

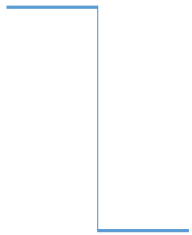
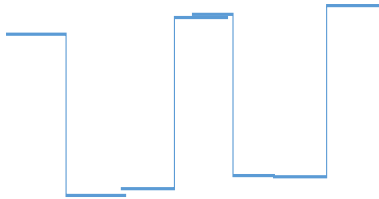
# Medication-Assisted Treatment (MAT) for PWIDs: Highly Significant Outcomes and Lessons Learned for Scale-Up

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# What is the natural pattern of drug use



Opiate use is a chronic condition similar to diabetes. There are effective treatments. Most drug users relapse several times before stopping. The more frequent drug use enroll in treatment, even after relapse, the more likely to be successful.

# What outcomes do we want for substance use disorder treatment

- Stopping drug use
- Reduction in drug use, reduce mortality,
- Increased physical and mental health and quality of life,
- HIV prevention, improved HIV clinical outcomes, prevention of HCV transmission
- Social factors of reduced crime, increased employment, improved family relationships

# Does treatment work?

- Effectiveness rates for methadone maintenance therapy range from 20% to 70%, and outcomes are dose related, with individual variability in the effective dose.
- Lower dosages (20–40 mg/day) are effective at suppressing opioid withdrawal but may not sufficiently decrease craving or block the effects of other opioids.
- Maintenance dosages are generally in the range of 70–120 mg/day, although some patients may require more than 120 mg/day for optimal therapeutic response.

## Mortality risk during and after opioid substitution treatment: systematic review and meta-analysis of cohort studies. Sordo et al.

- Following 122,885 people treated with methadone over 1.3-13.9 years and 15,831 people treated with buprenorphine over 1.1-4.5 years.
- Pooled all cause mortality rates were 11.3 and 36.1 per 1000 person years in and out of methadone treatment reduced to 4.3 and 9.5 in buprenorphine treatment.
- The induction phase onto methadone treatment and the time immediately after leaving treatment with both drugs are periods of particularly increased mortality risk, which should be dealt with by both public health and clinical strategies to mitigate such risk.

# Does MAT help social issues?

- Sun et al. (2014) Systematic review and meta-analysis conducted according to the PRISMA guidelines 38 publications
- Both English and Chinese literature databases, period 2004–2014 for studied indicators.
- Arrest rate decreased from 13.1% to 3.4% and 4.3% after 6 and 12 months of MMT intervention, respectively.
- The rate of drug selling decreased from 7.6% at baseline to 1.9% and 3.0%
- The rates of selling sex for drugs and drug-related crime decreased from 5.3% and 9.9% at baseline to 1.1% and 3.4% at 6 months, then to 0.8% and 3.4% at 12 months
- The rate of employment of clients and the proportion of clients having a good relationship with their family increased substantially from 26.4% and 37.9% to 41.6% and 59.6% then to 59.8% and 75.0%

## Retention in methadone maintenance treatment in mainland China, 2004–2012: A literature review focused on treatment retention: Zhou & Zhuang *Addictive Behaviors* 39 (2014)

- Clinic factors: Staff attitudes, Hours of operation, Distance, Costs (perceived and actual costs)
- Family: support for patients, support for methadone, stability married or main partner
  - Family support can be difficult due to conflict with the family. Drug users can still help the family. Drug users can still help the community.
- Reciprocity of support: helping family
- Time with non-drug using friends
- Social support reduces depression

# MMT retention

- Distance and cost of treatment: Low income more likely to drop out. Cost, need to work,
- Police: Perceptions of risk of arrest or actual arrest,
- Great illicit drug use,
- Younger age
- Dose, Dose, Dose
- Employment: Less likely to drop out and treatment increases likelihood of employment.
- Drug use leads to depression and anxiety. Depression and anxiety leads to depression



# Medication assisted treatment

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- Medication assisted treatment (MAT) is the most effective treatment for opioid dependent individuals. Methadone maintenance therapy enhances treatment retention, decreases illicit opioid and other drug use, and is associated with decreased criminal activity.
- Much more successful than only behavioral, social, and criminal justice approaches to treating opiate use.
- However, MAT rates can be improved by adding additional components.

# Medication assisted treatment

- Methadone is useful for suppressing withdrawal and blocking the effects of other opioids, and methadone maintenance therapy provides a context in which prosocial activities and health issues can be addressed.
- Psychosocial interventions: Coping without drugs, reducing chances of relapse, and dealing with relapse. Often drug users have poor relationships with family and friends. Social relationships can be addressed in treatment as can employment skills.

# Psychosocial interventions

- Effective methods to improve treatment outcomes:
- CBT, Supportive therapy, contingency management, prized based contingency management.

# Community reinforcement and family training for treatment retention (CRAFT-T)

- This intervention is designed to work with identified participants and concerned significant others (CSOs) who are already engaged in buprenorphine treatment to increase treatment retention and recovery support.
- In the CRAFT-T intervention, the patient and CSO met with a therapist for 2 joint sessions and the CSO met individually with the therapist for 10 sessions.
- Results showed that CRAFT-T participants with parental family CSOs had greater treatment retention than those with a non-parental family CSO, TAU participants with a parental-family CSO, or TAU participants with a non-parental family CSO. Patients assigned to the CRAFT-T group showed significantly greater reductions in opioid and other drug use (Brigham et al., 2014)

# Depression and Anxiety

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- Practice Guidance for Buprenorphine for the Treatment of Opioid Use Disorders:
- Results of an Expert Panel Process Farmer et al, (2015). Used RAND/UCLA method to assess the validity of the candidate guidelines by experts voting on guidelines.
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- Refer to specialized behavioral health care if patient fails to respond to treatment provided by prescribing physician.
- Assess severity of depression/anxiety.
- Integrate treatment for opiate dependence and depression/anxiety to the greatest degree possible, as on-site integrated care is associated with better outcomes than referrals off-site.

# Depression treatment

- Mild to moderate: behavioral is effective as pharmacological
- Medication: (need to closely monitor, change or adjust doses, highly trained staff)
- Behavioral: (social support, stress reduction, exercise, increase positive events, cognitive training, communications training, moderately trained staff)

# Depression intervention example:

## Workshop

- Workshop, an integrated cognitive behavioral therapy and HIV prevention intervention to reduce depressive symptoms and HIV risk in a sample of inner-city individuals who use drugs.
- **Methods:** The RCT compared the Workshop, a 10 session intervention, (9 group-based format and 1 individual-format) that was delivered by trained facilitators. to a single session overview of mental health services. Study participants were recruited using street-based outreach and media advertisements.
- Inclusion criteria were: aged 18-55, self-report at least one drug and sex risk behavior and score  $\geq 16$  on the Center for Epidemiologic Studies – Depression scale. Prospective data collection at 6 and 12 months

# Workshop

- Workshop utilized metaphors and visual aids to make CBT skills more relevant to the study participants.
- *Yellow and Blue* was a metaphor used to personify and symbolically represent negative and maladaptive (Blue) thinking, people, and environments versus pleasant and supportive (Yellow) thinking, people, and environments.
- Participants identified “Yellow people”; individuals who improved their mood or provided social support, and were encouraged to plan activities with these Yellow people and to give their Yellow people positive feedback for being supportive.
- Participants identified Yellow places, those associated with pleasant mood and thoughts, and set goals to spend more time at these places.



# Workshop

- **Results:** A total of 315 individuals were randomized (43% female).
- Retention at 12 months was 94% for both conditions.
- There was a significant reduction in depressive symptoms at the two time points.
- Workshop arm had a significantly higher reduction than the control arm at 12-months (coefficient: -2.83, 95%CI= -5.28; -0.38).
- Tobin, Nonyane, Davey-Rothwell, Knowlton, Wissow, Latkin, (in press) **RCT of an integrated cognitive behavioral therapy-HIV prevention intervention for drug users**, PLOS ONE

# What to do about MAT patients continues to use illicit drugs

- Important to ask them why they are using.
  - Implement MI, goals, address craving, and withdrawal symptoms
- Even those who use MAT is associated with lower levels of HIV. For those who are HIV+, associated with adherence.
- Patients with HIV can adhere to ART while using heroin. Other risk factors associated with drug use and low adherence: depression, homelessness.

# Can heroin users be productive members of society?

- We have recruited heroin users to be peer educators for HIV prevention, HIV testing, and HIV care.
- We train them in small groups and pay them for receiving the training but not for their peer education.
- We have found that this approach can reduce new HIV infections among injection drug users.
- We do not know if drug users can be effective in promoting drug treatment among other drug users.

# Can drug users pay for drug treatment?

- Depends on their income level.
- Some may intent to pay but find that they do not have the resources.
- By requiring payment the drug users who are worse off and may have HIV, HCV, or TB may drop out. These are the ones who may benefit greatly from treatment and treatment can help reduce HIV and HCV transmission.

# Stimulant treatment

- Evidence to suggest that other psychological interventions are effective for stimulant users. However, the majority of the treatment efficacy research has been done with cocaine abusing populations, and given the known differences between individuals seeking treatment for methamphetamine versus cocaine.
- A systematic review of cognitive and behavioral treatments as applied specifically to methamphetamine use disorders concluded that good clinical outcomes are achieved with CBT; and Contingency Management (CM) therapies involving the systematic use of reinforcement (Lee and Rawson, 2008). A number of caveats must be considered when interpreting these conclusions however, such as the durability of treatment effects (especially with respect to CM programs).

# HIV prevention and care

- Several studies find that PWID in methadone have significantly lower HIV rates and fewer HIV risk behaviors.
- HIV adherence is significantly increased in MAT, though injection drug use among those that are in drug treatment is associated with poorer adherence.
- Among active injectors, better adherence is associated with greater social support and stable housing.

# Integration of HIV and drug treatment

- Less bureaucracy accessing and engaging in services;
- increased monitoring of drug interactions and side effects from MMT and the provision of ART for HIV reduced HIV stigma from providers;
- consolidated drug use and HIV counseling; and health care delivery systems that are targeted and user-friendly integration of drug treatment and HIV care services reduces costs

# Go et al. Implementation Science (2016)

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- At the policy level, the need for a central-level decree considered essential before clinics could begin the process of integration.
- Differences in insurance reimbursements and staff salaries for MMT services as compared to HIV services need to be harmonized
- Concerns about staffing reductions and resistance to taking on additional tasks without compensation were voiced highlighting the need to develop clear policies for shifting staff and for providing monetary and non-monetary rewards for additional tasks.



# Stigma Yang et al. (2017) reviewed 18 articles on stigma

- Studies consistently show that the public holds highly stigmatizing attitudes toward substance users.
- Stigmatizing attitudes toward substance abusers include perceiving them as dangerous, unpredictable, unable to make decisions, to blame for their own conditions, and a willingness to coerce treatment, and maintain social distance.
- When compared with other psychiatric diagnoses, the percentage of respondents endorsing negative statements about treatability (i.e., would not improve with treatment) was generally less (11%) for drug and alcohol addiction.
- Individuals were largely blamed for having the disorder.
  
- Stigma can reduce willingness of policymakers to allocate resources,
- Reduces willingness of health care providers in to screen and address substance abuse,
- Reduce drug users willingness to seek treat due to fear of poor treatment, concerns of lack of confidentiality, and concerns that they will not be treated with a sufficient dose of medication to address withdrawal symptoms.
- Drug user stigma associated with depression and sharing of injection equipment

# How do we address drug user stigma?

- Few studies on it (many more on reducing HIV stigma)
  - An important field of research
- Train health care providers in the science of addiction and appropriate treatment of drug users
- Train criminal justice officials (great success in Taiwan)
- Train family members of drug users
- Use advertising and social media to provide the public with accurate information about substance abuse and effective treatments.

# Innovative approaches

- **Low threshold MMT:** rejection of abstinence from opiates as the only treatment goal.
- Safe consumption spaces
- Heroin trials for those who do not succeed in drug treatment
- Job training and placement for MMT patients
- Train MAT patients as HIV prevention and care outreach workers
- Decriminalization of certain drugs. In the US states with legalization of marijuana have lower drug overdose rates.

# Innovative approaches

- Family focused interventions
  - Help with ART adherence
  - Help with MAT take home doses
  - Support non-drug use activities

# THANK YOU

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