

Reducing Harms from Opioid Use among people living with HIV:

A brief guide for HIV providers



Comments or questions?

Dr. E. Jennifer Edelman (ejennifer.edelman@yale.edu)

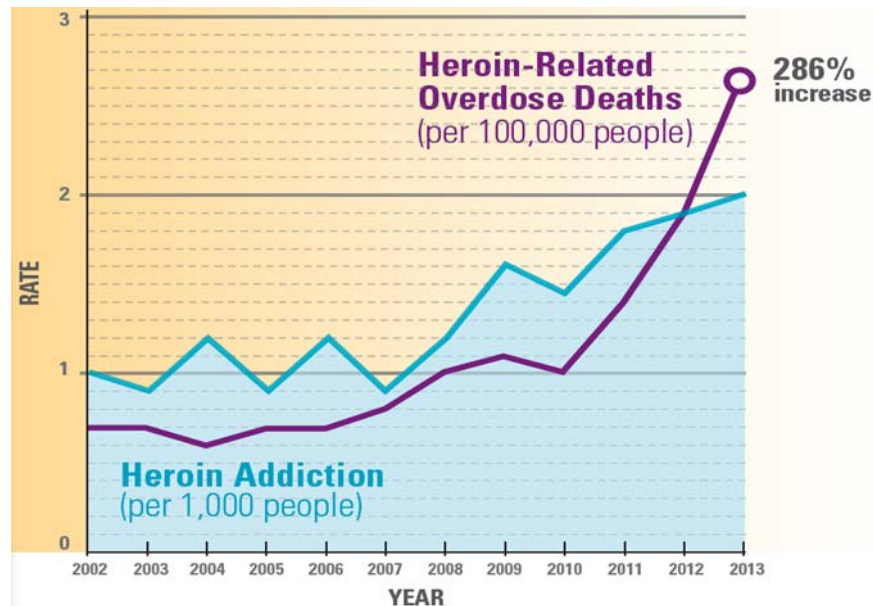
Dr. David Fiellin (david.fiellin@yale.edu)

Dr. Srinivas Muvvala (srinivas.muvvala@yale.edu)

Opioids and HIV

- The United States is in the midst of a severe opioid epidemic. ^{1,2}
- Prescription opioid and heroin use are widely prevalent and the rates are rapidly escalating. ^{1,2}
- Rates of opioid-related overdose deaths increased exponentially. ^{1,2}
- There has been a significant increase in injection drug use. ^{3,4}
- There has been an associated increase in Hepatitis C, Hepatitis B, HIV infections. ^{3,4}
- Methadone and buprenorphine treatment of HIV-positive individuals have both been shown to decrease HIV transmission risk and improve HIV biological outcomes. ⁵
- In addition, extended release naltrexone has been shown to decrease opioid use. ⁶
- Few sites integrate the treatment of HIV and opioid use disorder. ⁵
- Ongoing injection drug use negatively affects treatment outcomes among HIV-positive individuals despite the combined antiretroviral treatment. ⁷
- HIV Primary care clinics offer an opportunity to integrate HIV and addiction treatment. ⁷

Heroin Addiction and Overdose Deaths ¹



Educational Resources:

1. SAMSHA Opioid Overdose Prevention Toolkit: This toolkit offers strategies to help prevent opioid-related overdoses and deaths. <https://store.samhsa.gov/product/Opioid-Overdose-Prevention-Toolkit/SMA16-4742>
2. SAMSHA Treatment Improvement Protocol - TIP63: Medications for Opioid Use Disorders – Resources Related to Medications for Opioid Use Disorder. <https://store.samhsa.gov/product/SMA18-5063PTS>
3. Provider's Clinical Support System for Medication-Assisted Treatment (PCSS-MAT) is a national training and clinical mentoring project developed in response to the opioid use disorder crisis. The overarching goal of PCSS is to provide the most effective evidenced-based clinical practices in the prevention, identification, and treatment of opioid use disorders. <https://pcssnow.org/education-training/>

References:

1. Centers for Disease Control and Prevention. National Vital Statistics System mortality data. (2015). Available from URL: <http://www.cdc.gov/vitalsigns/heroin/>
2. Substance Abuse and Mental Health Services Administration. (2017). *Key substance use and mental health indicators in the United States: Results from the 2016 National Survey on Drug Use and Health* (HHS Publication No. SMA 17-5044, NSDUH Series H-52). Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. Retrieved from <https://www.samhsa.gov/data/>
3. Cicero TJ, Surratt H, Inciardi JA, Munoz A. Relationship between therapeutic use and abuse of opioid analgesics in rural, suburban, and urban locations in the United States. *Pharmacoepidemiol Drug Saf.* 2007;16 (8):827---840.
4. Akselrod H, Grau LE, Barbour R, Heimer R. Seroprevalence of HIV, hepatitis B virus, and HCV among injection drug users in Connecticut: understanding infection and coinfection risks in a nonurban population. *Am J Public Health.* 2014 Sep;104(9):1713-21
5. Fiellin DA, Weiss L, Botsko M, Egan JE, Altice FL, Bazerman LB, et al. Drug treatment outcomes among HIV-infected opioid-dependent patients receiving buprenorphine/naloxone. *JAIDS.* 2011; 56(Suppl 1):S33–S38.
6. Krupitsky E, Nunes EV, Ling W, Illeperuma A, Gastfriend DR, Silverman BL. Injectable extended-release naltrexone for opioid dependence: a double-blind, placebo-controlled, multicentre randomised trial. *Lancet.* 2011 Apr 30; 377(9776):1506-13.
7. Edelman EJ, Tetrault JM, Fiellin DA. Substance use in older HIV-infected patients. *Curr Opin HIV AIDS.* 2014 Jul;9(4):317-24.
8. Altice FL, Bruce RD, Lucas GM, et al. HIV treatment outcomes among HIV-infected, opioid-dependent patients receiving buprenorphine/naloxone treatment within HIV clinical care settings: results from a multisite study. *J Acquir Immune Defic Syndr.* 2011 Mar 1;56(Suppl 1):S22–32.
9. Lim JK et al. Prescribe to Prevent, Overdose Prevention and Naloxone Rescue Kits for Prescribers and Pharmacists. *J Addict Med.* 2016
10. Nora D. Volkow, M.D., and Francis S. Collins, M.D., Ph.D. The Role of Science in Addressing the Opioid Crisis. *N Engl J Med* 2017; 377:391-394 July 27, 2017

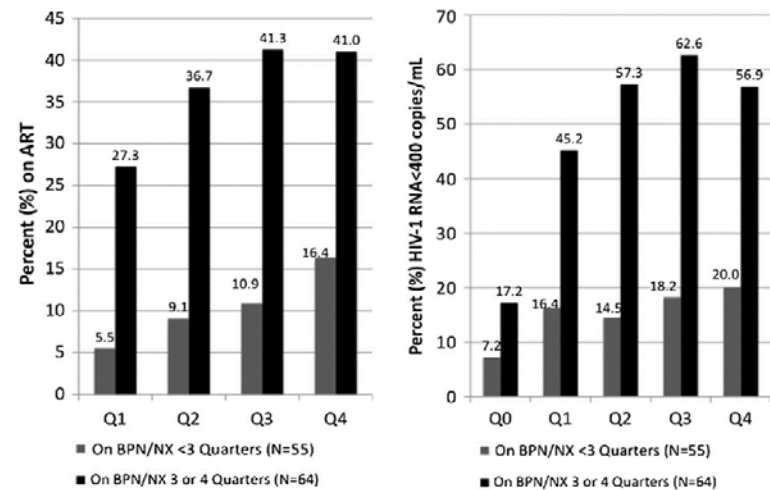
Medications for Treatment of Opioid Use Disorder ^{9,10}

Medication	MOA	Dosage	Notes
<p>Buprenorphine/Naloxone (Suboxone, Bunavail, Zubsolv)</p> <p>Or</p> <p>Buprenorphine (Subutex)</p>	Partial Opioid Agonist	<p>2-24mg daily of tablet or sublingual formulation.</p> <p>Approved injectable formulations</p>	<p>-Ceiling effect: Potentially less overdose risk as compared to full agonist</p> <p>-Improved treatment retention</p> <p>-Improved social functioning</p> <p>-Decreased opioid use</p> <p>-Decreased overdose deaths</p> <p>-Decreased HIV and HCV transmissions</p> <p>-Improve HIV treatment, biological outcomes</p> <p>-Decreased criminal behavior</p>
Methadone (oral)	Full Opioid Agonist	20 -120 mg. Higher doses as indicated in special circumstances	<p>-Improved treatment retention</p> <p>-Improved social functioning</p> <p>-Decreased opioid use</p> <p>-Decreased overdose deaths</p> <p>-Decreased HIV and HCV transmissions</p> <p>-Improve HIV treatment, biological outcomes</p> <p>-Decreased criminal behavior</p>
<p>Naltrexone</p> <p>Oral (Revia)</p> <p>Extended Release, IM (Vivitrol)</p>	Full Opioid Antagonist	<p>Tablet: oral 50-100mg daily</p> <p>Vivitrol): injectable IM 380mg monthly</p>	<p>Extended release formulation:</p> <p>-Improved treatment retention</p> <p>-Decreased opioid use</p>

Buprenorphine and HIV Treatment Outcomes

The primary findings, including work in New Haven and Providence, from the Human Resources and Service Administration-funded Buprenorphine and Integrated HIV Care Model Demonstration Project (BHIVES) Collaborative: ^{5,8}

1. Initiating buprenorphine/naloxone (BUP/NX) in HIV clinical care settings: Feasible, improves initiation of ART, and CD4 lymphocyte Counts.
2. BUP/NX retention improves HIV treatment outcomes for those not on ART at baseline.
3. BUP/NX provided in HIV treatment settings decreases opioid use.



Comparison of initiating antiretroviral therapy and viral suppression outcomes among patients not on antiretroviral therapy at baseline: stratified analysis among patients retained on buprenorphine/naloxone for three or more quarters. Compared to baseline, $p < 0.05$ for all comparisons. ⁸

DSM-5 Criteria for Opioid Use Disorder

1. Opioids taken in larger amounts or for longer than intended	7. Important activities given up or reduced because of opioid use
2. Persistent desire or unsuccessful efforts to cut down or control opioid use	8. Recurrent opioid use in physically hazardous situations
3. Great deal of time spent obtaining, using, or recovering from opioid use	9. Continued use despite knowledge of physical or psychological problems that are caused or exacerbated by opioids
4. Craving or strong desire to use opioids	10. Tolerance
5. Failure to fulfill major obligations due to opioid use	11. Withdrawal
6. Continued use despite problems caused or exacerbated by opioid use	Mild- 2 to 4 symptoms Moderate- 4 to 5 symptoms Severe- 6+ symptoms

RESPONDING to the OPIOID EPIDEMIC ^{1,9}

Reduce problems related to prescription opioids

- Safe opioid prescribing, identifying patients receiving high doses of opioids (i.e. >90 mg morphine equivalents per day)
- Use prescription monitoring systems
- Prescription drug disposal, “take-back” events
- Avoiding polypharmacy, drug combinations that might increase overdose risk especially benzodiazepines

Increase access to medication treatments for opioid addiction

- Methadone
- Buprenorphine
- Oral and Extended release naltrexone

Prevent or address medical comorbidities

- Education
- Syringe Service Programs
- Screening and Treatment for Hepatitis and HIV, including pre-exposure prophylaxis for HIV (PrEP)

Expand access to naloxone and overdose prevention training

- Overdose prevention education and training
- Naloxone rescue kits