SITE EXAMPLE

Starting Buprenorphine with Microdosing and Cross Tapering

We are sharing independent examples from selected hospital sites for the purpose of providing insight into how different sites treat substance use disorder. Please note CA Bridge is not responsible for the content of any site examples, and we do not formally recommend them as best-practices.

Below are example treatment guidelines for starting buprenorphine with microdosing and cross tapering. These examples are used at Zuckerberg San Francisco General Hospital and Highland General Hospital. This may be a starting point for individual hospitals that choose to build internal guidance for microdosing and cross tapering. This can be done in any setting, including home starts. In most cases, routine higher dosing protocols are preferable as they are more streamlined and faster. Microdosing protocols are helpful in limited circumstances.

When to consider microdosing/cross tapering:

- Patient has been taking methadone
- Patient reports difficulty starting buprenorphine in the past.
- Patient is transitioning from prescribed full agonist opioids for pain to buprenorphine.
- Patient has been intentionally taking fentanyl daily:
    - Note: many patients can start buprenorphine from fentanyl with a routine CA Bridge Quick start protocol, in these cases consider waiting for a COWS >12 before starting buprenorphine
    - We recommend asking patients about their prior experiences starting buprenorphine while on fentanyl and doing what worked in the past for them
    - Patients can be offered both quick start and microdosing start and chose based on their personal preference

When to avoid microdosing:

- Patient doesn't want to continue using full opioid agonists during transition period or at increased risk for sedation/respiratory depression
- Patient is already in significant withdrawal
- Patient prefers rapid start
- Difficulties with health literacy or medication adherence
- Patient unable to self administer doses or unable to dose sufficiently frequently (jail, some sober living homes)
- Most patients would benefit from routine buprenorphine starts, microdosing can delay induction

Microdosing means using very small doses of buprenorphine that are gradually increased while a patient continues to use either prescribed or illicit opioids. There are many different ways to do a microdosing start, this document will list options used at some hospitals and clinics. The key to microdosing protocols is that by starting with small amounts of buprenorphine (maximum 1 mg) you can overlap buprenorphine with other opioids in the system, allowing you to slowly build up buprenorphine levels and prevent patients from experiencing withdrawal. Two key review articles summarize the pharmacology and principles of microdosing[1,2].

Choose a protocol based on patient preference, formulary, and pharmacy issues. The protocols below are an aggregation of those in use at CA Bridge site and should serve as examples. In most cases, patients should be able to transition to buprenorphine alone within 7 days, and maintenance doses should be 16 mg or higher. Avoid prolonged microdosing, as this underdoses buprenorphine and exposes patients to risk of treatment failure.

Pharmacy notes:

- Chose a protocol based on your formulary
- Non-sublingual/subcutaneous buprenorphine can only be prescribed under a pain indication
- Some pharmacies may not allow cutting films—while this has been common practice it has not been well studied.
- Roughly equivalent formulations may be substituted: 0.5 mg SL buprenorphine ≈ 225 mcg buccal buprenorphine[3]
- Sublingual pharmacokinetics: half life 26 hours, reaches steady state at 3 days, duration 7 days. 20 mcg/hr patch is equivalent to less than 1 mg of buprenorphine SL.

3-day Sublingual Cross Taper Start

Prescribe 2 mg buprenorphine films #6, 8 mg buprenorphine films #4 for 3 day supply)[4]

- Day 1: 0.5 mg (1/4 of 2mg strip) SL buprenorphine q3 hours (4 mg total daily dose), continue full opioid agonists
- Day 2: 1 mg (1/2 of 2 mg strip) SL buprenorphine q3 hours (8 mg total daily dose), continue full opioid agonists
- Day 3: 8-16 mg (1-2 8 mg strips) SL buprenorphine once daily and 4 mg SL q6h prn withdrawal (max 32 mg total daily dose), wean or stop full opioid agonists

7-day Sublingual Cross Taper Start

Prescribe 2 mg buprenorphine SL strips # 15, 8 mg buprenorphine SL strips #4 for 7 day supply

- Day 1: 0.5 mg (1/4 of 2 mg strip) buprenorphine SL daily (0.5 mg total daily dose), continue full opioid agonist
- Day 2: 0.5 mg (1/4 of 2 mg strip) buprenorphine SL BID (1 mg total daily dose), continue full opioid agonist
- Day 3: 1 mg (1/2 of 2 mg strip) buprenorphine SL BID (2 mg total daily dose), continue full opioid agonist
- Day 4: 2 mg buprenorphine SL BID (4 mg total daily dose), continue full opioid agonist
- Day 5: 3 mg (1+1/2 of 2 mg strip) buprenorphine SL BID (6 mg total daily dose), continue full opioid agonist
- Day 6: 4 mg (2 of 2 mg strip) buprenorphine SL BID (8 mg total daily dose), continue full opioid agonist
- Day 7: 6 mg (3 of 2 mg strip) buprenorphine SL BID (12 mg total daily dose), continue full opioid agonist
- Day 8: 16 mg (2 of 8 mg strip) buprenorphine qday and 4mg (1/2 of 8 mg strip) q6h prn withdrawal (max 32 mg total daily dose), wean or stop full opioid agonists

1-Day Micro-Macro Start

Administer (2) 20 mcg patch, prescribe buprenorphine 8 mg SL film/tablet as needed

- **Place 2 x 20 mcg transdermal buprenorphine patch**
  (do not need to wait for withdrawal)
- If patches are not available:
  - Stop full opioids
  - Do not wait for withdrawal
  - Start very low dose of buprenorphine
    - 0.5 mg (1/4 of 2mg strip) SL buprenorphine q3 hours (4 mg total daily dose)

    OR
    - Swallow 2mg SL buprenorphine q3 hours (6 mg total daily dose)

- **Wait** until the development of moderate to severe withdrawal. Patients should report feeling sick from withdrawals. (COWS 8 or ≥7/10 severity rating by patient)

- 6-12 hours typically but can be much longer depending on the person and the drugs they have been consuming.
- Some patients may wait 24-72 hours
- Patient should stay abstinent and keep microdosing--keep the patches on or keep swallowing the 2mg tablets q3 hours (6 mg total daily dose) until they feel sick from withdrawal

Once withdrawal has become intolerable, **take 16mg SL bup** in one dose.

7-day Transdermal Cross Taper

Prescribe buprenorphine 20 mcg/hour patch #3, buprenorphine 2 mg SL film/tablet #6, buprenorphine 8 mg SL film/tablet #6 for 7 day supply

- Day 1: Start buprenorphine 20mcg/hour patch, continue full opioid agonists
- Day 2: Add 2nd buprenorphine 20mcg/hour patch for a total of 40mcg/hour, continue full opioid agonists
- Day 3: Add 3nd buprenorphine 20mcg/hour patch for a total of 60mcg/hour, continue full opioid agonists
- Day 4: 2 mg SL BID, continue patches, continue full opioid agonists
- Day 5: 4 mg SL BID, continue patches, continue full opioid agonists
- Day 6: 8 mg SL BID, remove patches, stop full opioid agonists
- Day 7: 16 mg SL qday and 4 mg q6h prn withdrawal (max 32 mg total daily dose)

References

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