

OPIOID REPLACEMENT THERAPY IN HCPS



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IntNSA Webinar Series

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Acknowledgements

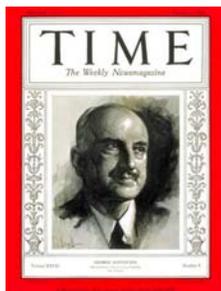
- Heather Hamza, CRNA, MS,
- Ethan Bryson, MD
- Omar Manejwala, MD
- Paul Earley, MD
- Marv Seppala, MD
- Keith Berge, MD, who lobbed the first grenade!
- Mike Oreskovich, MD.

Presentation Objectives

- Identify the impact of opioid dependency on HCPs.
- Examine the contributions of genetics, professional acculturation and professionally reinforced denial.
- Review the relevant pharmacodynamics and pharmacokinetics of opioid replacement options.
- Identify how prolonged drug use changes brain circuitry (Neuroplasticity) contributes to chronicity.
- Review definitions of safety sensitive professions, and the potential impact(s) of ORT on psychomotor and neurocognitive performance.

Underlying Theme

- “Those who cannot remember the past are condemned to repeat it” George Santayana, A Life of Reason, 1905.



Perils of Pharmacologic Optimism: A Cautionary Tale

“Neither advanced education nor knowledge of pharmacology nor familiarity with the addictive process was able to prevent tragic consequences for me. It is my sincere hope that my experience may serve as a warning, help illuminate prevent similar tragedies in the lives of others”.

Intellectualization of Drug Abuse
McCracken, C. B.
JAMA, May 19, 2010—Vol 303, No. 19
Pg 1895

Historical Bias: Pharmacologic Optimism in ORT

- Opium begat morphine
- Morphine begat heroin
- Heroin begat methadone
- Methadone begat LAAM
- Heroin/methadone begat buprenorphine
- Focus on agonist free recovery begat naltrexone

A Brief History of Opioid Treatment

- 1964: Methadone is approved.
- 1974: Narcotic Treatment Act limits methadone treatment to specifically licensed Opioid Treatment Programs (OTPs). Incredibly burdensome regulations.
- 1984: Naltrexone is approved, but has continued inadequately utilized outside of Opioid Dependent HCPs (approved in 1994 for alcohol addiction).
- 1993: LAAM is approved (for non-pregnant patients only), but is underutilized.

A Brief History of Opioid Treatment, Continued

- 2000: Drug Addiction Treatment Act of 2000 (DATA 2000) expands the clinical context of medication-assisted opioid treatment.
- 2002: Tablet formulations of buprenorphine (Subutex®) and buprenorphine/naloxone (Suboxone®) were approved by the Food and Drug Administration (FDA).
- 2004: Sale and distribution of ORLAAM® is discontinued.

Buprenorphine

- “Writing off a generation”
- Anti-buprenorphine vs “Wake up”
- State of the evidence, risk/benefit profile
- Cognitive impairment (Soyka et al J. Clin Psychopharm 12/2008)
- Buprenorphine Abuse SAMHSA monograph <http://bit.ly/buprenorphineabuse>

Buprenorphine Pharmacology

- Semisynthetic, highly lipophilic Thebaine derivative
- 25 to 50 times more potent than morphine
- Partial μ -agonist
- Some kappa antagonist effects
 - Clinical significance unclear, but some evidence that pure kappa antagonists have antidepressant activity in animal models.

Pharmacological Properties

- Partial agonist effects suggested by
 - Relative plateauing on analgesic effects
 - Ceiling on respiratory depression provided single agent ingestion.
 - Antagonizes fentanyl induced respiratory depression without complete loss of anesthesia
 - Indicates high affinity for μ -receptor
 - Can precipitate opiate withdrawal in highly μ -dependent people

Clinical Applications

- Used as parenteral analgesic in Europe (1° England) for cancer pain and in obstetrics
- Never caught on in USA as an analgesic agent
- Produces less respiratory depression than traditional μ -agonists
- Widely utilized in opioid detoxification and maintenance in appropriately selected patients
- Safer in overdose than pure μ -agonists

Seminal Article: Throwing a Grenade in a Stagnant Pond

- Buprenorphine Maintenance Therapy in Opioid-Addicted Health Care Professionals Returning to Clinical Practice: A Hidden Controversy
- Heather Hamza, CRNA, MS, and Ethan O. Bryson, MD
- Mayo Clin Proc. 2012;87(3):260-267

Buprenorphine Abuse

The most common pattern of abuse involves crushing the sublingual tablets and injecting the resulting extract (Cicero & Inciardi, 2005).

When injected intravenously, addicts have described the clinical effects of buprenorphine as similar to equipotent doses of morphine or heroin (Sporer, 2004).

Investigators have found that the blockade efficacy of Suboxone is dose-related, and that doses of up to 32/8 mg of buprenorphine/naloxone provide only partial blockade when subjects receive a high dose of an opioid agonist (Strain, Walsh et al, 2002).

An Alternative

- A large treatment center (P. Earley, MD, and M. Oreskovich, MD, oral communication, December 2011) and a large PHP (P. Earley, MD, and M. Oreskovich, MD, oral communication, December 2011) have demonstrated a significant reduction in relapse when opioid-dependent HCPs receive monthly injections of depot naltrexone, an opioid antagonist drug that lacks the potentially intoxicating effects of buprenorphine.
- Routine use of this medication may negate the need or indication for buprenorphine maintenance among HCPs.

Dispelling Some Myths about Buprenorphine & Suboxone

- In early pre-clinical studies subjects rated the "liking" score for buprenorphine as high as morphine and identified it as morphine like.
- The naloxone in Suboxone® is only a deterrent to IV administration.
- Under experimental conditions, buprenorphine has been found to be as effective as methadone in producing reinforcing and subjective effects (Alho, Sinclair et al., 2006).

Buprenorphine Abuse

- Based on follow-up interviews with study subjects, researchers have hypothesized that, by suppressing withdrawal symptoms, the buprenorphine provides both positive and negative reinforcement by simultaneously producing euphoric effects and alleviating withdrawal (Comer, Sullivan et al., 2005a).
- Buprenorphine diversion and abuse have been reported worldwide wherever the drug has been used for addiction treatment and, to a more limited extent, in the management of pain (Maxwell, 2006; Yeo, Chan et al., 2006; Chua & Lee, 2006; Jenkinson, Clark et al., 2005; Auriacombe, Fatseas et al., 2004).
- In a study reported at the 2006 Australian National Drug Trends Conference, one percent of 914 respondents (all of whom were injection drug users) cited buprenorphine as their drug of choice, and six percent said it was the drug they had injected most often in the preceding month. Those who had injected Suboxone reported that they used it to alleviate withdrawal, to achieve intoxication, and out of curiosity (Maxwell, 2006). From 12 studies cited in theSAMHSA monograph
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Buprenorphine cognitive impairment

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