Fentanyl to Buprenorphine < 24 hours - Rapid Micro induction

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Background

- Low dose buprenorphine (BUP) initiation protocols aka micro induction or Bernese method were developed to initiate BUP via slow titration & escalating doses while individuals continued to use other opioids.
- Patients unable to stop using full agonists sufficiently to avoid BUP → ppt wd have benefitted + protocols allow initiation in unique scenarios (while patients receive appropriately dosed full agonists concomitantly for pain or sedation).
- Use of low dose BUP initiation has also reduced BUP precipitated withdrawal in the era of ubiquitous non-pharmaceutical fentanyl availability/use.

Rapid Micro induction Protocol (Wiegand, TJ)[1]

If > 12 hours since last use of fentanyl:
- Patient not appropriate for a standard BUP induction (heavy protracted fentanyl use)
- Patient doesn't require standard 4-day micro induction panel used for concomitant sedation and pain treatment with full agonists + BUP
- Patient not able to follow outpatient low dose initiation protocol instructions

→ rapid protocol initiation →

1.) 300 mcg* SL & repeat in 2 hours → **if outpatient use 250 mcg 1/8th of 2 mg film*	2.) 1 mg SL & repeat in 2 hours →	3.) 2 mg SL x 1 if tolerating escalate to next dose →	4.) 8 mg SL and continue BID (or TID) depending on level of use	If not tolerating repeat lower dose x 1 then return to protocol escalation	Adjunctive clonidine, hydroxyzine +/- BZD initially

BUP 300 mcg → 300 mcg → 1 mg → 1 mg → 2 mg → 8 mg (each two hours apart) = 10 hours (if start at > 12 hours last fentanyl use < 24 hours total to 8 mg initiation & 'blocking doses with cumulative BUP)

Methods & Limits

- Retrospective chart review case series illustrating use of a rapid low dose BUP initiation protocol developed by lead author in four different patient scenarios.
- Limits = retrospective chart review of 4-patient case series & opioid use based on self report/UDS but not quantified.

Case Descriptions (abbreviated from abstract)

- 38-year-old F with counterfeit oxycodone (UDS + fentanyl) seen outpatient. Prior experience ppt wd. Started on BUP 12-24 hours after last use using rapid low-dose initiation[1] which she tolerates well → 8/2 mg SL BID.

Case Descriptions *continued -*

- 38-year-old G5P4 F at 32 weeks gestation + IN fentanyl use ~10 x daily & past ppt wd starts rapid low-dose initiation ~10 hours after last fentanyl use completed on OB unit ~36 hours prior to successful delivery. Tolerates process well → 8/2 mg SL BID BUP.
- 24-year-old M IVDU fentanyl/cocaine dependence (2 bundles each/day) in ED with cellulitis undergoes rapid micro-induction ~12 hours after last fentanyl. Mild opioid wd symptoms dissipate as BUP increased rapidly to 8/2 mg SL TID.
- 30-year-old M with 1-2 bundles/day fentanyl + cocaine presents after ATV crash → numerous traumatic injuries (fractures/lacs). Escalating doses full opioid agonists in ED & Trauma ICU refuses BUP micro induction. HD 4 abruptly decides to leave asks to, "get BUP before leaving." Completes rapid low-dose initiation ~four days* after last fentanyl & < 12 hours after last full agonist (oxycodone 30 mg). After BUP initiated (rapid micro induction) decides to stay (avoided AMA) kept on BUP + full agonists 2-3 x standard doses in hospital → 8/2 mg BUP SL TID @ discharge.

**suspected some surreptitious use fentanyl in hospital prior to BUP but could not confirm.*

Discussion & Conclusion

- There are a variety of published low dose initiation protocols using various BUP doses/formulations for different settings, context and resources usually requiring 4-8 days depending on protocol. Many patients aren't good candidates for these; hospital stay would be prolonged to complete, risk outpatient errors following.
- We demonstrated that low dose initiation can be done safely and successfully with BUP rapidly titrated up over much shorter periods of time in several patients (*primary author has been using protocol > 1.5 years numerous other patients*). Flexibility of dosing (e.g., repeating doses or even accelerating dosing (patient variability) may increase tolerability. Further study/comparison warranted.

References

1.) Huhn A., Hobelmann G., Oller GA., Strain EC. Protracted renal clearance of fentanyl in persons with opioid use disorder. Drug and Alcohol Dependence 214 (2020); 108147.
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3.) Schult R., Maynard KM., Corelli JM., Rapport S., McKinney B., Clarkson T., Wiegand TJ., Malcho J., Acquisto NM. Low-dose initiation of buprenorphine in hospitalized patients on full agonist opioid therapy. A retrospective observational study. Journal of Addiction Medicine. 2023 Aug 18. doi: 10.1097/ADM. PMID: 37594850.

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