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
- Liaison with local hospitals, mental health centers, obstetricians
- Education