

Abstract

Background: As part of the integrated drug treatment program implemented in an HIV treatment setting at Go Vap clinic, Ho Chi Minh City, Vietnam, we have developed structured counseling sessions.

Methods: Participants were assessed at baseline, weekly for 12 weeks and then monthly. Here we describe the retention, the treatment outcomes over the 12-month follow-up.

Results: 448 heroin injectors (97.2% males, 32.3 y.o.) were enrolled (268 receiving methadone – MET, and 180 BUP/NX -Suboxone®). The retention in methadone treatment at 12-month was 89.9% for MET, 57.0% for BUP/NX. Treatment adherence was high. The three treatment approaches were equally effective with a significant decrease in the days of heroin use ($F(12,277)=21.8, p<.0001$) along with a significant decrease of reported craving ($F(12,232)=20.2, p<.0001$), a significant improvement of mood ($F(12,232)=5.88, p<.0001$), satisfaction with income/work ($F(12,232)=4.64, p<.0001$), and satisfaction with recovery ($F(11,249)=3.78, p<.0001$). Change in heroin use was found highly correlated with all these previously listed outcomes (correlations range: 0.20-0.72). The baseline characteristics of the participants who dropped out treatment did not differ significantly from those who completed the 12-month program. Lower self-rated mood was associated with dropping out of treatment ($aOR=1.3, 95\% CI=1.1-1.5$), highly correlated with family relationships ($p=0.32, p<.0001$) and satisfaction with income/work ($p=0.48, p<.0001$).

Conclusion: As part of an integrated treatment program, structured counseling sessions using both relapse prevention and cognitive-behavioral techniques that address treatment observance, substance outcomes, client's psychosocial needs and their family relationships enhance the program retention and effectiveness.

Background

- Vietnam:**
 - 271,000 people using drugs (UNAIDS 2015)
 - 14,000 new HIV infections in 2015, and most of them are driven by drug users
 - 2006: Scale up of HIV prevention programs targeting people who inject drugs (PWID) (Giang et al., 2013)
 - Sterile injection equipment, the introduction and expansion of methadone treatment, and increased access to antiretroviral therapy (Government of Vietnam, 2014)
 - Although the proportion of HIV infections among PWID has declined from 30% in 2005 to 22% in 2013, PWID remain the largest risk group living with HIV infection (Vietnam Administration of HIV/AIDS Control, 2013)
- Since November 2013: Implementation of an integrated drug treatment program within an HIV treatment setting at Go Vap clinic, Ho Chi Minh City, Vietnam.
- Integrated Treatment provided**
 - A pharmacological opiate maintenance treatment with methadone (MET) or buprenorphine/naloxone (BUP/NX)
 - Introduction of BUP/NX (Suboxone®) in January 2015
 - First time in Vietnam
 - Counseling: 12 weekly sessions and 10 monthly sessions thereafter
 - HIV screening and HIV treatment if needed
 - HCV screening
- Structured and manual-based standardized counseling sessions**
 - Rooted in cognitive behavioral therapy
 - Sessions assess the need for intervention in six areas of functioning: 1) Adherence to SUD, HIV, TB; 2) continued drug use and related drug and sex risk; 3) cravings for drug use; 4) psychological status (depression, anxiety, symptoms of psychiatric disorder); 5) confidence in and satisfaction with SUD treatment; and, 6) strategies for the next month
 - Data recorded and available for review with the participant as a clinical tool to show progress and promote self-monitoring.

Objectives

- To describe the retention and treatment outcomes over the 12-month follow-up period
- Dosing schedule: All participants were required to receive their medications in directly observed dosing as Vietnamese law does not allow take-home medication.
 - Methadone: Daily dosing at the clinic
 - Buprenorphine/naloxone: Daily dosing at the clinic at the induction of treatment After four weeks of stable dose, switch to thrice weekly dosing (if clinically possible)
- Thus, we measured the efficacy of three opiate maintenance treatment strategies: daily methadone (MET), daily buprenorphine/naloxone (BUP/NX) and thrice weekly BUP/NX
- To identify the factors associated with treatment retention

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Conflict of Interest: Suboxone® tablets were donated by Reckitt-Benckiser/ Indivior PLC. The pharmaceutical company has no role in study design, data collection, nor data analyses

Methods

- Efficacy of treatment at 12 months was assessed by
 - Treatment retention
 - Heroin use
 - Self-reports of drug use: collected on a weekly basis for 12 weeks and monthly thereafter
 - Urine drug screens: randomly once a week for the first 12 weeks of treatment and twice a month thereafter
 - Agreement between self-report use and urine drug screen: high (89%)
 - Self-evaluation during counseling sessions
 - 12 weekly sessions then 10 monthly sessions thereafter
 - Craving
 - Mood
 - Family relationships
 - Satisfaction with income/work
 - Satisfaction with recovery
- Comparative assessments for each treatment strategies have been performed using Chi², t-tests, and analyses of variance. Multivariable models were performed to evaluate the factors associated with retention and treatment outcomes. Spearman's correlation were used to evaluate the correlations between variables.

Results

Participant characteristics at baseline

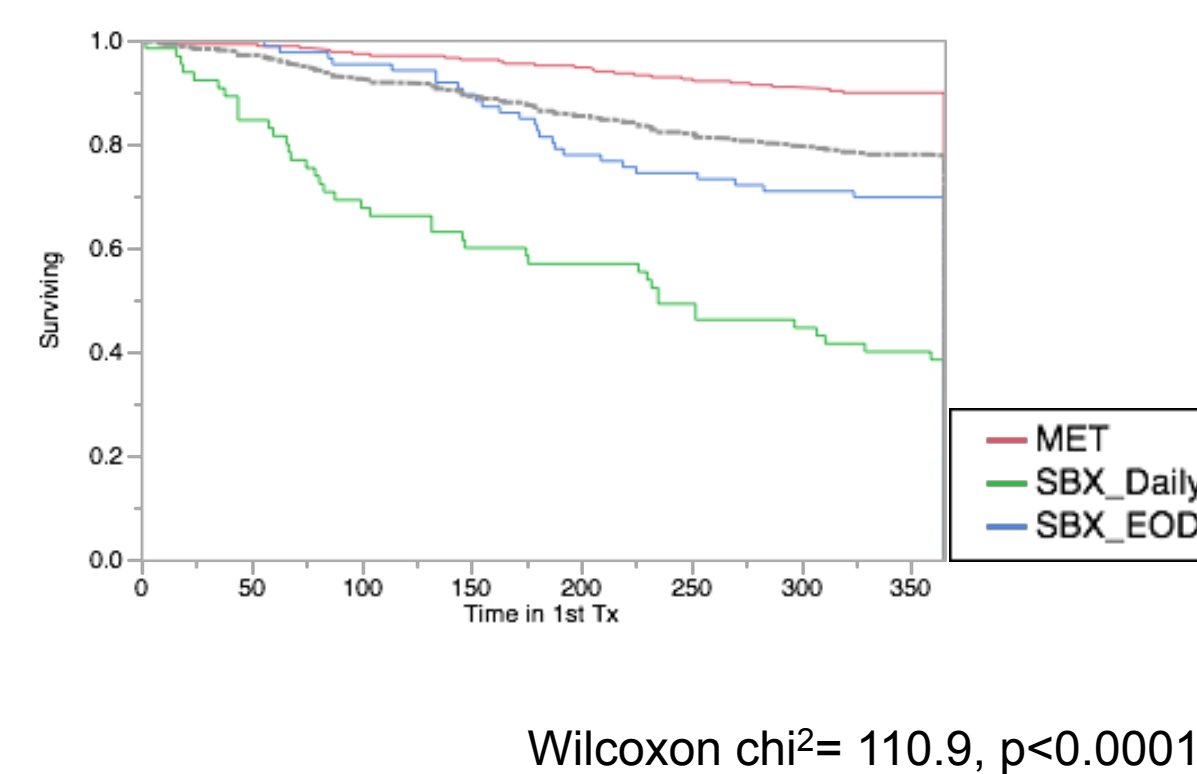
	All n=448	MET n=268	BUP/NX n=180	Test value, p-value
Age - Mean (SD)	37 (61.5)	35 (61.1)	32 (74.0)	$\chi^2=52, p=0.59$
Gender - Males n (%)	434 (96.9)	260 (97.0)	174 (96.7)	$\chi^2=0.04, p=0.83$
Education - High school or higher - n (%)	69 (15.9)	51 (40.8)	18 (40.8)	$\chi^2=70, p=0.40$
Living conditions	368 (82.5)	215 (80.5)	154 (86.0)	$\chi^2=5.37, p=0.25$
With parents' family n (%)	235 (52.7)	153 (57.3)	82 (45.8)	$\chi^2=0.68, p=0.02$
Currently have a job - n (%)	152 (34.2)	96 (36.0)	56 (31.5)	$\chi^2=0.96, p=0.33$
Serology - B (%)	323 (72.4)	184 (69.0)	139 (77.7)	$\chi^2=17, p=0.05$
HIV-positive	152 (34.2)	96 (36.0)	56 (31.5)	$\chi^2=0.96, p=0.33$
Hepatitis C-positive	323 (72.4)	184 (69.0)	139 (77.7)	$\chi^2=17, p=0.05$
Opiate Use				
Years of use - Mean (SD)	7.8 (6.2)	7.9 (6.9)	7.6 (4.9)	$t=0.68, p=0.49$
Days of use past 30 days - Mean (SD)	29.8 (1.4)	29.8 (1.2)	29.6 (1.8)	$t=1.31, p=0.19$
No. previous drug treatment Mean (SD)	5.4 (4.7)	5.9 (5.2)	4.6 (3.7)	$t=3.14, p=0.002$
Other substance use - n (%) of users past 30 days				
Alcohol	86 (19.3)	48 (18.0)	38 (21.2)	$\chi^2=0.73, p=0.39$
Amphet/ Methamphetamine	91 (20.4)	31 (11.6)	60 (33.5)	$\chi^2=31.67, p<.0001$
Benzodiazepines	67 (15.0)	27 (10.1)	40 (22.3)	$\chi^2=12.56, p=0.0004$
Tobacco	440 (98.6)	264 (98.9)	176 (98.3)	$\chi^2=0.25, p=0.67$

High retention in treatment at 12 months (78.0%)

MET > BUP/NX

MET: 89.9%
 BUP/NX: 57.0%
 Daily BUP/NX: 40.0%
 Thrice weekly BUP/NX: 69.8%

Group	n	In censored	Mean days	SE
MET	267	0	346.2	3.9
SBX Daily	65	0	223.2	17.1
SBX EOD	86	0	305.9	10.3
Combined	418	0	318.9	4.7

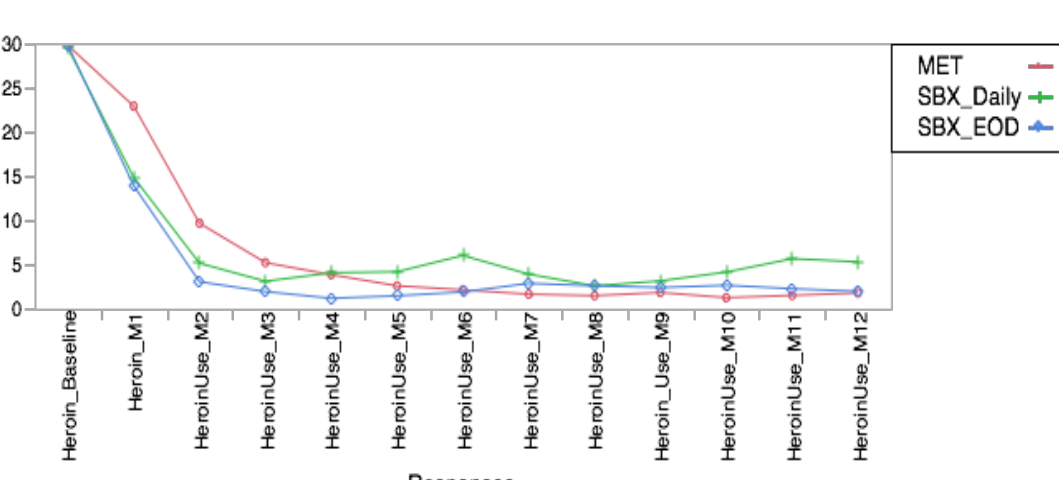


Average daily dose (mg/day (SD))

	All	HIV-positive	HIV-negative
MET	118.5 (61.8)	163.5 (64.7)	101.6 (52.0)
BUP/NX daily	18.5 (5.6)	19.0 (7.4)	18.2 (4.6)
BUP/NX 3x/wk	14.8 (1.8)	15.1 (1.7)	14.7 (1.9)

Heroin use

Significant decrease of heroin use regardless of the treatment ($F(12,277)=21.8, p<.0001$)



BUP/NX > MET

First 3 months of treatment ($F(12,702)=0.69, p<.0001$)

- No change in other substance use
- Change in heroin use correlated with

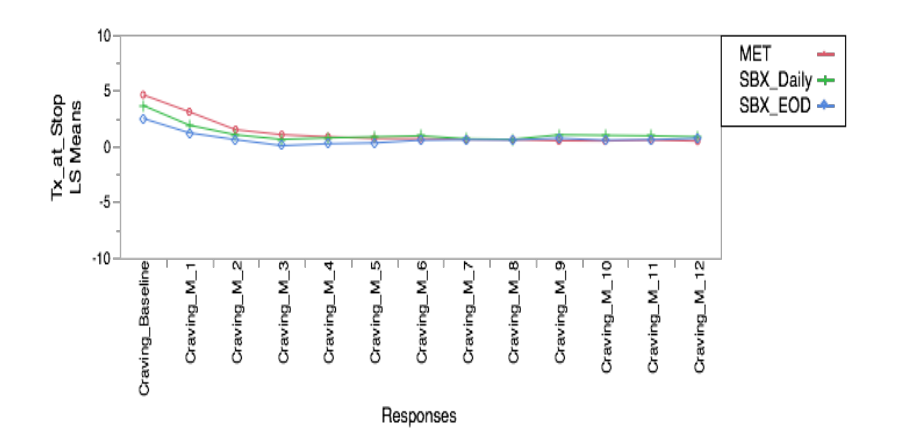
	MET	BUP/NX
Craving	0.72	0.64
Mood	0.54	0.56
Family	0.27	0.20
Income	0.30	0.31
Satisfaction w/ recovery	0.56	0.52

All $p<.0001$

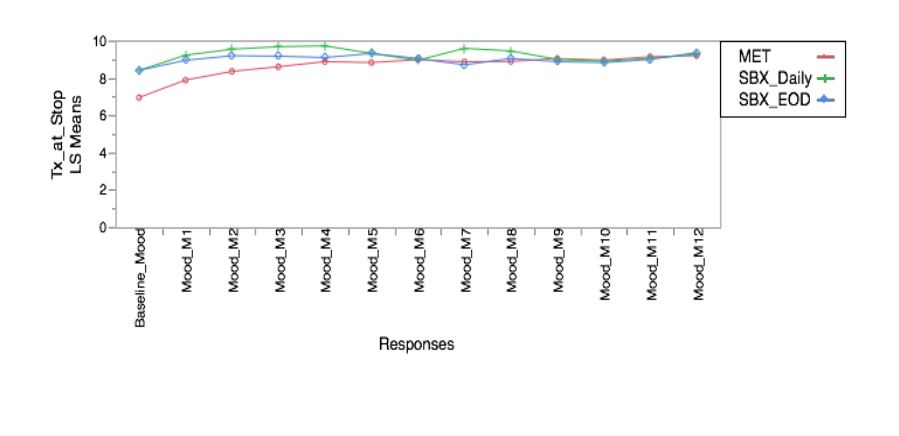
Results (cont')

- Change in craving, mood, family relationships, satisfaction with income/work, satisfaction with recovery

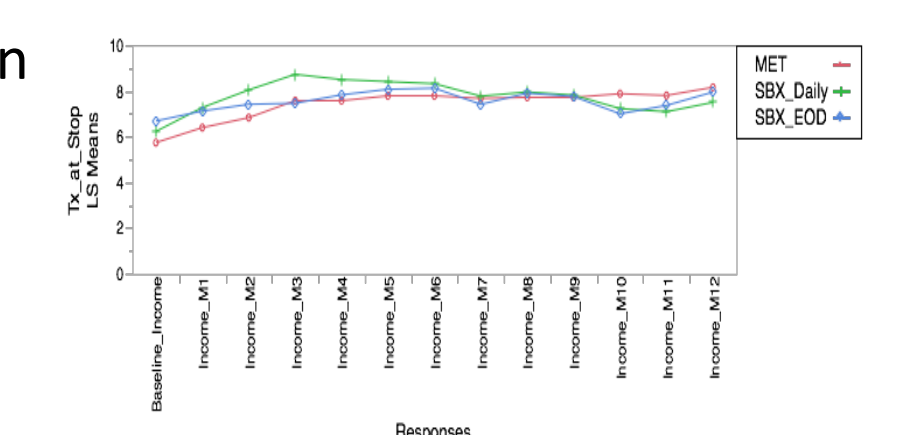
Significant decrease of craving regardless of the treatment ($F(12,232)=20.2, p<.0001$)
 BUP/NX > MET
 First 3 months of treatment



Significant improvement of mood regardless of the treatment ($F(12,232)=5.88, p<.0001$)
 BUP/NX > MET
 First 3 months of treatment

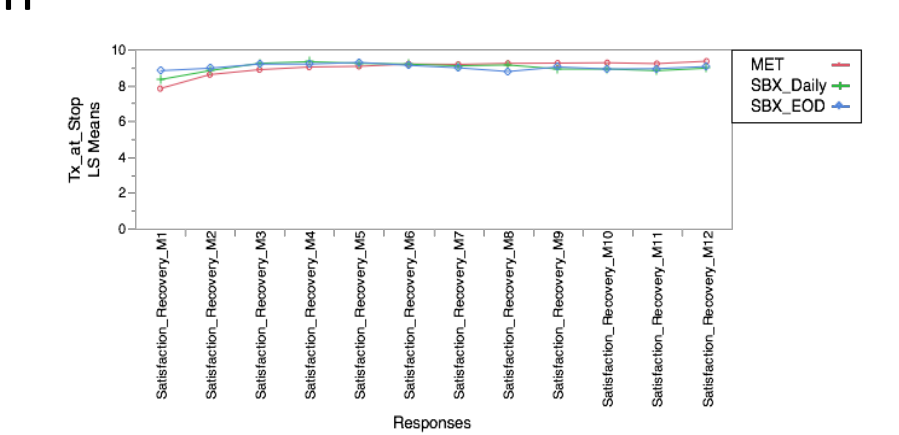


Significant improvement of satisfaction with income/work regardless of the treatment ($F(12,232)=4.64, p<.0001$)



No change in family support that stayed high over the 12-month follow-up period ($F(12, 232)=1.21, p=0.28$)

Significant improvement of satisfaction with recovery regardless of the treatment ($F(11,249)=3.78, p<.0001$)
 BUP/NX > MET
 First 3 months of treatment



- Factors associated with dropping out treatment program
 Lower self-rated mood ($aOR=1.3, 95\% CI=1.1-1.5$)
 Highly correlated with
 Family relationships ($p=0.32, p<.0001$)
 Satisfaction with income/work ($p=0.48, p<.0001$)

Conclusion

- The three approaches to treatment appear to be as efficient to treat opiate use disorder
 As part of a comprehensive and integrated treatment program i.e. OMT and structured counseling sessions
 BUP/NX quit heroin earlier (within the first 3 months of Tx)
- In a context where no take-home dose is allowed, BUP/NX thrice weekly
 - Enhance retention and adherence in treatment
 - Reduce heroin use sooner
 - Less time spend traveling to and from the clinic (reduces the cost for the client)
 - Less disturbance that prevents from working (less missed time from work)
- Importance of counseling sessions that address: substance use, craving, psychological functioning, family and social relationships
 Enhance retention in treatment program
- Not able to predict who will respond better on one medication versus another
 More treatment options available, more likely one will find a more suitable treatment option
- Long-acting medication within a comprehensive addiction treatment could be valuable to enhance treatment engagement, retention and adherence

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