Clinical Pharmacist with a DEA License: Efforts to Increase Access to Buprenorphine in a Veteran Population

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North Florida/South Georgia Veterans Health System (NF/SG VHS)

AUG 2024

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DISCLOSURE

- I have no personal fiduciary conflicts of interest
- I work full time for the North Florida/South Georgia VA Health Care System
- The views expressed in this presentation are solely my own and do not necessarily reflect the position or policy of the Department of Veterans Affairs, the United States government, or any university or organization
- Off label use of buprenorphine/naloxone for pain is discussed

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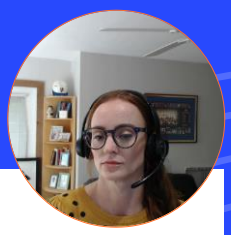
AGENDA

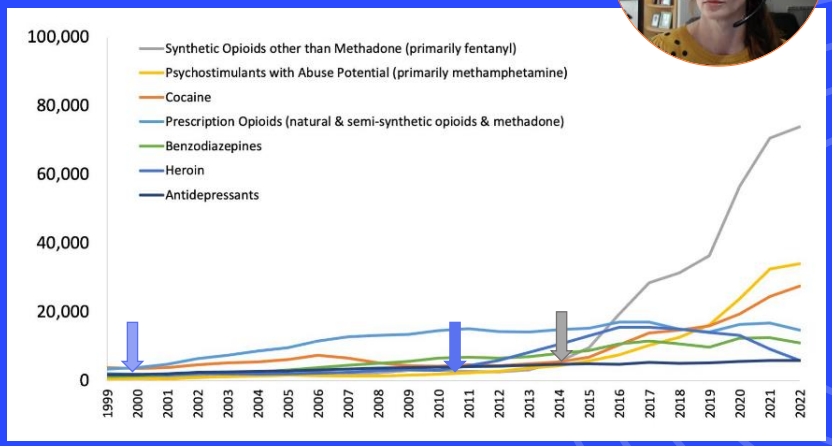
- Define the evolving opioid epidemic
- Introduce CPP as a mid-level provider(MLP) with potential for DEA privileges
- Discuss my prescribing patterns since licensure
- Overview key buprenorphine pharmacology and pharmacokinetics
- Provide data on 4-week prospective look at Pain CPP buprenorphine induction clinic
- Discuss specific cases involving DEA licensed pain CPP safely and effectively managing
    1. Buprenorphine/naloxone home inductions for opioid use disorder
    2. Opioid rotation from full mu agonist to buprenorphine for chronic pain
    3. Off label use of buprenorphine products at mg doses for complex pain

DRUG OVERDOSE DEATHS



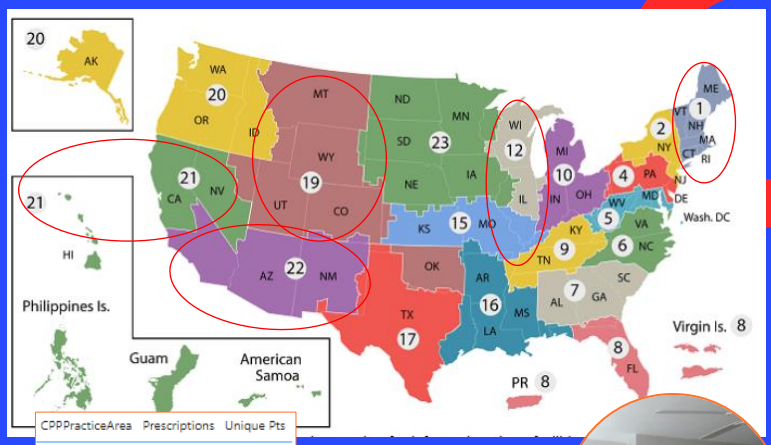
Three waves of opioid epidemic

- Wave 1: rise if **prescription opioid** overdose deaths started in late 1990s
- Wave 2: rise in **heroin** overdose deaths started in 2010
- Wave 3: rise **in synthetic opioid** overdose deaths started in 2014



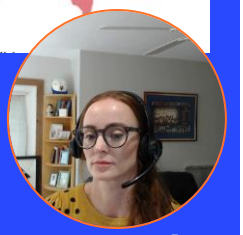
Accessed June 2024: Drug Overdose Death Rates | National Institute on Drug Abuse (NIDA) (nih.gov)
Lancet 2022 Feb 5;399(10324):555-604.

	DEA licensed CPP
VISN 1	★ 21
VISN 2	9
VISN 4	4
VISN 6	18
VISN 7	9
VISN 8	1 (2023)→3 (2024)
VISN 9	18
VISN 10	10
VISN 12	★ 28
VISN 15	10
VISN 16	4
VISN 17	4
VISN 19	★ 28
VISN 20	17
VISN 21	★ 24
VISN 22	★ 25
VISN 23	17



CPPPracticeArea	Prescriptions	Unique Pts
	44,167	9,774
MH	27,229	4,121
MH/SUD	1,128	216
PACT	498	213
Pain	27,520	3,963
Pain/MH	1,562	130
Palliative Care	16	7
SUD	12	8
SUD/Pain	3,693	507
Total	**105,825**	**17,229**

VISN-veterans integrated services network; CPP-clinical pharmacist practitioner



COLLABORATIVE PRACTICE AGREEMENTS (CPA)

- Written agreement between a physician and pharmacist which allows the pharmacist to provide specific patient care services
  - Agreement is specific to an individual physician and pharmacist
- ALL 50 states now recognize CPAs
  - Differences between continuing education requirements, liability insurance, and documentation of services
- No nationally recognized standardization
- 10 states recognize pharmacists as midlevel practitioners and allow for prescribing of controlled substances

1. California
2. Idaho
3. Massachusetts
4. Montana
5. New Mexico
6. North Carolina
7. Ohio
8. Tennessee
9. Utah
10. Washington

TIMELINE AND COST FOR OBTAINING DEA

7/31/23 – told by VISN & local leadership ok to *voluntarily pursue* DEA license

8/1/23 – opened application for Ohio license $341, NABP license transfer $400

8/2/23 – mailed fingerprints including separate checks for $22, $25.25 – unable to do WebCheck in Ohio so paying for background check/processing of prints

8/10/23 – notified materials received and scheduled by Ohio BoP for virtual session in Sept

9/12/23– 4hr virtual session on Ohio law.

9/15/23– emailed by Ohio BoP my Ohio license number & congratulations

9/18/23– applied for federal DEA, including self certify 8 hr opioid/sud training

9/28/23– received DEA license via email

9/29/23- updated scope

10/25/23- recredentialed and new scope of practice approved

11/1/23- CPA updated & officially able to order CS in electronic chart

Section 1263 of the Consolidated Appropriations Act of 2023 requires that beginning June 27, 2023, practitioners applying for a new or renewed Drug Enforcement Administration (DEA) registration will need to attest to having completed a total of at least 8 hours of training on opioid or other substance use disorders, as well as the safe pharmacological management of dental pain.

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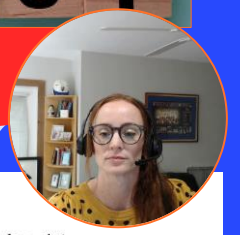
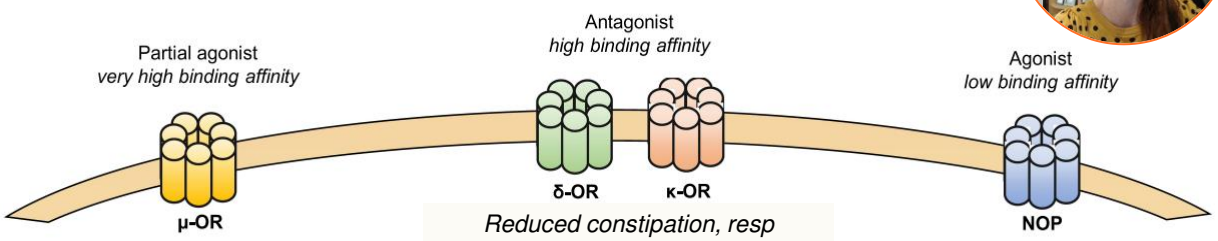
PHARMACOKINETICS



- Partial mu agonist, kappa & delta antagonist, NOP agonist
- Poor oral bioavailability
- Metabolized in the liver by CYP3A4
- Excretion: urine (30%), feces (70%)
- Slow dissociation: long half life

J Pain Res 2021 May 24;14:1359-69.



Potent analgesia
Ceiling effect on resp depression and euphoria
Reduction of adverse effects

Reduced constipation, resp depression, dysphoria, and substance abuse

Spinal analgesia
Limited tolerance

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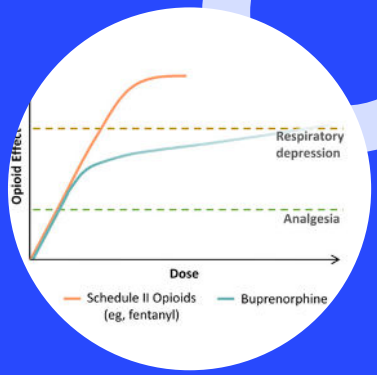
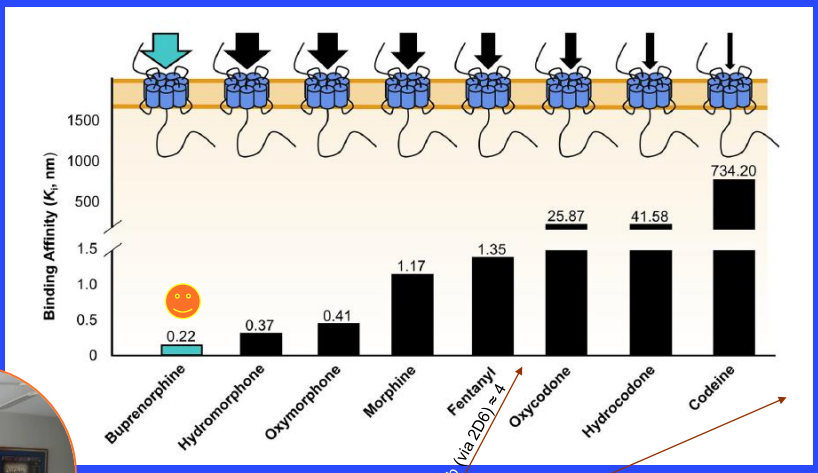
Ceiling effect??

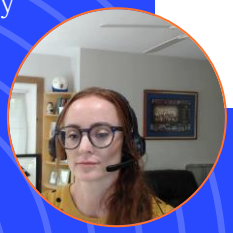


Biomolecules. 2021 May 31;11(6)816
Br J Anaesth 2006;96(5):627-32.

PHARMACOKINETICS

Low k corresponds to high **binding affinity** but does not necessarily translate to greater receptor activity

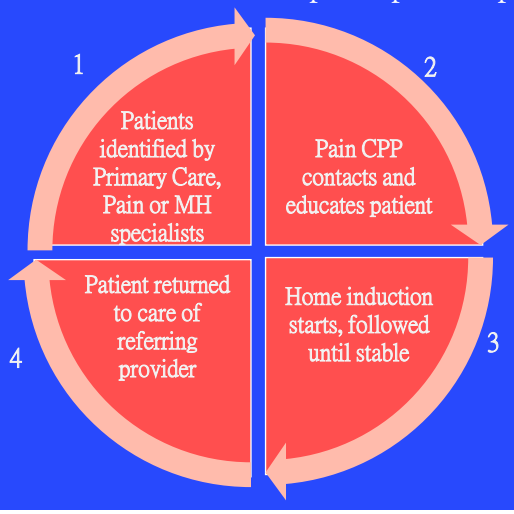




Pain Ther. 2020;9:41-54.

PAIN CPP LED HOME INDUCTIONS

- For opioid use disorder or complex opioid dependency



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DESCRIPTION OF SERVICE

- Buprenorphine home induction consult service with specialty pharmacist management prescribing MAT for patients diagnosed with opioid use disorder, opioid abuse or opioid dependence
- Introductory phone call made to veteran to introduce service, provide preliminary education and obtain consent for enrollment Written information subsequently mailed on buprenorphine and its management of OUD and pain.
- Home induction then began at Pain CPP discretion with goal of returning to referring provider care once on stable dosing.
- All prescriptions written and signed for by Pain CPP during induction and initial weeks gaining stability. Pain CPP also orders necessary labs for follow-up.

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FOCUSED REVIEW

- Prospective as four-week rotation with psychiatric pharmacy resident
- 14 home inductions completed
  - Majority referred from primary care pain MD from aberrant drug testing dashboard

DEMOGRAPHICS

- Age: 62 years
- Sex: 100% Male
- Race
  - 64% Caucasian
  - 36% African American

PRIOR OPIOID USE

- OXYCODONE 62%
- TRAMADOL 7%
- HYDROCODONE 31%
- FENTANYL IV 7%
- BUPRENORPHINE 23%

(31% combination drug use)

DIAGNOSIS

- Opioid use disorder 50%
- Opioid dependence 50%
- Both diagnoses: 36%

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HOME INDUCTION TOLERABILITY

REPORTED SIDE EFFECTS

- Lethargy (2)
- Insomnia (1)
- Bad taste (1)

PRECIPITATED WITHDRAWAL

- Nausea, dysphoria, emesis (1)

UNRELIEVED WITHDRAWAL

- (1) pt declined further dosing

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HOME INDUCTION DOSING

- Average dose of prior illicit med use was 25mg oral morphine equivalents/day
- Considering patient population (older) and reported opioid use, nearly all patients were induced on 2/0.5mg SL tablet
- All patients were called within 90min of first dose to assess for any precipitated withdrawal and then again later in afternoon
  - Average total buprenorphine dose on day 1 = 6mg (4-12)
  - Average total buprenorphine dose on day 2 = 10mg (8-16)

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CASE 1

- 66yo WM voluntarily presenting to ED requesting "detox", who mentioned SI involving OD by fentanyl due to life stressors. He has h/o leg injury roughly 10yrs prior with medial and lateral plating in left tibia and subsequent femur fracture 2019. He relates opioid issues began after first fall and being "cut off" due to "dirty" drug test (cannabis). He reports use of high-dose illicit oral hydromorphone until recent switch to fentanyl for cost. Of note, wife of 30 years died unexpectedly in last month.
  - Admitted to inpatient psychiatry unit
  - Declined Suboxone per psychiatry notes, stating did not like how he felt on it when used years prior
  - Discharged 7 days later with IN Narcan

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CASE 1 CONT.

- Contacted pt 2/14/24
- Agreed to Suboxone induction within minutes
  - Clarified overdose and suicidal ideation concern
  - Identified why he was resistant to Suboxone
  - Offered observed, in-office induction, but reported no opioid use in 10+ days
- F2F appt a few weeks later
  - Obvious need for help with pain mgmt.
    - Misconceptions re:requirements for corrective hardware surgery
    - Consults placed
      - Pain psychology
      - Ortho

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CASE 1 CONT.

- Titrated Suboxone to 8/2mg SL q6h
- Ortho offered surgery
  - We met leading up to surgery to ensure compliance, coordinate appropriate Suboxone dose reduction perioperatively
  - Imperative Suboxone continued perioperatively but he should still receive post-op pain management with full mu opioids for acute pain
- Pt ultimately desires to be off all medications
  - Counseling on early remission period – continued support
  - "You saved my life"

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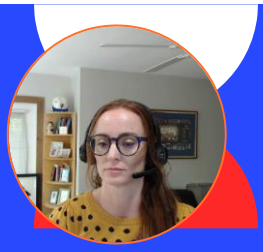
FENTANYL ABUSE



OUD TREATMENT GOAL

1. Eliminate negative reinforcement by suppressing opioid withdrawal symptoms and craving that can lead to illicit opioid use
2. Eliminate positive reinforcement by blocking the euphoric and motivational (drug-seeking) effects of illicit opioid use
3. Eliminate the toxicity of illicit opioid use by blocking its respiratory depression and associated overdose harm

TARGET DOSE?

- Higher doses needed to protect against overdose toxicity
  - Apnea from fentanyl infusion was completely suppressed at buprenorphine steady state plasma concentration of 5ng/ml (= 32mg/day SL bup)
- Higher doses seem to result in more consistent adherence to treatment
  - 5x more likely at dose of 24mg/day or higher
- People who inject opioids may especially benefit

J Addict Med 2023;17:509-16.

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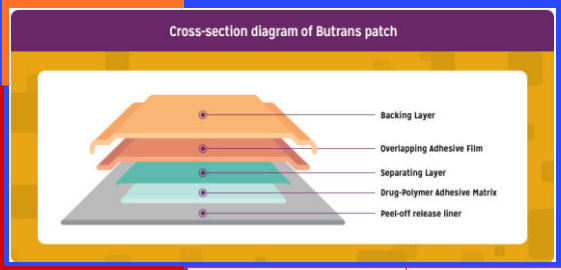
BUTRANS®

FORMULATIONS FOR CHRONIC PAIN

- STRENGTHS
  - 5, 7.5, 10, 15, 20 mcg/hr



- DOSING
  - Once weekly
  - Max (US) 20mcg/hr qweekly
- TITRATION
  - No sooner than q72hrs

Prior opioid OME before taper	Less than 30mg	30 – 80 mg	Above 80 mg
Starting dose	5mcg/hr	10mcg/hr	Maybe ineffective even with 20mcg/hr

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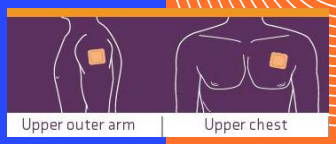

BUTRANS®

CLINICAL PEARLS

- 8 application sites
- Wait at least **21 days** before going back to same skin spot
  - Clean, dry, hairless/nearly hairless skin
  - Clean application site with lukewarm water, air dry
  - Avoid soaps, alcohol, oils, lotions, or abrasives on site
  - Avoid shaving site or applying to hairy/sweaty areas
  - Do not apply to irritated skin
- Do not cut patch
- During dose adjustments, use no more than 2 patches at a time (adjacent to each other)
- Avoid external heat sources, prolonged hot water, direct sunlight
- Ok to tape edges
- Disposal: fold adhesive edges on self, flush down toilet

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BELBUCA®

FORMULATIONS FOR CHRONIC PAIN

- STRENGTHS
  - 75, 150, 300, 450, 600, 900 mcg
- DOSING
  - Qdaily or BID
  - Max 900mcg BID
- TITRATION
  - No sooner than q4 days

Prior daily dose of opioid before taper to 30mg OME	Initial Belbuca Dose
Less than 30 mg	75mcg once daily or q12h
30 – 89 mg	150mcg q12h
90 – 160 mg	300 mcg q12h
More than 160mg	Consider alternative analgesic*

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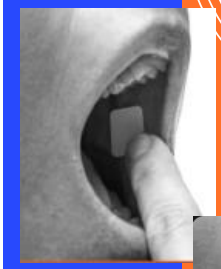

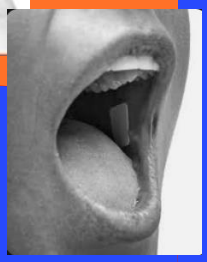

BELBUCA®

CLINICAL PEARLS

- Peppermint flavored
- Wet inside of cheek or rinse with water to moisten area
- Hold film with clean, dry finger and yellow side up
- Place yellow side on inside middle of cheek, hold for 5 seconds, leave in place until fully dissolved (~30min)
- Avoid application to open sores, too high or far back in cheek
- Avoid touching /moving film until dissolved
- If not fully dissolved after 30min, remove residual & rinse with water
- Do not chew or swallow film
- Avoid eating, drinking acidic beverages and using toothpaste 30min before, during or after application
- Gently rinse water around teeth after full dissolved
- Wait at least 1 hour to brush teeth
- Max 2 films per cheek, side by side

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DOSE EQUIVALENCIES

DRUG	BIOAVAILABILITY/ ABSORPTION	AMOUNT TAKEN	AMOUNT BUP ABSORBED
BUTRANS®	15%	20mcg/hr patch	0.48mg/day
BELBUCA®	55%	1800mcg	1mg
SUBOXONE®	25%	4mg	1mg

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CASE 2

79yo with nearly decade long use of opioids for failed back surgery, lumbar radicular symptoms. He has a unique, strict regimen for pain he follows:

7am oxycodone/apap 5/325	5pm tramadol 100mg
10am apap 650 mg	6pm oxy/apap 5/325
11am tramadol 100mg	10pm apap 650 mg
12pm oxycodone /apap 5/325	11pm tramadol 100mg, gabapentin 600 mg
3pm apap 650 mg	12am oxy/apap 5/325

Originally came as a drug testing consult for (+) methadone screen on UDS. But, I also alerted provider that he had not been seen within last 90d, required by law. Spoke to family about possible switch to buprenorphine.

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CASE 2 CONT.

- Current OME = 88mg from oxycodone 20mg/d and tramadol 300mg/d
  - Using suggested conversion strategy, started him on 150mcg buccal films BID
- Had him stop tramadol and start Belbuca 150mcg BID while still using oxycodone, understanding goal will be tapering off oxycodone as Belbuca increased.
- Pt titrated about every 7 days using 150mcg films sent to him
  - *"my personality is better even my psychiatrist said something and some friends"* [referring to mood]
    - Tremors improved, stuttering less
    - Pain "essentially gone" other than with significant activity
    - Pt stated *"I'm better than good, it is an absolute miracle"*
      - Settled on 600mcg bucc BID for several months

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CASE 2

- Great example of **life after traditional opioids**
- Patient reached out to say he was having more breakthrough pain due to increased activity and widespread "arthritis"
  - Checked administration technique
  - Could have taken to 900mcg BID but I felt he was headed to mg dosing of the buprenorphine (off label use)
- On 1200mcg/day buccal film →
  - Accounting for bioavailability, start 3mg SL Suboxone/day
  - Placed on 2/0.5mg SL tab, ½ tab SL TID, off label use for pain
    - Titrated slowly to 4/1mg SL TID and "basically pain free" unless significant activity but manageable with as needed acetaminophen

7am Suboxone 8/2mg, one-half tab
1pm Suboxone 8/2mg, one-half tab, gabapentin 600mg
9pm Suboxone 8/2mg, one-half tab, gabapentin 600mg
+ average 1 dose of 975mg acetaminophen/day

BUPRENORPHINE TRANSITIONS

- Manufacturer recommendations within the package insert to reduce OME to **< 30mg** before conversation **may be too conservative**
  - Their concern: precipitated opioid withdrawal
- This reluctance to include buprenorphine in opioid rotation secondary to concerns about withdrawal and inadequate analgesia may be **unfounded**

AGGRESSIVE BUPRENORPHINE TRANSITIONS

- 2021 retrospective review
  - Pts changed from CII opioids to buprenorphine 2016-2019
    - 64% on 200mg or more OME
    - 84 pts converted directly from CII long acting opioid
    - 74/84 were down titrated to < 150 MMED before conversion
    - Most were converted to either 450mcg BID or 300mcg BID and **most stabilized on 900mcg BID or 450mcg BID**
- Conclusion: ".. Provides valuable clinical data to support the conversion from treatment with schedule II long-acting opioids to BBF. These results demonstrate continued analgesia despite a reduction in daily OME, which could lead to improved patient safety outcomes and dosing strategies that are consistent with CDC recommendations."

*BBF-buprenorphine buccal formulation

Pain Medicine 2021;22(5): 1109-15.
Pain Medicine 2016; 17: 899-907.

AGGRESSIVE BUPRENORPHINE TRANSITIONS

For patients taking ≥80 mg MEDD, convert directly to an equivalent dose of buprenorphine buccal film:[10]

- ✓ **80-160 mg MEDD:** initiate 300 mcg 8-12 hours after last dose of full agonist opioids, q12 hr
- ✓ **161-220 mg MEDD:** initiate 450 mcg 8-12 hours after last dose of full agonist opioids, q12 hr

	30-59 mg MEDD		60-89 mg MEDD		90-120 mg MEDD		121-160 mg MEDD	
Day	Full agonist opioids	Buccal Bup	Full agonist opioids	Buccal Bup	Full agonist opioids	Buccal Bup	Full agonist opioids	Buccal Bup
1	Continue	150 mcg BID (300 mcg TDD)	Continue	150 mcg BID (300 mcg TDD)	Continue	300 mcg BID (600 mcg TDD)	Continue	300 mcg BID (600 mcg TDD)
2	Continue	300 mcg BID (600 mcg TDD)	Continue	300 mcg BID (600 mcg TDD)	Continue	300 mcg QAM + 600 mcg QPM (900 mcg TDD)	Continue	300 mcg QAM + 600 mcg QPM (900 mcg TDD)
3	Continue	450 mcg BID (900 mcg TDD)	Continue	450 mcg BID (900 mcg TDD)	Continue	600 mcg BID (1200 mcg TDD)	Continue	600 mcg BID (1200 mcg TDD)
4	Continue	450 mcg BID (900 mcg TDD)	Continue	600 mcg BID (1200 mcg TDD)	Continue	600 mcg QAM + 900 mcg QPM (1500 mcg TDD)	Continue	600 mcg QAM + 900 mcg QPM (1500 mcg TDD)
5 (+)	STOP	450 mcg BID (900 mcg TDD)	STOP	600 mcg BID (1200 mcg TDD)	STOP	600 mcg QAM + 900 mcg QPM (1500 mcg TDD)	STOP	900 mcg BID (1800 mcg TDD)

MEDD, morphine equivalent daily dose; Bup, buprenorphine; BID, twice daily; TDD, total daily dose; QAM, every morning; QPM, every evening.

OR

- Pain Medicine 2016; 17: 899-907.
- J Addict Med. 2021 May-Jun;15(3):255-257.
- Ann Intern Med. 2020;173(1):70-71.
- Psychiatric Times. 2020 Nov 9;37(11):47-51.
- CMAJ. 2020;192(3):E73.
- Subst Abuse Rehabil. 2016;7:99-105.
- Drug Alcohol Rev. 2020;39(5):588-59

NUMBERS & LESSONS LEARNED

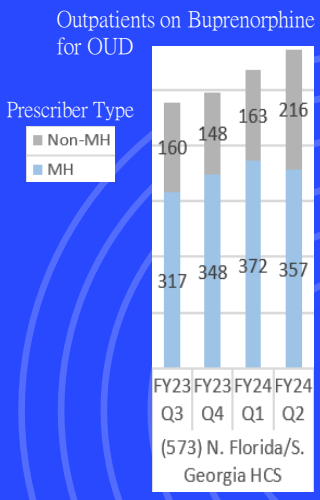
CPPPracticeArea	Prescriptions	Unique Pts
	212	64
Total	**212**	**64**

As of 07/03/24

CPPPracticeArea	DrugClassification	Prescriptions
	CN101 | OPIOID ANALGESICS	156
	CN900 | CNS MEDICATIONS,OTHER	48
	GA751 | CENTRALLY-ACTING APPETITE SUPPRESSANTS	7
	CN309 | SEDATIVES/HYPNOTICS,OTHER	1
Total		**212**

NationalFormularyName	Prescriptions
ACETAMINOPHEN/HYDROCODONE TAB	2
ACETAMINOPHEN/OXYCODONE TAB	8
BUPRENORPHINE FILM,BUCCAL	28
BUPRENORPHINE PATCH	25
BUPRENORPHINE/NALOXONE FILM,SUBLINGUAL	5
BUPRENORPHINE/NALOXONE TAB,SUBLINGUAL	71
ESZOPICLONE TAB	1
HYDROMORPHONE TAB	2
MORPHINE TAB,SA	3
OXYCODONE TAB	3
PHENTERMINE/TOPIRAMATE CAPSA	7
PREGABALIN CAPORAL	48
TRAMADOL TAB	9
Total	**212**

- NO REGRETS 8 months in
- No difficulties setting boundaries
- More than half prescriptions written for "rural" patients
- Monetary compensation is not the only means of job satisfaction
  - Shocking the "reset" on burnout from some of recent cases successes



TAKE AWAYS

- Buprenorphine pharmacokinetics are still yet to be fully understood but the medication is believed to be safer than traditional opioids with robust evidence for treatment of both OUD and pain
- DEA licensed Pain CPPs can make positive impact for patients with OUD and/or complex pain
  - Buprenorphine home inductions are feasible!
  - Pain CPPs seem more comfortable with buprenorphine than many other providers and may have ability to follow-up with patients more often potentially leading to greater success rate

THANK YOU

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