MACS
Maryland Addiction Consultation Service
for MOMS

The role of Prenatal Care Providers in caring for pregnant women with Substance Use Disorder (SUD)

Lorraine A. Milio, M.D.

Obstetrical Director
Center for Addiction and Pregnancy

Faculty
Maternal-Fetal Medicine Division
Dept. of Gynecology & Obstetrics
Johns Hopkins Medicine

MACS
Maryland Addiction Consultation Service *for MOMS*

Maryland Addiction Consultation Service (MACS) for Maternal Opioid Misuse (MOMs)

Provides support to maternal health providers and their practices in addressing the needs of their pregnant and postpartum patients with substance use disorders (SUD), particularly opioid use disorder (OUD).

All Services are FREE

- Phone consultation for clinical questions
- Education and training opportunities related to substance use disorders and pregnancy
- Assistance with addiction and behavioral health resources and referrals
- MACS for MOMs TeleECHO Clinics: collaborative medical education through didactic presentations and case-based learning

MACS
Maryland Addiction Consultation Service
for MOMS

Specific Aims

- Understanding the goals of screening, documentation, and referral.
- Modifying routine prenatal care for this population.
- Establishing communication with OUD treatment providers and other service providers.
- Handling the unstable patient.

MACS
Maryland Addiction Consultation Service
for MOMS

Worsening of the Opioid Epidemic

- Nearly 841,000 people have died since 1999 from a drug overdose.
- 2019: 70,630-78,000 drug overdose deaths occurred in the US
- >100,00 OD deaths between May, 2020 and April, 2021
- An increase of almost 30% from prior year.
  (CDC data)

- Since 2010, drug OD deaths have been a leading cause of Maternal Mortality across the US and in Maryland
  - as reported by State Maternal Mortality Review Committees.

MACS
Maryland Addiction Consultation Service
for MOMS

Terms

- OUD: Opioid Use Disorder
- SUD: Substance Use Disorder

MACS
Maryland Addiction Consultation Service
for MOMS

DEFINITIONS

DRUG ADDICTION

(NIDA, 2010)

- A compulsive drive to take a drug despite serious adverse consequences.
- A chronic, relapsing brain disease that is characterized by compulsive drug seeking and use, despite harmful consequences

- (ASAM, 10/2019)
  - Addiction is a treatable, chronic medical disease involving complex interactions among brain circuits, genetics, the environment, and an individual's life experiences. People with addiction use substances or engage in behaviors that become compulsive and often continue despite harmful consequences.

MACS
Maryland Addiction Consultation Service
for MOMS

DEFINITIONS

- **DRUG DEPENDENCE** (NIDA, 2010)
  - Dependence develops when the neurons adapt to the repeated drug exposure and only function normally in the presence of the drug. When the drug is withdrawn, several physiologic reactions occur, collectively known as a withdrawal syndrome. These can range from mild (e.g. for caffeine) to life-threatening (e.g. for alcohol and benzodiazepines).

- Although prolonged use of opioid drugs change brain structure and function, resulting in drug dependence, **addiction may or may not be present**.

MACS
Maryland Addiction Consultation Service
for MOMS

What happens in Chronic Opioid Use?

- There are changes in the neuronal cells in the brain
- The opioid user's struggle for recovery involves overcoming the effects of these changes.

MACS
Maryland Addiction Consultation Service
for MOMS

Understanding goals of Screening, Documentation, and referral

MACS
Maryland Addiction Consultation Service
for MOMS

Screening for OUD/SUD

- Importance of universal screening
  - regardless of method chosen
  - vs patient profiling or no screening
- Having a mechanism in place for a positive screen
  - Discussion with patient
  - Dealing with false positives
    - Cross-reactivity with other meds or food
  - Brief intervention
    - Is separately billable.
  - Referral for further evaluation and/or treatment services.

MACS
Maryland Addiction Consultation Service
for MOMS

Screening for OUD/SUD

- When to screen?
  - Screen at nurse history or initial prenatal visit
  - Consider re-screening in early third trimester
    - Patient more comfortable with practice
    - Pick up relapse which may have occurred during pregnancy
  - Screening on admission for delivery
  - ?screening on triage visit, as appropriate

MACS
Maryland Addiction Consultation Service for MOMS

Screening

- "Harmful substance use" is accurately identified with 2-3 questions.
  - Prevalence rates of 20-50% in healthcare
  - 60% of all ER admissions.
    - (McLellan AT, 2010)

- **Consider screening together for**
  - **Alcohol and substance abuse**
  - **Intimate Partner Violence**
  - **Tobacco use**

MACS
Maryland Addiction Consultation Service *for MOMS*

Screening (CAGE)

- CAGE for Alcohol (Self-reporting)
  1. Cut down
     - Have you ever felt that you should cut down on your drinking?
  2. Annoyed
     - Have people annoyed you by criticizing your drinking?
  3. Guilty
     - Have you ever felt guilty about your drinking?
  4. Eye-opener
     - Have you ever needed an “eye-opener” drink in the AM?
- CAGE-AID: Asks about alcohol or drug use
- 1 positive answer should prompt further evaluation

MACS
Maryland Addiction Consultation Service
for MOMS

Screening for Prescription Drug Abuse

- List all meds recently prescribed
  - Include those given prior to pregnancy
  - Check PDMP
- Multiple prescribers
  - Prescribers other than treating physician
- Multiple drug allergies/side effects
- All non-prescription therapies ineffective

MACS
Maryland Addiction Consultation Service
for MOMS

Increased risk of presence of substance abuse

- Late initiation of or no prenatal care
- Multiple missed prenatal visits
- Impaired school or work performance
- Poor obstetrical history
- Children with neurodevelopmental or behavioral problems
- Children not living with mother or involved with child protective services
- History of drug/alcohol mediated problems
  - Pancreatitis, skin abscesses, SBE, suspicious trauma
- Family history of substance abuse
- Frequent encounters with law enforcement agencies
- Having a partner who is a substance abuser

MACS
Maryland Addiction Consultation Service
for MOMS

SBIRT

- Screening, Brief Intervention, and Referral to Treatment

- A comprehensive and integrated approach to the delivery of early intervention and treatment services through universal screening for persons with substance use disorder and those at risk.

MACS
Maryland Addiction Consultation Service
for MOMS

SBIRT: 4P's plus Screen

- Developed by Dr. Ira Chasnoff

1. PARENTS: Did either of your parents ever have a problem with alcohol or drugs?
2. PARTNER: Does your partner have a problem with alcohol or drugs?
3. PAST: Have you ever drunk beer, wine, or liquor? Used illicit drugs or misused prescribed drugs?
4. PREGNANCY: In the month before you knew you were pregnant, how many cigarettes did you smoke? How much beer, wine, liquor did you consume? Have you used illicit or misunsed prescribed drugs?

MACS
Maryland Addiction Consultation Service
for MOMS

SBIRT: Assessment

- "Each woman who has a positive 4P screen underwent immediate assessment for substance use through a standardized structured clinical interview that addressed frequency, dose and pattern of use of alcohol, Cannabis, heroin, cocaine, benzodiazepines, club drugs and methamphetamines during pregnancy, commencing with the month prior to knowledge of the pregnancy through current point in gestation."

(Chasnoff, 2007)

MACS
Maryland Addiction Consultation Service
for MOMS

SBIRT: Referral

- Positive assessment: defined as having SUD
- Provision of information and education regarding substance abuse and its impact on pregnancy and child outcome.
- Offered referral to a LSW in the clinic.

MACS
Maryland Addiction Consultation Service
for MOMS

Goals in Treating SUD/OUD in Pregnancy

- Cessation of Illicit Drug Use
- Stabilization of Intrauterine Environment
- Stabilization of Patient's Environment
- Increased compliance with Prenatal Care and Substance Abuse Treatment Programming and Counseling
- Enhanced Pregnancy Outcomes

MACS
Maryland Addiction Consultation Service
for MOMS

Medication for Opioid Use Disorder (MOUD)

- Use instead of "Medication-Assisted Therapy or MAT"
- Treatment; then sustained recovery.
- Prevention of opioid overdose.
- Currently, in pregnancy
  - Methadone
  - Buprenorphine

MACS
Maryland Addiction Consultation Service
for MOMS

Opioid Detoxification in Pregnancy

Detoxification from opioids has been done under various protocols (usually under direct medical supervision), but is not advised because of:

- The high failure rate in maintaining drug-free status (up to 90%)
- Concerns about in utero fetal detoxification, although it does not appear to result in fetal death in utero.

Detoxification is done, where available, for the following reasons:

1. Patient request.
2. Unavailability of MAT close enough to her residence.
3. Requirement of a long-term residential or intensive-outpatient treatment program to have patient opioid-free prior to admission.

MACS
Maryland Addiction Consultation Service
for MOMS

Methadone in Pregnancy

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

> (Finnegan L P. Treatment issues for opioid-dependent women during the perinatal period. Journal of Psychoactive Drugs. 1991;23(2):191–201.)

Same results for Buprenorphine.

MACS
Maryland Addiction Consultation Service
for MOMS

Methadone in Pregnancy

- Methadone maintenance therapy significantly:
  - Reduces fluctuations in maternal serum opioid levels, so it protects a fetus from repeated withdrawal episodes
  - Eliminated need for illicit opioid use
  - Reduces neonatal morbidity and mortality
  - Increases birth weight

(Kaltenbach K, Berghella V, Finnegan L. Opioid dependence during pregnancy. Effects and management. Obstetrics and Gynecology Clinics of North America. 1998;25(1):139–151.)

(Hulse GK et al. Assessing the relationship between opiate use and neonatal mortality. Addiction. 1998;93(7):1033-1042.)

Same results for Buprenorphine.

MACS
Maryland Addiction Consultation Service
for MOMS

Screening for OUD/SUD

- DOCUMENTATION
  - Screening method used
  - Result of screen
  - Referral made (to whom?)
  - Did patient follow-up

MACS
Maryland Addiction Consultation Service
for MOMS

MODIFYING PRENATAL CARE FOR THIS POPULATION

MACS
Maryland Addiction Consultation Service
for MOMS

Challenges in providing care

- STIGMA
- Tremendous prejudice towards drug-addicted pregnant women
  - Within society
  - Within the healthcare system

  (WORDS MATTER)

- Limited or no reimbursement for additional services provided within either an obstetrical practice, a methadone program, or a practice/clinic providing buprenorphine therapy.

  (Jansson LM, Svikis DS, et al.(2007) The Impact of Managed Care on Drug-Dependent Pregnant and Postpartum Women and Their Children. Substance Use & Misuse. 42:961-974.

MACS
Maryland Addiction Consultation Service
for MOMS

Challenges in Accessing Care

- Lack of medical insurance and necessary documents
- Poor organizational skills
- Homelessness
- Unemployment
- Poor social supports
    - Multi-generational drug abuse
- Lack of transportation
- Lack of child care
- Violent social environment
- Family problems
    - Unstable partners and other family members
    - Parenting Difficulties

MACS
Maryland Addiction Consultation Service
for MOMS

Goals in Treating OUD/SUD in Pregnancy

- Improved Pregnancy Outcomes
  - Lower risk of preterm delivery.
  - Lower risk of low birth weight.
  - Lower risk of in utero fetal death.
  - Lower risk of emergency Cesarean delivery for non-reassuring fetal status.
  - Elimination of maternal/fetal/infant risk from contaminant drugs found in street heroin.
  - Lower risk of SIDS
- Concomitant avoidance of other street drugs (cocaine, benzodiazepines) will improve pregnancy outcomes.

MACS
Maryland Addiction Consultation Service
for MOMS

Enhanced prenatal care

Routine prenatal care plus:

- Establish pregnancy dating.
- Consider more frequent PN visits, esp. after initial visit.
- Obtain additional labs: HCV, HBs ab, Total HAA, TSH, fT4, CMP, Vitamin D level.
- Obtain third trimester growth ultrasound.
- Screen for PTL and pre-eclampsia
  - Outside hospitalizations
- No need for fetal testing unless other OB/Medical indications.

MACS
Maryland Addiction Consultation Service
for MOMS

Enhanced prenatal care

- Increased surveillance for STIs
  - Repeat HIV screening with third trimester labs
  - GC/CT with GBS at 36 weeks
  - Increased STI screening for known exposures and for sex workers.
- Consider HB and HA vaccinations, if non-immune.
- Offer supportive meds for constipation, heartburn, nausea & vomiting, etc.

MACS
Maryland Addiction Consultation Service
for MOMS

Enhanced prenatal care

- Resources for specific obstacles:
  - Transportation: County or MCO provided
  - Loss of contact: have info for family or friends who can find pt.
  - Remind pts. of appts.
  - Ensure pt. is obtaining prescribed meds.
    - Co-pay & pre-auths.
  - Screen for Intimate Partner Violence.

MACS
Maryland Addiction Consultation Service
for MOMS

Education on Neonatal Opioid Withdrawal Syndrome (NOWS)

MACS
Maryland Addiction Consultation Service
for MOMS

Neonatal Opioid Withdrawal Syndrome (NOWS)

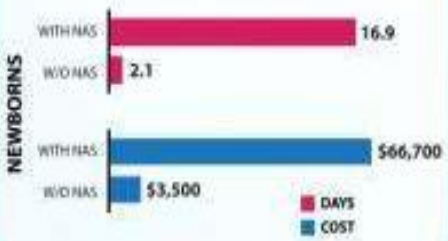
- Also called Neonatal Abstinence Syndrome (NAS)
- Most infants exposed to opioids in utero have some degree of NAS
- Opioids include: heroin, methadone, buprenorphine, all narcotic tabs, patches, and injectables.
- For methadone, the majority of studies looking at maternal dose have not shown a relationship between methadone dose and either severity or duration of NAS. Same for Buprenorphine.

DRAMATIC INCREASES IN MATERNAL OPIOID USE AND NEONATAL ABSTINENCE SYNDROME

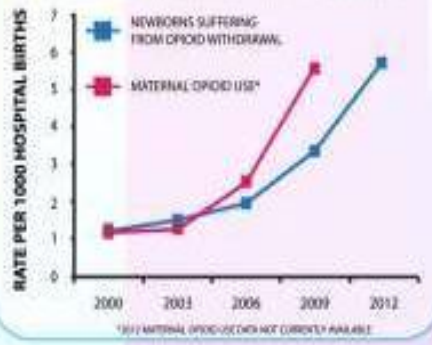
THE USE OF OPIOIDS DURING PREGNANCY CAN RESULT IN A DRUG WITHDRAWAL SYNDROME IN NEWBORNS CALLED **NEONATAL ABSTINENCE SYNDROME** (NAS), WHICH CAUSES **LENGTHY** AND **COSTLY** HOSPITAL STAYS. ACCORDING TO A NEW STUDY, AN ESTIMATED **21,732 BABIES** WERE BORN WITH THIS SYNDROME IN THE UNITED STATES IN 2012, A **5-FOLD INCREASE** SINCE 2000.

EVERY 25 MINUTES, A BABY IS BORN SUFFERING FROM OPIOID WITHDRAWAL.

AVERAGE LENGTH OR COST OF HOSPITAL STAY



NAS AND MATERNAL OPIOID USE ON THE RISE



National Institute on Drug Abuse

Source: Patrick et. Al., JAMA 2012, Patrick et. Al., Journal of Perinatology 2015

MACS
Maryland Addiction Consultation Service *for MOMS*

Neonatal Opioid Withdrawal Syndrome (NOWS)

- All of these infants should b evaluated on regular basis for first 4-5 days for NAS
  - Modified Finnegan scoring system; a checklist, is often used.
  - Eat, Sleep, Console Protocol.

- Only a subset of these infants require medication for NAS.
  - Average length meds are required is 12 days
  - Most common meds used are morphine and clonidine
  - Weight-based vs symptom-based dosing

- Non-pharmacologic treatment is appropriate for all opioid-exposed infants until infant appears well integrated.

- **NAS is self-limiting**

MACS
Maryland Addiction Consultation Service *for MOMS*

Buprenorphine in Pregnancy

The MOTHER Study – Published 2010

131 Neonates followed post-delivery.

- Requiring NAS treatment
  - 27 (47%) vs. 41 (57%) P=0.26
- Mean dose of morphine needed:
  - 1.1mg (B) vs. 10.4mg (M) P<0.0091
- Mean hospital stay:
  - 10.0 days (B) vs. 17.5 (M) P,0.0091
- Duration of treatment:
  - 4.1days (B) vs. 9.9 days (M) P<0.003125

(Jones HE, Kaltenbach K, Heil S, et al. Neonatal Abstinence Syndrome after Methadone or Buprenorphine Exposure.NEJM 2010;363(24):2320-2331.)

MACS
Maryland Addiction Consultation Service
for MOMS

Methadone vs Buprenorphine in Pregnancy

Comparing Methadone and Buprenorphine for Management of Opioid Dependence in Pregnancy

- Both are efficacious in preventing relapse to illicit opioid use.
- Buprenorphine may result in less fetal cardiac and movement suppression than does methadone.
- Prenatal exposure to buprenorphine results in less severe NAS/NOWS relative to methadone.

  (Review: Jones HE, Finnegan LP and Kaltenbach K. Comparing Methadone and Buprenorphine for Management of Opioid Dependence in Pregnancy. Drugs. 2012; 72(6):747-757.)

MACS
Maryland Addiction Consultation Service
for MOMS

Nicotine Withdrawal Syndrome

- In utero exposure to Nicotine may worsen NOWS
  - Strategize with patient on decreasing and stopping Nicotine products.
  - Refocus pt. away from decreasing MOUD to decreasing Nicotine use.

MACS
Maryland Addiction Consultation Service
for MOMS

ESTABLISHING COMMUNICATION WITH SUD/OUD TREATMENT PROVIDERS

MACS
Maryland Addiction Consultation Service
for MOMS

An Integrated Care Model

- Care of the pregnant women with OUD/SUD is a multi-disciplinary effort to optimize both perinatal outcome and maternal sobriety!
  - Prenatal care
  - Evaluation and treatment for co-morbidities
    - Psychiatric, medical
  - Substance abuse treatment and counseling
  - Nutritional counseling
  - Social service involvement
  - Pediatric follow up

MACS
Maryland Addiction Consultation Service
for MOMS

Communication

- Establish upfront that you want to have permission to have contact with patient's OUD/SUD treatment provider
  - To optimize and co-ordinate care, not for punitive reasons
- Obtain special consent form for contacting OUD/SUD provider or Psychiatric provider.
- Have mechanism in place to receive and provide updates.
- Mutual support with other providers in caring for shared patients.

MACS
Maryland Addiction Consultation Service
for MOMS

HANDLING THE UNSTABLE PATIENT WITH OUD/SUD

MACS
Maryland Addiction Consultation Service
for MOMS

Ongoing use/misuse of Drugs and/or Alcohol

- Some patients are unwilling/unable to stop for variety of reasons:
  - Have no hope of success
  - Are not invested in pregnancy
  - Don't feel capable of parenting
  - Don't abide by rules/restrictions of treatment programs
  - Have social pressure not to be on MOUD
  - Have lack of support
  - Have untreated psychiatric illness
  - Are too disorganized to follow-up for treatment

MACS
Maryland Addiction Consultation Service *for MOMS*

Managing the Unstable patient

- Meet with patient to discuss barriers to OUD/SUD treatment.
- Have more frequent visits
  - Phone contact with staff
- Consider fetal testing
- Elicit co-operation of support person
- Involve case manager for MCO
- Discuss referral to residential treatment
  - May be required by CPS to maintain custody of infant
- Consider IOL at 37 weeks.

MACS
Maryland Addiction Consultation Service
for MOMS

One model of care: Center for Addiction and Pregnancy (CAP)

Obstetrical Evaluation and Care

- Including high-risk obstetrical care and HIV care

Substance Abuse Treatment

- Methadone or buprenorphine maintenance
- Intensive Outpatient Programming (IOP)

Mental Health/Psychiatric consultation

- Domestic Violence / PTSD Counseling

Pediatric Health Care

Residential Service: a 16 bed housing unit

Referral and follow-up for in-patient detoxification

- Opioids, Benzodiazepines, Alcohol

MACS
Maryland Addiction Consultation Service
for MOMS

Our Role as OB/GYNs

As primary and specialty care providers for women of all ages, we have a platform to impact the epidemic of addiction.

Pregnancy is a time when individuals with Substance Use Disorder are often motivated to make changes and engage in treatment

- May we embrace this challenge!

MACS
Maryland Addiction Consultation Service *for MOMS*

Maryland Addiction Consultation Service (MACS) for Maternal Opioid Misuse (MOMs)

Provides support to maternal health providers and their practices in addressing the needs of their pregnant and postpartum patients with substance use disorders (SUD), particularly opioid use disorder (OUD).

All Services are FREE

- Phone consultation for clinical questions
- Education and training opportunities related to substance use disorders and pregnancy
- Assistance with addiction and behavioral health resources and referrals
- MACS for MOMs TeleECHO Clinics: collaborative medical education through didactic presentations and case-based learning

MACS

Maryland Addiction Consultation Service *for MOMS*

1-855-337-6227

www.marylandMACS.org

Email: MACS@som.umaryland.edu

Funding for MACS for MOMs is provided by Maryland Department of Health and the Centers for Medicare and Medicaid Services.