



Overview

Methadone (a full mu-opioid agonist) is the recommended treatment for opioid use disorder (OUD) during pregnancy, but prenatal exposure to methadone is associated with a neonatal abstinence syndrome (NAS). NAS is characterized by central nervous system hyperirritability, including signs like tremors and high-pitched crying, and autonomic nervous system dysfunction, including fever and sweating. It often requires medication and extended hospitalization. After a landmark multi-institutional study funded by the National Institute on Drug Abuse, buprenorphine (a partial mu-opioid agonist) is now considered an alternative treatment for OUD during pregnancy to reduce the severity of NAS.

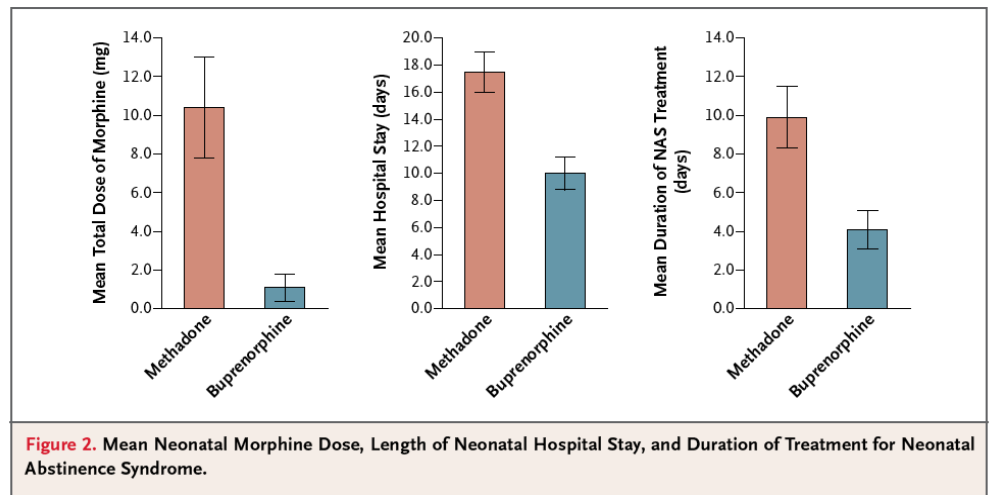
Methods

Researchers at eight international sites conducted a double-blind, double-dummy, flexible-dosing, randomized, controlled study in which buprenorphine and methadone were compared for use in the comprehensive care of 175 pregnant women with OUD. Primary outcomes were: number of neonates requiring treatment for NAS; peak NAS score; total amount of morphine needed to treat NAS; length of the hospital stay for neonates; and, neonatal head circumference.

Findings

A comparison of the 131 neonates whose mothers were followed to the end of pregnancy according to treatment group (with 58 exposed to buprenorphine and 73 exposed to methadone) showed that the buprenorphine group:

- Required significantly less morphine (mean dose, 1.1 mg vs. 10.4 mg; $P < 0.0091$)
- Had a significantly shorter hospital stay (10.0 days vs. 17.5 days, $P < 0.0091$)
- Had a significantly shorter duration of treatment for the NAS (4.1 days vs. 9.9 days, $P < 0.003125$)



Reprinted from *Neonatal Abstinence Syndrome after Methadone or Buprenorphine Exposure*, New England Journal of Medicine, HE Jones et al., 2010.

Data suggests that buprenorphine should be a first-line medication for the treatment of OUD in pregnancy. Women should work with their provider in deciding which medication is best for them.

Learn More

“[Neonatal Abstinence Syndrome after Methadone or Buprenorphine Exposure](#)” was published in the *New England Journal of Medicine*, December 9, 2010. UVM CORA has trained educators available to support providers in the use of buprenorphine for treatment of opioid dependence in pregnant women. Providers can reach out to uvmcora@uvm.edu for consultation free of charge.