

Medication Assisted Treatment

MAT

- Opioid dependence/addiction
- Opioid treatment programs

OTP

- Regulation of OTP
- Office Based Treatment

Opioid Drugs

- Opium
- Morphine
- Heroin
- Codeine
- Oxycodone
- Roxycodone
- Oxycontin
- Percocet

Opioid Drugs

- Hydromorphone
 - Dilaudid
- Hydrocodone
 - Vicodin
- Fentanyl
- Methadone
- Buprenorphine

Therapeutic Effects of Opioids

- Pain relief
 - Short vs long term
 - Cancer vs non cancer
- Cough suppressant
- Myocardial infarction – heart attack
- Pulmonary edema – fluid in lungs

Other Effects (Positive)

- Increased energy
- Improved focus/concentration
- Reduced anxiety
- Reduced depression
- Sleep aid
- Euphoria

Other Effects (Negative)

- Withdrawal from drug
- Increased pain (paradoxical)
- Sedation
- Overdose
- Death

Categories of Opioid Addiction

- Opioid dependence - Physiological effects of drug
- Opioid addiction - Physical dependence on, and subjective need and craving for the, drug either to experience the positive effects or to avoid negative effects of withdrawal
- Tolerance - Increased need for larger quantities of opioids to achieve the same effect

Opiate Receptors in the Brain

- A type of protein in the brain, spinal cord and G.I. Tract
- Four major groups:
 - Receptors activated by opiate drugs
 - Stimulate pleasure centers
- Results in reward feelings
- Dopamine release causes intense “rush” of euphoria, followed by relaxation and contentment

Opiate Receptors in the Brain

- Four major groups (continued):
 - Facilitate pain relief
 - Endogenous opioids - Endorphins

Opiate Withdrawal Syndrome

- Caused by stopping or reducing opioid use after prolonged periods of use
- Symptoms start 8-12 hours after last dose:
- Symptoms include: irritability, restlessness, insomnia, flushing, runny nose and eyes, nausea, vomiting, diarrhea, aches and pains, poor concentration, anxiety, racing heart, sweating, dilated pupils

Opiate Withdrawal Syndrome

- Later symptoms include: drug craving, lethargy, depression, lack of pleasure, drug dreams – may persist for months or years

Medication Assisted Treatment

- At OTP – Methadone or Buprenorphine (Suboxone, Subutex)
- Office – Buprenorphine
- Opioid dependent for one year with six months of continuous use

Methadone

- Long duration of action (24-36 hours)
- Strictly regulated in treatment of addiction – only in OTPs
- Induction phase – start low, increase dose until symptoms of withdrawal stop
- “Blocking” dose – other opioids ineffective
- Daily visits – can earn take-home doses slowly

Methadone

- Drug testing weekly – monthly counselling
- Referral to medical, psychiatric, more intense services
- Family involvement
- Confidentiality
- Stabilize physical, mental, family, legal, occupational, financial status

Methadone

- Non judgmental
- Medically supervised withdrawal when patient is ready

Buprenorphine

- OTP or office based
- Doctors have a waiver from DEA to prescribe it for addiction
- Sublingual tablet or film
- “Ceiling” effect – Not sufficient in high dose opioid abusers

Buprenorphine

- Pain relief – sometimes inadequate
- Counseling and drug testing
- Doctor gives prescriptions

Methadone vs Buprenorphine

- Methadone
 - Cheap
 - Side effects – weight gain, sedation
 - Daily travel to OTP
 - Stigmatized
 - Effective for All
 - More control

Methadone vs Buprenorphine

- Buprenorphine
 - Expensive
 - Fewer side effects
 - Fewer visits to doctor's office
 - More acceptable
 - Ineffective for some
 - Less control

Pregnant Opioid Abusers

- Short acting opioids (heroin, oxycodone, etc.) lead to repeated withdrawal episodes for fetus
- High risk pregnancies
- Avoid prenatal care

Pregnant Opioid Abusers

- Increased medical diagnoses
 - Hepatitis B or C
 - HIV infection/AIDS
 - Tuberculosis
 - STDs
 - Infections
 - Malnutrition

Effects of Opioid Withdrawal in Pregnancy

- First and second trimester – miscarriage
- Second and third trimester – premature delivery
- Increased risk of obstetrical complications in opioid addicted women
 - Placental problems
 - Pre eclampsia
 - Retarded fetal growth

Effects of Opioid Withdrawal in Pregnancy

- Obstetrical complications (continued)
 - Death of fetus
 - Post partum hemorrhage
 - Pre term labor and delivery

Management of Pregnant Patients

- Early intervention – first trimester refer to high risk OB/GYN
- Screen for medical problems
- Education - “Pregnancy teaching”
- Experienced counselor
- High nicotine abuse

Management of Pregnant Patients

- Frequent drug testing for other substances
 - Marijuana
 - Benzodiazepines
 - Cocaine
- Alcohol abuse screening
- Living, transportation, and/or legal issues

Methadone in Pregnancy

- Accepted standard of care (NIH 1998)
- Only opioid approved by FDA for MAT in pregnant women
- Long acting drug prevents fluctuation in maternal serum opioid levels
- Dosing is individualized based on patients' symptoms

Methadone in Pregnancy

- Usually during pregnancy, patients need increased methadone doses due to increased blood volume, altered metabolism of drug
- May need “split” dose – twice daily
- Patient's dose at delivery does NOT predict NAS (Neonatal Abstinence Syndrome)

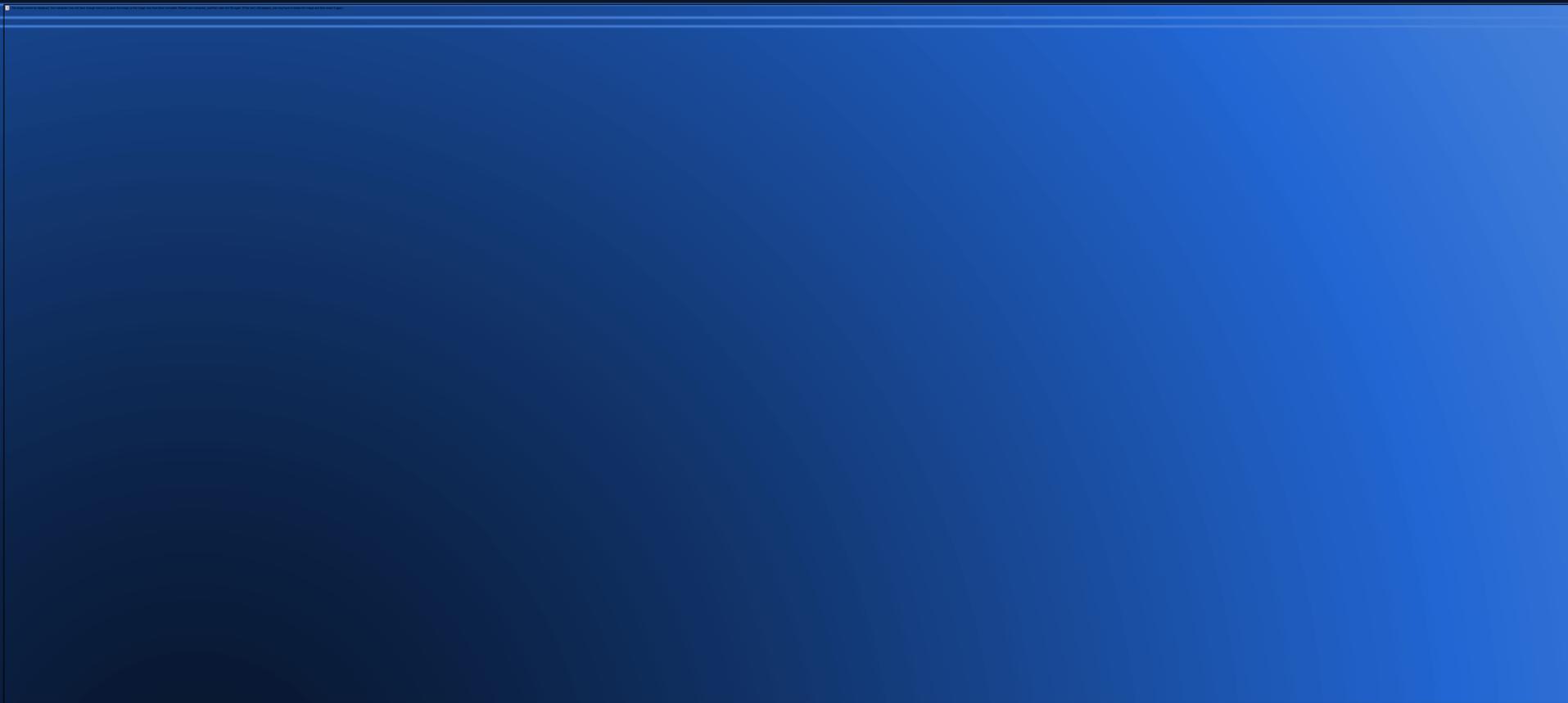
Buprenorphine in Pregnancy

- Not FDA approved
- Limited number of women treated
- Expensive - \$6 to \$8 per pill, 1 to 4 pills per day
- “Ceiling” effect
- High incidence of polysubstance abuse
- Must be able to trust patient with prescriptions or fund OTPs to buy medication

“NAS After Methadone or Buprenorphine Exposure”

- New England Journal of Medicine, Dec 2010
- Estimated cost in US in 2009 of treatment of NAS: \$70 to \$112 million
- Study compared 89 pregnant women on methadone to 86 pregnant women on buprenorphine

Study Results



Study Results

- Dropout rate for buprenorphine group: 33%
- Dropout rate for methadone group: 18%

Residential Treatment

- Court ordered vs voluntary
- Operation PAR – PAR Village
- Pregnant women prioritized
- Group and individual therapy
- Training informed care
- Live in houses, medical and nursing overlay, transported to medical, psychiatric, dental appointments

Residential Treatment

- May have other children up to age 8
- Frequent visits to the hospital if baby has NAS
- May bring baby to PAR Village from hospital

Operation PAR

- 5 OTPs
 - Tarpon Springs
 - Clearwater
 - Bradenton
 - Sarasota
 - Fort Meyers
- Total patients and OTPs = 3,082
- Pregnant patients = 145-150

Operation PAR

- Deliveries per month = 25-35
- Case management
- Day treatment
- Intensive outpatient treatment
- Motivating new moms
- Liason with local hospitals, mental health centers, obstetricians
- Education