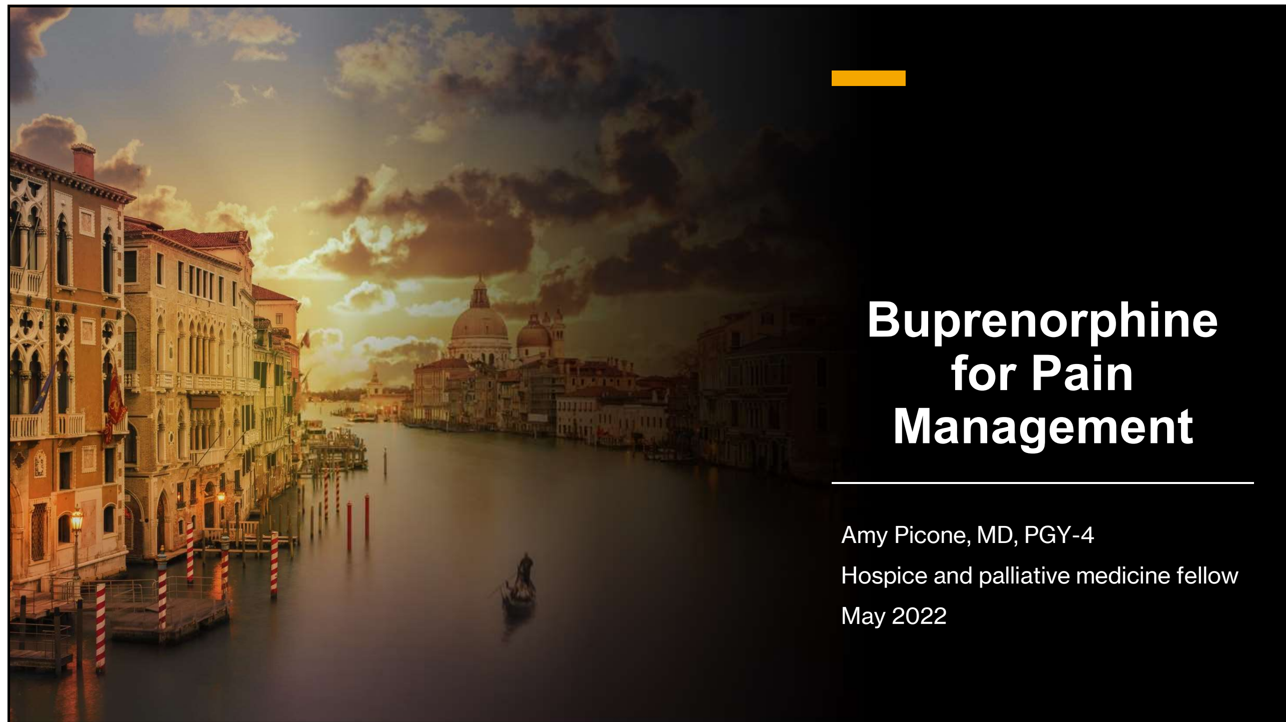

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Outline

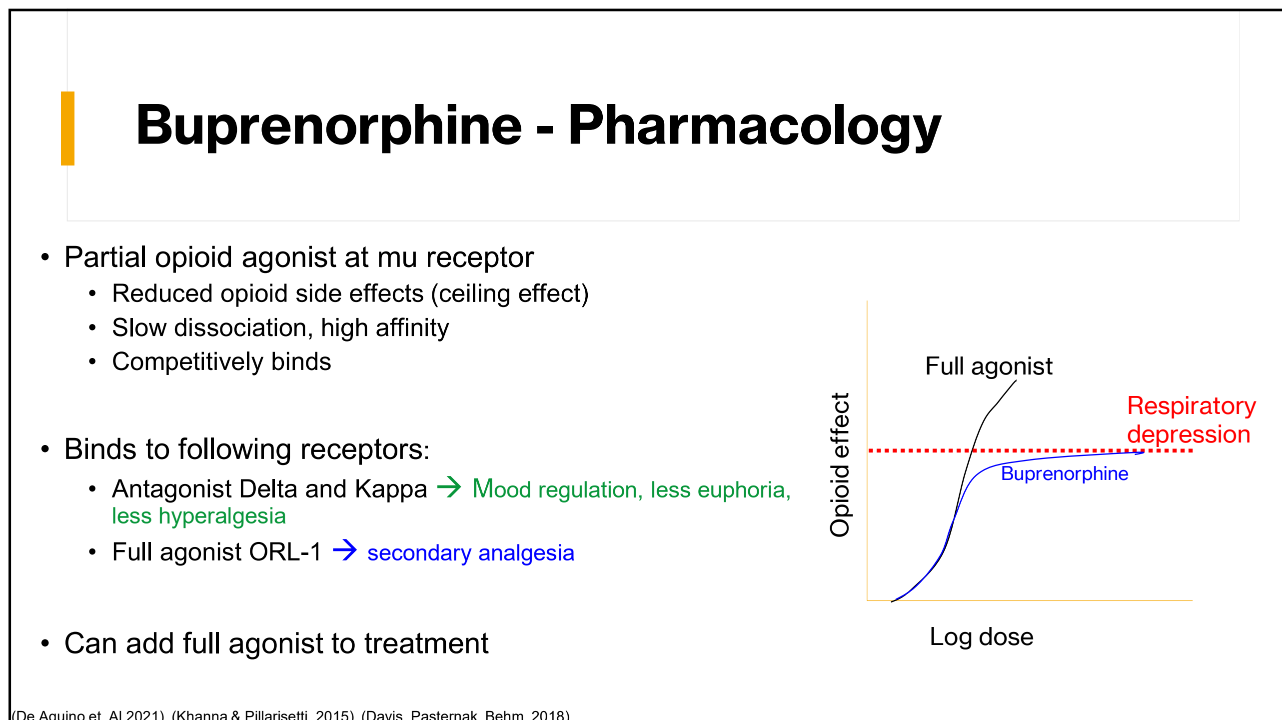
1. Discuss Buprenorphine basics
2. Review standard induction method
3. Review low dose induction method
4. Discuss resources

2

When Treating Pain

- Weigh harms and benefits
- Opioid pandemic
- Whose job is it?

3



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Current Studies

- Buprenorphine compared to placebo or full agonist opioids:
  - Non-inferior
  - Less side effects than full agonists
  - Effective alternative for patients with cancer related pain with or without opioid use disorder
  - Multiple routes - Beneficial

Wolff et. Al 2012; Pace et al. 2007; Aurilio et al. 2009; (Naing, Aung, Yeoh 2014) Ahn et al 2017; Choudhury et al 2018; Moryl et al. 2020; Hirsch et al. 2021)

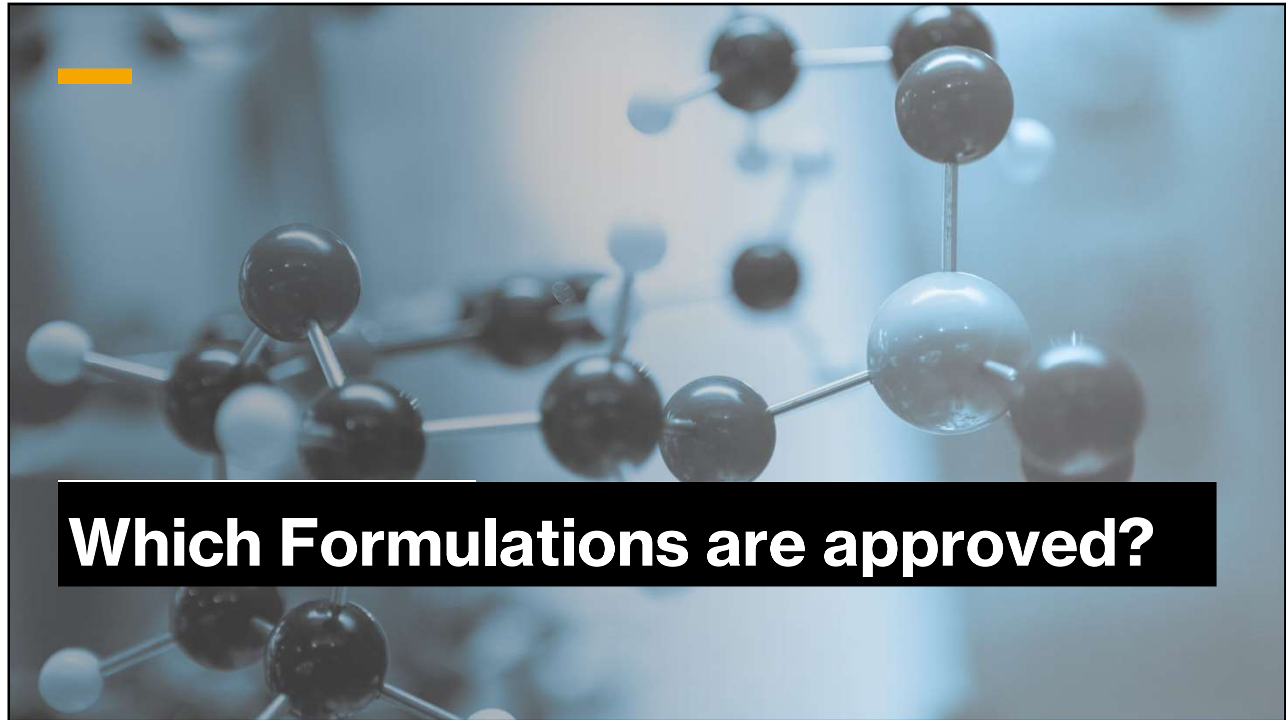
5

Buprenorphine – Why?

- Use in patients with:
  - Renal impairment (dialysis does not affect plasma clearance)
  - Liver impairment
- Signs or symptoms of opioid use disorder
- Safe in elderly
- Respiratory ceiling
- Help with mood stabilization, pain control
- Multiple Routes, long-term opioids
- Less QT change

(Davis, Pasternak, Behm, 2018)

6



7

Chronic pain

Buprenorphine transdermal (BUTRANS)

- Approved use 2010
- Moderate to severe pain

Buccal film (BELBUCA)

- Approved 2015
- Moderate to severe pain

Buprenorphine IV/SQ (BUPRENEX)

- Approved use 2002
- Moderate to severe pain

U.S. Department of Health & Human Services
FDA U.S. FOOD & DRUG ADMINISTRATION

8

Dosing and Formulations

Butrans– Transdermal patch

- 5-20mcg/hr Q 7 days
- Half life: 26 hours (12-36h), steady-state 48 hours
- 3 day patch: Half C_{max} 12-24h, C_{max} 60h
- 7 day patch: C_{max} 72h

Belbuca – Buccal Film

- 75mcg – 900mcg Q 12-24 hours
- Half life: 22.6 - 27.6 hours
- Steady state reached at 72 h
- Peak plasma concentration ~1 hour

Buprenex –Intramuscular / Intravenous

- 0.3 mg Q 6 hours
- Peak at 1 hour
- Effects occur 15minutes after IM and persist 6 hours

(Jones, Merlin 2021; Davis, Pasternak, Behm 2018 ; Kumar, Viswanath, & Saadabadi, 2017; Childers, Lou, Arnold 2020)

9

Opioid Use Disorder

- Generic Buprenorphine/naloxone sublingual tablets
- Buprenorphine sublingual tablets (Subutex)
- Buprenorphine/naloxone sublingual films (Suboxone)
- Buprenorphine/naloxone) sublingual tablets (Zubsolv)
- Buprenorphine/naloxone buccal film (Bunavail)
- Buprenorphine implants (Probuphine)
- Buprenorphine extended-release injection (Sublocade)

10

Chronic pain- off label

SL tablets Buprenorphine / naloxone (Zubsolv)

SL Buprenorphine / naloxone (Suboxone)

X-Waiver needed if prescribing for opioid use disorder

11

Patient Case

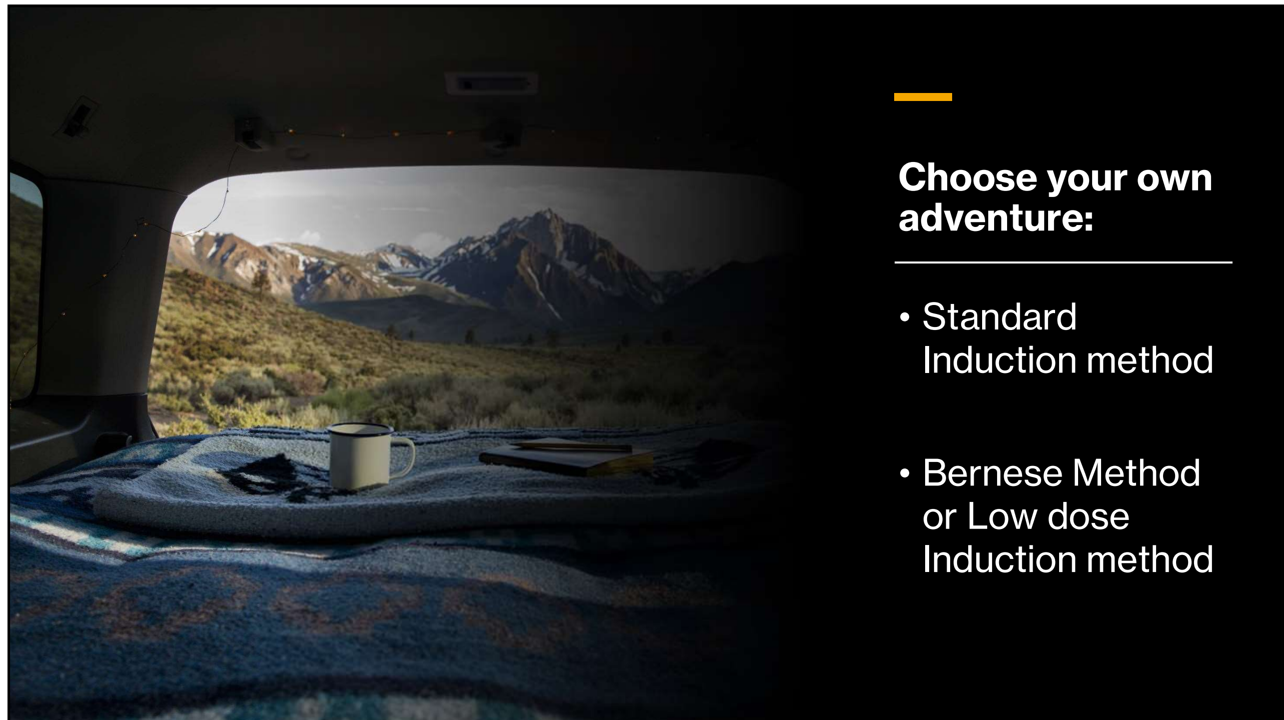
- 26-year-old male with rectal cancer who uses heroin. Chart review: Lost his job due to heroin, craves heroin, and uses even when not in pain. He uses more now than he did before. He uses despite knowing that it may kill him. PMH: Obesity.
- Social history: Lives with mother. Not working. No tobacco or alcohol use.
- Rectal pain – sharp, pulsating and diagnosed with rectal cancer 3 months ago. Oncology wants to start patient on chemotherapy.
- Patient is in severe pain. UDS + Morphine and hydromorphone. He has 12 tablets left of home 5mg morphine pills. He says he ran out of money for heroin. Doctor please help me with my pain.

12

What would you do next?

A. Start Buprenorphine once in withdrawal
B. Start Buprenorphine now
C. Start methadone
D. Call palliative psychiatry
E. Call palliative care

13



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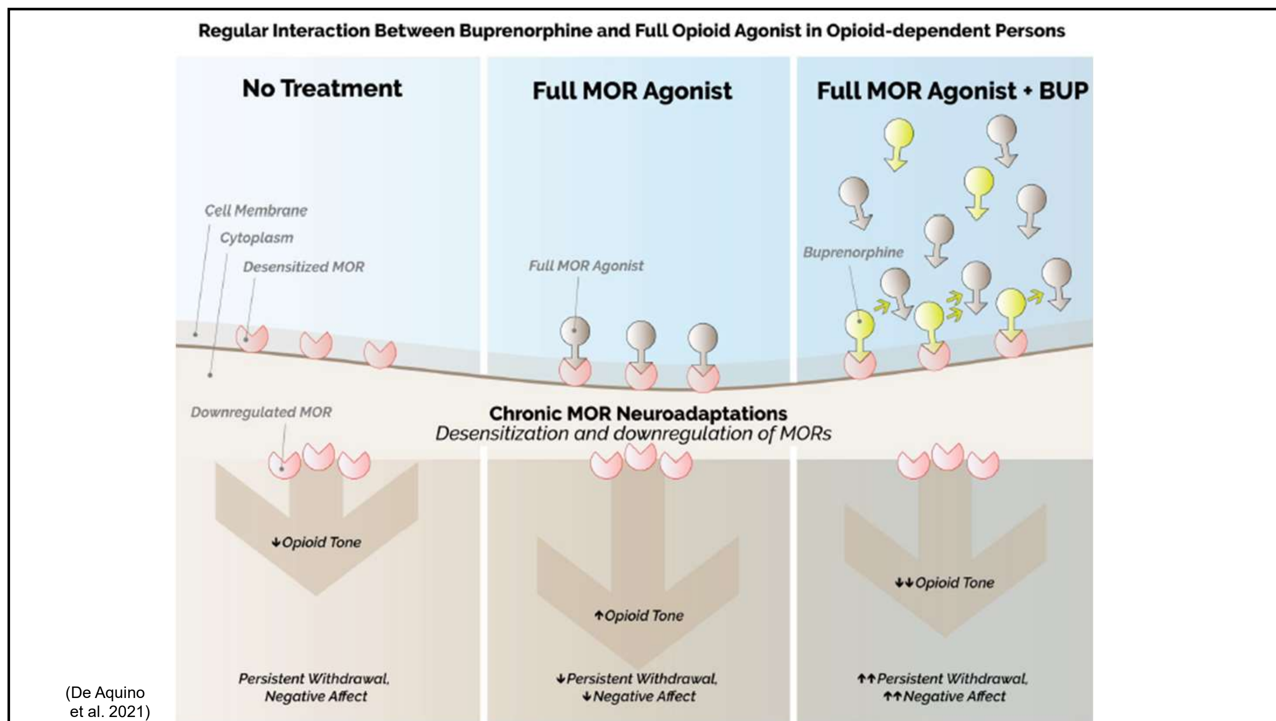

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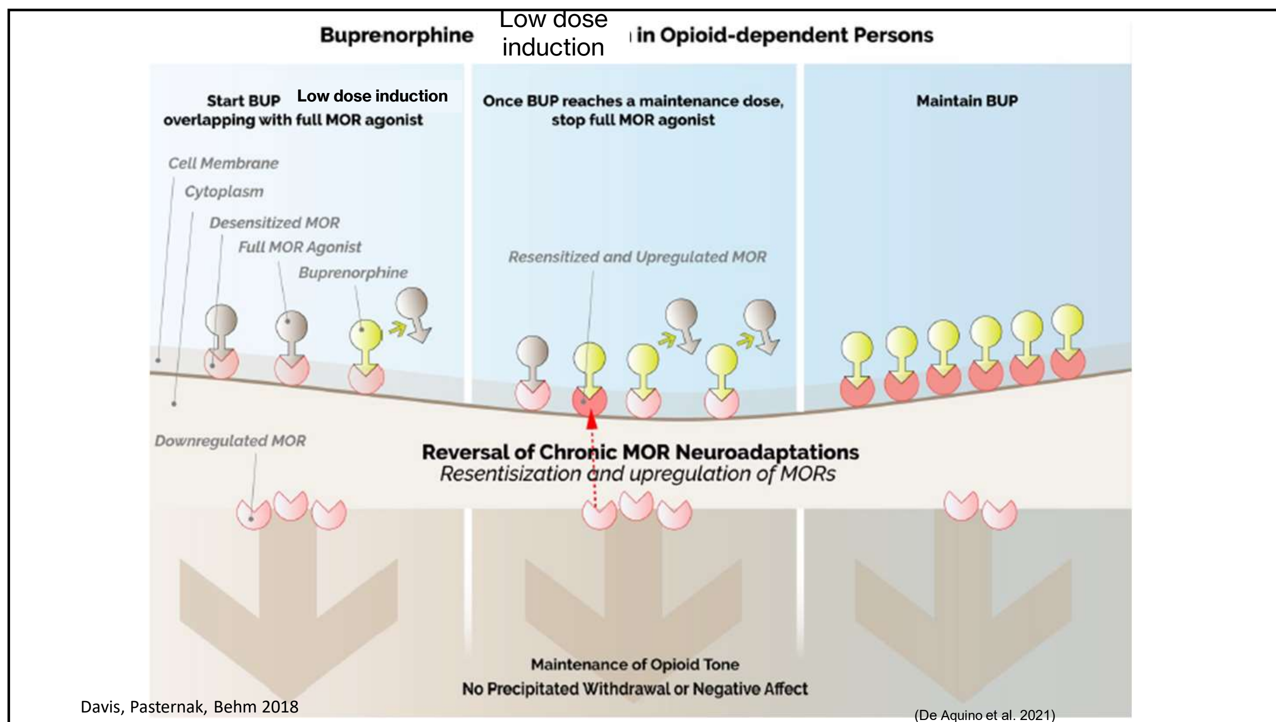

16

Standard Induction

Day 1: Patient in Withdrawal

- Start 4mg dose tablet Buprenorphine/Naloxone
- Wait 3 hours and assess
- Wait 6-12 hours and assess

DO NOT TAKE > 12mg on the first day!

(Ho, Childers, Weimer, Fitzgerald, & Merlin 2022)

17

Standard Induction continues

- Day 2:
  - Dose depends on yesterday's dose

- No withdrawal with 24h dose= today's dose
- If 4mg + withdrawal
  - Start 8mg and reassess

- If 8mg + withdrawal
  - Start 12mg dose and reassess
- If 12mg + withdrawal
  - Start 16mg dose and reassess

(Ho, Childers, Weimer, Fitzgerald, & Merlin 2022)

18

Standard Induction Summary

- Day 1:
  - Takes **4mg** in AM
  - After 3h another **4mg**
- Day 2:
  - Takes **8mg** in AM
  - After 3 hours, another **4mg**

Day 3:
12mg in AM

Day 4:
Felt groggy, reduced dose to **8mg** in AM
No cravings, minimal pain

19

Low Dose Induction

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Buprenorphine dose	0.5mg	0.5mg BID	1mg BID	2mg BID	4mg BID	4mg TID	8mg BID
Film size	2mg	2mg	2mg	2mg	2mg	2mg	8mg
Morning	¼ film	¼ film	½ film	1 film	2 films	2 films	Whole film
Afternoon						2 films	
Evening		¼ film	½ film	1 film	2 films	2 films	Whole film
Full agonist	Same dose	Same	Same	Same or taper down	Same or taper down	Same or taper down	Same or taper down

(Ho, Childers, Weimer, Fitzgerald, & Merlin 2022)

20

Alternative Low Dose Inductions – Buprenorphine/Naloxone tablets or films

Schedule	Total dose	Full Agonist Opioid	Withdrawal
Day 1	0.5mg	No change	none
Day 2	0.5mg BID	No change	None
Day 3	1mg BID	No change	None
Day 4	2mg BID	No change	None
Day 5	2mg TID	No change	None
Day 6	4mg TID	No change	None
Day 7	Per provider	Taper by 25% weekly	None

(Robbins, Englander, & Gregg 2021)

21

Low Dose Induction Considerations

- Use strips not pills
- Follow-up every 1-2 days before stopping full agonist
- If withdrawal occurs, repeat last day's dose for more days
- **Slow down** protocol
- Use Clonidine 0.1mg Q6h PRN withdrawal symptoms

(Ho, Childers, Weimer, Fitzgerald, & Merlin 2022)

22

Pros and Cons- Buprenorphine

- Pro
  - Less withdrawal symptoms
  - Respiratory distress ceiling
  - Safe in organ dysfunction/failure
  - Treating any opioid misuse concerns or diagnoses
  - Patient centered approach
  - Can continue full agonist
- Con
  - Less physician comfort and familiarity with Buprenorphine
  - Cost
  - Insurance barrier
    - Easy - Prior auth!

23

X-Waiver Information

- Easy!
- https://getwaivered.com/resources/
- Fill in information – Certifying training criteria: select other
  - Date Field: type "utilize training exemption to treat < 30 patients (MD/DO can do type this in the city field)"
- If you would prefer to take the course – it's excellent!

24

Final points

Buprenorphine is a safe alternative for certain patient populations

Induction methods are patient and provider dependent

Learn what formulations are at your institution

25

Final Thoughts

- Learn more about Buprenorphine
  - Get X-waivered
  - Know your resources!
  - CAPC modules
  - GeriPal Podcast April 14, 2022 – Buprenorphine Use in Serious Illness: A podcast with Katie Fitzgerald Jones, Zachary Sager and Janet Ho
  - Free one hour course: https://elearning.asam.org/products/buprenorphine-mini-course-building-on-federal-prescribing-guidance#
  - QR CODE: https://padlet.com/kfitzgerald118/pbrl241qci5yompo

26

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28

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