

Title: “Lowest effective dose of Buprenorphine in stable office based opioid maintenance treatment”

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Background:

Research and extensive clinical experience since its release in 2002 have established that bup/NX is a safe and effective treatment for moderate and severe opioid use disorder as part of medication assisted treatment. Bup/NX treatment decreases opioid use, improves treatment adherence and increases sobriety rates. Much less has been reported regarding the safety and efficacy of changing bup/NX doses in stable patients during long-term opioid maintenance therapy. Very little information is available as to whether or not patients need the same bup/NX dose in long-term stable maintenance that was necessary to initially stabilize them from active addiction.

Bup/NX doses appear to rarely be changed over time, and even strategies to introduce the topic of dose change have not been reported in the literature. This is contrary to many other areas of chronic illness management, where in very stable patients concepts of “lowest effective dose” or “gradual dose adjustment to ensure stability and limit side effects” are commonly encountered. Bup/NX tapering could be done for a number of good clinical reasons: 1) evaluate a long term stable dose to see if it is the most appropriate dose for the patient at this point in time (i.e. sustained full remission), 2) to limit side effects of bup/NX resulting from higher initial induction doses, 3) to keep the over-all pharmacy costs of MAT to the lowest reasonable level, or 4) to maintain the patient on as low a level of physical dependence as is safe in order to facilitate final tapering if or when the patient decides to stop bup/NX entirely. Despite all of these potential clinical indications to discuss the gradual tapering of bup/NX dose during long term MAT, there is little research or even case reports indicating whether or not such discussions take place or the safety and efficacy of such tapers.

In this report we present data from a MAT clinic initiative to introduce the idea of ultra-gradual bup/NX dose taper to patients in sustained full remission from opioid use disorder and fully adherent with a comprehensive sobriety support program. Data includes clinical characteristics of those patients who agreed to taper, how an ultra-slow taper was tolerated including the emergence of withdrawal / craving / relapse data during a taper, and whether an initial dose taper was likely to result in the patient deciding to taper off of bup/nx completely. In addition data about patient satisfaction with their MAT program in those who chose to taper and those who did not are presented.

Methods:

The study is a retrospective case series chart review of patients stable on long-term outpatient MAT and fully adherent with a comprehensive sobriety support program who were receiving bup/NX between the years of 2003 through 2017. All patients met criteria to be considered in sustained full remission from their opioid use disorder. We collected the following demographic data: patient age, sex, race, insurance status, employment, urine toxicology history, bup/NX dosage history, outpatient program adherence, and withdrawal symptoms if tapered. In addition, a validated Satisfaction with Life Scale wellbeing survey was also given to all patients to assess self-wellbeing. Patients were asked to assess their wellbeing satisfaction scores prior to their start of bup/NX treatment, and also after receiving bup/NX MAT. The taper option was presented to patients in sustained full remission from opioid use disorder on long-term bup/NX MAT through the question: “now that you have done so well for so long in sobriety ... how long would you like to be on this medication, and what is your interest in a very slow partial taper of your dose?” The ultra-slow taper involved decreases of 1-2 mg every 3-4 months, and all dose decreases were initiated with the patient’s agreement. If at any time the patient chose not to taper, or to reverse a previous dose decrease this was done immediately.

Results:

45 of 101 patients expressed interest in attempting a slow dose taper while 56 declined to taper and remained on their original dose. Of the 45 taper attempting patients, their average length of time on stable MAT was 58.1 months with a range of 6 to 130 months and median length of 47 months. Characteristics of those agreeing to dose adjustment: 35. 7% were female, 64. 3% male, 64. 3% employed, 73. 8% were Caucasian, 19% African American, 7. 1% Hispanic. All patients in the MAT Clinic had already completed an IOP and Aftercare program, ongoing 12 step participation, regular urine toxicology screening and prescription monitoring program checks. The average daily bup/NX dosage of patients prior to taper was 11 mg with a range of 6 mg to 16 mg. The ultra-slow taper approach produced minimal withdrawal symptoms (some mild increase in self-reported anxiety in the two weeks following a dose decrease), no increase in opioid cravings and no relapse events. The average final bup/NX dose at the time of data gathering for taper patients was 5.4 mg with a range of 0 mg to 12 mg. Of the 45 patients who chose to taper, 5 patients reduced their dose to zero, 4 patients were unable to tolerate the taper at all were returned to their initial bup/NX dose. There was no report of relapse in patients who began tapering, and there were no abnormal UDS results in this group.

Of the 101 patients in long-term stable MAT clinic, 66 patients completed the wellbeing assessment survey. Of these 66 patients, 21 patients participated in dose adjustment while 45 did not. The average pretreatment wellbeing satisfaction scores of patients agreeing to dosage adjustment was 6.76. The average pretreatment wellbeing satisfaction scores of patients who did not participate in dose adjustments was 6.2 ($p=.287$). The t-value comparing these two groups is 0.5648. The average posttreatment wellbeing satisfaction score of taper patients was 24.05 and of the non-taper patients was 23.38 ($p=.253$). The t-value comparing these two groups is 0.668.

Conclusions:

Patients in sustained full remission, two or more years enrolled in a comprehensive sobriety support program combined with bup/NX MAT, can be safely screened for their willingness to very gradually reduce their bup/NX dosage. In motivated patients, gradual dose reductions in the range of 1-2 mg Q3 months appears to be safe and well tolerated. The act of screening patients on long term stable MAT regarding a possible gradual tapering of dose often results in patient agreement to participate in a taper attempt. The efficacy of dose adjustment in long term stable patients in MAT as measured by patient satisfaction, withdrawal, and cravings is safe and well tolerated. There was no appreciable difference in wellbeing satisfaction in patients who agree to dose adjustments verses those who did not agree. In stable patients on MAT, discussion of dose adjustments and gradual dose tapering can be considered and in our experience was welcomed by almost half of the patients in our clinic.

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