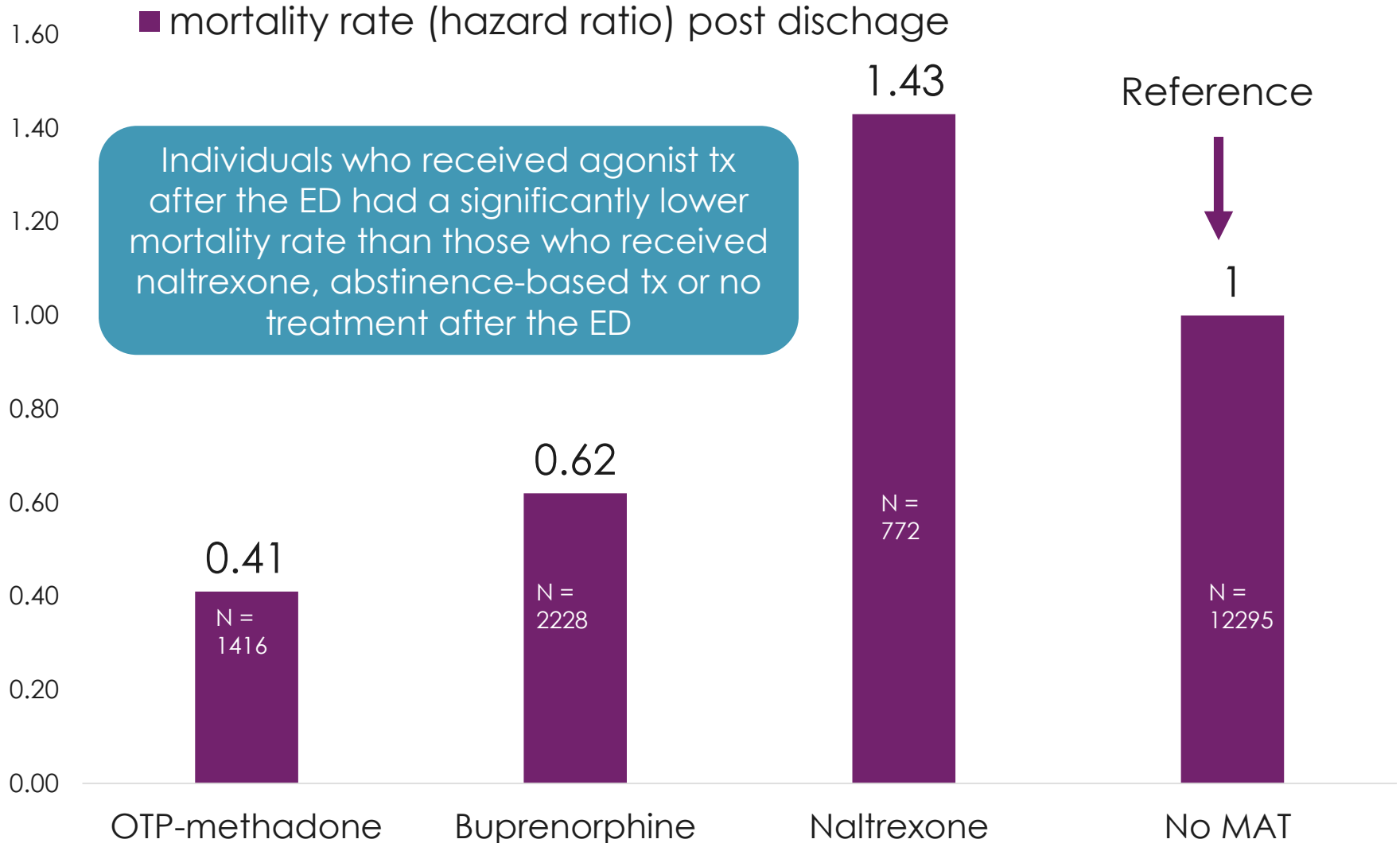
# Odds Ratio - Mortality in MA after OD

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- Researchers in Massachusetts tracked 17,568 individuals who had an opioid-related overdose for 12 months after the event
- After the OD event:
  - 30% received some type of MAT and a mix of other traditional services, such as detox or residential care,
  - 9% received detoxification services within the first month,
  - 4% received short-term residential services and 3% received long-term residential services, and
  - Approximately 58% received no behavioral health services
- Mortality rate after the OD event:
  - The 12-month all-cause mortality rate was 4.7/100 person years after discharge or approximately 235 times the rate for the State



# Odds Ratio - Mortality in MA after OD



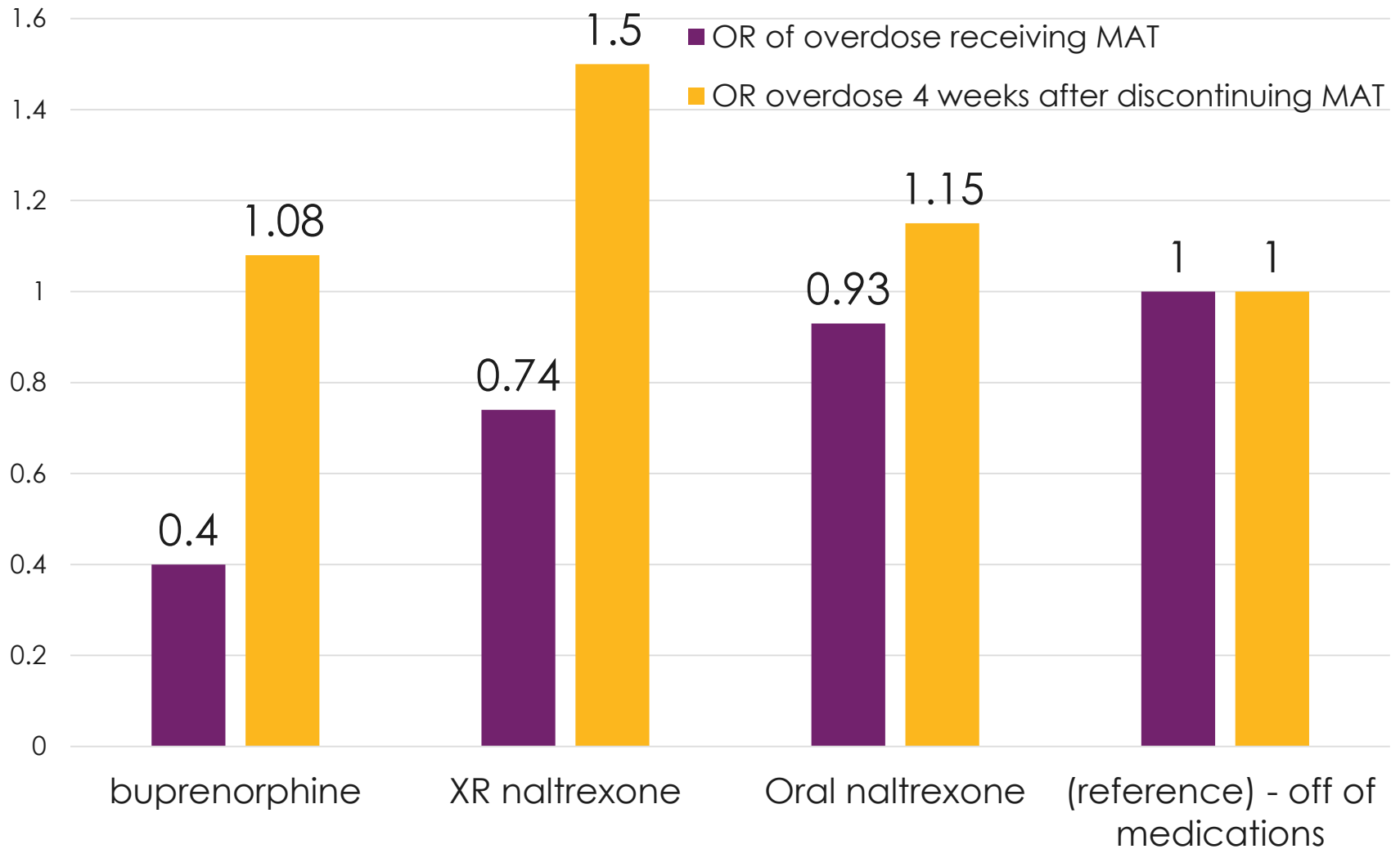
# OR of OD in Commercial Ins. Plans

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- Researchers calculated the odds ratio (OR) of an overdose for 46,846 individuals with an OUD in commercial insurance plans who received either buprenorphine (40,441) or naltrexone
  - 1805 (3.9%) individuals had 2755 overdoses recorded during the approximately 18 month review period
  - 2020 overdoses (73%) occurred when individuals were no longer taking medications for their OUD



# Odds Ratio of OD in Commercial Insurance



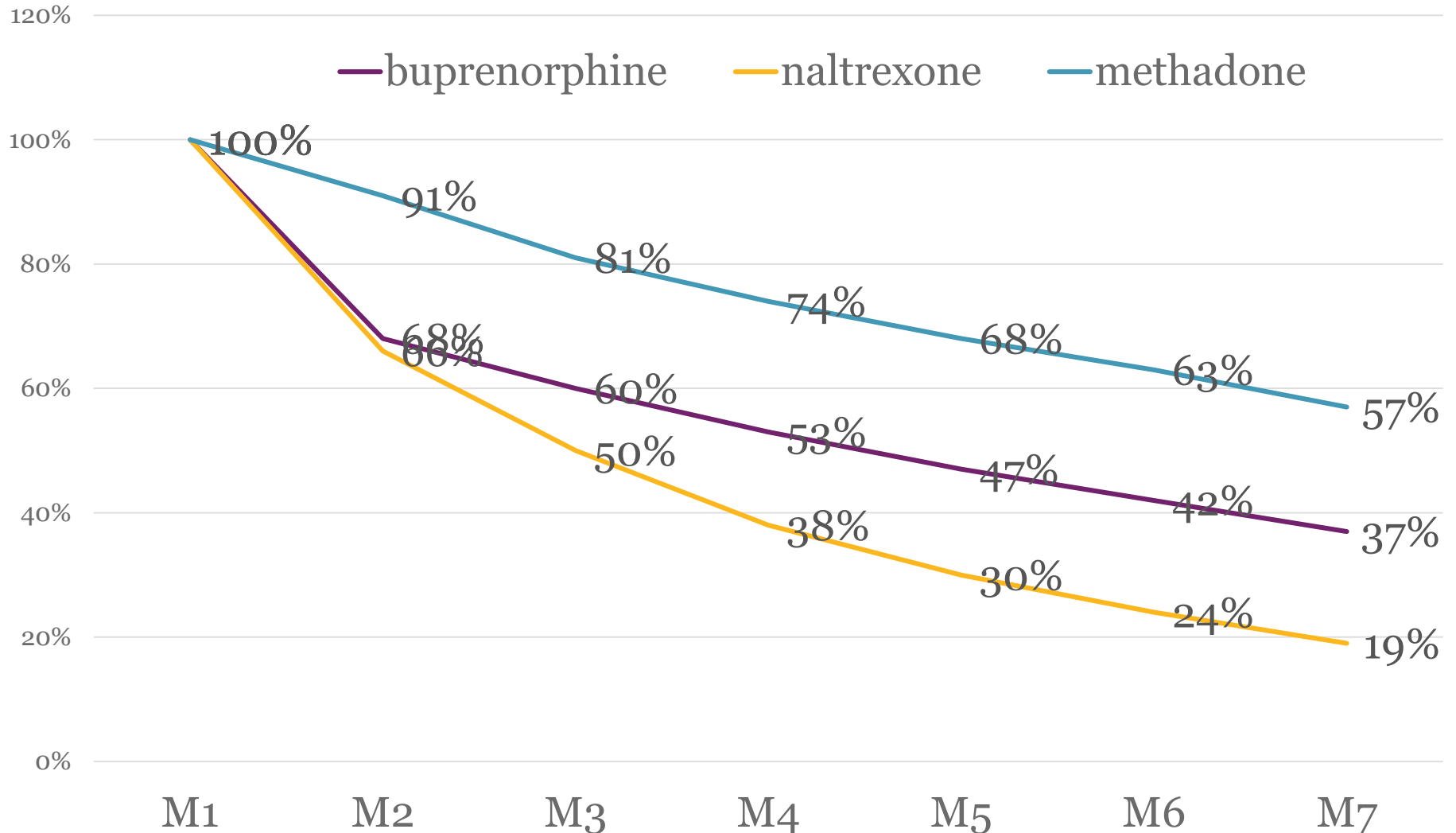
# Six Month Attrition Rates by Medication for OUD

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- Attrition rates were produced for CCBH members who received one of the three medications used in the treatment for an OUD, including:
  - Methadone within an OTP – 12,831 members enrolled in a OTP between 1/1/13 to 6/30/18 and tracked to 12/31/18
  - Buprenorphine within a D&A OBOT – retention is based on BU codes billed – 4925 members enrolled in the OBOT between 1/1/17 to 12/31/18 and tracked to 6/30/19
  - Naltrexone (Vivitrol only) – 9446 members who received a prescription for naltrexone between 1/1/15 to 12/31/18 and tracked to 6/30/19
    - A caveat to the naltrexone data is that 20% of the members received naltrexone for an alcohol used disorder (AUD), not an OUD



# 6-Month Attrition Rates by Medication for OUD: CCBH Network



# Engaging Kayla

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- Kayla agreed to enter an office-based opioid treatment (OBOT) upon discharge from the ED as she was desperate to stop the withdrawals
  - Tammy connected Kayla to an OBOT that enrolled her on the same day, stayed with her during the assessment & induction, and drove her home with a week supply of buprenorphine in her possession
  - What would be your next step with Kayla and how could you keep her engaged over time?





# Planning for Kayla's Disengagement

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- Kayla is at high risk of disengaging from tx – what factors noted in the slides could lead to a relapse and leaving the program
- *Convert the relapse risks to cut-points (0 or 1) and develop a plan to address each cut point*

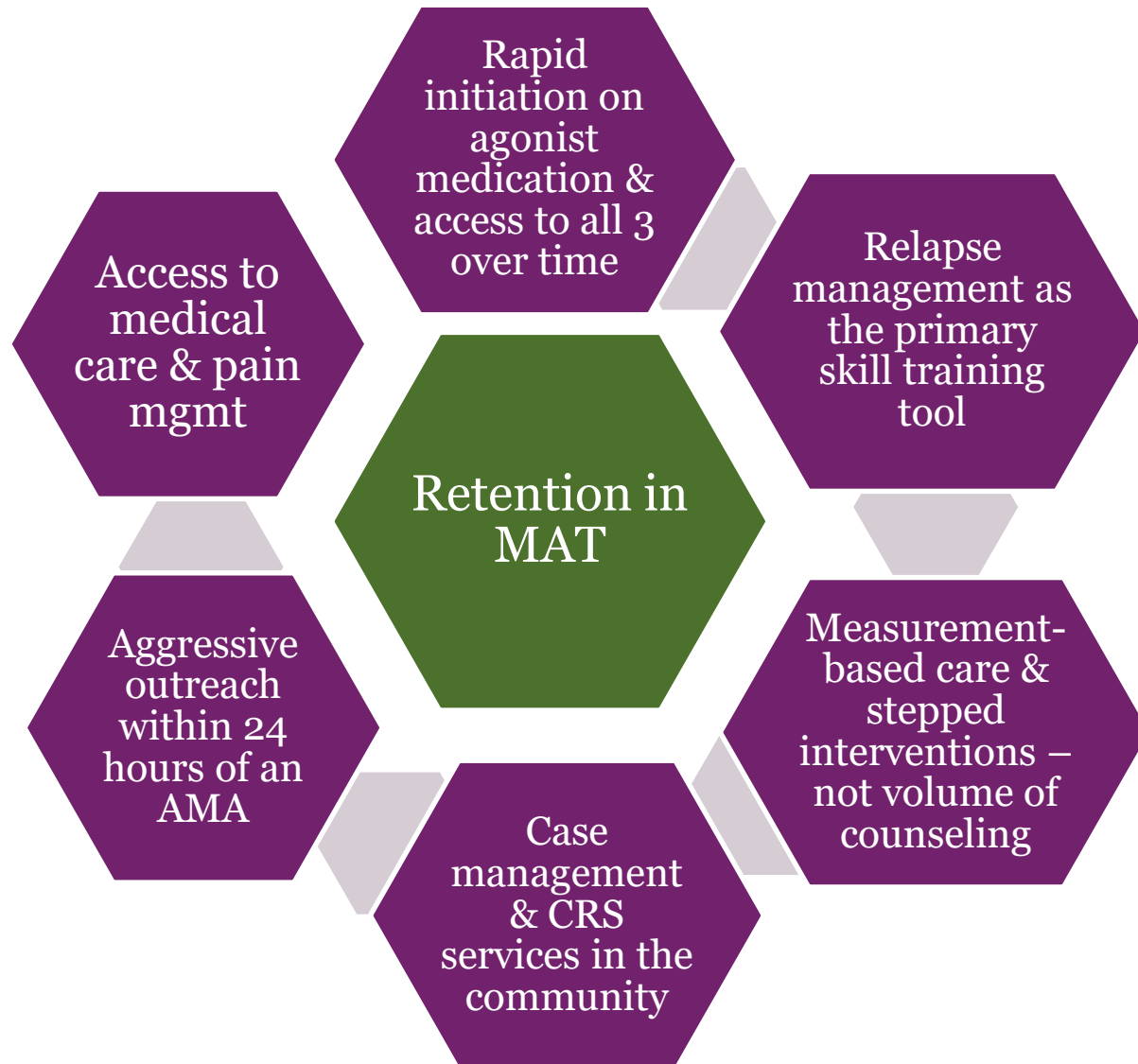


# Cut Points and Relapse Risks

Relapse Risk Category	Higher Risk (score 1)	Lower Risk (score 0)
Age and ethnicity/race	Below age of 33 and non-white ethnicity/race	Above the age of 33 and white, non-minority status
Drug use patterns	IV heroin, fentanyl combining opioids and other medications	Opioid pills, no IV use, several days or weeks of abstaining in OP setting
Overdose history	Multiple overdoses or a recent over dose	No history of overdose on any drug or beyond 12 to 24 months
Psychiatric history	Hospitalization in past 12 months or active symptoms of MI	No history of hospitalization in past 12 months, minimal symptoms
Treatment history & social support	Multiple tx, rapid relapse after discharge or AMAs, support around using	No history of tx & social support to abstain

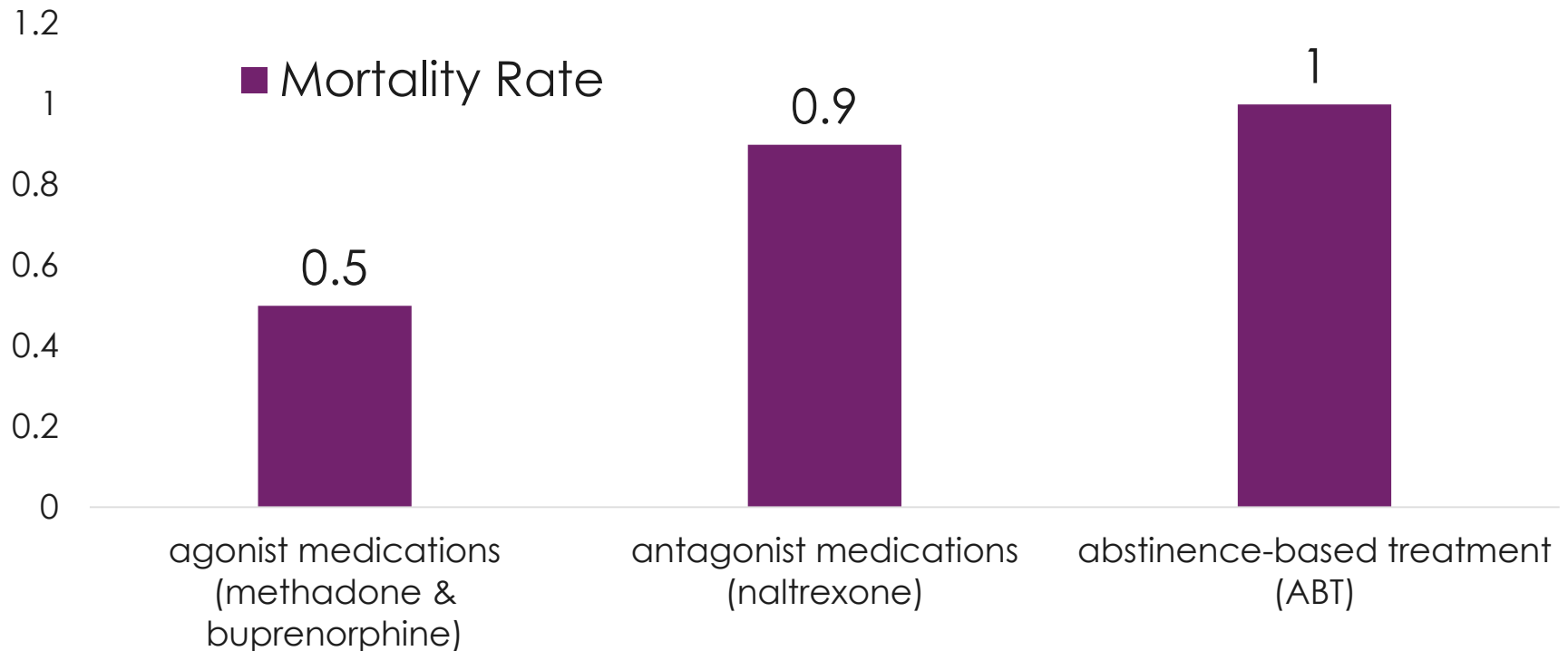


# Interventions that Increase Retention



# NAP Report on MAT – 2019

Individuals with an OUD who receive agonist medications, methadone or buprenorphine, have a 50% lower mortality rate compared to individuals receiving abstinence-based treatment with no medications



# National References on MAT

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- An updated research summary on the benefits of MAT for OUD can be found in the National Academies Press (NAP, 2019). *Medications for Opioid Use Disorder Save Lives*  
<https://www.nap.edu/catalog/25310/medications-for-opioid-use-disorder-save-lives>
- An updated report on effective treatment for people with an OUD from the U.S. Department of Health and Human Services (DHHS) – *Facing Addiction in America: The Surgeon General’s Spotlight on Opioids* (2018)  
[https://addiction.surgeongeneral.gov/sites/default/files/OC\\_SpotlightOnOpioids.pdf](https://addiction.surgeongeneral.gov/sites/default/files/OC_SpotlightOnOpioids.pdf)

# National References on MAT

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- SAMHSA's recent publication on MAT referred to as TIP 63: *Medications for Opioid Use Disorder*  
<https://www.store.samhsa.gov/product/TIP-63-Medications-for-Opioid-Use-Disorder-Full-Document-Including-Executive-Summary-and-Parts-1-5-/SMA18-5063FULLDOC>
- SAMHSA's recent publication: *Clinical Guidance for Treating Pregnant and Parenting Women With Opioid Use Disorder and Their Infants* (2018)  
<https://store.samhsa.gov/product/Clinical-Guidance-for-Treating-Pregnant-and-Parenting-Women-With-Opioid-Use-Disorder-and-Their-Infants/SMA18-5054>



# National & Community Care Resources on MAT

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- National Institute of Drug Abuse (NIDA) updated research summary of MAT for OUD: *Medications to Treat Opioid Use Disorder* (2018)  
[https://d14rmgtrwzf5a.cloudfront.net/sites/default/files/21349-medications-to-treat-opioid-use-disorder\\_o.pdf](https://d14rmgtrwzf5a.cloudfront.net/sites/default/files/21349-medications-to-treat-opioid-use-disorder_o.pdf)
- Community Care provides a summary of medication triage & treatment retention strategies for individuals with an OUD: *Recommendations for Initiation and Engagement of Medication-Assisted Treatment (MAT) for Individuals with an Opioid Use Disorder (OUD)* (2019)  
<https://providers.ccbh.com/uploads/files/2019010-loveland-initiation-engagement-mat-oud-final-10-11-19.pdf>



# Thank You

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