

Buprenorphine Treatment of Prescription Opiate Addiction.

John McCarthy, M.D.
Executive/Medical Director
Bi-Valley Medical Clinic
Sacramento, Ca
Assistant Professor of Psychiatry
University of California, Davis
jmccarthy@bivalley.com

Opiate Use in Sacramento, California

- ▶ Sacramento has experienced a 40% increase in opiate abusers in public funded drug treatment programs from 2006–2008. 47% of this population were using pills.
- ▶ Bi-Valley Medical Clinic's methadone treatment programs have seen a dramatic shift from heroin users to oxycodone and hydrocodone
- ▶ In our urban Sacramento clinic, 91 of the last 198 admission to MMT (46%) were using pills, 38% hydrocodone, 8% oxycodone.
- ▶ In our suburban clinic, 238 of 315 admits (75%) were using pills (43 % oxy, 32% Vicodin/Norco)

Retrospective Review of 243 Consecutive Admits to a Private Buprenorphine Program

- ▶ First patient induced in September 2004
- ▶ It is a private pay program. No public funding.
- ▶ No insurance coverage for the medication at that time. Now it's more common.
- ▶ No insurance coverage for the treatment model, beyond a physician office visit.

Program Design

- Co-located within a suburban methadone clinic, but an independent OBOT model. Patients are treated as private practice patients under each physician's 'waiver'.
- Team: 3 MDs, 2AHPs, 1 manager, 1 admin assistant, 1 fiscal (all part-time).
- Physician/AHP model of care. Physician visits 15–20 minutes

Screening

- ▶ Generally phone screening done by manager or AHP. Intakes scheduled in 1–2 days.
- ▶ We used a flexible maintenance model, a 1 week induction fee, followed by a monthly fee.
- ▶ Most referrals come from finding us on the Web, but many from our existing patients.

Assessment/Induction

- Patients scheduled early in week and instructed to be withdrawal.
- Patients are seen 2–3 times the first week and given doses from stock at each visit to last to the next visit. No reporting required to law enforcement. Violates confidentiality.
- Hepatic function screening for acetaminophen toxicity, not ideal compliance.

Induction

- Initial dose is 4mg Subutex generally followed by 4mg in 1 hr, then 4mg in 1-2 hrs if necessary. COWS used as guide to dosing.
- Patients are generally given take home 'rescue' doses of 4mg or 8mg for the evening if needed, and enough to take 8 mg (usually) the following morning before returning to the clinic, i.e. generally 16mg as TH.
- Dose range 4mg up to 12-16mg on first day.

NIDA START Study

Starting Treatment with Agonist Replacement Therapies

- ▶ Buprenorphine vs Methadone comparison. Liver function is primary outcome. Bi-Valley a site within California/Arizona Node of CTN
- ▶ Mostly indigent heroin/polydrug users. Retention across all 10 sites was significantly better for methadone.
- ▶ Initial dosing protocol was modified. A more aggressive induction regimen (4/4/8 at BV) was more effective. No take homes.
- ▶ START Retention Study (UCLA) looking at what factors contributed to differential retention.

Stabilization

- After induction, appointments on a weekly basis for the first month. They are encouraged to attend an evening support group and NA/AA.
- Scheduled with the M.D. every 2 weeks for the next 2-3 months, AHP back-up.
- Prescriptions are written starting the second week and only at times of clinic visits to last till next physician visit (rare call ins)

Maintenance

- Patients are seen monthly after the first 2-3 months, after 1 year every two months.
- Psych assessments and med management prn
- All patients have urine drug testing via insta-test monthly, with screening for:
 - opiates, cocaine, benzos, THC, methamphetamine, and oxycodone (added 2007)

Dosing Schedule

- ▶ Induction dosing is usually BID, but at times by patient preference (tolerance?) TID
- ▶ Most patients continue to prefer multiple doses, BID or TID in spite of long half-life and physician encouragement to try once day dosing.
- ▶ Consistency from day to day is emphasized.

Patient Demographics on Admit

- Average age 36 yrs, range 17-78
- 102 (42%) were under 30 years
- 33 (14%) were under 22 years
- 70% male

Drug Use History on Admit

- ▶ Hydrocodone 69%
- ▶ Oxycodone 47%
- ▶ THC 28%
- ▶ Cocaine 13%
- ▶ Heroin 8%
- ▶ Methadone 7%
- ▶ Methamphetamine 4%

Route of Administration

- ▶ PO 77%
- ▶ Inhalation (smoking, snorting) 29%
- ▶ IV 11%
- ▶ Some overlap

Duration of Treatment (N=243)

- ▶ 11 had < 1 week (4%)
- ▶ 46 had 0–4 weeks (19%)
- ▶ 30 had 5–8 weeks (12%)
- ▶ 93 had 8–50 weeks (38%)
- ▶ 63 had 1 year or > (26%)

Drug Test Results (Insta-tests) 211 patients (32 no tests)

- ▶ Opiate pos UAs (2004–2009) 5% (96/1844)
- ▶ Oxycodone 6% (36/577 tests from Nov 2007)
- ▶ Opiate 8% (46/577)
- ▶ Total opiate positivity from 11/07 = 14%
- ▶ THC 12% (222/1844)
- ▶ Benzodiazepine 12% (217/1844) Mostly Rx
- ▶ Cocaine 3% (52/1844)
- ▶ Amphetamine 2% (31/1844)

Dose Range: max dose used

- ▶ 116 (48%) received < 24mg/day
- ▶ 127 (52%) received 24mg/day or >
- ▶ 51 (21%) received 28mg/day or >
- ▶ 34 (14%) received 32mg/day

Response in 102 Patients Under 30

- ▶ 81% male
- ▶ Duration of treatment
 - Average 29 weeks, median 16 weeks
 - 20% retained for 1 year or more
 - 3 patients retained for >3 years
- ▶ This age group had:
 - 35/36 oxy positive tests, but only 18 patients (18%) had a positive (i.e. 82% never used oxy after admission)
 - 62/96 other opiate positive tests, but only 30% had a positive test (i.e. 70% never used other opiates after admission)
 - 61% of the THC positives

Co-occurring Disorder by History on Admission

- ▶ Chronic Pain (CP) 110 (45%)
- ▶ 57% received a max bup dose of 24mg or >

- ▶ Prior Mental Health (PMH) 102 (42%)
- ▶ 50% received max bup dose of 24mg or >

Active Patients N= 44

- ▶ Average length of treatment 104 weeks (Inactives (N=199) averaged 33 weeks)

- ▶ 33% received max dose of 32mg (average 24mg) Current average 18mg

- ▶ 69% had either CP or PMH, 31% had both

Case: Pain and Addiction

- ▶ 50 yr/old admitted with active Vicodin addiction, past hx of alcoholism, and chronic back and neck pain and surgery.

- ▶ 1 year in treatment. All negative testing.

- ▶ Varies bup dose between 24–32mg QD, depending on pain level. No other pain meds but ibuprophen 600mg/qd prn.

Buprenorphine as an Analgesic (W. Ling, M.D.)

- ▶ 20–50 times the potency of morphine. Analgesia not compromised by ceiling effect, as with respiratory depression. Analgesic action up to 8 hrs.

- ▶ Bup plus full mu agonists in analgesic doses show additive or synergistic effects. Only at supra-analgesic doses does antagonism appear. So bup seems to be a partial blocker like methadone.

Buprenorphine: An Effective Psychotropic?

- ▶ Bup (and methadone): mu opiate receptor agonist
- ▶ Beyond this, it has a number of other neuromodulatory actions with significant psychiatric effects:

- ▶ 1. NMDA receptor antagonism reduces development of tolerance and blocks glutamate, the major excitatory neurotransmitter of the brain, producing anti-anxiety and calming effects
- ▶ 2. SSRI properties giving potential anti-anxiety and anti-depressant effects
- ▶ 3. MAOI action further augments anti-depressant effects.

- ▶ Given the above, mu receptor occupancy studies of bup may not give an accurate guide to optimal dosing.

Case of Co-occurring Disorder Bi-Polar

- ▶ 50 yr old with 10 yr hx off and on of morphine, oxycodone, and hydrocodone addiction, plus methamphetamine, alcohol, and THC use.
- ▶ Multiple treatments for mania and depression over a 15 year period with lithium, Seroquel, antidepressants.
- ▶ Starts buprenorphine 8/07. On no psychiatric meds on admission or since. No mood disorder symptoms (which patient attributes to bup) until he stops bup 12/09 to “get mania back” but goes into depression. Re-stabilizes on bup and mood symptoms resolve.
- ▶ Tenore, Peter, MD. Psychotherapeutic Benefits of Opioid Agonist Therapy. Journal of Addictive Diseases. Vol. 27(3) 2008. Online at <http://jad.haworthpress.com>.

Summary

- ▶ Buprenorphine is well tolerated and effective both youth and adults in a flexible maintenance model
- ▶ Retention is very good with cost being a significant barrier to care.
- ▶ Maximum doses used were in the 24–32mg/qd for 50% of the population
- ▶ Chronic pain and mental illness were common in this population. Analgesic and psychotropic effects of buprenorphine may be an important part of its efficacy.