MEDICATION-ASSISTED DRUG TREATMENT AND CHILD WELL-BEING

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Acknowledgements

- Workshop is based on a study conducted in collaboration with:
  - The Center on Work and Family at Boston University
  - The National Center on Substance Abuse and Child Welfare

- Supported through funds from the National Center on Substance Abuse and Child Welfare

- Other collaborators of the study include:
  - Robert Schilling, Ph.D., UCLA
  - Maryann Amodeo, Ph.D. Boston University
A Program of the Substance Abuse and Mental Health Services Administration Center for Substance Abuse Treatment and the Administration on Children, Youth and Families Children’s Bureau Office on Child Abuse and Neglect
NCSACW Mission

- To improve outcomes for families by promoting effective practice, and organizational and system changes at the local, state, and national levels

  - Developing and implementing a comprehensive program of information gathering and dissemination
  - Providing technical assistance
Recent NCSACW Products

  - A short monograph for front-line workers

- **On-Line Training – Now Available**
  - Understanding Child Welfare and the Dependency Court: A Guide for Substance Abuse Treatment Professionals
  - Understanding Substance Use Disorders, Treatment and Family Recovery: A Guide for Child Welfare Professionals

2007 National Conference

- January 29, 2007 – Pre Conference Symposium on Substance-Exposed Children with Dr. Ira Chasnoff

  - Disneyland Hotel, Anaheim, CA
Why This Focus on Medication Assisted Drug Treatment (MADT) and Child Welfare?

- Researcher primarily does quantitative studies
- State-wide needs assessment of drug treatment use by IDUS-quality treatment-examining evidence base
- Women and Methadone Study
- Study of child welfare system’s awareness of methadone
Importance of Workshop

- Limited information on the use of pharmacological approaches to the treatment of alcohol and drug dependence among drug-dependent mothers

- Limited information on the effectiveness of medication-assisted drug treatment (MADT), and on the outcomes of children of mothers who participate in these treatments
Background

- In 2003, 314,000 people reported heroin use in the past year, with more than half being dependent upon or abusing heroin (NIDA, 2005)
  - 281,000 were receiving treatment for their dependence (NIDA, 2005)

- Essential that child welfare/drug treatment staff understand the severity of the situations opiate dependent mothers are in because heroin dependence is associated with:
  - Increased criminal activity, mortality, loss of capacity to care for children, birth defects, increased likelihood of HIV, Hepatitis C virus, co-morbidity with mental health problems, and tuberculosis (NIDA, 2004)
Common Risks for Opiate-Dependent Clients

- High risk for HIV and other infectious diseases
  - High rates of needle sharing among opiate dependent clients

- Sex work, and other criminal activity (drug seeking crimes)

- Mental illness
  - Particularly depression, is associated with poor long term prognosis (in terms of drug use), failure to enter treatment and higher relapse rates (Brienza et al., 2000)
  - Many women have histories of physical and sexual trauma (Wechsber et al., 1998) and continue to be in high risk environments while actively using
What is MADT?

- At present, heroin and related opiates are the only addictive substances for which there are demonstrably effective medications
  
  - The medications include:
    - Buprenorphine
    - Naltrexone
    - LAAM
    - Methadone

- All have been shown to be effective in reducing illicit drug use, and increasing treatment retention (Johnson et al., 2000)

- These medications are only for adults who are chronic drug users
Effectiveness of MADT

- Some of the organizations that endorse MADT because of the proven effectiveness for treatment of opiate dependent drug users and HIV prevention include:
  - American Public Health Association
  - World Health Organization
  - National Institute on Drug Abuse
  - The Center for Substance Abuse Treatment
Methadone (MMT)

- Reduces cravings for opiates (mainly heroin), and blocks the feeling of euphoria which is produced by opiates
- Most widely researched and tested
- Doses of Methadone can be adjusted according to the amount of heroin the patient is currently using, and is tapered to detoxify, without producing severe withdrawal symptoms
- The oldest and most used MADT
- Treatment of choice for heroin-using pregnant women
  - Standardized use in the medical field for over 30 years, for opiate dependent pregnant woman (Jones et al., 1999)
- MMT has the highest retention rate (Barrett and Hui, 2000)
  - MMT was more effective than non-pharmacological approaches in retaining patients in treatment, and suppressing heroin use (Mattick et al., 2003)
Federal Regulations of MMT Clinics

- MMT clinics must be accredited through an agency sponsored by SAMHSA, and follow federal regulations similar to other health care settings.

- For example, it is mandatory for clinics to:
  - have a medical director, doctors, nurses, addiction counselors and other licensed professionals
  - have a licensed practitioner, regulated by state and federal law, who dispense the opioid agonist treatment medications
    - only opioid agonist treatment medications sanctioned by the FDA can be used
  - diagnose clients as being addicted to an opioid drug, through criteria set by the DSM-IV
    - must have become addicted at least 1 year ago, unless the patient is a pregnant woman, newly released from prison or has been previously treated
Federal Regulations of MMT Clinics continued

MMT clinics must also,

• conduct initial medical examinations by a program physician
• provide drug abuse testing (minimum of 8 random urine drug tests per year)
• conduct initial and periodic assessments
  • plan the combination of services received, and set individualized goals
  • highlights the patient’s educational, vocational rehabilitation, employment, medical, psychosocial, economic and legal needs
• provide adequate medical, counseling, vocational and educational assessment and treatment services
  • these must be provided at the primary site, unless the clinic has a documented agreement with other agencies or practitioners for referring patients
• provide special services for pregnant women, including prenatal care at the primary site or make a referral to another agency or other healthcare provider
• provide adequate substance abuse counseling to each patient as necessary
  • provided by a qualified counselor
• provide HIV awareness and prevention counseling

(SAMHSA (2001). A complete list can be retrieved from http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2001_register&docid=01-723-filed)
Services Provided by Comprehensive MMT programs

- Access to health care, including medical examinations*
- Information about HIV risks*
- Drug testing*
- Counseling services including substance abuse counseling, HIV/STD prevention counseling, and vocational, rehabilitation, and education counseling
- Assessment of environmental, physical and social risks and needs of the clients
- Psychiatric services*
- Prenatal care, or referral to an outside agency
- Parental support groups and counseling
- Parenting skills education
- Child care
Positive Factors Associated with MMT

- Reduces risk of HIV transmission
  - MMT reduces chance of becoming HIV positive
    (Sorenson & Copeland, 2000)

- Reduce participation in amount of and risky sex work
  - Decrease in unprotected sex, sex with multiple partners and needle sharing (Camacho et al, 1997)

- Reduces criminal activity
  - 52% decrease in criminal activity, and a 24% increase in full-time employment (NIDA, 1998)

- Provides assessment and treatment services for dually diagnosed clients
Buprenorphine

- One of the most recent MADTs

- Less risk of addiction, when compared to methadone
  - Does not produce withdrawal symptoms as severe as those produced by Methadone

- First MADT available through prescription
  - Can be prescribed and dispensed in a physicians office

- Little research available on the effects of this MADT on pregnant women or on the outcomes for their children
Naltrexone (reVia)

- Acts as a block against the feeling of euphoria created by heroin and other opiates
- Has not been found to be addictive, or to create a physical dependence
- Is used in treatment facilities, or through physicians’ offices
- Often used with clients who have detoxified, but are in need of an extra measure of security during the recovery process
MADT and Neonatal and Child Well-Being
Concerns for Neonatal and Infant Well-Being of Children Born to Opiate-Dependent Mothers

- Low birth weight
- Birth defects and smaller head circumference
- Slower intellectual development during later development
- Higher risk of transmission of HIV and other infectious diseases
- Poor prenatal care
- Poor prenatal nutrition and sleep (Health Canada, 2002)
- Domestic violence
- Poverty
- Poly-drug use, and tobacco and alcohol use (Choo et al., 2004)
- Withdrawal from opiates - fetal stress and possibly death (Joseph & Appel, 1993)
- Increased risk of pre- and postpartum depression and other mental health problems
  - Maternal depression and stress create health problems for both the mother and the developing fetus during pregnancy (Federenko & Wadhwa, 2004; Weinstock, 2005), and can lead to postpartum depression (Siegal, 2005; Weinstock, 2005)
- Neonatal abstinence syndrome
Neonatal Abstinence Syndrome

- Characterized by:
  - Hyperirritability
  - Tremors/shaking
  - High-pitched cry
  - Poor eating
  - Failure to thrive

- 60-90% of infants born to opiate-dependent mothers show symptoms of NAS
Neonatal Abstinence Syndrome and MMT

- **What is the effect of MMT on NAS?**
  - The research is contradictory
    - Some research shows a positive, or lack of, association between MMT and NAS
    - Other shows that high doses of MMT have been linked to longer lasting, and more severe NAS

- However, reducing the dose of methadone to prevent NAS may lead the mother to relapse, to increase illegal drug use, and possibly leads to intrauterine withdrawal, which is much more dangerous than NAS (NIDA, 2004)
Neonatal Abstinence Syndrome and MMT

- Effects of NAS and MMT on prenatal and post-natal development are unclear, because many factors leading to NAS are caused by environmental and other variables unrelated to the MMT, such as poly-drug use and tobacco use.

- Effects of NAS, although problematic, are often short-lived and reversible with the proper amount of care and safety after the birth, which is available through the comprehensive services provided by MMT clinics (Jones et al., 1999).
Neonatal Abstinence Syndrome and Buprenorphine

- There is limited research on Buprenorphine and NAS, however:
  - NAS is less prevalent in infants exposed to Buprenorphine compared to infants exposed to MMT
    - 20% of infants exposed to Buprenorphine have NAS, compared to 60-80% of infants exposed to MMT (Fischer et al., 2000)
  - Buprenorphine associated NAS is less severe than MMT associated NAS
    - 50% of infants required treatment for NAS, but only 10% required treatment in an neonatal intensive care unit (Johnson et al., 2003)
- No correlation between severity of NAS and dosage of Buprenorphine (Fischer et al., 2000)
- Confounding variables include poly-drug use and tobacco use
- There are no long-term studies on the effect of Buprenorphine on later child development
Positive Effects of MMT on Neonatal Well-Being

- Methadone is significantly safer than heroin because:
  - Pure, reducing ingesting of extremely dangerous toxins
  - Highly regulated and administered in a medically supervised clinic, reducing risk of using illegal substances
  - Supervised, therefore preventing unmonitored intrauterine withdrawal
- Decreased risk of HIV transmission
- Prenatal care is available through MMT clinics
- Increased birth weight (Jones et al., 1999)
Positive Effects of MMT on Infant Well-Being

- Supervised medical care for mother and infant
- Increase in positive birth outcomes through postnatal care for mother and infant
- Effects of NAS can be more effectively treated through immediate postnatal care
- Reduction in poly-drug use and unsupervised withdrawal
- Greater likelihood that mothers will be able to breastfeed their infants:
  - Provides all the benefits of breastfeeding otherwise unavailable if the mothers remained opiate-dependent (Finnegan, 2000)
- Access to mental health services
Positive Effects of MMT on Infant Well-Being

- Opportunity for parenting skills education and support
  - Increasing chance of opiate dependent mothers retaining primary custody

- Infants and children may be monitored by MMT clinic staff, thus concerns of safety and neglect more likely to be addressed

- Mothers stabilized on MMT are more likely to maintain custody of their children while they are in treatment

- Increased retention in substance abuse treatment
MADT and Opiate-Dependent Mothers: Infancy Through Adolescence

- Much less research on child development past infancy
- Existing research is problematic in that the focus of study is often on mothers as drug users, not on MADT
  - Overall agreement that the role of psychosocial variables on child development and well-being is more important than methadone use, or even illegal drug use
  - Agreement that MMT is a safer option, and increases short-term and long-term well-being of mother and child, when compared to unregulated, illegal opiate use
Opiate Dependence and Later Development

- Lower mental and motor development
- Infants with more severe NAS
  - Smaller
  - Tenser
  - Less motor development
- Lower hearing, speech, and intellectual performances (Bunikowski et al., 1998)
- Environmental, social and familial risk factors associated with drug culture
- Higher risk of children being raised by someone other than their biological mother
- Risks and effects similar to other high-risk groups of children
Effects of MMT on Later Mental and Motor Development

- Research on mental development is contradictory:
  - No effect found on cognitive functioning when compared to non-drug exposed infants (Jones et al., 1999)
  - Lower mental development in MMT exposed infants (Kaltenbach, 1996)

- Research on motor development, again, is contradictory:
  - No difference in motor development in MMT exposed infants (Hans & Marcus, 1983)
  - Lower motor development in MMT exposed infants (Kaltenbach, 1996)
Generally...

- Normal mental development scores

- Lower scores in:
  - Language
  - Fine and gross motor skills
  - Coordination
  - Attention performance skills

- Higher rates of ADHD
  (Jones et al., 1999)

- Again a contradiction...
  - Others found no differences in development between MMT exposed and non-drug exposed children, and no problem behaviors (Burns et al., 1996)
Why these contradictions?

- The following factors all vary within the studies researching the effects of MMT on child development:
  - Types and level of illegal drug use by parent
  - Maternal methadone dosages
  - Length of time in MMT clinics
  - Amount of prenatal care received
  - Obstetrical complications
  - Differences in environments the infants are born into
  - Socioeconomic status
  - Nicotine use
  - Studies focus on the drug use aspect
Researchers suggest

- Psychosocial and demographic factors have a much greater effect on the development of these children than opiate use alone
  - Essential to consider the psychosocial and environmental variables when working with a child of a opiate dependent mother
  - Comparing MMT exposed children, to non-drug exposed children, poorer outcomes in both groups were associated with lower socioeconomic status (Burns et al., 1996)

- There are long-term developmental differences due to poverty and maternal instability linked to long-term drug use
  - Therefore the children of stable methadone users are better off than those of mothers who are opiate dependent
In general....

- Negative effects of MMT administered in-utero on later child development are not permanent, as long as adequate protective environmental factors are in place.
  - Children at greatest risk are those who face a set of complex social factors, and biological fragility at birth (Saitz & Amadi, 1996).
MMT can help reverse negative effects....

When the “physical, psychological, and economic issues of the pregnant opiate abuser are addressed concurrently with MMT, the benefits [of MMT] far outweigh the risks for the mother, the fetus and the infant”

Jones et al., 1999, p. 272
Summary

- In summary, research tells us that for adults who are chronic drug abusers who are dependent on opiates, there are effective medications.
- Some of these medications (i.e., MMT) are prescribed for opiate dependent pregnant women even though there are some medical consequences of these medications for children.
- The positive medical and psychosocial benefits for children far outweigh these consequences.
Working With Mothers on MADT: Suggestions

- View participation in MMT as long-term treatment and as a measure of stability, opposed to as long term drug use.

- Be aware that the Methadone is often the primary source of support and stability for these women, and withdrawal can be extremely difficult, physically and emotionally.
  
  - This is particularly important to consider for clients who also have mental health concerns, and for whom the effects of withdrawal will be even greater.
  
  - Consult with MMT staff and the client’s substance abuse counselor before suggesting that the client withdraw from treatment.
Working With Mothers on MADT: Suggestions

- When assessing your MADT client’s needs and risks, identify what services are available to your client through MADT, specifically:
  - What types of services other than the medication are provided at the specific clinic?
  - Does the counseling take place in house, or is it referred out?
  - If the counseling is referred out, does the clinic have a mechanism to follow up and verify whether clients participate in counseling?
  - Is there a psychiatrist on staff?
  - Are there parental support services?
  - Is there a way to collaborate with counselors from MADT settings to develop joint treatment plans? If so, is my client willing to sign a release of information to allow such collaboration?
Working With Mothers on MADT: Suggestions

- Be aware of clinics that have worked specifically with certain populations, for example, with opiate-dependent pregnant women
  
  - These clinics are more likely to have the knowledge and services available to work effectively with this population
  
  - These clinics are more likely to be able to assess needs and risks of this population, for example, recognizing an infant with NAS
Working With Mothers on MADT: Suggestions

- Encourage women to remain in MMT through their pregnancies and after
  - Exceptional stress is faced as a pregnant woman and as a new parent
  - Few personal, social and economic resources are available to these women
  - Ending MMT would have a dangerous effect on the mother and infant, and likely lead to relapse

- Encourage clients to participate in MMT for as long as the MMT staff recommends
  - In general, longer participation in treatment = better outcomes for both mother and child. These may include:
    - Abstinence from drugs
    - Reduced HIV risk
    - Improved mental health
    - Improved dental health
    - Improved physical health
    - Securing employment
    - Learning to parent
Working With Mothers on MADT: Suggestions

- Collaborate with staff at MMT clinics around issues of child safety and well-being
  - Staff are frontline observers of these children, and can assess developmental and physical concerns, and concerns of parental abuse or neglect
  - Staff can make referrals to outside services for these children
Working With Mothers on MADT: Suggestions

- Provide, or make referrals to as many appropriate services as possible
  
  - These mothers are faced with many barriers to effective treatment and well-being
  - Arranging for the following services may be helpful:
    - Stable housing
    - Employment assistance
    - Parenting education groups
    - Couples and/or family counseling (including the children)