

Innovative Strategies for Medication Initiation in Opioid Use Disorder

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ASAM Annual Conference 2026



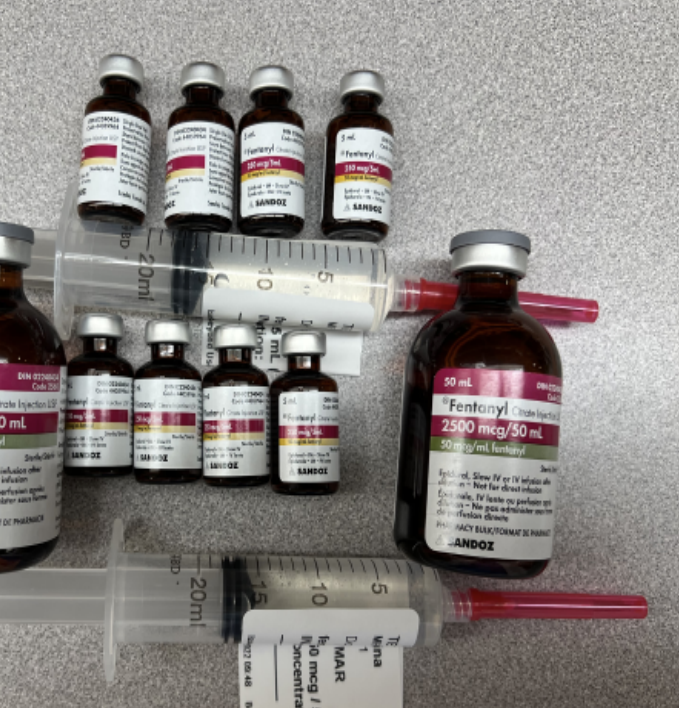
Disclosure Information

- ☀ Presenter 1: Pouya Azar, MD, FRCPC, DABAM
 - ☀ Receives honoraria for presentations organized by Indivior.
- ☀ Presenter 2: Andrew Herring, MD
 - ☀ No Disclosures.
- ☀ Presenter 3: Melissa Weimer, DO, MCR, DFASAM
 - ☀ No Disclosures.
- ☀ Presenter 4: Laura Kehoe, MD, MPH, FASAM
 - ☀ Received honoraria for advisory board, presentation organized by Indivior

Learning Objectives

- ☀ Describe the unique pharmacology of high-potency synthetic opioids and their implications for initiating medications for opioid use disorder.
- ☀ Summarize the current evidence base supporting novel methadone, buprenorphine, and extended-release buprenorphine, initiation strategies.
- ☀ Discuss the pharmacologic rationale, clinical applications, and relative risks and benefits of each initiation approach.





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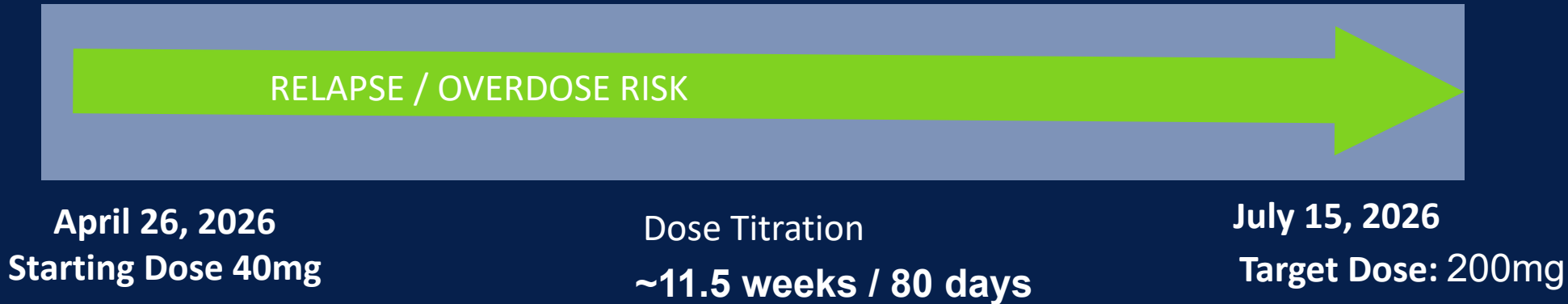
Methadone Initiations



ASAM Guidelines: Methadone Initiation

☀ Day 1 total dosage: 10-40 mg

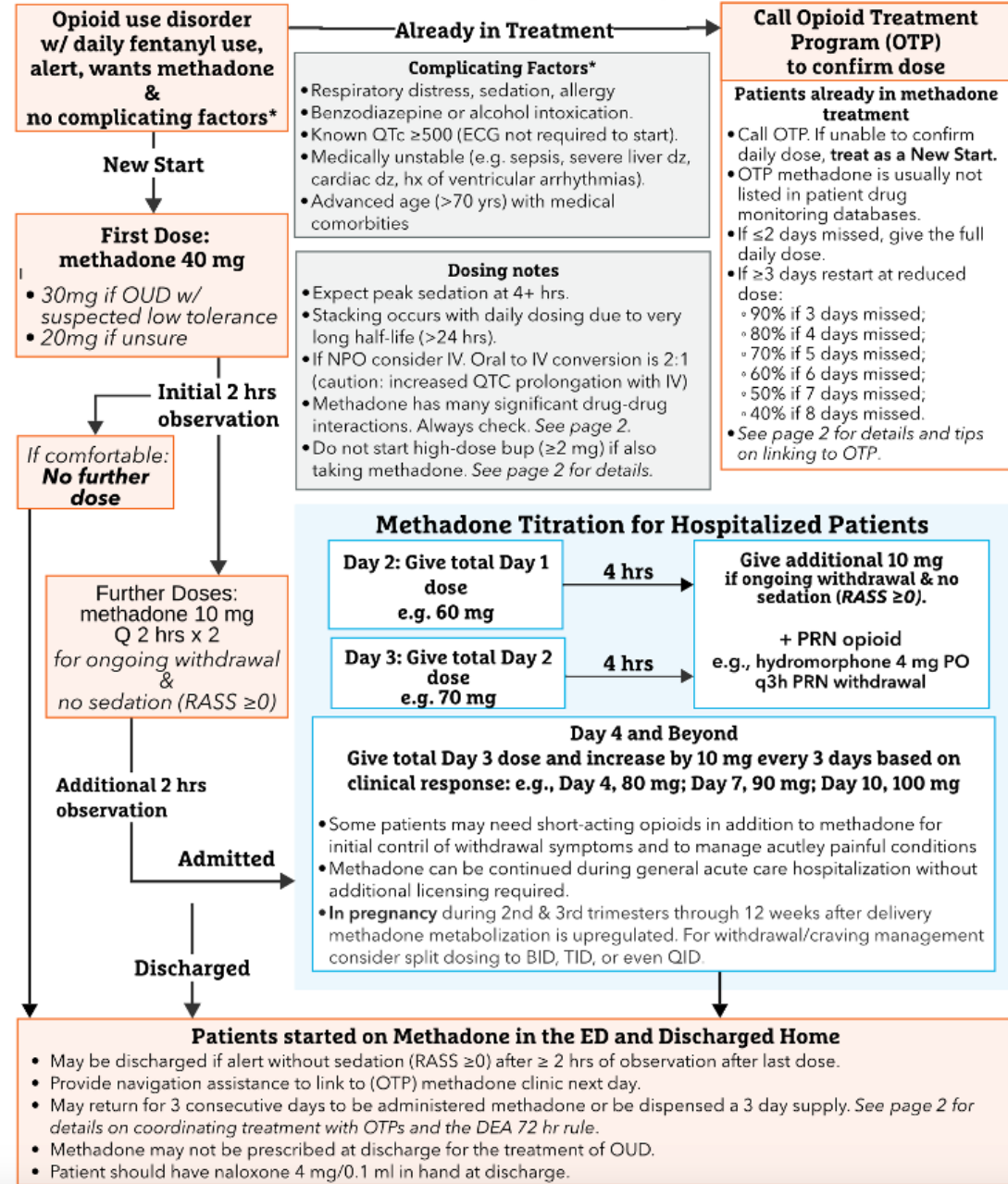
☀ Titration schedule: Increase 10 mg ~ every 5 days



Emergency Department case Putting it all together



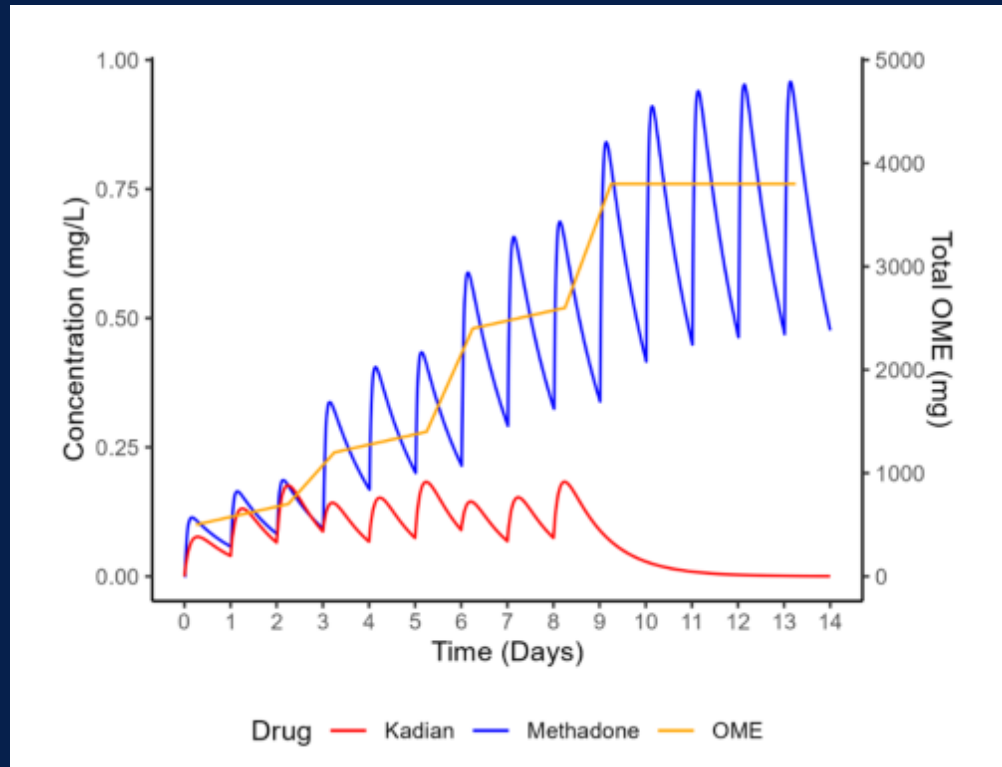
Hospital and Emergency Department Methadone Quick Start Guide for Patients using Fentanyl



Rapid Methadone Titration with Slow-Release Oral Morphine (SROM) Bridging

Half-Life: ~11-13 hours

Tmax: ~8.5 hours



Day	1	2	3	4	5	6	7	8	9	10-14
Methadone (mg)	40	40	40	90	90	90	140	140	140	190
SROM (mg)	300	400	500	300	400	500	300	400	500	0

Rapid Methadone Titration with SROM Bridging - Case

☀️ **Adult male presenting for re-initiation of OAT at community clinic**

- Severe OUD
- Unhoused
- schizophrenia
- Declined buprenorphine, past methadone

☀️ **Substance Use**

- Fentanyl: ~1 g daily smoked - Solitary use
- Cocaine use with stimulant-induced psychosis
- UDS + for amphetamines, methamphetamines, benzos, hydromorphone, fentanyl

☀️ **Goal: restart Methadone, abstinence.**

Rapid Methadone Titration with SROM Bridging - Case

Day	Methadone	SROM	Cravings / Withdrawal	Fentanyl Use
Day 1	50 mg PO daily	300 mg PO daily	Active withdrawal; significant cravings	Ongoing daily use (prior baseline ~1 g/day)
Day 2	“	400 mg PO daily	Withdrawal ongoing	“
Day 3	“	500 mg PO daily	Withdrawal improving	“
Day 5	100 mg PO daily	300 mg PO daily	“	“
Day 6	“	400 mg PO daily	“	“
Day 7	“	500 mg PO daily	“	“

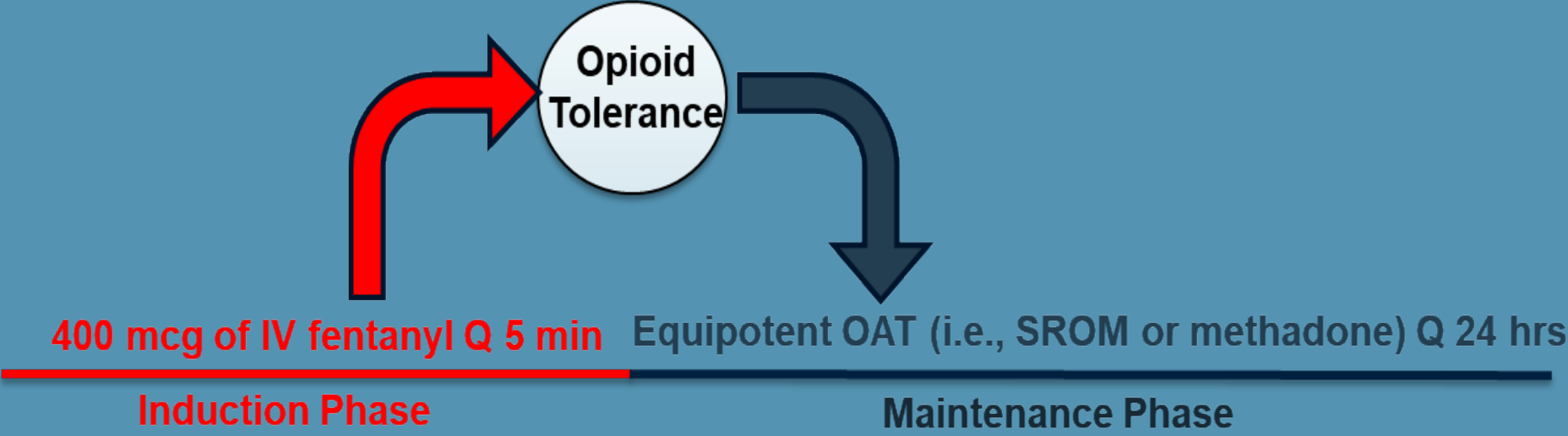
Rapid Methadone Titration with SROM Bridging - Case

Day	Methadone	SROM	UDS	Cravings / Withdrawal	Fentanyl Use
Day 8	150 mg PO daily	300 mg PO daily		Withdrawal improving	reduced
“	“	400 mg PO daily			“
“	“	500 mg PO daily			“
Day 11	200 mg PO daily	Discontinued			“
”	“	“		Cravings largely resolved; mild residual withdrawal	“
“	“	“		No withdrawal; denies cravings	“
Day 18	240 mg PO daily	“		Withdrawal absent; mild cravings persist	“
Day 21	“	“			“
Day 22	“	“	NEG (+ EDDP)		No reported use
Day 46	240 mg PO daily	“	NEG (+ EDDP)	No cravings/No withdrawal	No reported use

Symptom-Inhibited Fentanyl Induction (SIFI)

Purpose: Rapidly assess opioid tolerance and initiate an equipotent OAT dose

Patients using fentanyl



Symptom-Inhibited Fentanyl Induction (SIFI) Clinical Trial: Preliminary Results

- **24 participants**
- **Average fentanyl induction dose 4,050mcg (800 to 9600mcg)**
- **Average methadone starting dose: 166mg (45 to 200mg)**
- **0 adverse events during induction and the 7-day follow-up**
- **7-day follow-up: 83.3% participants retained**
- **1-month follow-up: 82% participants retained**
- **More results to be shared/published!**



Azar P, Kim JJ, Davison R, et al. Case series: symptom-inhibited fentanyl induction (SIFI) onto treatment-dose opioid agonist therapy in a community setting. *Am J Addict.* 2025;34:355-360. doi:10.1111/ajad.70011

Azar P, Ignaszewski MJ, Harris M, et al. Rapid intravenous symptom-inhibiting fentanyl induction (SIFI) to optimize rotation onto oral opioid agonist therapy among individuals who use unregulated fentanyl: protocol for an open-label, single arm clinical trial. *Addict Sci Clin Pract.* 2025;20:58. doi:10.1186/s13722-025-00586-7

STUDY PROTOCOL

Open Access

Rapid intravenous symptom-inhibiting fentanyl induction (SIFI) to optimize rotation onto oral opioid agonist therapy among individuals who use unregulated fentanyl: protocol for an open-label, single arm clinical trial



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CASE SERIES

Case series: Symptom-inhibited fentanyl induction (SIFI) onto treatment-dose opioid agonist therapy in a community setting

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analytical
chemistry



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Article

Development of a Graphene-Oxide-Deposited Carbon Electrode for the Rapid and Low-Level Detection of Fentanyl and Derivatives

Daniel Jun, Glenn Sammis, Pouya Rezazadeh-Azar, Erwann Ginoux, and Dan Bizzotto*

Symptom-Inhibited Fentanyl Induction (SIFI)

Purpose: Rapidly assess opioid tolerance and initiate an equipotent OAT dose

Patients using fentanyl



Opioid Tolerance

Equipotent OAT (i.e., SRM or methadone) Q 24 hrs

Maintenance Phase

Case: ICU management of Opioid Withdrawal

- ☀ 31 yo female, severe OUD
- ☀ 4th presentation to the hospital for left lower extremity wound with full thickness necrosis
- ☀ BMI is 15
- ☀ Xylazine level >100,000
- ☀ Multiple premature discharges from the ED while waiting for bed
- ☀ Last ED presentation had tried Q1 hour IV fentanyl 150mcg + methadone 60mg + valium without tolerance

Methadone – Day 1

- ☀ Patient placed on medical hold
- ☀ BP 90/40, HR 140, COWS 20-25, wide awake, vomiting
- ☀ Bacteremia
- ☀ IV fluids
- ☀ Fentanyl 100mcg/hr gtt started and titrated to Richmond Agitation-Sedation Scale (RASS) 0 to -1
- ☀ Methadone 20mg IV + 10mg IV
- ☀ Olanzapine 5-10mg IV
- ☀ Ondansetron IV PRN
- ☀ Patient in severe lower extremity pain, COWS 15-20, HR 130

Day 2

- ☀ Methadone 30mg IV
- ☀ Dexmedetomidine gtt started
- ☀ Increased Fentanyl gtt to 150mcg/hr
- ☀ Added ketamine 0.3mg/kg-0.4mg/kg
- ☀ Added IV PRN fentanyl boluses Q1hr 100mcg
- ☀ Patient remaining awake, vomiting, has not slept
- ☀ Severe pain
- ☀ QTc 490ms

Day 3

- ☀ Methadone 70mg
- ☀ Fentanyl TD patch 100mcg
- ☀ Continued ketamine gtt
- ☀ Continued Dexmedetomidine gtt
- ☀ Olanzapine 5mg BID

Day 4-9

- ☀ Methadone escalated each day by 10-15mg to total dose 100mg
- ☀ Close monitoring QTc
- ☀ Fentanyl gtt and boluses continued
- ☀ Fentanyl TD patch 100mcg
- ☀ Dexmedetomidine gtt transitioned to PO clonidine taper
- ☀ Ketamine gtt continued
- ☀ PO hydromorphone 4-6mg Q3H

Day 10

- ☀ Continue ketamine infusion through day 12
- ☀ Discontinue fentanyl gtt
- ☀ Methadone 110mg
- ☀ Oral hydromorphone 6-8mg PO Q3H PRN
- ☀ 100mcg fentanyl patch
- ☀ Clonidine taper
- ☀ Acetaminophen, ketorolac
- ☀ *Amputation on day 21 of hospitalization – received nerve blocks*

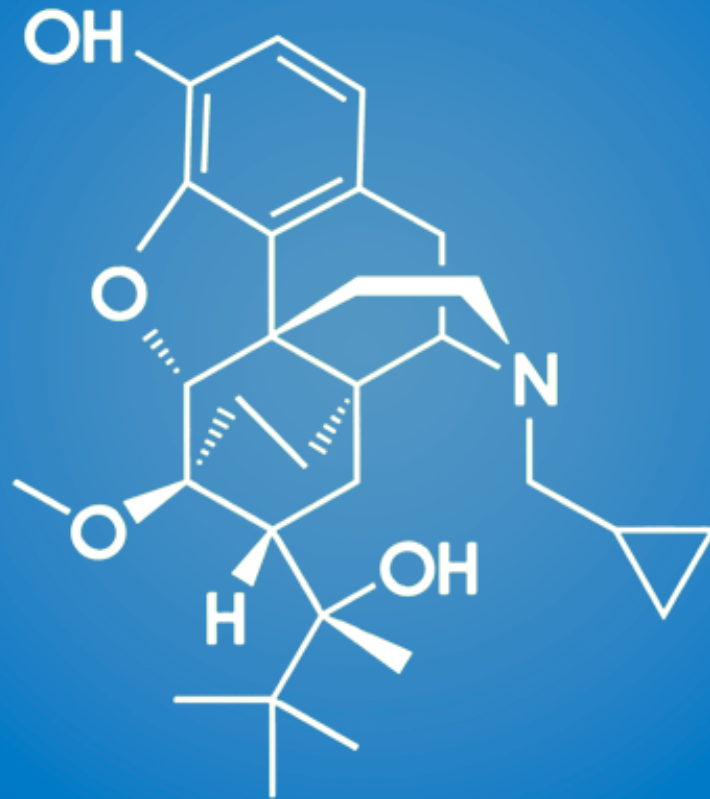
Day 36

☀ Discharged home with methadone 170mg

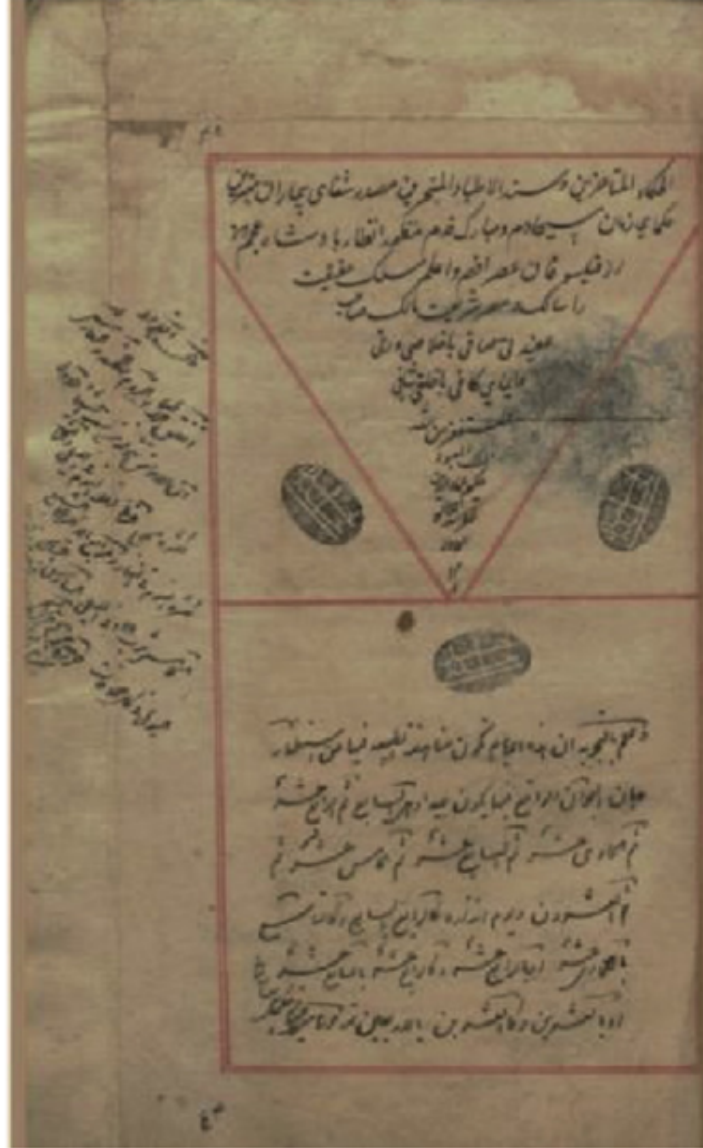
Case Takeaways

- ☀ Use of fentanyl gtt and other fentanyl agents in addition to methadone titration to address profound opioid tolerance
- ☀ Use of multiple layering adjuncts to address opioid withdrawal and alpha agonist withdrawal
 - ☀ Methadone, fentanyl, dexmedetomidine, ketamine, olanzapine, hydromorphone
- ☀ Balance of opioid tolerance and sedation, utilize RAS
- ☀ Complex ICU-level opioid withdrawal can take several days to resolve and is an essential start to recovery process

Buprenorphine Initiations



Afyunieh ~ 1500



Afyunieh ~ 1500

Method	script	Description
Increasing the time between doses	تعويق	Progressively spacing doses farther apart
Regular dose reduction	تقليل	Gradually lowering the amount of opium used
Substitution, then taper	تعويض	Replacing opium with another agent, then tapering that substitute

Increasing opioid potency = larger neuroadaptive hurdle

Relative potency (log scale, morphine = 1)



Increasing risk of fatal overdose with return to use after abstinence

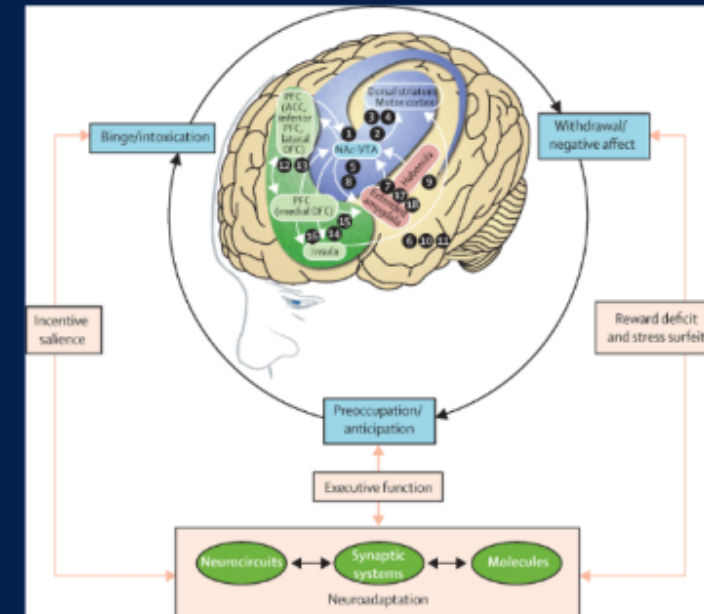
More extensive and more persistent neuroadaptations in reward circuitry and stress-tolerance systems



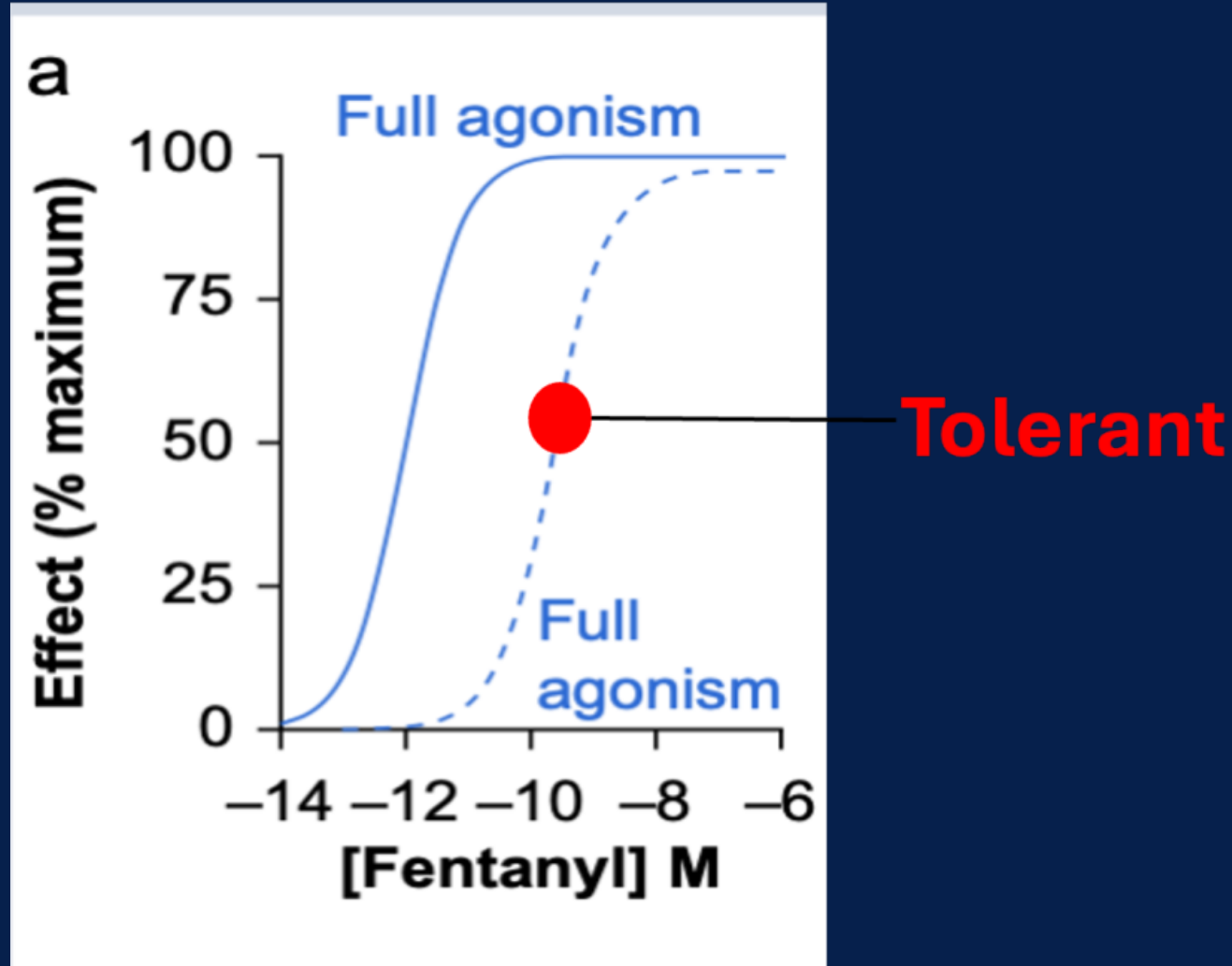
less extensive, more reversible

more extensive, more persistent

- ◆ Duration and magnitude of exposure drive adaption

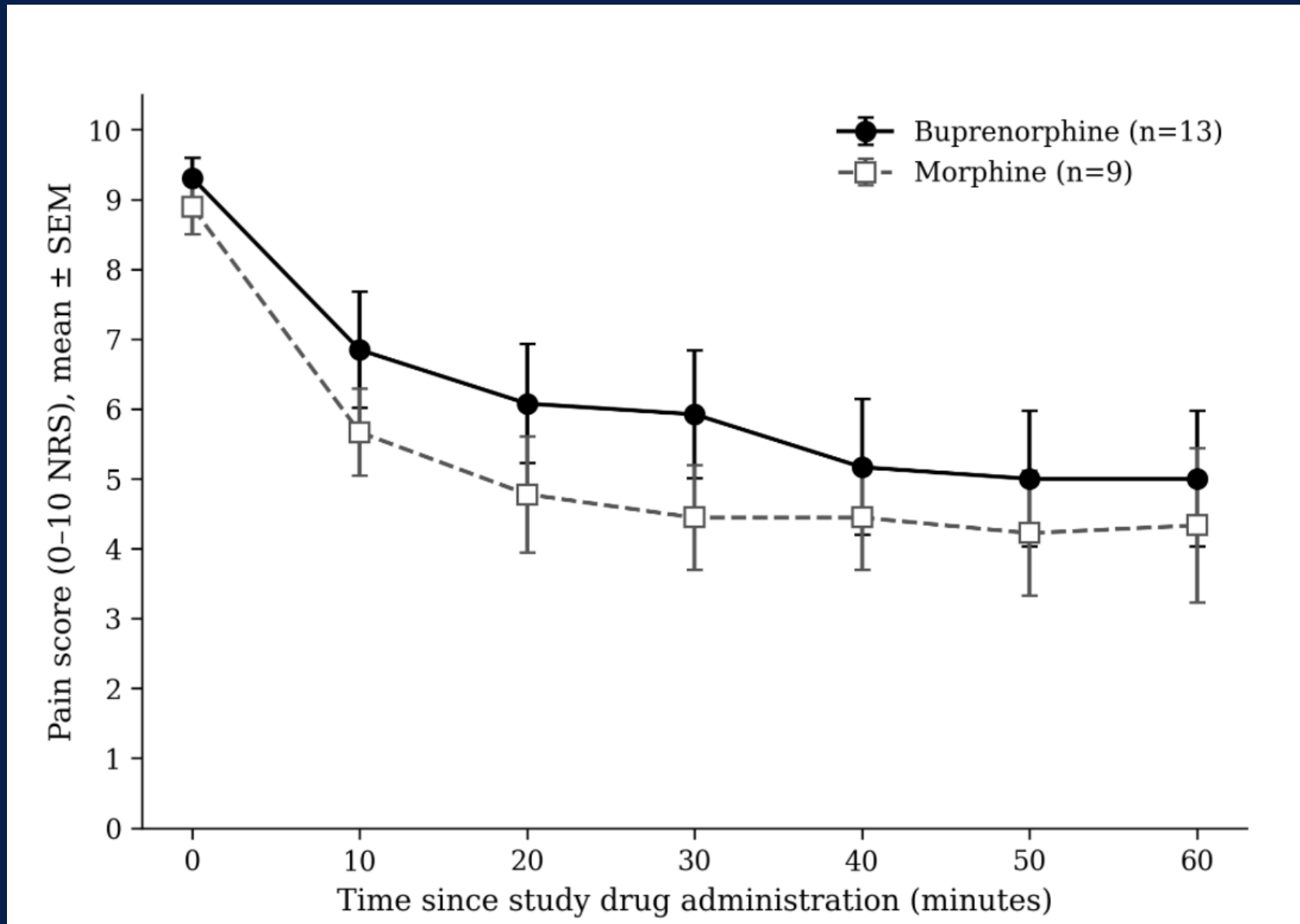


Full agonist

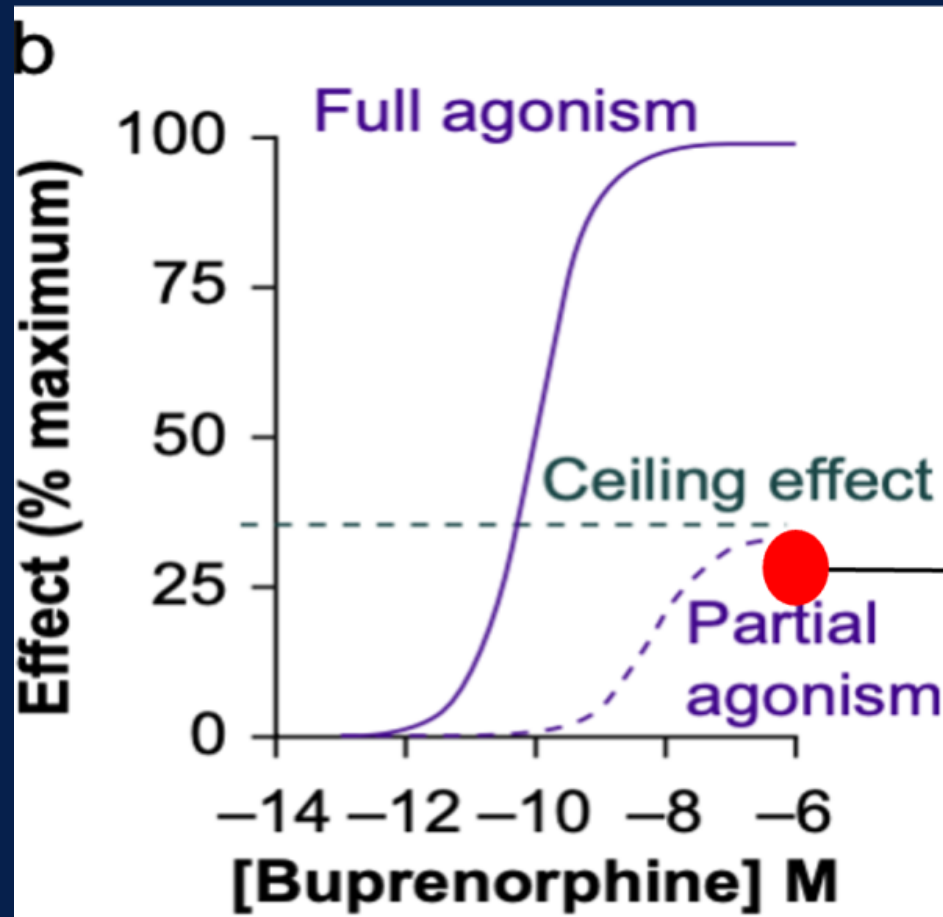


Samways, Damien SK. "Clarifying intrinsic efficacy, partial agonism, and full agonism: the case of buprenorphine." *British Journal of Anaesthesia* 132.2 (2024): 431-432

Buprenorphine: Normal Opioid Sensitivity



Buprenorphine in setting of tolerance



Tolerant

Tolerance

Interventions to recover opioid sensitivity

1. Abstinence + time
2. Partial agonist + full agonist
- 3. Antagonists**
4. Potentiators that accelerate tolerance recovery

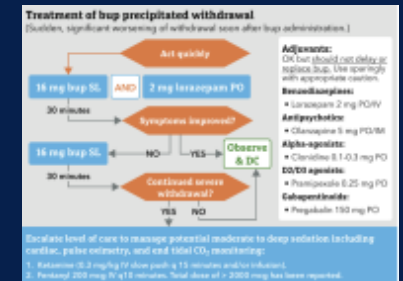
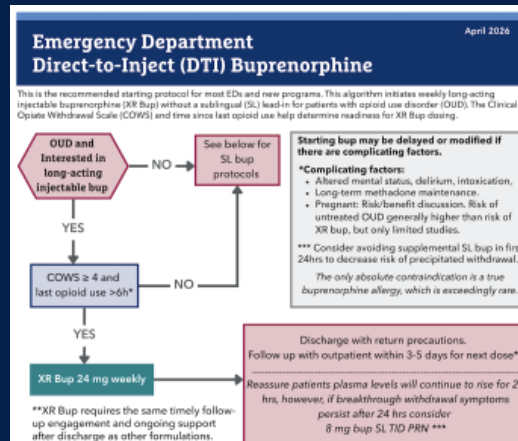
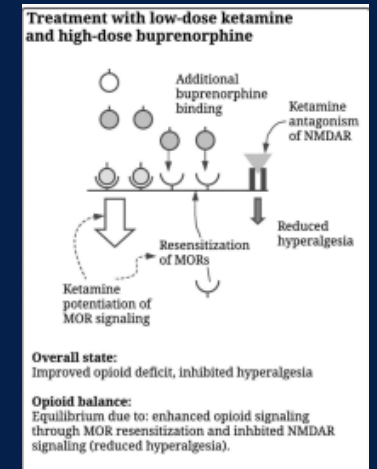
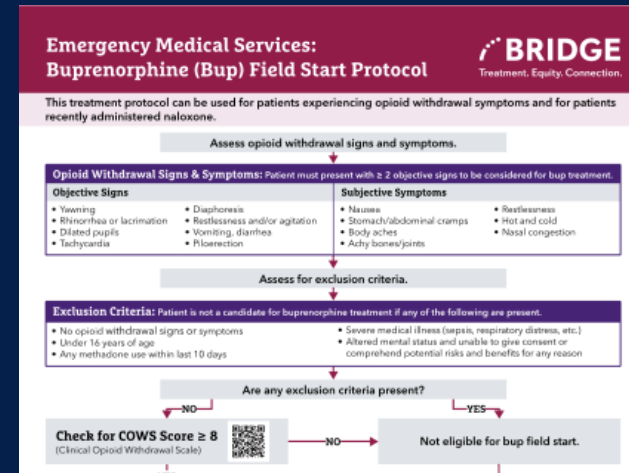
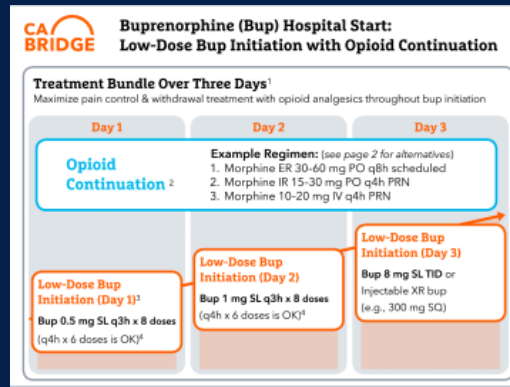
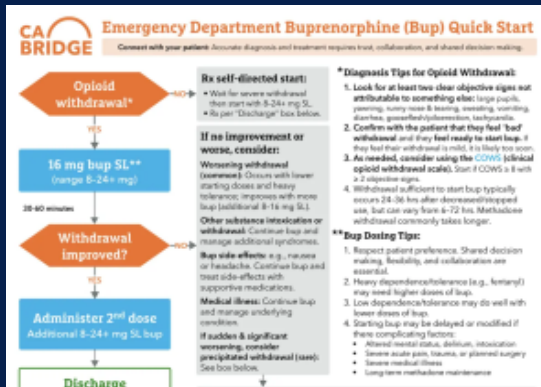
Interventions to recover tolerance

Abstinence + time

Partial agonist & full agonist

Antagonists (naloxone)

Potentiators (ketamine)



BUPRENORPHINE

(bupe, subs)

WHAT CAN BUPE DO FOR ME?

Reduces cravings and withdrawal



Protects against opioid overdose



Treats pain and stabilizes energy



You can pick buprenorphine up at a pharmacy like any other medication.

Buprenorphine can be tablets, films, or injections

SO YOU WANT TO TRY BUPE?

Would you consider an INJECTION?

YES

NO

Direct to inject



Once you're in mild withdrawal, you can start a weekly injection. After that first week, you can stay with injections or switch to films or tablets if you prefer.

How much WITHDRAWAL can you handle?



VERY LITTLE

I CAN TOUGH IT OUT

LOW dose tabs or films

Start bupe 1 week before stopping other opioids, either:

- 7 day: take bupe 2 times a day most days
- 4 day: take bupe 4 times a day

HIGH dose tabs or films

Stop opioids, then when withdrawal gets severe, start bupe and increase dose over 1-2 days.

Withdrawal (e.g., runny nose, body aches, nausea, etc.) is treatable. Make a plan with your provider.

High Dose is the only option

Treatment Bundle Over Three Days¹

Maximize pain control & withdrawal treatment with opioid analgesics throughout bup initiation

Day 1

Opioid
Continuation²

Low-Dose Bup
Initiation (Day 1)³

Bup 0.5 mg SL q3h x 8
doses
(q4h x 6 doses is OK)⁴

Day 2

Example Regimen: (see page 2 for alternatives)

1. Morphine ER 30–60 mg PO q8h scheduled
2. Morphine IR 15–30 mg PO q4h PRN
3. Morphine 10–20 mg IV q4h PRN

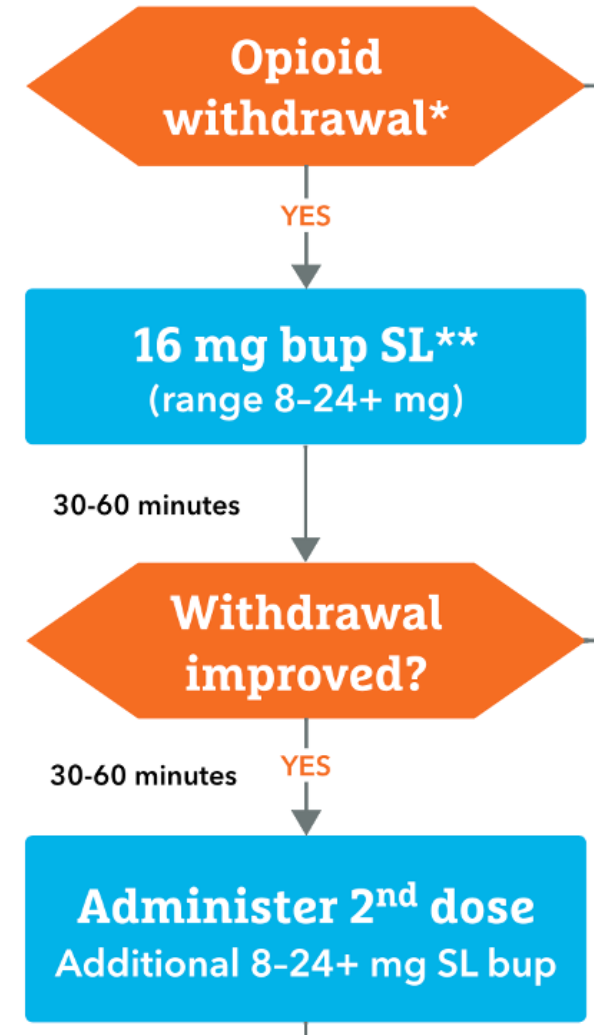
Low-Dose Bup
Initiation (Day 2)

Bup 1 mg SL q3h x 8
doses
(q4h x 6 doses is OK)⁴

Day 3

Low-Dose Bup
Initiation (Day 3)

Bup 8 mg SL TID or
Injectable XR bup
(e.g., 300 mg SQ)



Antagonists

Naloxone → Bup

Antagonists

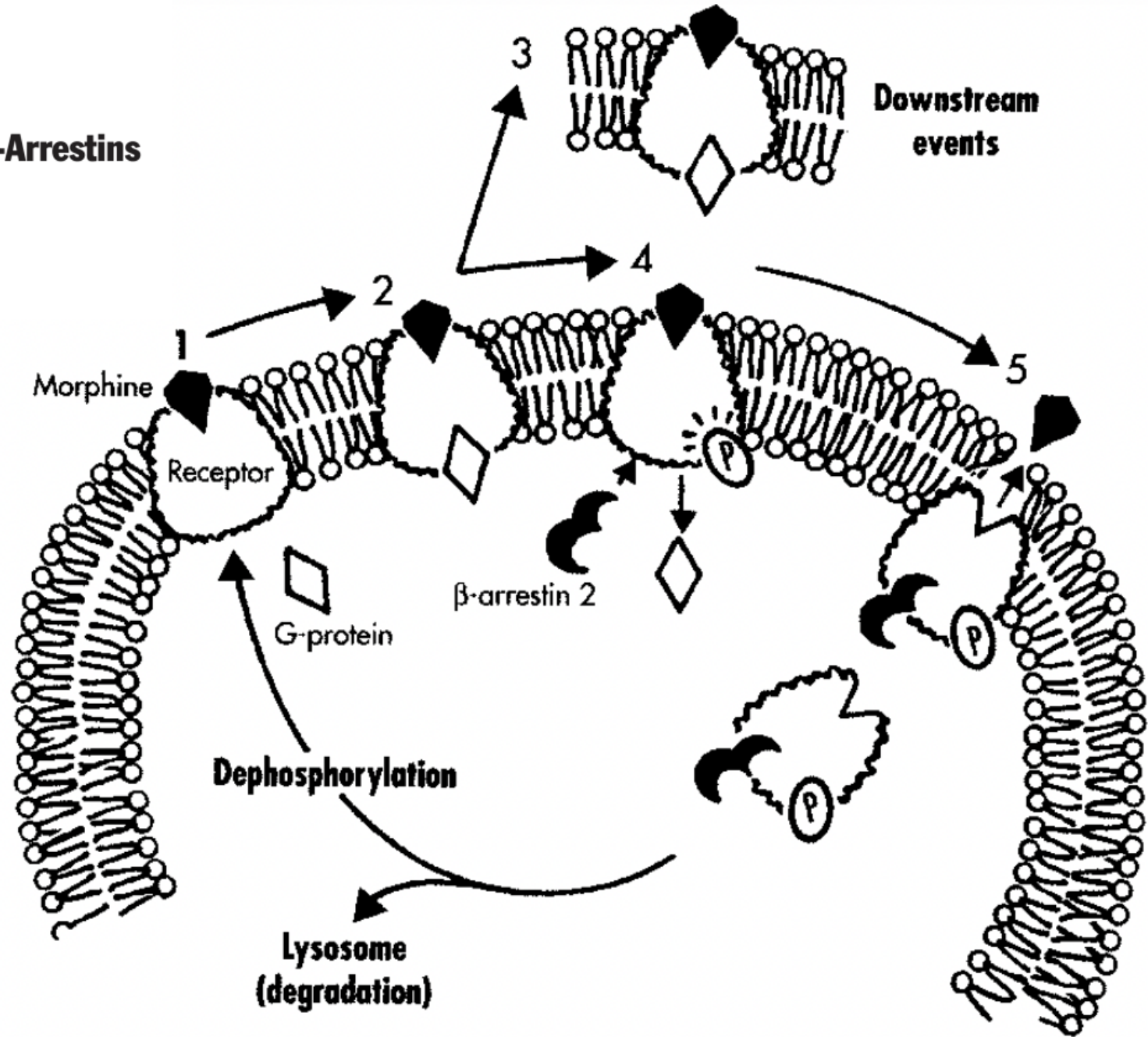
Why does naltrexone/naloxone precipitated withdrawal differ from buprenorphine precipitated withdrawal?

The Role of Opioid Receptor Internalization and β -Arrestins in the Development of Opioid Tolerance

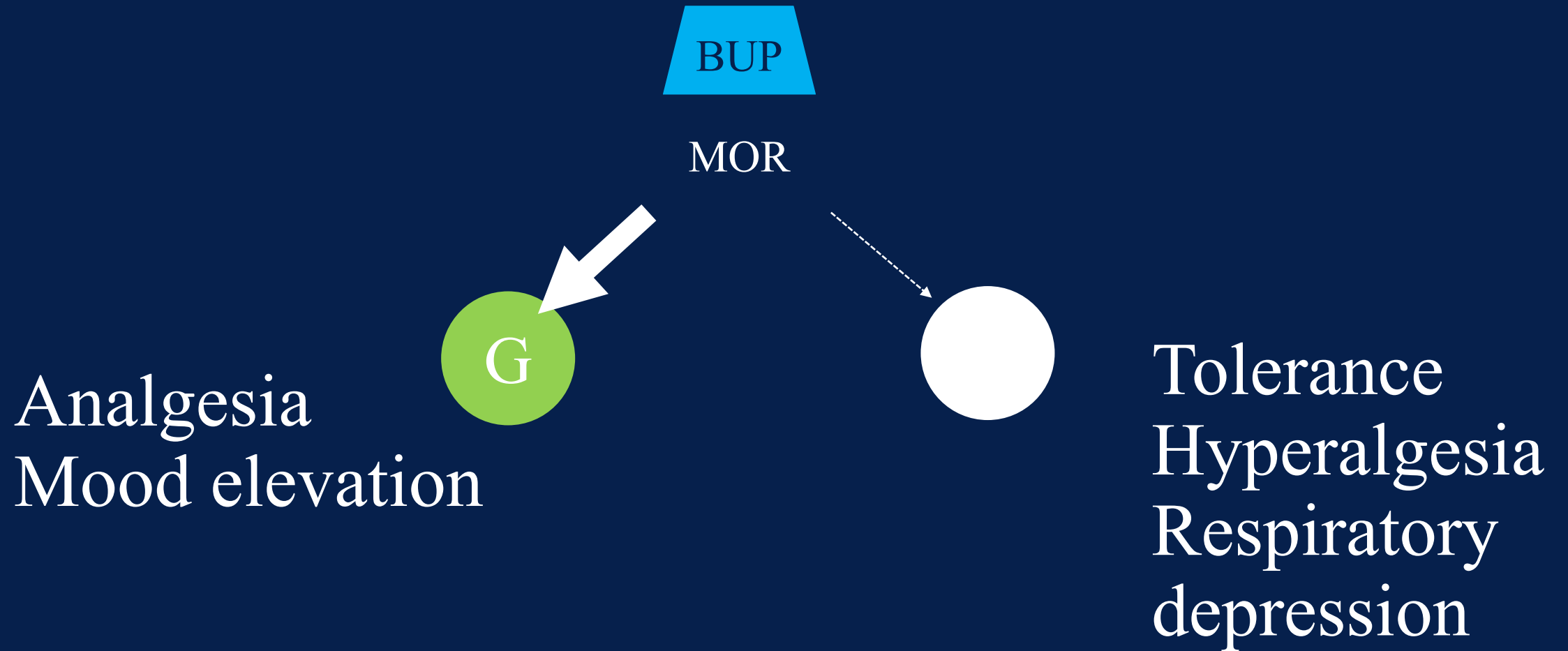
Zhiyi Zuo, MD, PhD

Department of Anesthesiology, University of Virginia, Charlottesville, Virginia

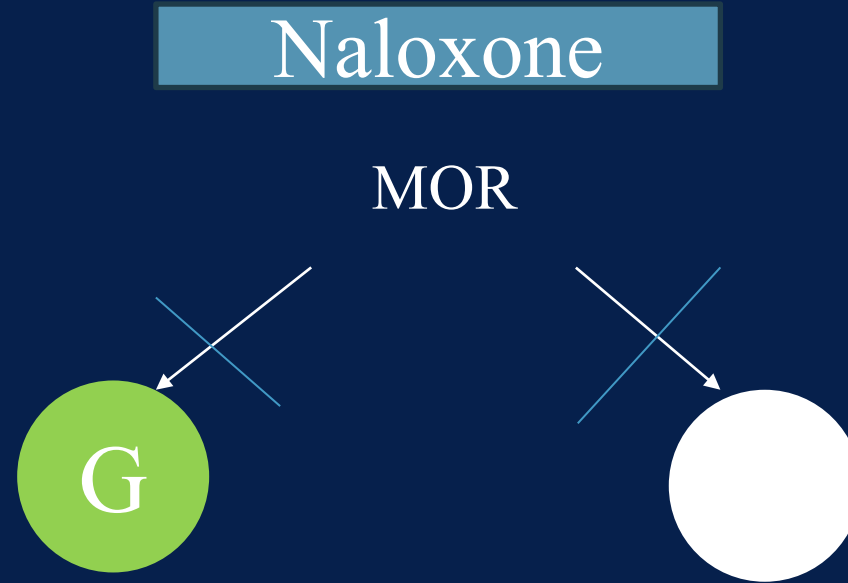
Zuo, Zhiyi MD, PhD. The Role of Opioid Receptor Internalization and β -Arrestins in the Development of Opioid Tolerance. *Anesthesia & Analgesia* 101(3):p 728-734, September 2005.



Buprenorphine has partial Beta-arrestin activity



Naloxone completely blocks Beta arrestin



Blockade of beta arrestin activity triggers more rapid Mu receptor traffic to membrane surface

Díaz, A., et al. "Regulation of μ -opioid receptors, G-protein-coupled receptor kinases and β -arrestin 2 in the rat brain after chronic opioid receptor antagonism." *Neuroscience* 112.2 (2002): 345-353.

Bohn, Laura M., et al. " μ -Opioid receptor desensitization by β -arrestin-2 determines morphine tolerance but not dependence." *Nature* 408.6813 (2000): 720-723.

Naloxone Reset

- ☀ *Rapid MOR dephosphorylation and recruitment of MORs to cell surface*
 - ☀ *Halts the desensitization/internalization cycle*
 - ☀ *Rapidly leads to c recovery of tolerance*
-

*Buprenorphine leads to incomplete recovery of tolerance.
Withdrawal severity may exceed the degree of recovery of tolerance.*



Huang P, Liu-Chen LY. Detection of the endogenous mu opioid receptor (mopr) in brain. Front Biosci (Elite Ed). 2009 Jun 1;1(1):220-7. doi: 10.2741/E21. PMID: 19482639

Buprenorphine Post-Overdose Case

1



OVERDOSE & REVERSAL

Pre-arrival

- Just discharged from inpatient methadone withdrawal program
- IV fentanyl 0.5 mg → opioid overdose
- 12 mg IN naloxone by bystanders
- Respirations and mentation restored

2



PRECIPITATED WITHDRAWAL

1315 — SUD observation unit

- N/V, headache, abdominal pain
- HR 102, BP 140/76
- Undecided on preferred MOUD

3



SYMPTOMATIC MANAGEMENT

1358 – 1528

- Acetaminophen + clonidine + dicyclomine
- Lorazepam 2 mg PO for residual anxiety
- GI symptoms improve; patient elects buprenorphine

4



BUPRENORPHINE & RESOLUTION

1629 – 1900

- SL bup/nx 16/4 mg — tolerated well
- Extended-release SQ buprenorphine 300 mg
- Symptoms fully resolved by 1900
- Vitals normalized (BP 108/57, HR 85)

Overdose to 30 day BUP



- Post-naloxone withdrawal is a clinical window for extended release BUP
- Same-day XR-buprenorphine provides ~30 days of coverage
- EMS partnerships with low-barrier programs can expand access

DTI Buprenorphine from Methadone

☀ *Off label, case series submitted*

DTI Buprenorphine from Methadone - Case

- ☀ 37 yo female w decades severe OUD in remission on 70 mg methadone
- ☀ Tapered from 120 to 58 in past with return to opioid use
- ☀ Dose increased to 70, one time fentanyl use 4 weeks prior, declines further dose optimization
- ☀ Tired of OTP, daily medication, attributes wt gain to MTD, false positive tox was demoralizing/lost take-homes
- ☀ Does not want to experience opioid withdrawal, but about to “walk off” clinic
- ☀ Hates the taste of SL bup

- ☀ Goal: transition off MTD to buprenorphine with “the shot”

Methadone to Buprenorphine transition

☀ Why?

- ☀ High desire by pts to taper off methadone for variety of reasons
 - ☀ High barrier structure of OTP
 - ☀ Inappropriate or misguided management or dosing
 - ☀ Symptoms/ side effects
 - ☀ Safety concerns or lack of access/discrimination

☀ How?

- ☀ First see if above can be addressed/remedied
 - ☀ Increase take homes, split dose, check and treat testosterone deficiency
 - ☀ [Legal Action Center | Addressing Discrimination in Health Care...](#)
- ☀ Educate, empower, partner
- ☀ Ensure patients have evidence base/meet with medical provider to make an informed decision

DTI Buprenorphine from Methadone: Sample shared decision-making documentation and dose guidance

MGH Substance Use Disorder Bridge Clinic

OUD: Patient requesting transition from methadone to extended-release buprenorphine. Patient counseled around methadone being one of our gold standard treatments for OUD. We reviewed and attempted to address any barriers to staying on methadone.

Despite counseling, patient elects to transition to extended-release buprenorphine. We discussed evidence for direct-to-inject buprenorphine is strongest for people with untreated OUD actively using non-prescribed opioids, and especially for individuals with at least a COWS of 4. Patient is not interested in staying on methadone or getting to COWS of 4, therefore we discussed the experimental option of methadone to weekly BUP-XR protocols that we have been piloting in the Bridge Clinic.

We reviewed that on the first night some people have mild to moderate symptoms, but rarely have we seen actual precipitated withdrawal. Anticipatory anxiety may be the worst symptom, thus we provided reassurance and discussed management strategies.

DTI Buprenorphine from Methadone: early experience

Direct-to-Inject Buprenorphine from Methadone: MGH Protocol

Basal Methadone \geq 80mg

Day	Methadone	Buprenorphine	Non-opioid
-1	Full dose	SL bup 0.5mg BID	
0	Full dose	SL bup 0.5mg QID	
1	Full dose	SC bup 8mg	clonidine 0.1mg TID PRN + clonazepam 1mg qhs or gabapentin 600mg TID
2	Full dose	SC bup 16mg	Clonidine 0.1mg TID PRN
3		SC bup 128mg or 300mg (prefer latter)	

Basal Methadone < 80mg

Day	Methadone	Buprenorphine	Non-opioid
1	Full dose	SC bup 8mg	clonidine 0.1mg TID PRN + clonazepam 1mg qhs or gabapentin 600mg TID
2	Full dose	SC bup 16mg	Clonidine 0.1mg TID PRN
3		SC bup 128mg or 300mg	

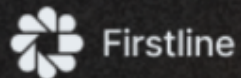
- n= 17
- Setting: low barrier bridge clinic, primary care
- OUD in remission, >1 mo continuous methadone
- Methadone dose: 24-120 mg
- Median length of methadone: 2 yr (2 mo -13 years)
- 94% (16/17) completed protocol
 - (15/16 received 2nd monthly)
 - 1/17 returned to MTD

Slow increase in weekly LAI BUP levels (peak 24 hr) facilitates gradual build up and reducing risk of POW vs. SL bup (quick serum peak 1 hr)

Evolving Outpatient Real World Experience: Lessons Learned

- ✦ Despite steps to lower barriers to methadone/optimize care in OTPs
 - ✦ many patients still wish to transition off and suffer
- ✦ Our practice has evolved by partnering with patients
 - ✦ Patients are terrified of withdrawal
 - ✦ SL Low dose buprenorphine-opioid continuation (LDB-OC) is complicated
 - ✦ Comfort meds *make a difference*
 - ✦ Transition better tolerated on lower methadone doses
 - ✦ More to learn...
- ✦ We need to double down on efforts to reform methadone care and delivery

The protocols are
only useful if they're
in your hands when
it matters.



See it in action →



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