The Opioid Addicted Pregnant Patient

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• Receives no commercial support, in any form, from pharmaceutical companies or anyone else

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• Expert witness, U.S. Attorney, TBI, FBI, DEA, IRS, Commonwealth Attorney Virginia and Kentucky, Virginia State Police, Tennessee Board of Medical Specialties

• Member, Greene County Drug Court, Judge Kenneth Bailey and member of the National Association of Drug Court Professionals

• Speaker, Proper Prescribing of Controlled Substances

• Founding Partner and Chairman, Board of Directors, High Point Clinic, a non-profit clinic in Johnson City, Tennessee, with an interest in opiate addicted pregnant women

• Recovering from addiction to opiates, benzodiazepines and alcohol since July 2004

• Advocate for Proposition 46 in the state of California

• 2014 Advocate for Action, Office of National Drug Control Policy, Executive Office of the President of the United States

• Tennessee Volunteer Fan and Alum and Father to Heath and Hayley and husband of 25 years to Karen
The Stockdale Paradox

Retain faith that you will prevail in the end, AND at the same time confront the most brutal facts of your current reality, regardless of the difficulties. Whatever they might be.

Admiral Jim Stockdale

Prevailing Philosophy

• “Here is the solution to the American drug problem suggested by the wife of our President: “Just Say No.””

Kurt Vonnegut
Tennessee

• An estimated 4.25% Tennessee adults (or 201,000 people) used pain relievers non-medically in the past year. Almost 12% of 18-25 year olds (or about 77,000 people) abused pain relievers

• Tennessee ranks third in the nation for number of prescriptions written at 17.6 per capita. Prescribing practices in 2010 resulted in 51 pills of hydrocodone, 22 pills of Xanax and 21 pills of oxycodone for every Tennessean above age 12

• There were 887 prescription drug overdose deaths in Tennessee in 2010, up from 301 deaths in 2001

• Estimated that 4% of pregnant women are opiate addicted
Tennessee 2007

• Opioid Prescription Rates by County
Tennessee 2008

- Opioid Prescription Rates by County
Tennessee 2009

- Opioid Prescription Rates by County
Tennessee 2010

- Opioid Prescription Rates by County
Tennessee 2011

- Opioid Prescription Rates by County
Supply and Demand: The Substance Abuse/Misuse Market Triangle
Substance Abuse/Misuse

Constraining the Market

Treatment

Control

Prevention
Addiction

• 23 million people in the United States suffer from addiction, the same number that suffer from Type I diabetes mellitus

• The AMA, the American Psychiatric Association, and the American Society of Addiction Medicine all describe addiction as a “chronic, relapsing disease”, yet we treat it more as a moral failing than a disease
People’s Views

• “How about treatment that works instead of ridiculous 12-Step AA/NA cult “Higher Power” nonsense that has a 100% failure rate?”

• “Pain management specialist are hard to come by and not covered by my insurance. My physicians will not treat my pain properly and threaten me with no medication.”

• “99% of addicts are personality disordered. They are mentally retarded.”
Treatment Options

- Our area, 150 inpatient beds available for drug treatment as late as 1995

- My treatment= $50,000.00, CASH

- Buprenorphine based treatment- pill mills vs. legitimate treatment

- What does the medical literature say about current best treatment options? What if 12-step doesn’t work?

- **Concept of harm reduction**- It is estimated that individuals with opioid dependence have a **mortality rate 10 to 30 times higher** than those who do not use. The main causes of death are *HIV/ AIDS* and overdose. Individuals on opioid replacement therapy (methadone or buprenorphine) have a **70% reduction in mortality** compared with those who are not in treatment.
1930’s Mental Health Treatment
What’s the picture that changes the face of addiction?
Does this change the face of drug addiction?
NAS Rates by County

• 2010
Dependence vs. Addiction

• **Dependence** - once the drug is stopped, a predictable physiological withdrawal syndrome occurs.

• **Addiction** - the compulsive use, loss of control and continued use despite adverse consequences; *hallmark is craving*
Hi-jacking of the Reward Center
Opiates
Abuse Potential

- Codeine
- Fentanyl
- Morphine (*Kadian*)
- Opium
- Methadone
- Oxycodone (*Percocet, Roxicet, Oxycontin*)
- Meperidine (*Demerol*)
- Hydromorphone (*Dilaudid, Opana*)
- Hydrocodone (*Lortab, Vicodin*)
- Propoxyphene (*Darvon, Darvocet*)
- Buprenorphine (*Subutex, Suboxone*)
How do you let this happen?
Buprenorphine

- mu1, mu2, kappa and delta receptors
- Partial agonist, antagonist depending on the receptor
- mu1 = pain control
- mu2 = euphoria/respiratory depression
- Treatment for opioid addiction and pain (ceiling effect)
- Theory for adding naloxone to buprenorphine
- Acute pain management in patient taking Suboxone
IV Drug Abuse
Not Just the Arm- Subclavian
Jugular
Abscess- Complication: Endocarditis
Doctor?
Underground Healthcare
Injection Risks

• Cellulitis +/- abscess formation

• Sepsis

• Endocarditis

• Osteomyelitis

• Hepatitis B & C

• HIV
Withdrawal Syndrome

• Short acting opioids (heroin, oxycodone, hydrocodone)
  – Develops with 4-6 hours, progresses to 72 hours, subsides in a week
• Long acting opioids (methadone, Oxycontin)
  – Develops in 24-36 hours, may last for several weeks
• Obsessive thinking and cravings may persist for years
• Fetal death is a risk in pregnant women not treated for opioid addiction because the offspring experience acute opioid abstinence syndrome (Obstet Gynecol Clin North Am 1998;25:139-51)
Effects on Pregnancy Outcomes

- 1\textsuperscript{st} trimester- codeine can cause congenital heart defects
- No increase in the risk of birth defects after prenatal exposure to oxycodone, propoxyphene and meperidine
- Heroin- fetal growth restriction, \textit{abruptio placentae}, fetal death, pre-term labor and intrauterine passage of meconium (effects of repeated withdrawal on placental function)
- Risk of woman engaging in prostitution, theft and violence
  - Sexually transmitted diseases
  - Becoming victims of violence
  - Legal consequences- loss of child custody, criminal proceedings or incarceration
Screening in Pregnancy

- Part of complete obstetric care

- Should be done in partnership with the pregnant woman

- Non-judgmental approach

- Screening- 4 P’s, CRAFFT
Pregnancy Substance Abuse Red Flags

• *Seek prenatal care late in pregnancy*
• Poor adherence to their appointments
• Poor weight gain
• Sedation, intoxication, withdrawal symptoms, erratic behavior
• Track marks, abscesses, cellulitis (injection sites)
• Positive serology for Hepatitis B&C, HIV
• UDS- with patient’s consent and in compliance with state laws
Treatment

• Methadone- standard of care since the 1970’s
• Rationale for treatment- prevent complications of illicit opioid use and narcotic withdrawal
• Goals- encourage prenatal care and drug treatment
  – Reduce criminal activity
  – Avoid risks associated with the drug culture
• *Comprehensive opioid-assisted therapy that includes prenatal care reduces the risk of obstetric complications* (SAMSHA/CSAT February 9, 2012)
Neonatal Abstinence Syndrome

- *Methadone/buprenorphine (Subutex/Suboxone)* does not prevent NAS
- **NAS is an expected and treatable condition** - need collaboration among treating specialties
- Hyperactivity of the central and autonomic nervous systems
  - Uncontrolled sucking reflexes- leads to poor feeding
  - Irritability
  - High pitched cry
Timing of NAS

- **Methadone**- symptoms appear within 72 hours and can last for days and weeks

- Buprenorphine (*Subutex/Suboxone*)- symptoms appear within 12-48 hours and usually resolve within 7 days
  
  – (Drug Alcohol Depend 2003; 70:S87-101)
Opioid Replacement in Pregnancy

• Should be titrated until the woman is asymptomatic- withdrawals and cravings

• Systematic literature review- severity of NAS does not appear to differ based on the maternal dosage of methadone*

• Buprenorphine is the only approved opioid for the treatment of opioid dependence in an office-based setting
  • *Addiction 2010; 105:2071-84
Buprenorphine vs. Methadone

• **Advantages**- lower risk of overdose, fewer drug interactions, ability to treat as an outpatient, evidence of less severe NAS*

• **Disadvantages**- liver dysfunction, lack of long term data, dropout rate due to dissatisfaction with the drug, risk of precipitated withdrawal, increased risk of diversion
  

• Buprenorphine (Subutex/Suboxone) or methadone in 175 opioid-dependent pregnant women

• Buprenorphine neonates required:
  – 89% less morphine to treat NAS
  – 43% shorter hospital stay
  – 58% shorter duration of medical treatment for NAS
Forced Tapering During Pregnancy

• Goal- relief of withdrawal symptoms and cravings; PREVENT RELAPSE

• *Not recommended during pregnancy because of association with high relapse rates*

• If attempted, 2\textsuperscript{nd} trimester under the supervision of a physician experienced in perinatal addiction treatment

• Coordination between the ObGyn and Addiction Medicine Specialist is important
  • *(Am J Addict 2008; 17:372-86)*
Intrapartum and Postpartum Management

• Analgesia

• Breastfeeding

• Postpartum Issues

• Long-term Infant Outcomes
**Analgesia**

- *Should receive pain relief as if they were not taking opioids*
- Epidurals and spinals- same
- Avoid pentazocine, nalbuphine & butorphanol- can precipitate *acute opiate withdrawal syndrome*
- Will require higher dosages of opioids to achieve analgesia
  - 1 study, post C-section, buprenorphine patients required 47% more opioid analgesia (*Am J Addict* 2006; 15:258-9)- secondary to up-regulation of opioid receptors and down-regulation of dopamine receptors
- Maintain methadone/buprenorphine through labor (prevents withdrawal)
- Dividing daily dose of buprenorphine into 4 doses will provide partial pain relief
Breastfeeding

• *Should be encouraged in persons without HIV*

• Buprenorphine PI says breastfeeding is contraindicated
  – Consensus panel- breastfed infant effects are likely minimal and breastfeeding should not be contraindicated (*Drug Alcohol Depend* 2001; 63:97-103)

• Swaddling associated with breastfeeding- may reduce NAS symptoms
  – Contributes to bonding between mother and infant
  – Provides immunity to the baby
Postpartum

• Buprenorphine dosages don’t need to be decreased
• Should continue with their treatment plan and support
• *Have to address contraception LARC!!*
• Ensure psychosocial support- including chemical dependency relapse prevention programs
Long-Term Infant Outcomes

• *No significant differences in cognitive development in children up to 5 years old* (methadone)

• Buprenorphine exposed infants- ?????

• Enriching early childhood experiences and improving quality of the home environment are likely to be beneficial
Summary

• Early ID of pregnant opiate-addicted women improves mother and infant outcomes
• *Contraception counseling should be routine*
• Should be co-managed by the ObGyn & Addiction Medicine specialist
• *Medically supervised withdrawal should be discouraged during pregnancy*
• Monitor infants for NAS
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