

Improving Treatment of OUD in Youth: The Youth Opioid Recovery Support (YORS) Intervention

Marc Fishman MD
Maryland Treatment Centers
Johns Hopkins University School of Medicine



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Disclosures

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Outline

- Background
- Barriers to success along the OUD treatment cascade
- Description of the YORS intervention as a potential response
- Illustrations and vignettes
- Pilot outcomes
- Next steps

Background

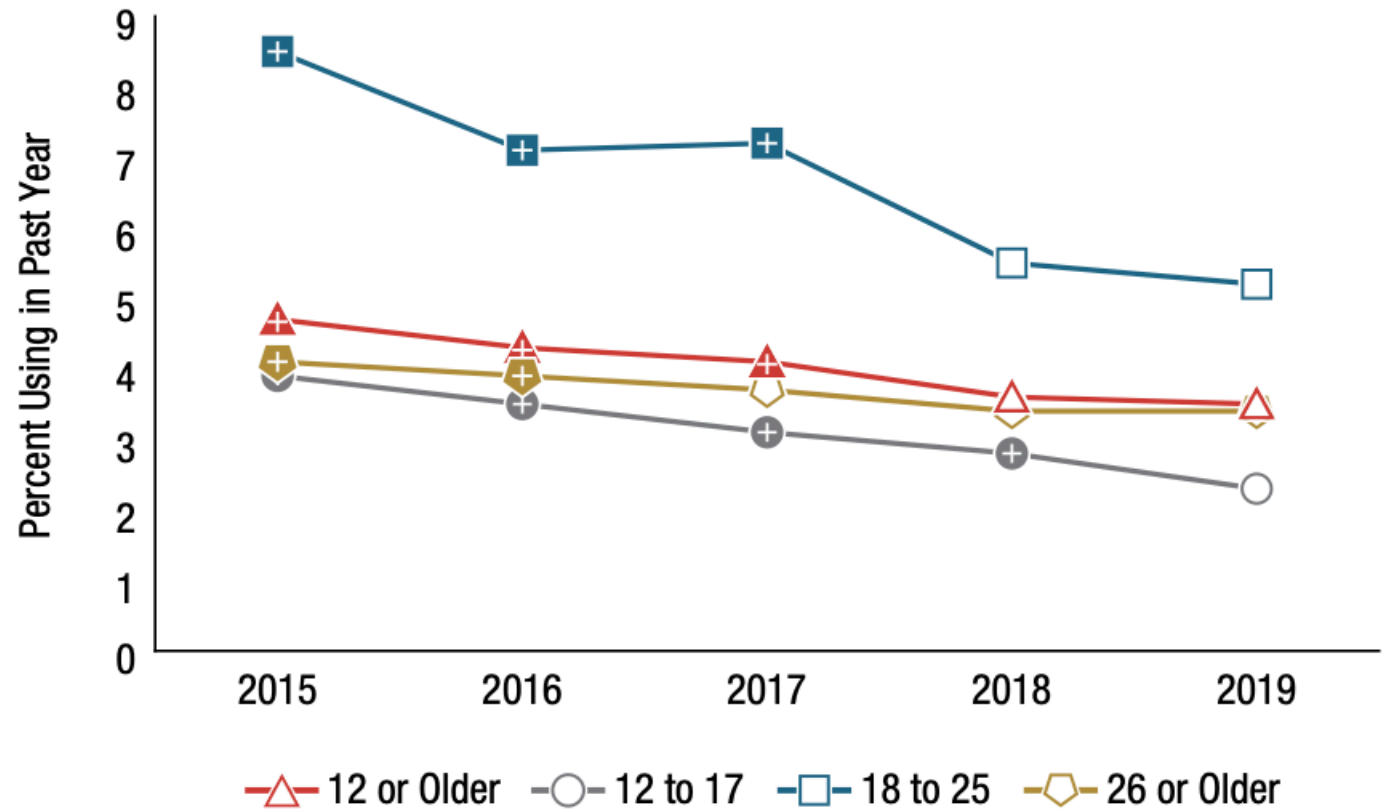
- Opioid use disorder (OUD) is an advanced, malignant form of substance use disorder (SUD), usually beginning in **youth**
- Young adults are disproportionately affected by the opioid epidemic
- There is evidence and consensus for **medications in OUD** (MOUD) in youth, but dissemination is poor due to problems with capacity, misinformation, and prejudice
- Developmental vulnerability in youth is prominent
- Youth have **worse outcomes** than mature adults
- Improved, developmentally-informed strategies that target engagement, retention and medication adherence could help
- The Youth Opioid Recovery Support (YORS) intervention has promise as one such approach

Intervention for youth substance use is Prevention for youth OUD

- Addiction – a developmental disorder of pediatric onset
- The vast majority of youth who initiate opioids have problems with other substances first
- Earlier onset associated with worse outcomes
- Earlier intervention associated with better outcomes
- Opioid addiction as an advanced stage in progression of illness
- Prevention of OUD by treatment of non-opioid SUD prior to opioid initiation – cannabis, alcohol , nicotine

Young adults have the highest prevalence of use of non-medical prescription opioids.

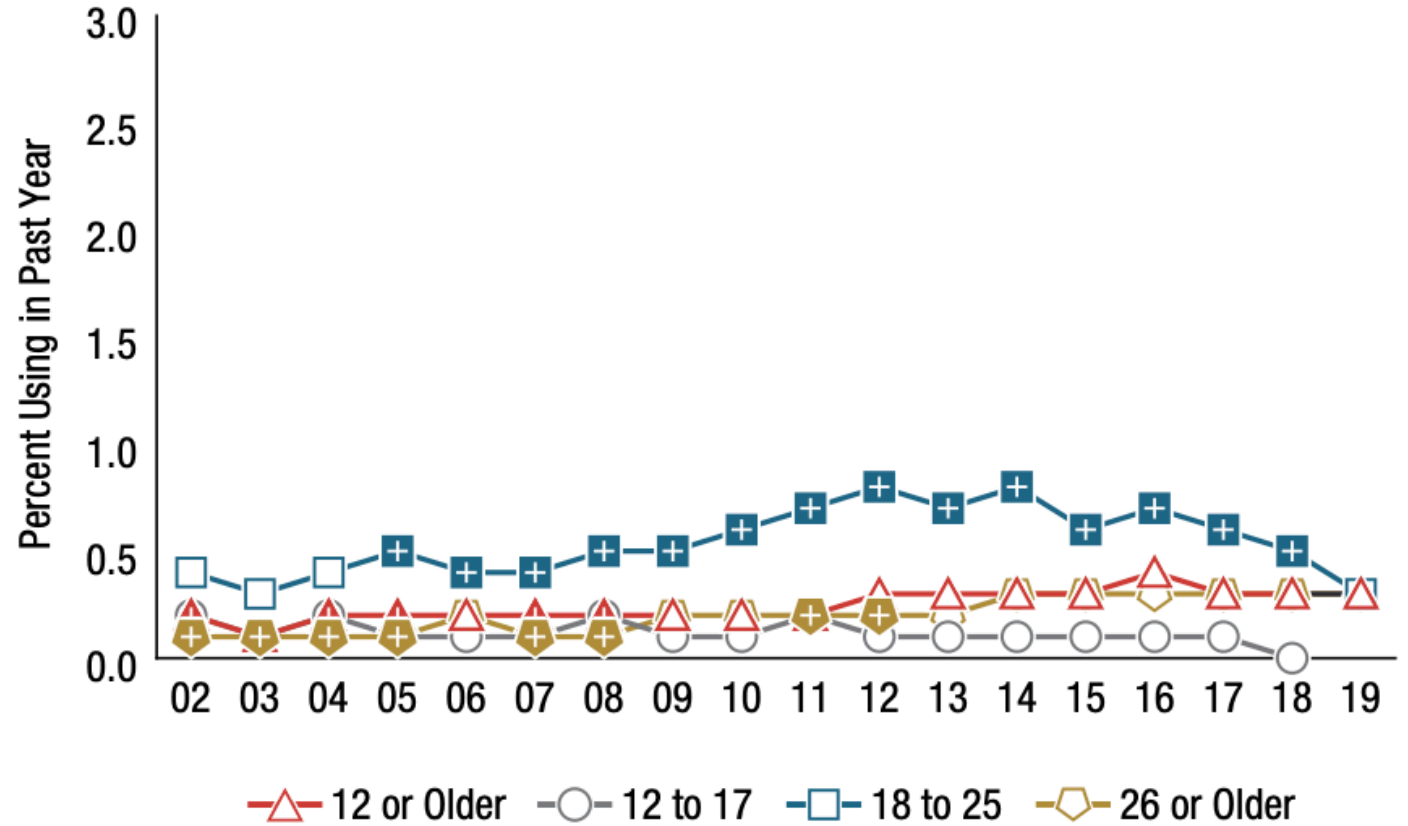
Figure 21. Past Year Prescription Pain Reliever Misuse among People Aged 12 or Older: 2015-2019



+ Difference between this estimate and the 2019 estimate is statistically significant at the .05 level.

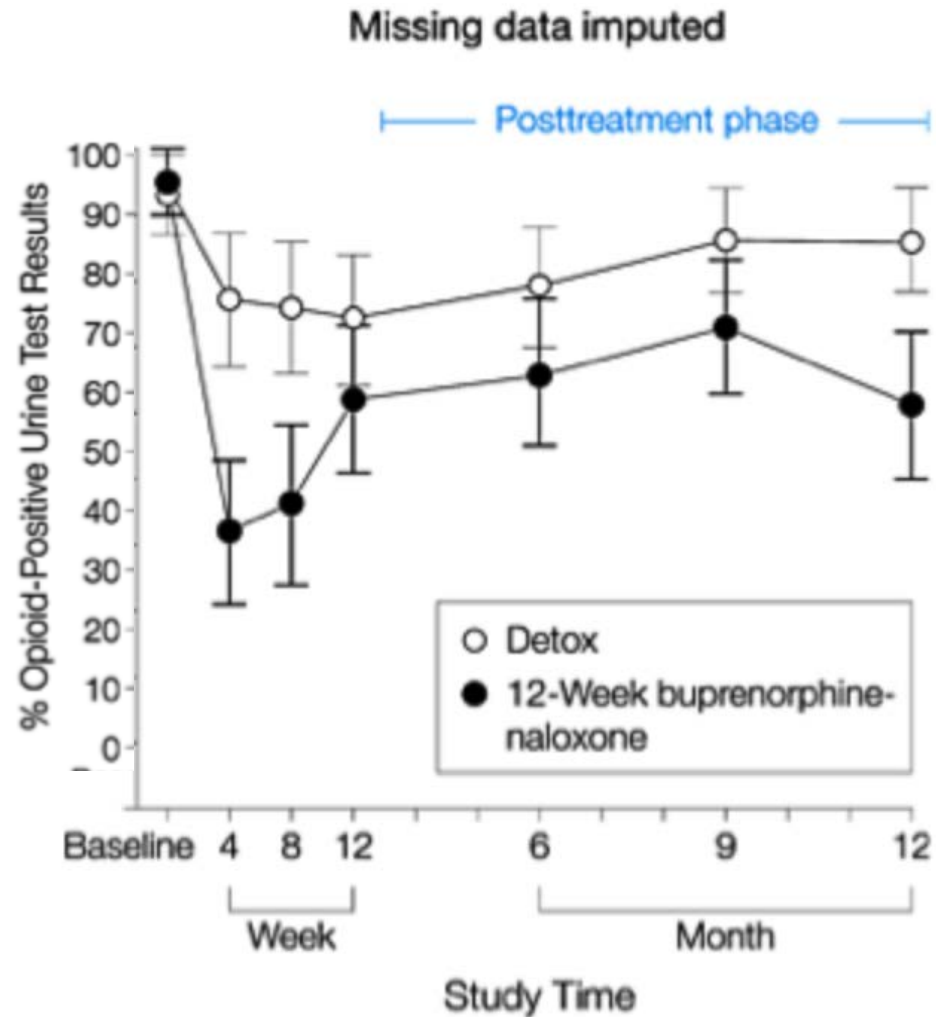
Young adults have the highest prevalence of use of heroin.

Figure 14. Past Year Heroin Use among People Aged 12 or Older: 2002-2019



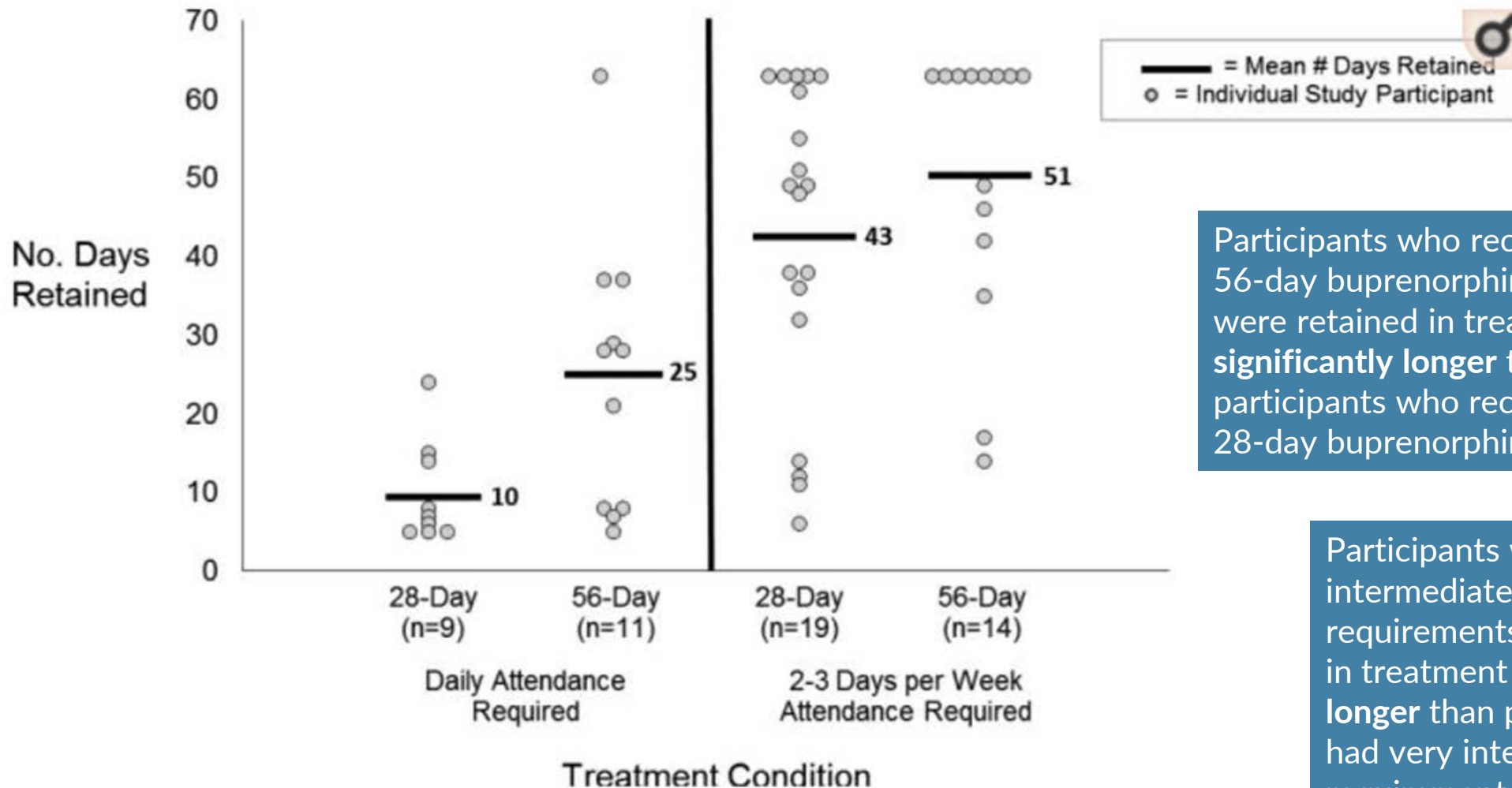
+ Difference between this estimate and the 2019 estimate is statistically significant at the .05 level.

CTN Youth Buprenorphine Study Opioid Positive Urines: 12 weeks Bup vs Detox



Duration of Treatment

Impact of Treatment Delivery



Participants who received 56-day buprenorphine were retained in treatment **significantly longer** than participants who received 28-day buprenorphine

Participants who had intermediate program requirements were retained in treatment **significantly longer** than participants who had very intensive program requirements

Treatment of opioid dependence in adolescents and young adults with extended release naltrexone: preliminary case-series and feasibility

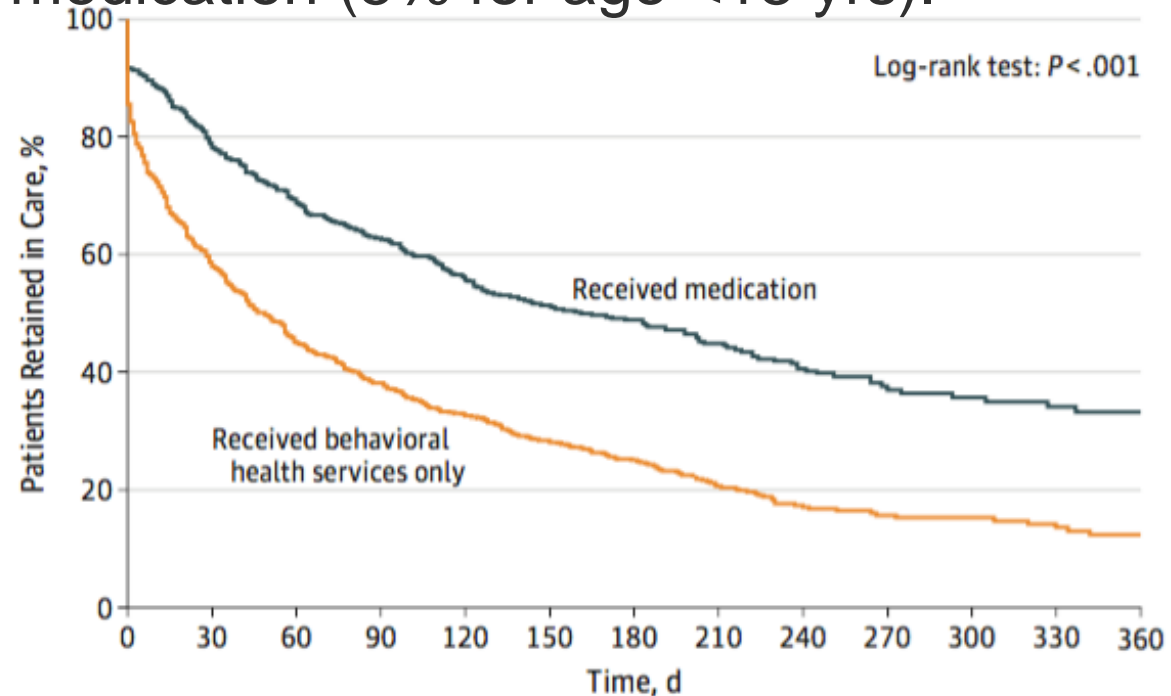
Marc J. Fishman^{1,2}, Erin L. Winstanley^{3,4}, Erin Curran^{1,2}, Shannon Garrett² & Geetha Subramaniam^{1,2}

Johns Hopkins University School of Medicine, Department of Psychiatry and Behavioral Sciences, MD, USA,¹ Mountain Manor Treatment Center, MD, USA,² University of Cincinnati College of Medicine, Department of Psychiatry, OH, USA³ and Lindner Center of HOPE, OH, USA⁴

- 20 youth received extended release naltrexone
- 16 youth initiated outpatient treatment
- 10 youth retained at 4 months

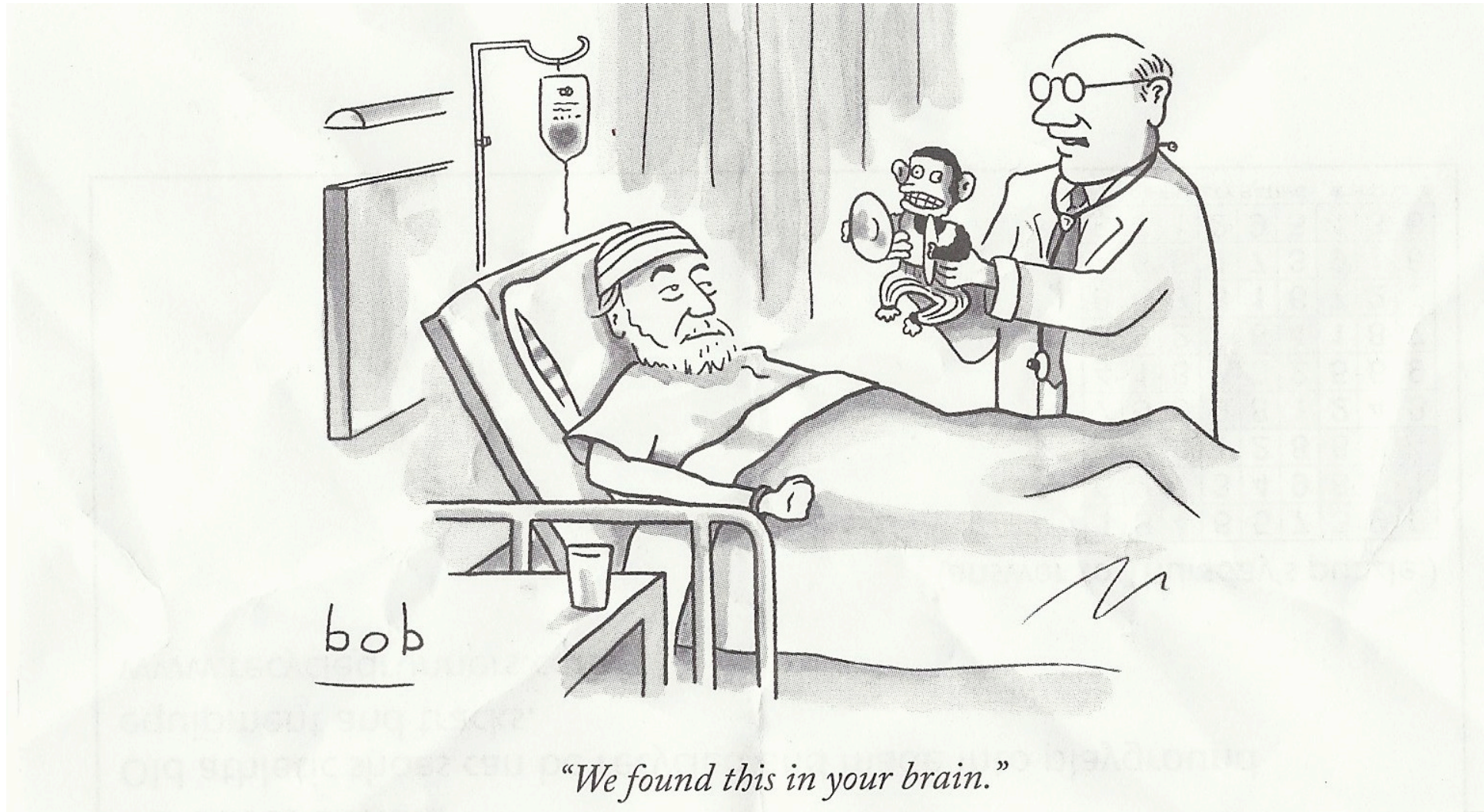
Medications promote retention for youth (But poor uptake)

- Medicaid claims datasets, 11 states, ages 13-22
- N = 4837 youths dx OUD (out of 2.4M, 0.2%)
- 76% received *any* treatment within 3 months of dx
- 52% received psychosocial services only
- 26% received any medication (5% for age <18 yrs).



Hadland et al. JAMA Pediatrics 2018

If only it were that easy



How should we help this young person?

- 22 M
- Onset cannabis age 14
- Onset prescription opioids 17, progressing to daily use with withdrawal within 8 months
- Onset nasal heroin 18, injection heroin 6 months later
- 3 episodes residential tx, 2 AMA, 1 completed, but no continuing care
- Buprenorphine treatment (monthly supply Rx x 4), took erratically, sold half
- Presents in crisis seeking detox
("Can I be out of here by Friday?")

Case scenario -- Polling questions

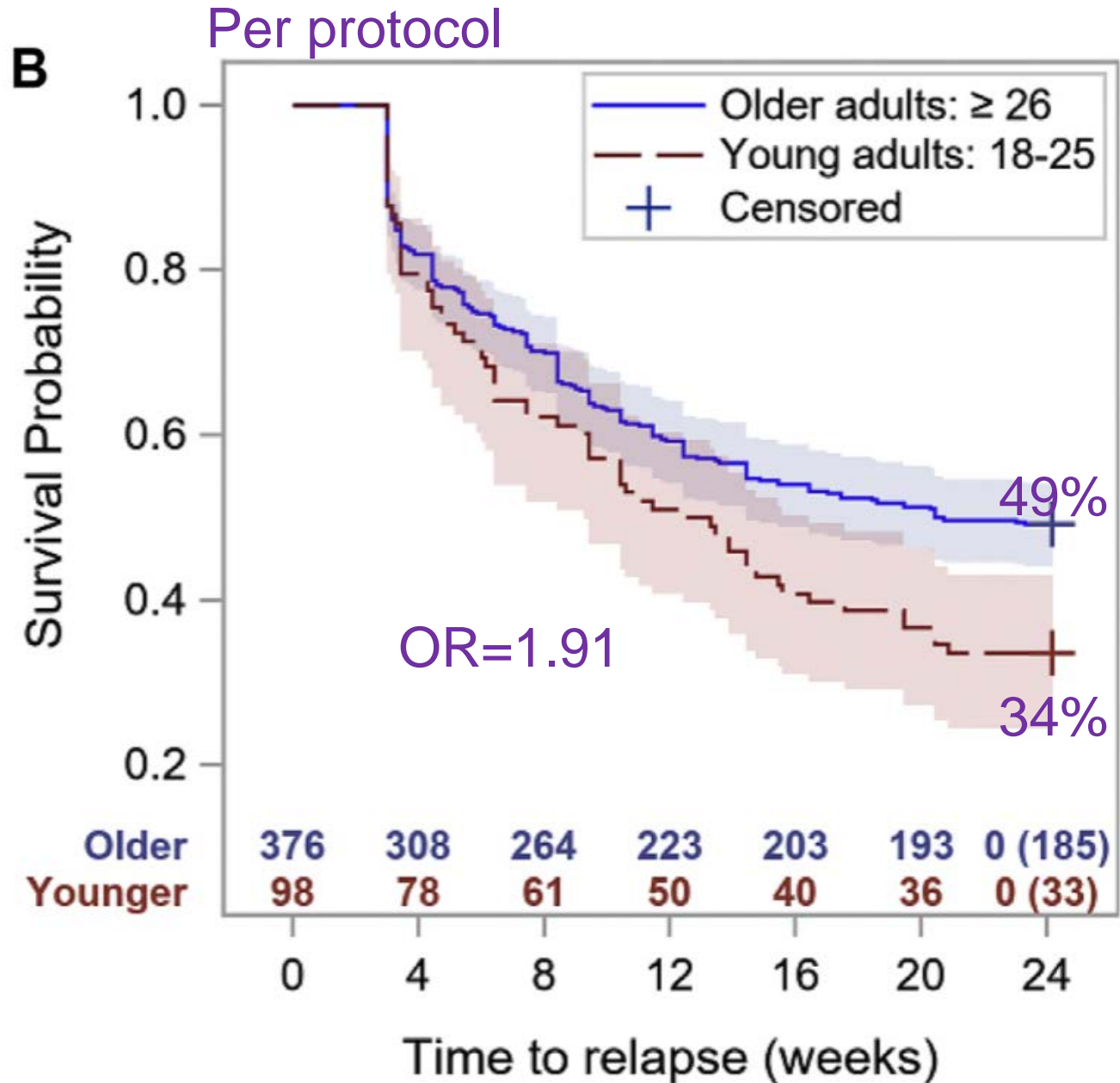
- My parents don't get it. They think bup isn't real recovery and they think I sell it. You can't call them.
 - Call parents?
 - Yes
 - No
- 6 days after admission, Sat night. This place stinks, I'm outta here!
 - Call parents?
 - Yes
 - No

Features of youth opioid treatment

- Developmental barriers to treatment engagement
 - Invincibility
 - Immaturity
 - Motivation and treatment appeal
 - Less salience of consequences
 - Strong salience of burdens of treatment
- Variable effectiveness of family leverage
- Pushback against sense of parental dependence and restriction
- Prominence of co-morbidity

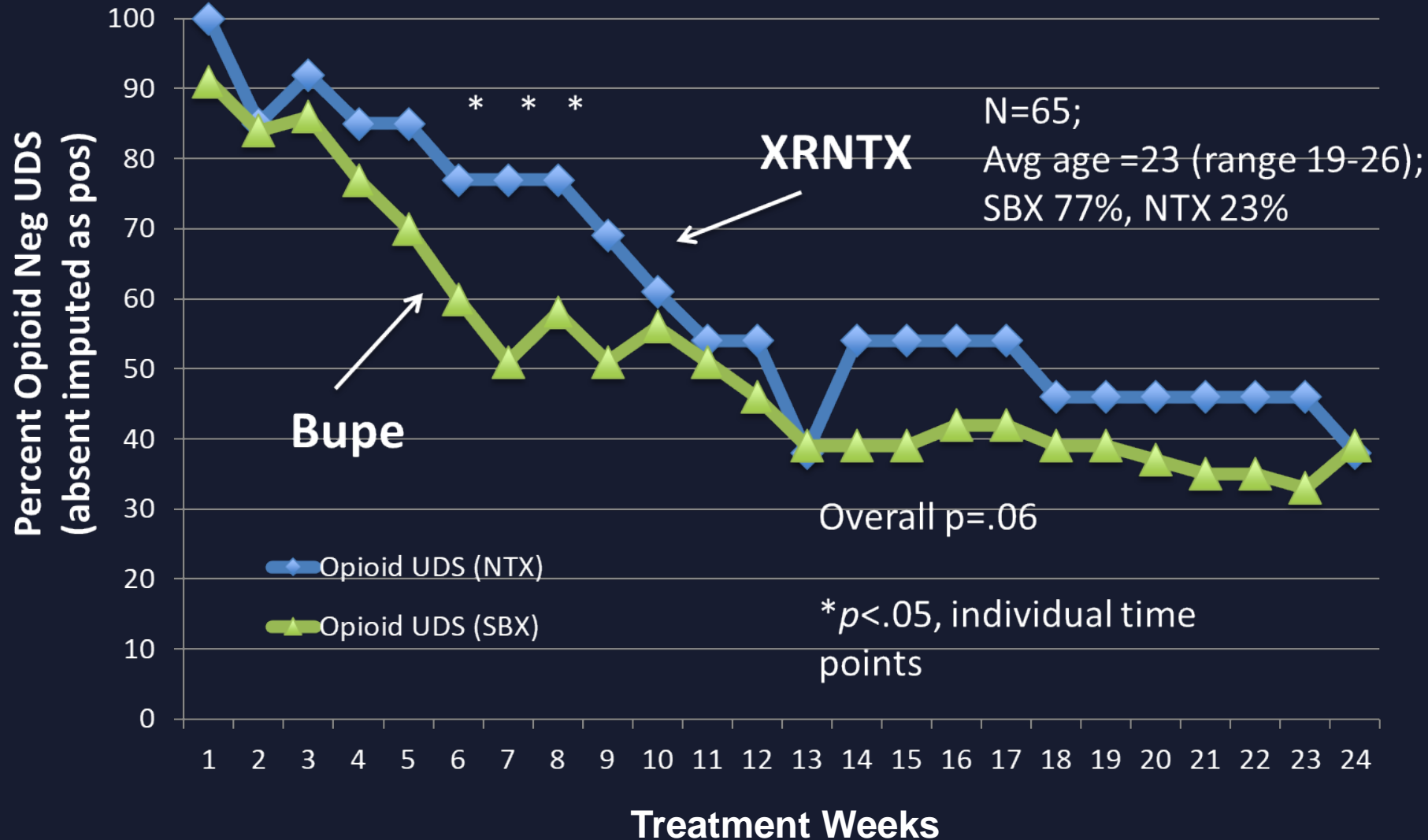
Young adults have worse outcomes vs older adults:
 XBOT secondary analysis

Fishman. J Adol Health 2020. In press.



Young Adults

Enrolled in Specialty Intensive Outpatient (IOP)



MOUD feasible for youth in real world

But poor adherence in community treatment

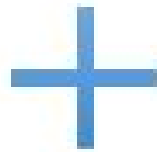
- Treatment received in acute residential followed by multiple community providers, youth 15-21, N=288
 - XRNTX 28%, Bup 33%, No meds 39%
- Over 6 months following residential discharge **low rates of MOUD** use:
 - XRNTX: mean doses 1.3
 - 41% 1st OP dose
 - 12% 3rd OP dose
 - 2% 6th OP dose
 - Bup: mean days 57
- Currently receiving MOUD **higher for the bup group** than XR-NTX or no medication at 6 months
- Self-reported opioid **use lower for XR-NTX group** than bup and no meds at 3 and 6 months
- Meeting OUD criteria **lower for XR-NTX than** no meds at 3 and 6 months, and than bup at 3 months

Example of Innovative Intervention

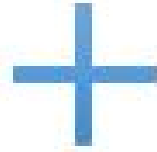
Youth Opioid Recovery Support (YORS)



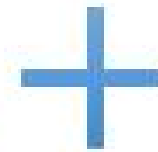
Assertive
Outreach



Family
Involvement



Medication
Home Delivery



Incentives for
Medication

Assertive Treatment

Well established for treatment of **chronic illness** in hard-to-reach populations in which medication adherence is a **major barrier**

- TB, HIV, schizophrenia (ACT)



Family Engagement: Historical Barriers

- Normative pushback against **sense of parental dependence and restriction**
- Clinicians: lack of training, competence, comfort
- Focus on **internal transformation**
- Preoccupying focus on “enabling”
- Over-rigid concern with **confidentiality**



Rationale

Both **families and youth** need a recipe for treatment, with role definitions, expectations, and responsibilities

- Families have **core competence** and natural leverage

- Encouragement of emerging youth autonomy and self-efficacy **is compatible** with empowerment of families

- Family **mobilization** – “Medicine may help with the receptors, but you still have to parent this difficult young person”

Family Framework Elements

Family education

3-way treatment plan, collaboration, and contract: youth, family, program

How will family know about attendance and treatment progress?

How will family help support attendance and treatment progress?

How will family help support medications?

What is the back-up or rescue plan if there is trouble?

Principles of Family Negotiation

The Art of the Deal

- Pick your battles
- Know your **leverage**
- You gotta give to get
- You have more juice than you realize
- Keep your **eyes on the prize**



Additional components

Home delivery

- Meet them where they are, literally
- Prioritization of MOUD

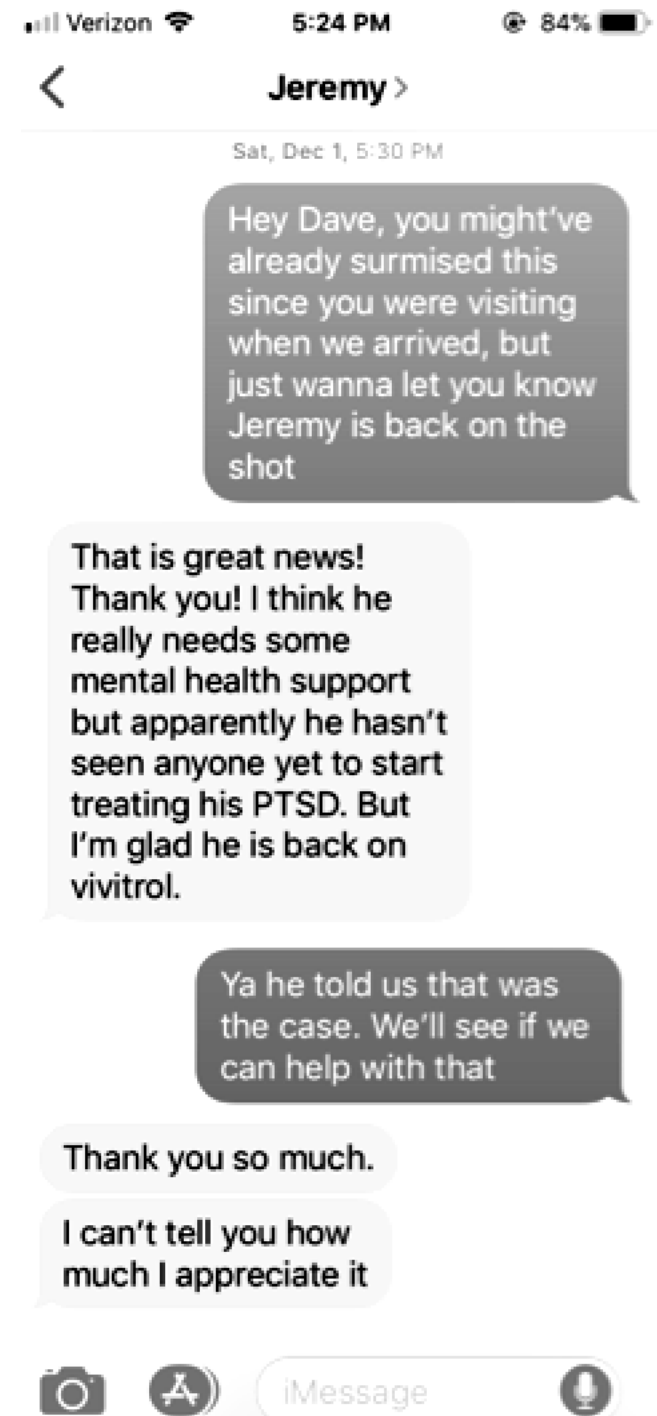
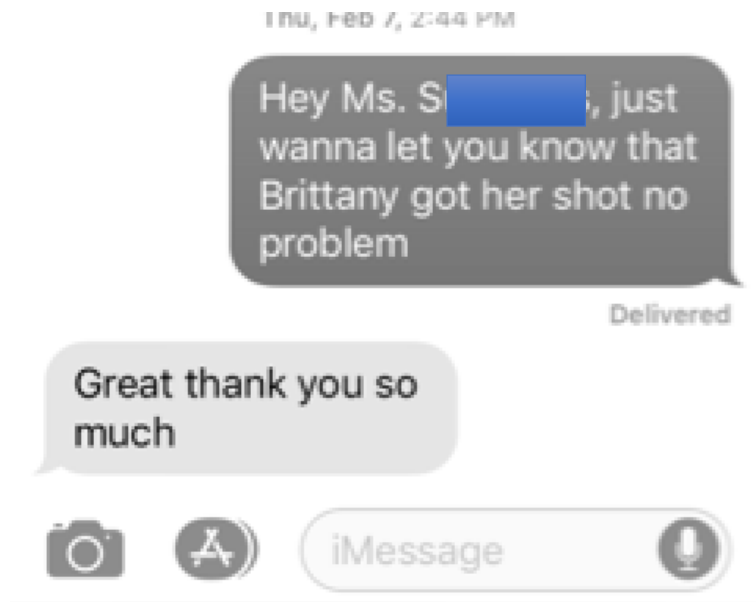
Contingency management

- Well established in research but little uptake in real-world care
- Best studied target negative UDS
- Medication adherence as target less well established but perhaps more generalizable?

Poster Child?

- 21-year-old male injecting heroin
- 5 inpatient detox admissions over 1.5 years, each time got first dose of extended release naltrexone but never came back for 2nd dose
- Lives with GM, team shows up with dose, he says no thank you, she says no not an option, **done deal**, gets 6 doses

Engagement – monitoring



Maintaining therapeutic optimism

May 3, 6:54 PM

Hey I'm getting kicked out because you told my mom I didnt leave a urin so yeah im a have to stop the study.

May 3, 6:54 PM

Or you can come leave a urine?

May 3, 6:57 PM

I Couldnt pee what was I suppose to do wait for 2 hours hours in till I could? I fucking homeless now I have to go to the city to live in a bando

May 3, 6:58 PM

I'm still here come leave a urine.

May 3, 6:58 PM

Don't use this as an excuse to relapse.

May 3, 6:59 PM

Thanks for everything, goodbye.

May 3, 6:59 PM

May 3, 6:09 PM

Hey I'm coming up to leave a urin

May 4, 1:08 PM

Great. Would love to talk to you if you'd like otherwise Jared can get it.

May 4, 1:10 PM

I'm sorry this is how things turned out, it was not my intention. I do think I can help next steps and getting everyone on board. Please think about it

May 4, 1:29 PM

Hi B. Just confirming that I will see you tomorrow at 3?

May 16, 12:44 PM

Yes

Am I getting shot friday

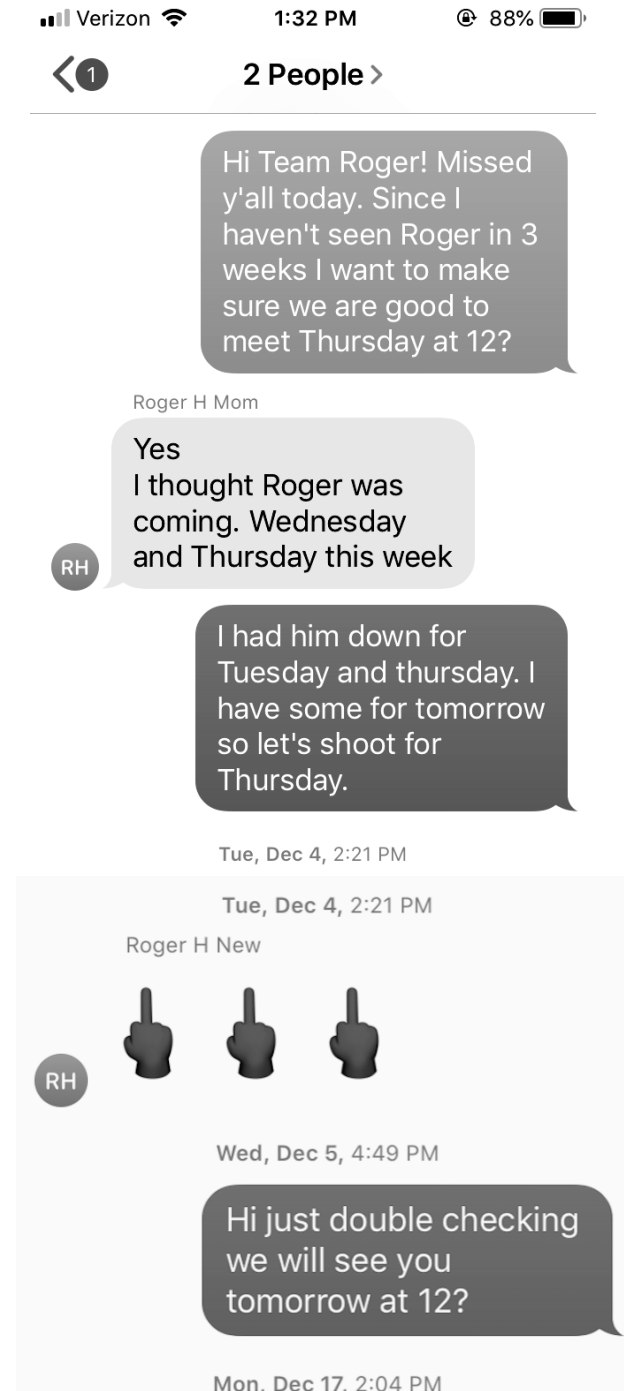
May 16, 12:46 PM

Yes. That ok?

Balancing parental and young adult empowerment

- Patient: “Mom, you can’t be in here when I’m getting the shot...”
- Therapist: “Ma’am I think it’s best if we provide her privacy for the injection.”
- Mother: “Are you kidding me? Of course I am. I’m not leaving this room till I see that medicine go in you...”

Keep your eyes on the prize



Don't take no for an answer

Tue, Apr 3, 6:30 PM

Can u stop calling my mother am done I don't want no more shots

Can you give us a call?

Thanks for sticking with us Eddie, we'll see you tomorrow around 7:30 for the shot. And if your having any problems with vivitrol, we can get you in to see the doctor about it

Case scenario -- Polling questions

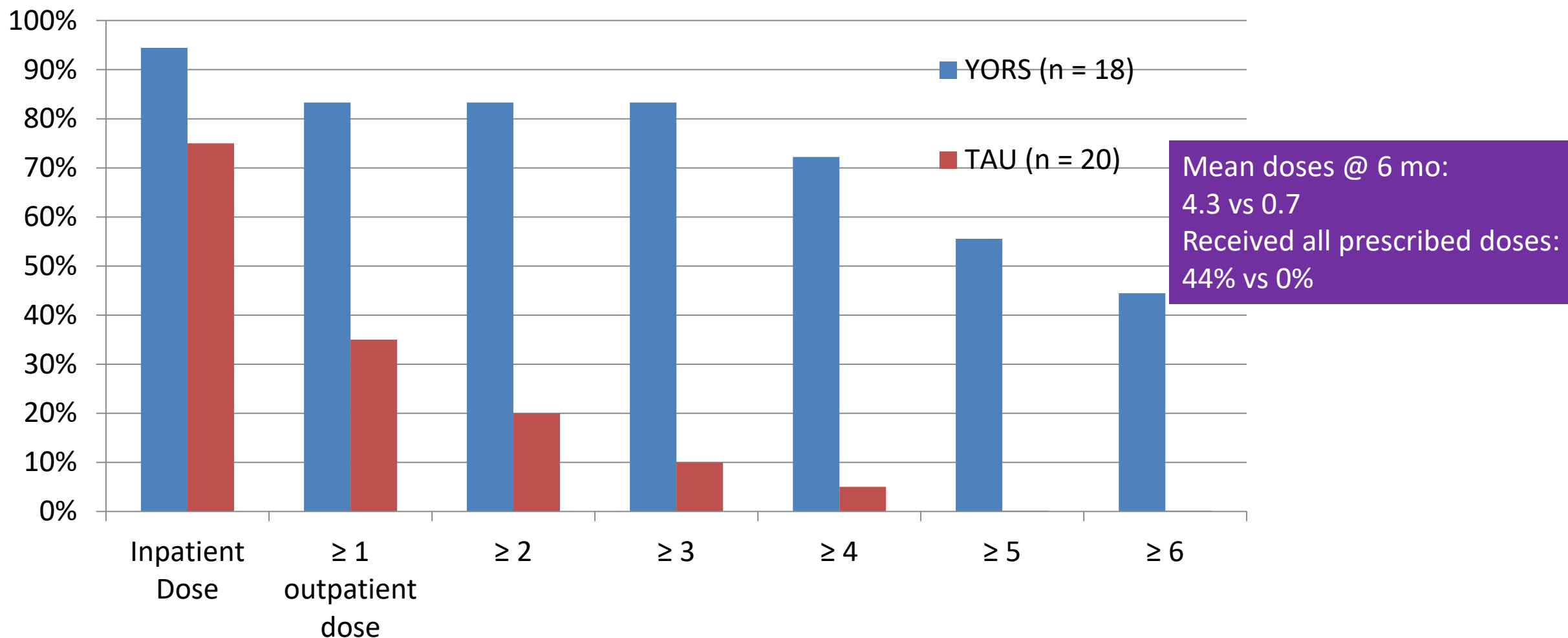
- 25F XR-MOUD but late for dose, living at home. Recent sporadic opioid use. How would you proceed with family communication?
 - Immediately call parents
 - Work with patient to get dose but protect confidentiality
 - Give patient “one more chance” or else will need to call parents
 - Ask patient to call parents together
 - Ask patient to call parents together after dose of XR-MOUD, from a “position of strength”
 - Send group text reminding everyone that dose is past due

YORS Pilot RCT

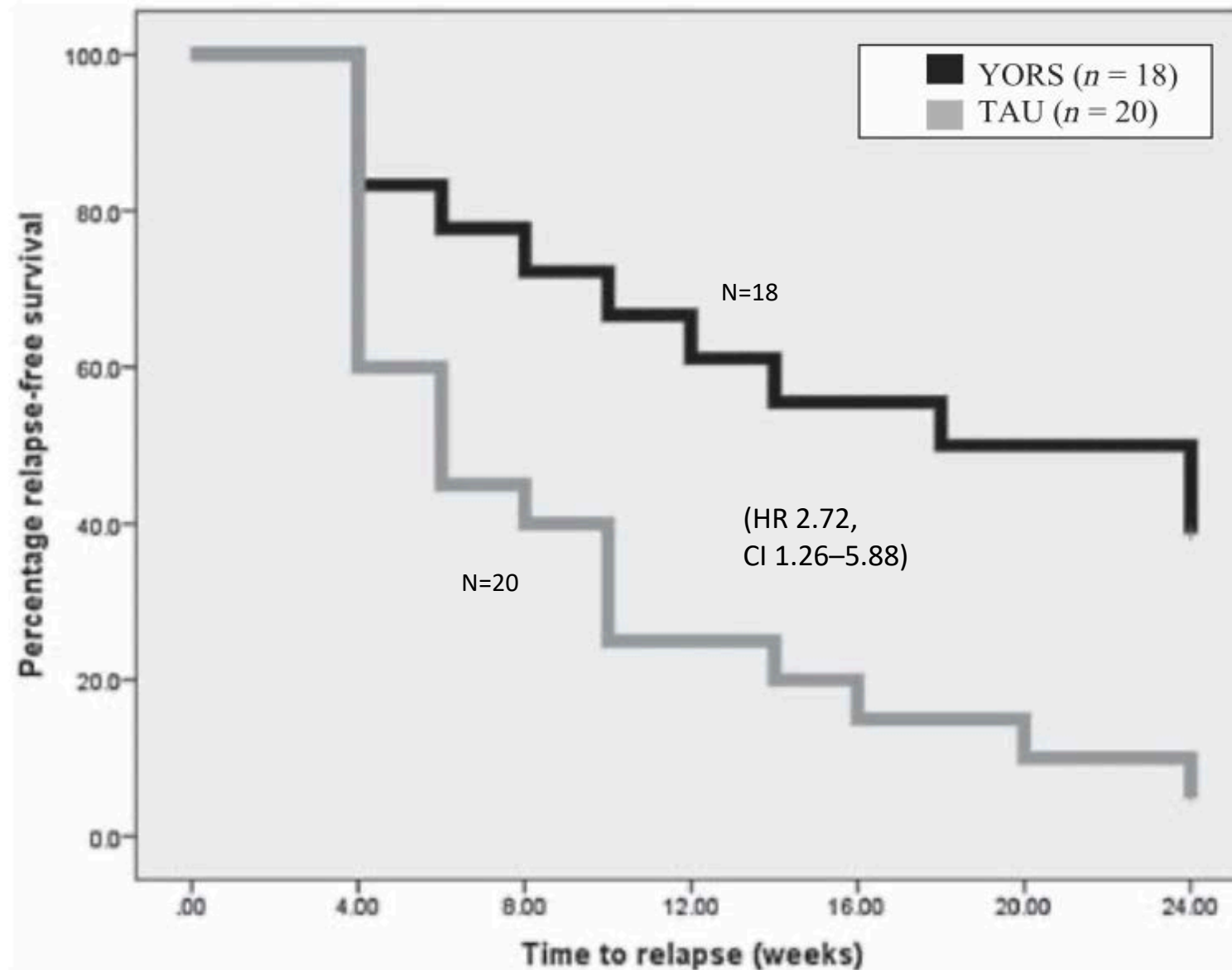
- Ages 18-26, OUD, seeking XR-NTX
- Recruitment through index episode of acute residential treatment, with detox
- Randomization to YORS vs TAU
- 6 months duration
- N = 38
- Outcomes: doses received, opioid relapse (>10d use per 28d, missing imputed pos)

Fishman M, et al. "A pilot randomized controlled trial of assertive treatment including family involvement and home delivery of medication for young adults with opioid use disorder." *Addiction*. In Press. 2020.

Receipt of Cumulative XR-MOUD Doses



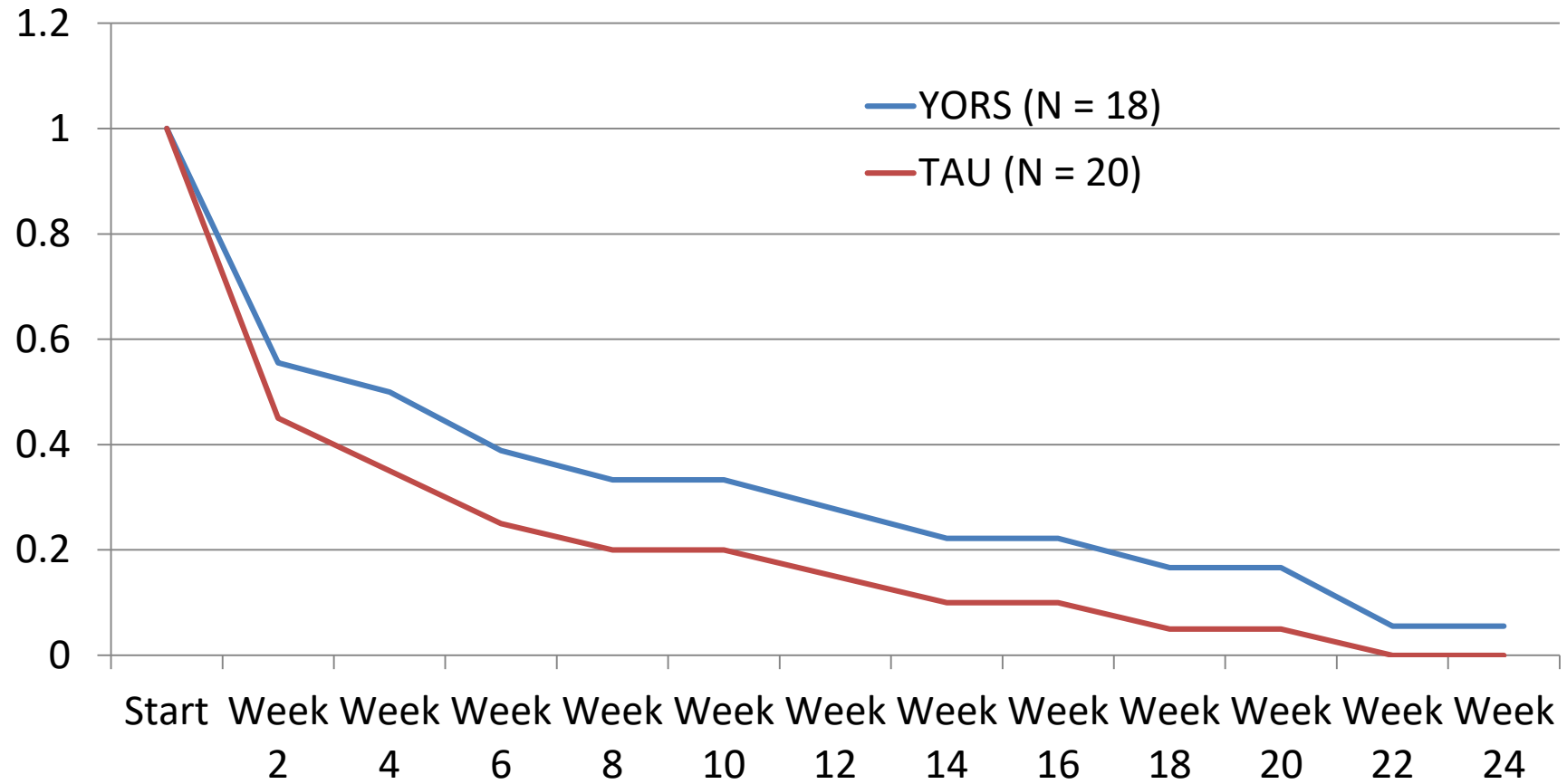
YORS Outcomes: Opioid Relapse-Free Survival



Days of Substance Use at 6 Months

Days of use	YORS (n = 18)	TAU (n = 20)	<i>P</i>
Average Opioid Days of Use (SD)	23.6 (21.3)	51.0 (35.2)	.007
Average Marijuana Days of Use	11.9 (16.1)	9.3 (22.2)	.69
Average Cocaine Days of Use	8.0 (14.2)	12.8 (34.4)	.58
Average Alcohol Days of Use	5.4 (8.0)	5.5 (19.6)	.98
Average Benzodiazepine Days of Use	3.7 (10.2)	0.2 (0.6)	.14

Opioid abstinence survival



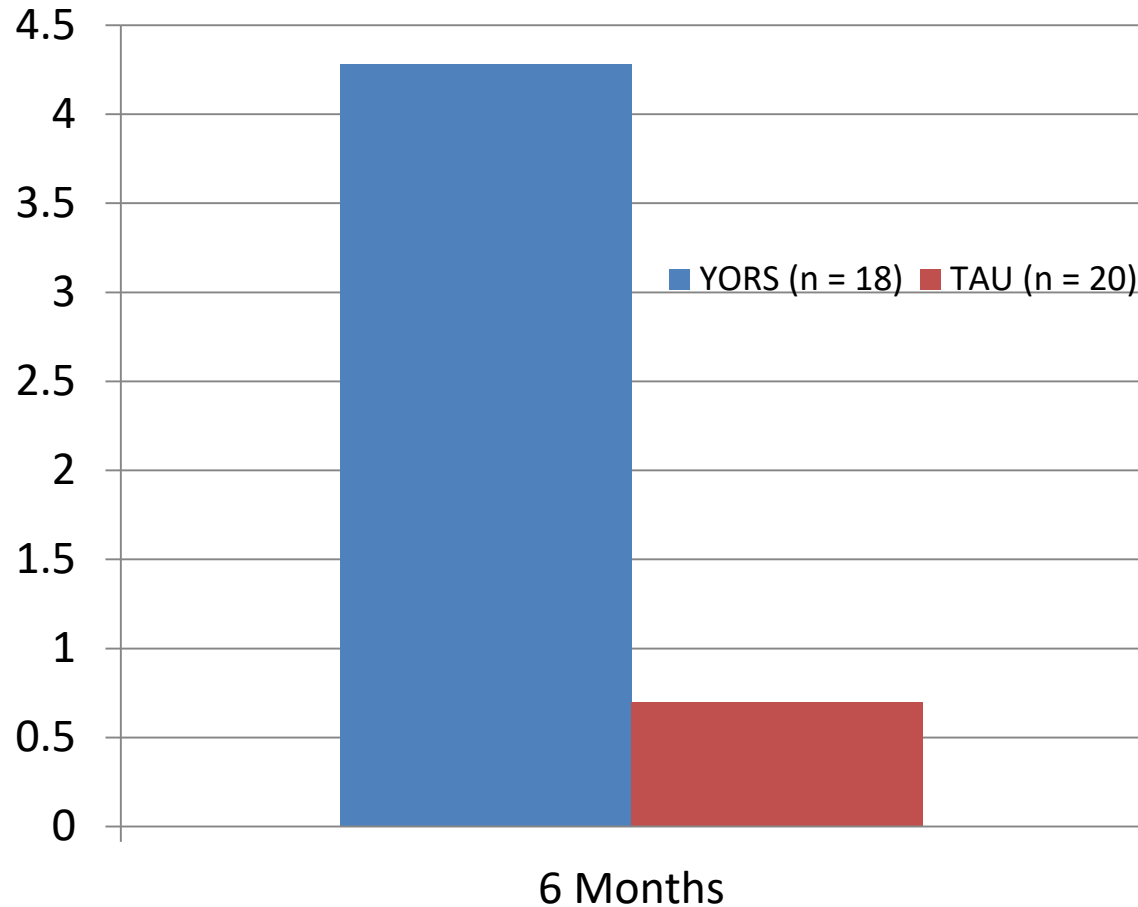
YORS pilot Study #2

- Ages 18-26, OUD, seeking XR-MOUD, choice of XR-NTX or XR-Bup
- Recruitment through index episode of acute residential treatment, with detox
- Historical comparison TAU group from study #1
- Variable duration 12-24 wks
- N = 22
- Outcomes: doses received, opioid relapse (>10d use per 28d, missing imputed pos)

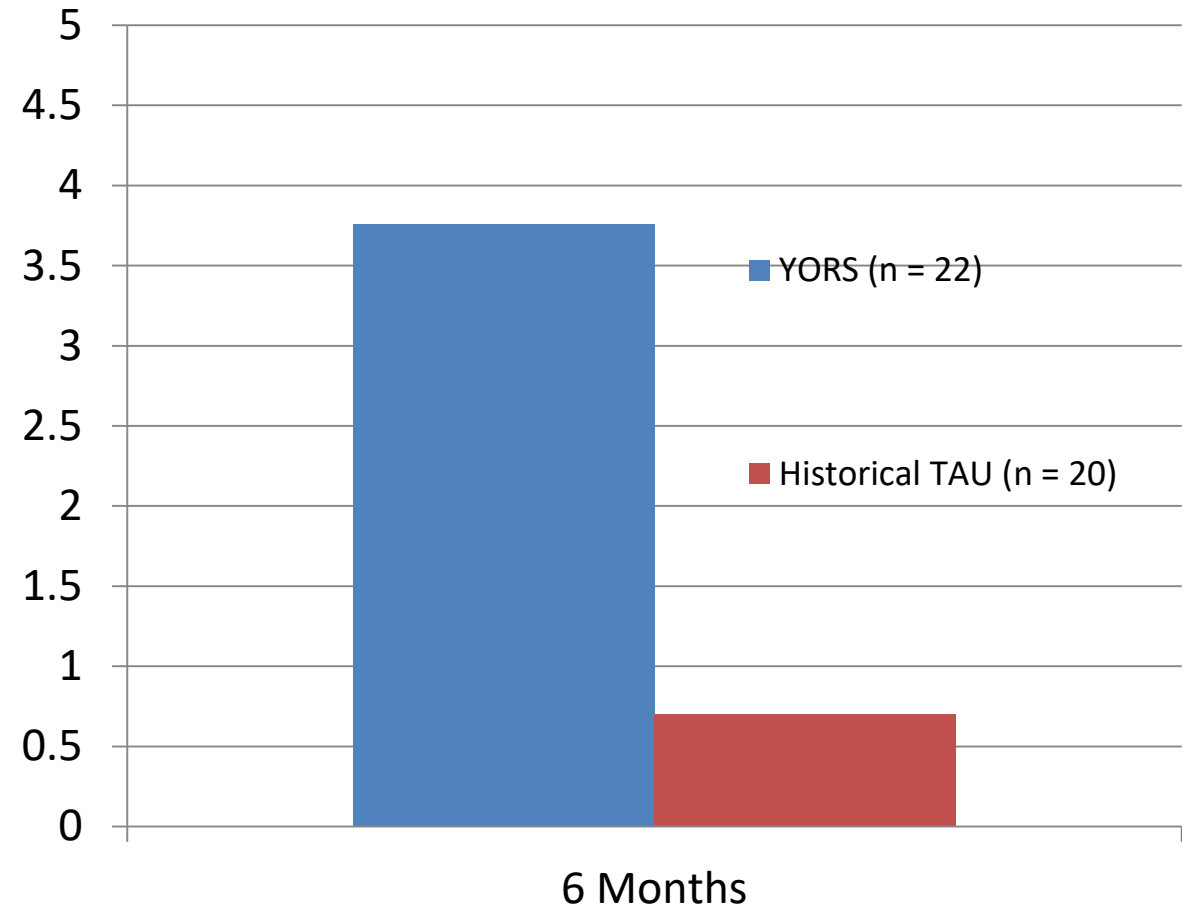
Wenzel et al. Choice of extended release medication for OUD in young adults (buprenorphine or naltrexone): a pilot enhancement of the Youth Opioid Recovery Support (YORS) intervention. *JSAT*. In press. 2021.

Mean outpatient MOUD doses received

Study 1
(XR-NTX only)

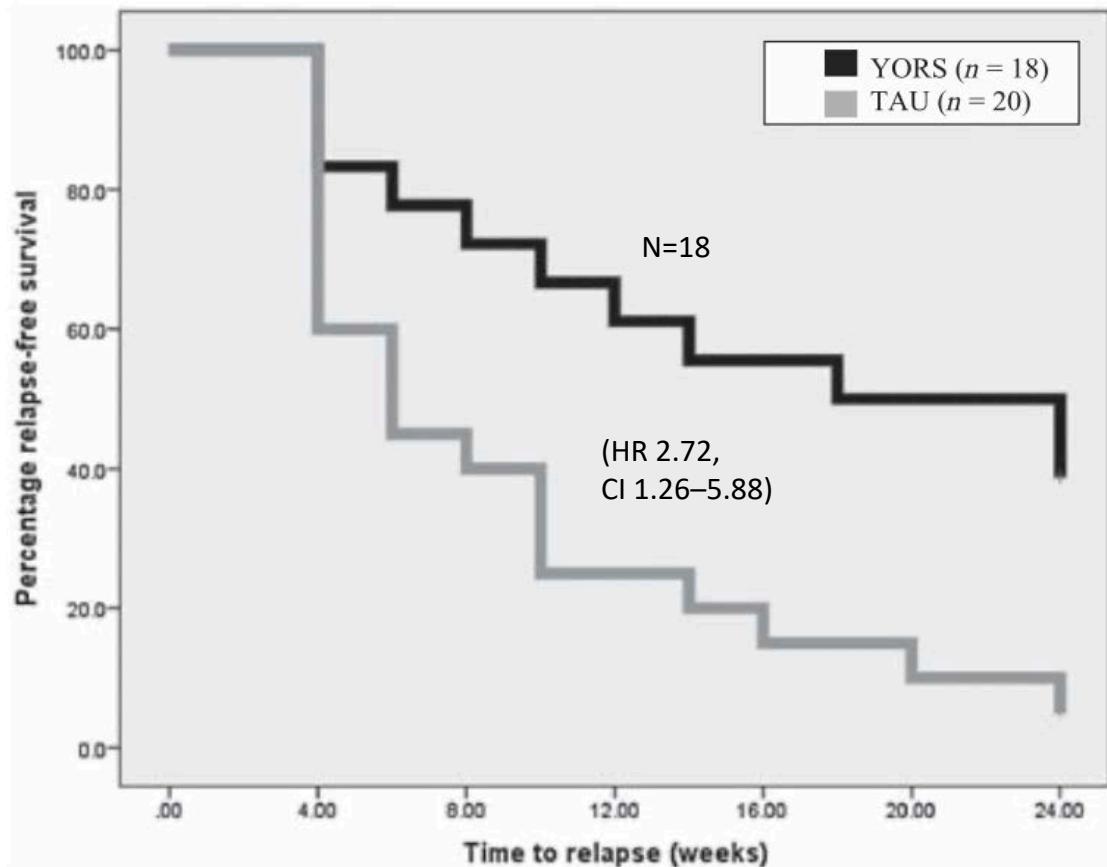


Study 2
(patient choice XR-NTX or XR-BUP)

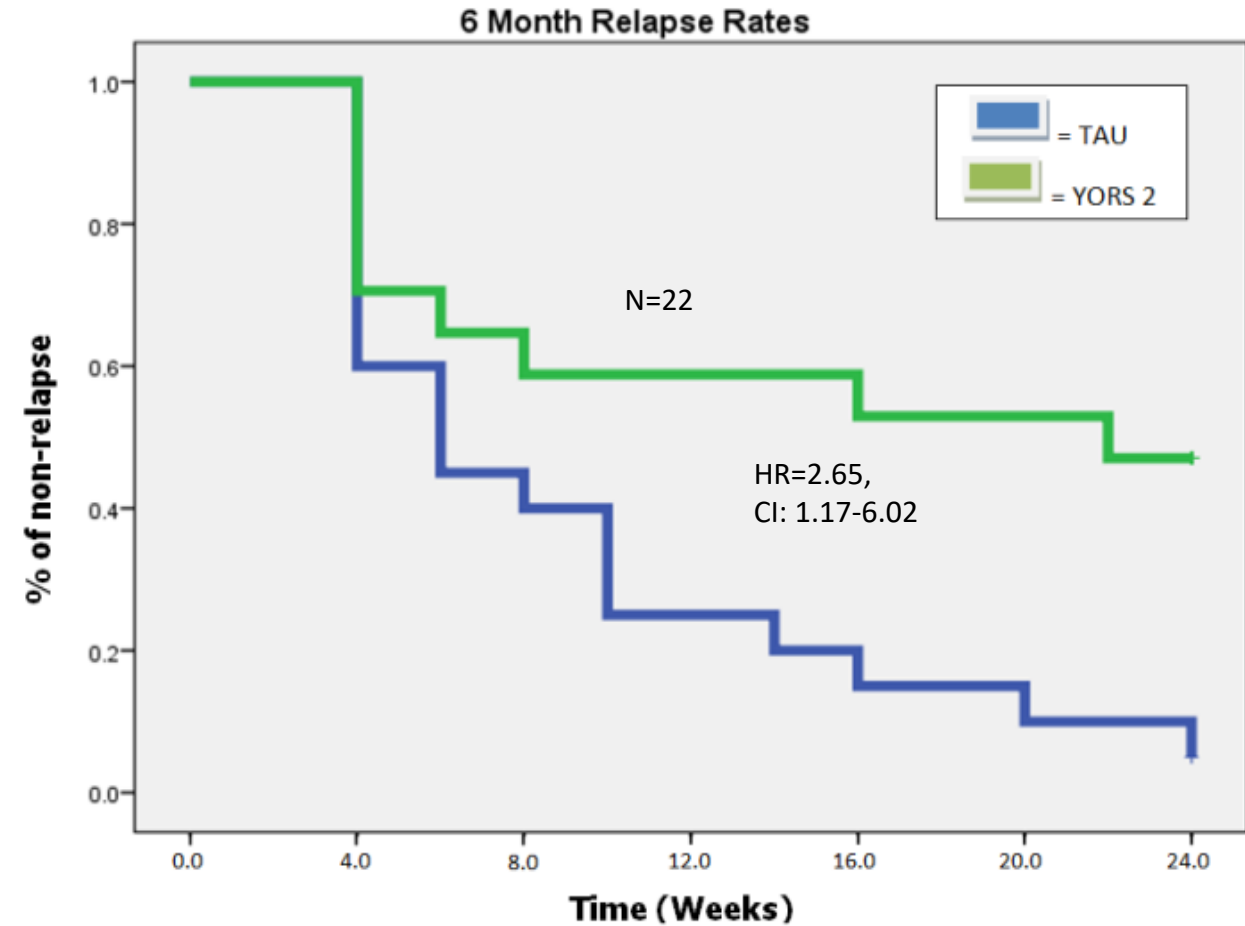


YORS Outcomes: Opioid Relapse-Free Survival

Study 1
(XR-NTX only)



Study 2
(Patient choice XR-NTX or XR-Bup)



Exploratory medication comparison

	XR-NTX	N	XR-BUP	N	p-value
Doses Received at 12-weeks	2.00	11	1.82	11	.75
Doses received at 24-weeks	3.80	10	3.71	7	.95
% Relapsed at 12-weeks	18.2%	11	36.4%	11	.34
% Relapsed at 24-weeks	50.0%	10	57.1%	7	.77

YORS HEAL Project

- Yrs 1-2: intervention enhancement, test cycles
- Yrs 2-5: larger RCT of enhanced YORS
- Enhancement test cycles
 - Covid adaptations
 - Use of telehealth
 - Mobile van delivery
 - reSet m-health app
 - Parent peer tele-group
 - Written feedback “report card”



Wenzel and Fishman. Mobile van delivery of extended-release buprenorphine and extended-release naltrexone for youth with OUD: An adaptation to the COVID-19 emergency. *JSAT*. In press. 2020

Example of innovative intervention

Telehealth

- 23F in residential treatment, past troubles with SL Bup → video with Mom to introduce XR-Bup and develop plan
- 20M living at home, attending tele session for SL Bup, says parents skeptical because MOUD “replacing one addiction for another” → Is Mom at home? Go get her...
- 26M heavy opioid use in relapse, housing unstable (couch surfing and car), M unable to get him to return to treatment, wants to return home but M reluctant → 3-way session to negotiate terms of return home contingent on treatment

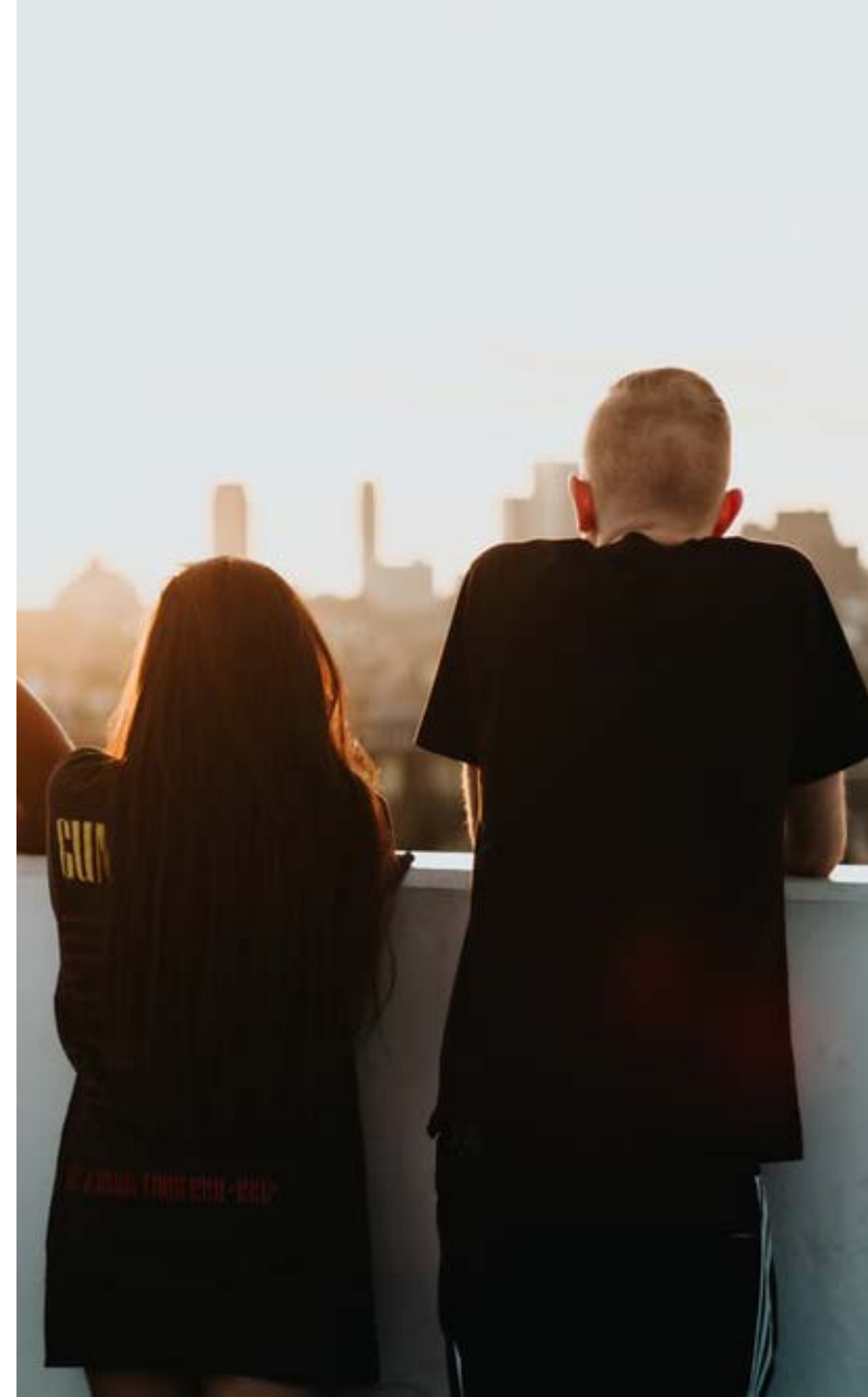
Case scenario -- Polling questions

- 23M discharged from recovery house for smoking cannabis.
Contact parents?
 - Yes
 - No
- Discharged from recovery house, missed XR-MOUD dose.
Contact parents?
 - Yes
 - No
- Discharged from recovery house, missed XR-MOUD dose, opioid relapse, homeless.
Contact parents?
 - Yes
 - No

Example of Innovative Intervention

Primary Care Delivery, Hub and Spoke

- MOUD in youth serving primary care (**spokes**)
- Consultation and support from regional special center (**hub**)



Example of innovative intervention

Youth OUD recovery housing

- Youth-specific
- OUD-specific
- Emphasis on MOUD, co-occurring disorder treatment, and accommodation to youth shenanigans
- Embedded in full continuum of care

Outcomes (N= 46)

Avg. weeks in residence	14.4; Range = 0.4 - 50
Retention at 12-weeks	62%
Retention at 24-weeks	18%
Opioid Positive UDS at 12-wks	7.5%



A Call to Action

- We are at a crossroads
- We have an existing and emerging toolbox but an **alarmingly low level** of adoption and utilization
- Emerging research and clinical consensus support **aggressive treatment of youth** with OUD including MOUD
- Therapeutic optimism remains one of our best tools!
- We are saving lives, but we need to do better
- **Developmentally-informed interventions** might help
- If not now, then when?

Hypothetical miracle cures?



Selected references

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