Understanding Medication Assisted Treatment (MAT) for Families Affected by Parental Substance Use Disorders

Jason B. Fields MD
University of Florida Fellow in Addiction Medicine
Medical Services Manager, DACCO
Tampa, Florida

Linda Mann LCSW, CAP
Director of Women’s Services, DACCO
Tampa, Florida

Ken DeCerchio MSW, CAP
National Center on Substance Abuse and Child Welfare

State of the Field

- Stigma about the use of Medication Assisted Treatment
- Misunderstanding of the use of MAT, particularly Methadone treatment, in substance abuse treatment and how it relates to child safety.
- High incidence of opiate and prescription drug abuse
- Confusion about how to address prescription medication
- Positive toxicology result for methadone at birth as a presumptive cause for child removal.

The Regional Partnership Grant (RPG) Program

Cross-systems partnerships designed to improve the safety, permanency and well-being of children affected by parental substance use.
Efforts Across the Nation

NCSACW In-Depth Technical Assistance Sites (IDTA)

Children Affected by Methamphetamine Sites (CAM)

Children's Bureau Regional Partnership Grants (RPG)

OJJDP Family Drug Courts (OJJDP)

NCSACW IDTA Sites (20)

CAM Grants (12)

Family Drug Court Grants (22)

RPG Sites (53)

Regional Partnership Grants

- Authorized by the Child and Family Services Improvement Act of 2006
- 53 regional partnership grants awarded in September, 2007
- Improve the safety, permanency, and well-being of children affected by methamphetamine and other substance abuse
- The grants address a variety of common systemic and practice challenges that are barriers to optimal family outcomes

Nature of the Prescription Drug Crisis

The Prescription Drug Abuse Problem

- 478 million prescriptions for controlled-substances dispensed in U.S. in 2010
- 7 million Americans reported current non-medical use of prescription drugs in 2010
- 1 in 4 people using drugs for first time in 2010 began by using a prescription drug non-medically
- 6 of top 10 abused substances among high school seniors are prescription drugs
- 28,000 unintentional overdose deaths in 2007 – driven by prescription opioids
The Prescription Drug Abuse Problem

In 2009, approximately 7.0 million (M) persons reported past month non-medical use of psychotherapeutic drugs (2.8 percent of the U.S. population). This class of drugs is broadly described as those targeting the central nervous system, including drugs used to treat psychiatric disorders (NSDUH, 2009). The medications most commonly abused are:

- Pain relievers - 5.3 M
- Tranquilizers - 2.0 M
- Stimulants - 1.3 M
- Sedatives - 0.4 M

Source: NIDA (2010)

New Users in the Past Year of Specific Illicit Drugs among Persons Aged 12 or Older, 2010

<table>
<thead>
<tr>
<th>Drug Type</th>
<th>Number of New Users (Thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marijuana</td>
<td>1,500</td>
</tr>
<tr>
<td>Psychotherapeutics*</td>
<td>1,500</td>
</tr>
<tr>
<td>Pain relievers*</td>
<td>1,500</td>
</tr>
<tr>
<td>Tranquilizers*</td>
<td>1,500</td>
</tr>
<tr>
<td>Stimulants*</td>
<td>1,500</td>
</tr>
<tr>
<td>Sedatives*</td>
<td>1,500</td>
</tr>
<tr>
<td>Ecstasy Inhalants</td>
<td>1,500</td>
</tr>
<tr>
<td>Stunna</td>
<td>1,500</td>
</tr>
<tr>
<td>LSD</td>
<td>1,500</td>
</tr>
<tr>
<td>Sedative, Heroin</td>
<td>1,500</td>
</tr>
<tr>
<td>PCP</td>
<td>1,500</td>
</tr>
</tbody>
</table>

Note: The specific drug refers to the drug that was used for the first time in the past year, regardless of whether it was the first drug ever used or not.

Source: SAMHSA, 2009 National Survey on Drug Use and Health (September 2010).

Emergency Department Visits

Emergency Department Visits Involving Illicit Drugs or Non-medical Use of Pharmaceuticals, 2004-2009

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Visits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>512,371</td>
</tr>
<tr>
<td>2005</td>
<td>520,338</td>
</tr>
<tr>
<td>2006</td>
<td>530,120</td>
</tr>
<tr>
<td>2007</td>
<td>540,935</td>
</tr>
<tr>
<td>2008</td>
<td>552,746</td>
</tr>
<tr>
<td>2009</td>
<td>565,580</td>
</tr>
</tbody>
</table>

Percent Increase in Admissions for Specific Opioid Analgesics¹:
2000-2006

1 Includes admissions where primary, secondary, or tertiary substance was reported as Other opiates/synthetics. Excludes admissions for non-prescription use of methadone. Analysis restricted to 13 States that reported detailed drug codes for 2000 and 2006.

Treatment Admissions Involving Opioid Analgesics¹

OxyContin introduced

Treatment Admissions Among Females, Percentage Other Opiates* as Primary Substance of Abuse at Admission, by Age Group: 1998 and 2008

Overall, primary admissions among females for other opiates comprised 1.9 percent of all female admissions in 1998 and 8.2 percent in 2008.

Percentage Females Treatment Admissions for Other Opiates* as Primary Substance of Abuse: States with Highest Percentage: 1998 and 2008 (listed in order by 2008 percentage)
Drug-Induced Deaths vs. Other Injury Deaths, 1999–2009*


*Data for 2008 and 2009 are provisional and subject to change.

Causes of death attributable to drugs include accidental or intentional poisonings by drugs and deaths from medical conditions resulting from chronic drug use. Drug-induced causes exclude accidents, homicides, and other causes indirectly related to drug use. Not all injury cause categories are mutually exclusive.

Unintentional Drug Overdose Deaths
United States, 1970–2007

For every 1 overdose death in 2007, there were

- 7 Abuse treatment admissions
- 29 ED visits for misuse or abuse
- 148 People with abuse/dependence
- 450 Nonmedical users
The Florida Experience

- In 2007, average of 9 daily lethal overdoses (11 daily as of end of 2008)
- 3317 of prescription overdose deaths were 70% of total drug deaths in 2007
- Over 700,000 Floridians misuse prescription pain meds yearly
- Top 25 US dispensing practitioners of Oxycodone are all in Florida
- Florida was one of the largest states without a Prescription Drug Monitoring Program (PDMP), recently implemented
- Florida has become a major distribution center for opioids and benzodiazepines

Deaths from Opiate Addiction

- Based on the Medical Examiner’s Report (2007) of drug related deaths in Florida, 56% occurred as a result of opioid toxicity (Bohs & Sayed, 2009)
- Methadone related deaths are connected to pain management clinics and not MAT clinics (Bohs & Sayed, 2009)

Healers or Dealers?

- From 2005 to 2009, Florida tallied 5,887 deaths from prescription drugs. That’s three times the number of deaths from heroin, cocaine and other illegal drugs combined.

Florida is now home to 98 of the top 100 doctors in the United States who dispense Oxycodone right out of their offices. This is one reason Florida is known as the epicenter of the nation’s prescription drug abuse crisis.
2010 Florida Medical Examiners Report

- In 2009 there were 1,948 oxycodone related deaths and in 2010 there were 2,384 oxycodone deaths, an increase of 22.4%.
- Also increases from 2009 to 2010 in deaths from other prescription opiates like hydrocodone (10.8%), fentanyl (5.6%), and oxymorphone (109%).
- Decrease from 2009 to 2010 by 48% in heroin related deaths.

Drug Causal Deaths
July 2000 – December 2010

Medication Assisted Treatment
The Basics: How It Works

GOALS FOR PHARMACOTHERAPY

- Prevention or reduction of withdrawal symptoms
- Prevention or reduction of drug craving
- Prevention of relapse to use of addictive drug
- Restoration to or toward normalcy of any physiological function disrupted by drug abuse
- Blockade of euphoric effects of illicit self-administered opiates

Source: MJ Kreek, Rationale for Maintenance Pharmacotherapy of Opiate Dependence, 1992
PROFILE FOR POTENTIAL PSYCHOTHERAPEUTIC AGENT

- Effective after oral administration
- Long biological half-life (>24 hours)
- Minimal side effects during chronic administration
- Safe, no true toxic or serious adverse effects
- Efficacious for a substantial % of persons with the disorder

Source: MJ-Kreek, Rationale for Maintenance Pharmacotherapy of Opiate Dependence, 1992

Impact of Maintenance Treatment

- Reduction death rates (Grondblah, '90)
- Reduction IVDU and relapse to IVDU (Ball & Ross, '91)
- Reduction crime days (Ball & Ross)
- Reduction rate of HIV seroconversion (Bourne, ‘88; Novick '90; Metzger '93)
- Improved employment, health, & social function

The Statistics

- TIP 43 from SAMSHA says, “risk of relapse during and after tapering is significant and because of the physical and emotional stress of attempting to end treatment, its encouraged clients stay in treatment for at least 2 years. The highest risk of relapse is 3-12 months after ending Medication Assisted Treatment.
- Less than 25% of opiate addicts can be successful in the first year when quitting use "cold turkey".
- Studies show 70% of patients that participate in OTPs for at least 1 year no longer abuse opiates.
Benefits of MAT to the Community

- Allows client to return to normal activities of daily living including parenting
- Promotes pro-social behaviors

Benefits of MAT to the Individual and Community

- Reduces Deaths
- Reduces Crime
- Promotes healthier lifestyle
- Reduces economic impact
- Allows client to return to normal activities of daily living including parenting
- Promotes pro-social behaviors

Why MAT as a solution?

- Not addressing the addiction leaves the individual ill and no closer to recovering and gaining pro-social behaviors, proactive instead of reactive.
- Chasing answers to the adverse events associated with opiate addiction such as ER expenses does not get to the solution.
- Treatment adapted from the biopsychosocial model of addiction which shows opiate addicts do recover.
- Over 35 years of research justifying MAT as the standard of practice in the medical community for the opiate dependent individual.

Reduced Crime

- Criminal activities are decreased as individuals are being treated for their addiction and do not have to rob, steal or sell drugs to maintain their habit.
- A nationwide study showed 82% of clients in MAT were arrested at least once before starting treatment and this arrest rate decreased to 19% after one year of treatment (O’Connor & Carillo, 2006).
- Three to five years post-treatment arrests were still down 50% (O’Connor & Carillo, 2006).
- A study by NIDA found that methadone treatment reduced illicit opiate use by 70%, criminal activity by 57% (O’Connor & Carillo).
Promotes Healthier Lifestyle

- Research shows long-term MMT is medically safe, over 35 years of research.
- Long-term treatment causes no negative effects to the heart, lungs, liver, kidneys, bones, blood, brain, or other vital organs.
- Reduction rate of HIV seroconversion (Bourne, '88; Novick '90; Metzger '93).
- Reduction of intravenous drug use and its complications.
- Participants can maintain a relationship with primary care provider with continuity of care and address mental health concerns.

Reduced Economic Impact

- Bohs and Sayed (2009) analyzed economic costs of drug use in Florida and reported $21,807,843,781 was spent on adverse events due to drug use, billions spent on reactive measures.
- The same study showed about 3% of Florida’s GDP is spent on consequences of drug use.
- Out of every $100 it was reported $96.80 is spent on burden public programs (i.e. criminal justice) with only 0.2% of costs spent on treatment programs with zero dollars spent on research to enhance proactive efforts on these economic issues.

Reduction Economic Impact

- Prescription diversion is costly. Bohs & Sayed (2009) stated $266,510 was spent every hour on drug-related crimes.
- Clients must dose with Methadone in MAT daily, promoting diversion control.
- In viewing economic costs spent in Florida on drug issues, 23 billion spent overall and 2.3 billion on crime alone.
- For every $1 spent on methadone allows $4 to be saved in social and health costs (O’Connor & Carillo, 2006).

Return to Normal Activities of Daily Living

- Individual can focus on daily activities with attention to short and long term goals.
- Methadone does not produce euphoria as the medicine fills opiate receptors in the brain eliminating physical withdrawal (O’Connor & Carillo, 2006).
- While on the medication the brain returns to normal physiological functioning, no negative effects on mental function (O’Connor & Carillo, 2006).
- A NIDA study found increased full-time employment by 24% (O’Connor & Carillo, 2006).
- Participants may again participate in their family and return to parenting.
Dependence is a medical disorder that can be treated effectively. Supervised treatment works when tailored to the individual. When patients are effectively treated, society benefits.

From the publication Countering Opioid Stigma for AATOD, 2006

Opioid Addiction is a Brain Disease

- Use of drugs starts off as voluntary behavior, but once continued, use of an addictive drug brings about structural and functional changes in the brain that cause compulsive drug-seeking and use (Leshner 1997).
- The addicted brain is distinctly different from the non-addicted brain, as manifested by changes in brain activity, receptor availability, gene expression and responsiveness to environmental cues (Leshner 1997).
- Research shows that long-term drug use results in significant changes in brain function that persist long after the individual stops using drugs. The drug-induced changes in brain function have behavioral consequences, including the compulsion to use drugs despite adverse consequences – the defining characteristic of addiction (NIDA 1999).

Supervised Treatment Works Well When Individualized

- MMT is "not substituting one drug for another" (COMPA 1997)
- Opiate euphoria is absent and opiate withdrawal symptoms are eliminated
- Cravings for opiates is effectively diminished
- The ability to focus on daily life activities and goals is restored
- Methadone blocks the effects of heroin and other opiate drugs, rendering ineffective attempts to take them to achieve euphoria

- Dependence is a medical disorder that can be treated effectively. Of the various treatments available, MMT combined with individual attention to medical, psychiatric and socioeconomic issues, as well as drug counseling, has the highest probability of being effective (NIDA Consensus Statement 1997).

- Similar to other diseases of the brain (depression) and other diseases of the body (hypertension, diabetes) opioid addiction is a chronic, relapsing disease. Remaining in treatment for an adequate period of time is critical for treatment effectiveness. The appropriate amount of time depends on the individual’s problems and needs (NIDA)

When Patients Are Treated Effectively Society Benefits

- Methadone therapy... is one of the longest established, most thoroughly evaluated forms of drug treatment... Methadone therapy helps keep more than 100,000 addicts off heroin, off welfare, and on the tax rolls as law-abiding, productive citizens (National Drug Control Strategy, 1999)
- The financial cost of untreated opiate dependence to the individual, the family, and society are estimated to be approximately $220 billion/year (NIDA Consensus Statement, 1997)
- A three-city field study of methadone treatment patients in NYC, Baltimore and Philadelphia found significant reductions in criminality across 14 types of crimes, most categories declining over 80% (NIDA 1999)
- Lifetime arrest rates of 151 male patients in Baltimore demonstrated a substantial reduction after admission to methadone treatment – an 85% decrease in the annual arrest rate in comparison to the addiction years (Ball et al. 1994)
Methadone and Pregnancy

Opioid misuse during pregnancy is a serious and growing concern:

- High rates of infection
- Premature delivery
- Low birth weight, which is an important risk factor for later developmental delay.
- Comprehensive methadone maintenance treatment that includes prenatal care reduces the risk of obstetrical and fetal complications, in utero growth retardation, and neonatal morbidity and mortality.

Obstetrical Complications Opiate Abuse

- Remember the polysubstance abuse is the norm....
  - Increased spontaneous Abortion, especially first trimester
  - Increased 3rd trimester premature delivery, premature rupture of membranes
  - Intrauterine Growth Retardation
  - Amnionitis
  - Placental Insufficiency
  - Postpartum Hemorrhage
  - Pre-eclampsia and Eclampsia
  - Septic thrombophlebitis

Acceptance as the Standard of Care

- Methadone has been accepted since the late 1970s to treat opioid addiction during pregnancy
- In 1998, a National Institutes of Health consensus panel recommended methadone maintenance as the standard of care for pregnant women with opioid addiction
- Recent literature supports Buprenorphine as another option for safe medication-assisted treatment for opioid addiction (MAT) in pregnant patients.
Standard of Care

• Methadone maintenance has been the recommended standard of care over no treatment or Medication Assisted Withdrawal (MAW) based on:
  – Longer durations of maternal drug abstinence
  – Better obstetrical care compliance
  – Avoidance of associated risk behaviors
  – Reductions in fetal illicit drug exposure

• Methadone is the oldest, most widely used medication prescribed during pregnancy, and in comparison to infants born to heroin-abusing mothers, infants from methadone-treated mothers have:
  – Increased fetal growth
  – Reduced fetal mortality
  – Decreased risk of HIV infection
  – Decreased risk of pre-eclampsia
  – Less fetal exposure to rapid and unpredictable cycles of heroin-induced highs and withdrawal
  – Increased likelihood of the infants being discharged to their parents (Finnegan 1991).

Pregnancy Specific Benefits of Opioid Maintenance Therapy

• Methadone Maintenance Therapy (MMT) is regarded as an established treatment with birth outcomes comparable to a general obstetrical population (Kreek MJ, 2000)
  – Fewer Pre-term Births
  – Less Intrauterine Growth Restriction
  – Fewer Low Birth Weight Infants
  – Less Maternal Drug Use
  – Greater reduction with higher dose of methadone
  – Improved Prenatal Care Compliance (Burns L, 2004; Goler NC, 2008)
  – There appears "to be no differential effect of either treatment (methadone or buprenorphine)—it was exposure to stable treatment that was important (Gibson 2008).

Medication Assisted Withdrawal

• Smaller consecutive doses of an opioid agonist like methadone to provide a smoother transition from illicit opioid use to a medication-free state
• Indicated for the following:
  – Patient refuses treatment unless medication-free at delivery
  – Inability to receive agonist therapy in their community
  – Need to ingest a medication that is incompatible with methadone
Advantages of MAT with methadone vs. MAW

- Superior relapse prevention
- Reduced fetal exposure to illicit drug use and other maternal behaviors
- Enhanced compliance with obstetrical care
- Enhanced neonatal outcomes including heavier birthweight (Kaltenbach et al. 1998)

Methadone Maintenance vs. Methadone Taper During Pregnancy: Maternal and Neonatal Outcomes (Jones et al. 2008)

- Retrospective Study of 175 pregnant clients at the Center for Addiction and Pregancy (CAP) at Johns Hopkins Bayview Medical Center in Baltimore, Md. From 1995 to 2001
- Compared 3 groups of participants
  - Women receiving 3 day MAW
  - Women receiving 7 day MAW
  - Women receiving MAT
- Showed that MAW is not in the best interest of the mother or child because MAW clients had poorer maternal outcomes than MAT clients

Maternal Outcomes

- The methadone maintained groups remained in treatment at CAP an average of 106.7 days and the medication free groups an average of 20.6 days
- Methadone maintained groups attended an average of 8.3 obstetrical visits vs. medication free groups averaging only 2.3 days
- Methadone maintained groups were 7.1 times more likely to deliver at CAP.

Common Medical Complications Among Pregnant Women Who Are Opiate Addicted

- Anemia
- Bacteremia/septicemia
- Cardiac disease, especially endocarditis
- Cellulitis
- Depression and other mental disorders
- Edema
- Gestational Diabetes
- Hepatitis A, B, and C
- Hypertension/tachycardia
- Pneumonia
- Poor dental hygiene

- STDs
  - Chlamydia
  - Condyloma acuminatum
  - Gonorrhea
  - Herpes
  - HIV/AIDS
  - Syphilis
- Tetanus
- Tuberculosis
- UTIs
  - Cystitis
  - Pyelonephritis
  - Urethritis
Common Obstetrical Complications Among Women Addicted to Opioids (The fetus is at risk for morbidity and mortality because of episodes of maternal withdrawal compounded by a lack of prenatal care)

- Abruptio placentae
- Chorioamnionitis
- Intrauterine death
- IUGR
- Intrauterine passage of meconium
- Low Apgar Scores
- Placental insufficiency
- Amnionitis
- Postpartum hemorrhage
- Preeclampsia
- Premature labor/delivery
- PROM
- Septic thrombophlebitis
- Spontaneous abortion, especially first trimester

Neonatal Abstinence Syndrome

Methadone and Pregnancy

- There is no evidence that higher doses are harmful to the fetus.
- The neonate has a high probability of having NAS (Neonatal Abstinence Syndrome)
- Delivery should be arranged for a hospital where the neonate can be appropriately managed for NAS, if necessary.

Dosages relative to Neonatal Abstinence Syndrome

- Historically, treatment providers have based dosing decisions on the need to avoid or reduce the incidence of NAS (Kaltenbach et al. 1998).
- This low-dose approach emerged from several 1970s studies (Harper et al. 1977) and has been contradicted by more recent studies (Brown et al. 1998).
- There is no compelling evidence supporting reduced methadone dosages to avoid NAS.
On the contrary, higher doses of Methadone have been associated with:

- Increased weight gain
- Decreased illegal drug use
- Improved compliance with prenatal care by pregnant women in MAT
- Increased birth weight
- Increased head circumference
- Prolonged gestation
- Improved growth of infants born to women in MAT (De Petrillo and Rice 1995)

***Reduced methadone dosages may result in continued substance use and increased risks to both expectant mothers and their fetuses***

Dosage of Methadone and NAS

- In a retrospective review of pregnancies that were maintained on methadone therapy in one hospital, 100 mother/neonate pairs on methadone therapy were identified.
- Women who received an average methadone dose of greater than 80 mg were similar to women maintained on dosages of less than or equal to 80 mg in:
  - Having infants with similar NAS Scores
  - Needs for neonatal treatment for withdrawal
  - Similar duration of withdrawal when it occurred in the neonate.
- The authors concluded that maternal methadone dosage does not correlate with neonatal withdrawal; therefore maternal benefits of effective methadone dosing are not offset by neonatal harm.

Initial Neonatal Work-up

- First urine—will only detect very recent substance use
- First meconium—will detect substances used after 20 weeks gestation
- Standardized NAS scoring should begin within 2 to 4 hours of birth and repeated every 2 hours
- Finnegan Scores
- Easy to learn/administer
- Promotes standardization/consistent management
- Assess for other diagnoses as indicated particularly for persistent diarrhea

Substance Exposed Infants

- May be full term and look healthy
- Symptoms occur 60% of time and to varying degrees within a few days of birth and include:
  - Tensed Muscles
  - Frequent Diarrhea
  - High Respiratory Rates
  - Loss of Appetite
  - Vomiting
  - Marble like appearance
  - Increased risk of SIDS
  - Long hospital stays which can cause clashes with families
Infant Withdrawal

**Opioids** (heroin, codeine, morphine, Oxycodone)
- Withdrawal occurs in 42-94% exposed infants
- Occurs 24 hours after birth and as long as 6 days after birth

**Methadone** (synthetic opioid)
- Best medical option for opioid-addicted pregnant women
  - does not cause birth defects
  - blocks the euphoric and sedating effects of other opioids
  - decreases illicit behaviors, improves prenatal care and outcomes
  - prevents acute maternal withdrawal that is associated with fetal death
- Withdrawal usually occurs within 1-4 weeks.

Treatment for Babies

- Withdrawal can last weeks or months
- No universal standard for pharmacologically treating babies
- Finnegan scale helps determine treatment
- Tiny doses of morphine, methadone, phenobarbital or clonidine used to relieve symptoms and wean newborns of addiction
- Doctor may attempt to treat baby without drugs
- Long-term effects remain unknown

Developmental Sequelae

- Research findings on developmental sequelae associated with in utero methadone exposure are diverse but most studies suggest that infants through 2-year-olds function well within the normal developmental range. They do not differ in cognitive function from a population that was not drug exposed and was of comparable socioeconomic and racial background (Kaltenbach 1996).
- Other data have suggested that maternal drug use is not the most important factor in how opioid-exposed infants and children develop but that family characteristics and functioning play a significant role (Johnson et al. 1987).

Developmental Sequelae

- One long-term follow-up study of 27 children who had been exposed to methadone in utero found no cognitive impairment in preschool years (Kaltenbach et al. 1998).
- Overall, prenatal exposure to methadone provided as part of comprehensive treatment does not appear to be associated with developmental or cognitive impairments (Kaltenbach 1996).
Buprenorphine

- There have been 31 published reports of Buprenorphine, a partial-mu opioid agonist, exposure during pregnancy that were reviewed and summarized (Jones et al. 2008).
- Overall, the studies report approximately 522 neonates prenatally exposed to Buprenorphine, with a wide range of therapeutic doses from 0.4 to 24 mg sublingual tablets/day.
- Generally, the pregnancies were uneventful, without physical teratogenic effects, and with low rates of prematurity, suggesting that Buprenorphine is relatively safe and effective for this population.

Methadone vs. Buprenorphine

- Opioid maintained patients who become pregnant should be maintained on the current agent
- Suboxone can be changed directly to Subutex
- Even though it is a category C drug, Buprenorphine may be used with pregnant patients in the US under certain circumstances
- Buprenorphine should only be initiated when
  - Patient cannot tolerate methadone
  - Methadone program is not accessible
  - Patient is adamant about avoiding methadone
  - Patient is capable of informed consent

New Study!

- A double blind, double dummy, flexible-dosing, randomized, controlled study in which Buprenorphine and methadone were compared for use in the comprehensive care of CTs pregnant women with opioid dependency at 8 international sites.
- Primary outcomes were:
  - The number of neonates requiring treatment for NAS
  - The peak NAS score
  - The total amount of morphine needed to treat NAS
  - The length of the hospital stay for neonates
  - Neonatal head circumference
- Secondary outcomes were:
  - Number of days during which medication was given for NAS
  - Weight and length at birth
  - Preterm birth (<37 weeks gestation)
  - Gestational age at delivery
  - 1 and 5 minute APGAR scores

Results:

- 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 the Buprenorphine group
  - Required significantly less morphine (mean dose, 1.1 mg vs. 10.4 mg)
  - Had a significantly shorter hospital stay (10.0 days vs. 17.5 days)
  - Had a significantly shorter duration of treatment for the NAS (4.1 days vs. 9.9 days)
- There were no significant differences between the groups in other primary or secondary outcomes or in the rates of maternal or neonatal adverse events.
Measurable Outcomes

- UDS Compliance
- Drug-Free Delivery
- Infant birth weight and gestation at delivery (Full term defined as greater than or equal to 37 weeks)
- Presence of NAS and outcome (How long were infants treated?)
- Did client utilize ZEP services?
- Was infant discharged to mother?
- Was client dually enrolled in another DACCO’s Program, such as WOS or Residential?
- Developmental Milestones WNL?

Services Involved in Comprehensive, Coordinated Care

- OBGYNs/Primary Care (Genesis/Exodus)
- OATS (Physician/Nursing/Counselor)
- Zero Exposure Services
- Women’s Outpatient Services
- Women’s Residential
- Social Workers
- Hospital Delivery Service
- NICU
- Pediatrician

Screening for Substance Use During Pregnancy

- Most effective way to determine risk
  - Lab tests and toxicology are ineffective
  - Quick, brief questionnaires are most effective in assessing drug and alcohol use
  - Pregnant women follow their provider’s advice
Using a Screening Tool

- Be non-judgmental and supportive
- Stress benefits of abstinence and offer to help patient achieve it
- Know where to refer a patient for assistance
- Screen every patient

Screening Tools

- Substance use by pregnant remains a frequently missed diagnosis.
- T-ACE (Tolerance, Annoyed by Criticism, Cut down, Eye-opener)
- TWEAK (Tolerance, Worry about drinking, Eye-opener, Amnesia, K/Cut down)
- CAGE (Cut down, Annoyed by criticism, Guilty about drinking, Eye-opener)
  - These questionnaires are more suited for heavy, alcoholic drinking and do not identify more moderate or light drinkers or users of illicit drugs

4 P’s Plus

- The 4P’s Plus Screen for Substance Use in Pregnancy: Clinical Application and Outcomes, Chasnoff et al. 2005
- Evaluated the performance of the screening instrument in five diverse populations.
- 4 P’s Plus (Parents, Partner, Past, Pregnancy) is a easy to use five question screen specifically designed to quickly identify obstetrical patients in need of in-depth assessment or follow-up monitoring for risk of alcohol, tobacco, and/or illicit drug use.
- Takes less than one-minute and is easily integrated into the initial pre-natal visit and used for follow-up screening through the pregnancy.

4P’s Plus Questions

- Parents: Did either of your parents ever have a problem with alcohol or drugs?
- Partner: Does your partner have a problem with alcohol or drugs?
- Past: Have you ever drunk beer, wine, or liquor?
- Pregnancy: In the month before you knew you were pregnant, how many cigarettes did you smoke?
- Pregnancy: In the month before you knew you were pregnant, how many beers/how much wine/how much liquor did you drink?
FAQs!

- What kind of accountability is there with clients enrolled into MAT?
- How long will the client be on Medication Assisted Treatment?
- What do you do if the client continues to use other substances?
- Are there any restrictions on what people on Medication Assisted Treatment can do?

Methadone & Pregnancy Fact Sheet

- Pregnant women on methadone need to be on doses that alleviate withdrawal symptoms. If your baby is becoming hyperactive in utero as the methadone dose wears off, you may need to go up on your dose.
- Pregnant women on methadone are candidates for split dosing. Dosing twice a day delivers more steady methadone levels to your baby. You will be returning to once a day dosing after the baby is born.
- All pregnant women must see the medical provider once a month.
- During the third trimester, you may need to go up on your methadone dose due to increased blood volume that dilutes the methadone.
- After delivery, reduction in methadone dose is often needed. If you are feeling drowsy, let the nurse know so that we can decrease your methadone dose.

Methadone & Pregnancy Fact Sheet

- Breast feeding in methadone maintained mothers is encouraged and safe for the baby. The amount of methadone in breast milk is negligible. (Mothers who are HIV positive should not breast feed), breast feeding decreases withdrawal symptoms in the baby due to maternal bonding, not from methadone in the breast milk.
- Most babies born to methadone maintained mother have some withdrawal symptoms. Your baby may require opiates for a few days in order to treat the withdrawal symptoms. There are no known long term negative effects from this in the baby.
- While you are in the hospital after delivery, your maintenance dose of methadone should be continued. This will be provided to you by the hospital. If you require pain medications after a C-section or vaginal delivery, you should still get your maintenance methadone dose as well as the pain medication.
Methadone & Pregnancy Fact Sheet

- When you go to the hospital to deliver your baby, do not let the staff give you any of the following medications because these will cause immediate and severe withdrawal in you and your baby:
  - Stadol (butorphanol)
  - Nubain (nalbuphine)
  - Talwin (pentazocine)
  - Buprenex (Buprenorphine)

These drugs are contraindicated in the methadone maintained patient!

WWW Resources

Medications in Pregnancy and Lactation:
  - A free, regularly updated information on medications in pregnancy and lactation, select “Lactmed” for safety in lactation.
- TerisWeb - http://depts.washington.edu/terisweb

Toxicology and Teratology:
- Organization of Teratology Information Specialists - www.otispregnancy.org

Addiction and Pregnancy:

Psychiatric Disorders and Pregnancy - Clinical Research Centers
- UPMC - www.womensbehavioralhealth.org
- MGH – www.womensmentalhealth.org

Postpartum Psychiatric Disorders
- MedEdPPD - www.mededppd.org
  - A professional education, peer-reviewed Web site developed with NIMH support.
- Postpartum Support International – www.postpartum.net

Questions?
Challenges of Medication Assisted Treatment in the Child Welfare System

Frequently Heard MAT Myths in the Child Welfare System

- “Methadone clients are ‘still using’ (continuing drug use) and not really engaged in recovery.”
  
  MAT is a medical intervention used to treat symptoms of opioid addiction, similar to a SSRI treating depression, also a brain disorder.

- “They’re just substituting one drug for another.”
  
  Belief that clients should be free of all chemicals regardless of medical validity.

Prevalent MAT Myths in the Child Welfare System

- “Drug use including Methadone treatment is a ‘choice,’ not a disease process.” “Just quit!”

  Addiction is not a moral choice but a disease process of the brain that creates intense craving and distressing, painful withdrawal symptoms.

- “Clients get high on Methadone & Suboxone.”

  With correct dosing MAT withdrawal symptoms are ameliorated and no euphoria is produced.

- “Parents should be off all drugs, including Methadone, in order to be reunified.”

  1) Discontinuing methadone treatment places the parent at elevated risk for relapse to illicit opiate use and associated high-risk factors, including unsafe injection practices and illegal behavior to support using.

  2) These factors can significantly increase the risk of abuse or neglect to children in the custody of these parents.

  3) The decision to require methadone detoxification should be measured carefully and based upon sound clinical principles rather than the stigma associated with methadone treatment.
Prevalent MAT Myths in the Child Welfare System

- “Mothers on Methadone should not breastfeed—it’s harmful to the baby.”
  - Mothers on methadone maintenance can breast-feed if they’re not HIV positive, not abusing substances, and do not have a disease or infection in which breast-feeding is contraindicated (Kaltenbach et al., 1993).
  - American Academy of Pediatrics Recommendations:
    • 1994: doses > 20mg/day contraindicated
    • 2001: methadone, regardless of dose, removed from the contraindicated list, data supported.
  - Studies have found minimal transmission of methadone in breast milk, regardless of maternal dose (Geraghty et al., 1997)
  - Breastfeeding shouldn’t impact dosing decisions.

Family & Friends Resistance to MAT: SA Provider Responses

- Comprehensively educate clients themselves so they can discuss MAT factually with family/friends.
- Provide MAT education to family & friends via: 1) Info-Sheets in non-technical terms; 2) family meetings or sessions; and 3) participation in Methadone Anonymous meetings.
- Co-enrollment between MAT and SA/co-occurring disorders treatment programs with the counseling staff knowledgeable & supportive of MAT.

Approaches to Educating Child Welfare Workers and Administrators

- Dissemination of MAT current research & practice information on multiple system levels.
- Whenever and wherever prescription drug abuse is discussed MAT as an option.
- Share case information and SA/CW cross-system, reciprocal staffings.
- Cross-system trainings with case managers and supervisors.

Approaches to Educating Child Welfare Workers and Administrators

- Presentations to key community stakeholders—for example, DACCO provides MAT training to various community agencies and county child welfare committees.
- Tours of medically monitored, licensed Methadone programs to dispel myths to Judges, court administration, CBC and CPI leaders, case managers, etc..
Responding to Dependency
Judges & Court Administrators

- Accurate program, research & practice information distributed to judges & court administrators.
- 1:1 meetings with judges to facilitate communication & strengthen collaboration.
- MAT trainings with court staff.
- Develop MAT progress reports to courts, as needed, to assist and indirectly educate court staff.
- SA case managers in courts to communicate accurate client & program information.

Addressing MAT in Child Welfare System
Timeline: 2006-2008

- The prescription drug problem in Hillsborough County increasing.
- Hillsborough County Family Dependency Treatment Court funded & implemented.
- Parents on MAT initially excluded from FDTC participation.

Addressing MAT in Child Welfare System
Timeline: 2007-2008

- Emergence of parents on MAT in the dependency system grows simultaneously with county prescription drug abuse.
- MAT discouraged by Judges & CW workers, thereby creating confusion for clients and issues with SA TX providers.
- Parents are frequently required to discontinue MAT as a prerequisite to reunification.

Locally, resistance to MAT initially addressed via:

- SA trainings for HKI & HCSO CPI’s that includes information regarding opioid abuse and MAT.
- Informal discussions with Judges and case managers.
- Whenever the prescription drug problem is mentioned, DACCO discussing MAT as an treatment option.
**Addressing MAT in Child Welfare System Timeline: 2007-2008**

- At the state level, FADAA (Florida Alcohol & Drug Abuse Assoc) is discussing value of establishing stronger connections with other systems of care.
- Several FADAA members recommend that the DCF Family Safety Office be at the table to discuss recurring issues between the SA and CW systems.

**Addressing MAT in Child Welfare System Timeline: 2009**

- Locally, as more FTDC and dependency clients are opioid addicted, more engage in MAT. Child Welfare staff & Dependency Court resistance remains.
- HKI workers continue to report to Judges that parents need to discontinue Methadone w/in 2 or 4 weeks in order to be reunified.
- Judges continue to confront clients when their dose is increased and asks for plan to reduce dose & discontinue MAT.

**Addressing MAT in Child Welfare System Timeline: 2009**

- Another meeting scheduled with FTDC Judge and substance abuse provider wherein current & accurate MAT information presented and discussed.
- A specific FDTC MAT Review form is subsequently developed to provide the Judge with data he deems crucial to the court to make informed decisions. A DACCO physician signs-off on the reviews.

**Family Dependency Treatment Court MAT Case Review Form**

This client is medically monitored by Medical staff. The following treatment was provided to the above client and meets medical protocol: ☐ NO ☐ YES

**Current Medication and Dose:**

☐ Methadone at ___ mg.  ☐ Suboxone at ___ mg.

**Admission:**

- New Methadone client admitted on ________ with initial dose of 30 mg. Up to four 5 mg. increases as needed for withdrawal ordered. (Please note that “blockade” actually doesn’t start until 60 mg.)
- A new Suboxone client admitted on ________ with initial dose of 4 mg. and additional 4 mg. dose after one hour if needed. Up to three 2 mg. doses as needed for withdrawal ordered.
- Client transferred from another clinic and receiving their established dose of Methadone/Suboxone as prescribed at their previous clinic.
**Family Dependency Treatment Court**
**MAT Case Review Form**
- Dose increased because of:  
  - ☐ Nausea  
  - ☐ Headache  
  - ☐ Cramps  
  - ☐ Doctor approval of counselor request / treatment plan  
  - Other: _________________________  
- Dose decreased because of:  
  - ☐ Sleepiness  
  - ☐ Physical illness  
  - ☐ Medical problems  
  - ☐ High methadone levels  
  - Other: _________________________  
  - Client missed 3 days in a row, and their dose is more than 30 mg., so his/her dose was automatically cut by 1/3 to.  
  - Client missed 4 days in a row and their dose is more than 30 mg., so his/her dose was automatically cut by 2/3 to.  
  - Client missed 5 days in a row and was required to meet with the Physician to resume dosing. They have ☐ not met OR ☐ met with the Physician.

---

**Addressing MAT in Child Welfare System**
**Timeline: 2009**
- At the state level, FADAA reaches out to DCF Office of Family Safety.  
- Alan Abramowitz, Office of Family Safety Director, attends March 2009 FADAA board meeting wherein he provides an overview of the state child welfare system.  
- Discussion includes the particular challenges posed by the dependency system regarding clients receiving Medication Assisted Treatment.  
- Director Abramowitz offers to write a letter in support of MAT to circuit administrators, CBC lead agencies, supervisors and all related staff across the state.

---

**Family Dependency Treatment Court**
**MAT Case Review Form**
- Client is currently a candidate for detox:  
  - ☐ NO  
  - ☐ YES  
- Nurse Signature/date required  
- Physician Signature/date required  
- Form faxed to court and program case manager present to answer questions.
Felony Drug Court Progress: MADCT Fall 2010

- A three-year federally funded SAMHSA grant was awarded to Hillsborough County, FL in to expand substance abuse treatment for felony offenders with prescription drug dependency.
- The purpose of the Medication Assisted Drug Court Treatment (MADCT) program is to offer opiate-addicted offenders a harm-reduction based outpatient treatment option, as an alternative to abstinence-based programs or jail/prison – with the ultimate goal of enabling clients to achieve sobriety and stability.
- Coincidentally, MADCT Judge also the FDTC Judge, thereby reinforcing the value of MAT in the courts.

2011: Hillsborough County FDTC Changing Client Profile

- 61% (1624/2653) of the UDS screens facilitated by HCSO Child Protection Investigators were positive.
- Of the 1624 positive screens by CPI’s:
  - 373 (23%) Oxycodone & Opiates
  - 299 (19%) Benzodiazepines
  - 664 (41%) THC
2011: Hillsborough County FDTC Changing Client Profile

- Hillsborough FDTC enrolled 91 parents - 74% female.
- While our community is culturally diverse, the majority of clients are Caucasian, non-Hispanic.
- Of the 394 positive UDS detected by Drug Court Specialists across all dependency courts last year, Oxycodone most prevalent at 24.6%, while other opiates accounted for additional 10%.
- Of the 60 clients DACCO treats under FDTC funding, 41% are addicted to opiates. Court data indicates prescription drugs as the substances of choice in the FDTC.

FDTC PRESumptIVE UDS 2011

<table>
<thead>
<tr>
<th>UDS of Choice</th>
<th>Total</th>
<th>Qtr 1</th>
<th>Qtr 2</th>
<th>Qtr 3</th>
<th>Qtr 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drugs (Detected)</td>
<td>196</td>
<td>146</td>
<td>100</td>
<td>68</td>
<td>88</td>
</tr>
<tr>
<td>AMP (Anphetamines)</td>
<td>23</td>
<td>13</td>
<td>7</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>BZO (Benzodiazepines)</td>
<td>67</td>
<td>20</td>
<td>19</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>COC (Cocaine)</td>
<td>23</td>
<td>11</td>
<td>3</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>MAO (Heroin)</td>
<td>36</td>
<td>20</td>
<td>11</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>MDMA (Ecstasy)</td>
<td>14</td>
<td>6</td>
<td>5</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>MHT (Methamphetamine)</td>
<td>11</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>OPI (Opines)</td>
<td>61</td>
<td>11</td>
<td>6</td>
<td>7</td>
<td>13</td>
</tr>
<tr>
<td>OTP (Propines)</td>
<td>97</td>
<td>20</td>
<td>23</td>
<td>17</td>
<td>28</td>
</tr>
<tr>
<td>THC (Marijuana)</td>
<td>73</td>
<td>18</td>
<td>12</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Alcohol (Detected)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

RECENT STATE & NATIONAL SUPPORT FOR MAT Florida Update

- 3/2012 - Florida Alcohol & Drug Abuse Association working with DCF to re-issue an updated 2009 DCF State Director of the Office of Family Safety Memorandum to DCF regional directors addressing Medication-Assisted Substance Abuse Treatment.

- FADAA Child Welfare & Substance Abuse Committee planning webinar trainings for child welfare staff throughout the state.

RECENT STATE & NATIONAL SUPPORT FOR MAT National Association of Drug Court Professions (NADCP) Resolution 2012

- Make reasonable efforts to attain reliable expert consultation on the appropriate use of MAT for their participants including partnering with substance abuse treatment programs that offer regular access to medical and psychiatric services.

- Do not impose blanket prohibitions against the use of M.A.T. for their participants and the decision whether or not to allow the use of M.A.T. is based on a particularized assessment in each case.
Drug court judges base their decision whether or not to permit the use of M.A.T., in part, on competent expert evidence or consultation.

In cases in which a participant, the participant’s legal counsel, or a medical expert has requested the possible use of M.A.T., the judge articulates the rationale for allowing or disallowing the use of addiction medication.

This report examined the prevalence of opiate addiction in the criminal justice system, the devastating consequences, and the widespread denial of access to one of its most effective forms of treatment: medication assisted treatment.


Suggestions for CW Case Management of Parents Enrolled in MAT

- Learn the basics of MAT to more effectively manage case.
- Remain non-judgmental, open minded and supportive.
- Have client sign Release of Information for MAT provider so as to facilitate open communication.
- Tour a MAT program and ask for an explanation of their dosing & drug screening practices.

Suggestions for CW Case Management of Parents Enrolled in MAT

- Request that MAT Provider share client UDS results and program compliance reports.
- Client sign Release of Information if client co-enrolled in another treatment program so information can be shared.
- Enhance cross-system collaboration by participating in MAT/SA provider’s clinical staffings as scheduled or at least discuss outcome with provider.
- Invite SA/MAT provider/s to participate in child welfare staffings as well.
**Additional MAT Challenges**

- Cost - Medicaid & private insurance will pay for Methadone, otherwise client must self-pay.
- Medicaid currently pays for Methadone but not Suboxone. Buprenorphine requires extensive pre-authorization process.
- Appropriate MAT training to child welfare and court staff due to time & cost restraints.
- Coordination of services that client is engaged in.
- Other SA TX providers not embracing MAT.

**RESOURCES**

- Florida Alcohol & Drug Abuse Association
  - [www.fadaa.org](http://www.fadaa.org)
- Hazelden
  - [www.hazelden.org](http://www.hazelden.org)
- National Center on Substance Abuse & Child Welfare
- National Institute on Drug Abuse (NIDA)
  - [www.drugabuse.gov](http://www.drugabuse.gov)
- Treatment Improvement Exchange
  - [www.treatment.org](http://www.treatment.org)
- US Dept. of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Treatment
  - [csat.samhsa.gov](http://csat.samhsa.gov)

**Considerations for Child Welfare Policy and Practice**
Child Abuse Prevention and Treatment Reauthorization Act (CAPTA) of 2010

Ensures that all States have the capacity to provide services and improve child protective service (CPS) systems, including operation of a statewide program that includes policies and procedures to address the needs of substance exposed infants (e.g. Fetal Alcohol Spectrum Disorder), including:
- Primary care providers are required to notify CPS of instances of substance exposed infants. Notification should not be construed as an automatic finding of child abuse or neglect under Federal law.
- The development of a plan of safe care for the infant.

Policy and Practice Issues

- Requirement of minimal “dosing” of MAT medications for pregnant women or as a term for reunification.
- Use of MAT as exclusionary criteria for child welfare programs, particularly Family Drug Courts.
- Response to positive toxicology for methadone at birth for parent enrolled in MAT.

Discussion Questions

- Can a parent who is receiving MAT for substance dependence be an effective parent?
- Does your child welfare system have a policy that addresses the use of medication-assisted treatment for parents of children in the child welfare system?

Child Welfare Training Toolkit

6 modules, each containing:
- Trainer Script
- PowerPoint Presentation
- Handouts
- Case Vignettes

http://www.nccallocation.samhsa.gov/training/default.aspx