PERINATAL SUBSTANCE ABUSE

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PERINATAL SUBSTANCE ABUSE OVERVIEW

1. Substances used
2. Trends
3. Scope of the problem
4. The definition of addiction, dependence and tolerance
5. Psychosocial issues
6. Principles of prenatal healthcare
7. Role of the healthcare provider
8. Treatment for the chemically dependent woman
9. Perinatal drug exposure continuum of care
10. What mama takes, baby gets

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SUBSTANCES ABUSED

DRUGS SEEN MOST OFTEN AT THE CLINIC	
HEROIN*	ALCOHOL*
BENZODIAZEPINES*	MARIJUANA*
METHAMPHETAMINE	NICOTINE
PRESCRIPTION OPIOIDS*	SEDATIVES*
FENTYNAL*	
*Depressants used together	

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TRENDS

- Alcohol results in 3.3 million deaths each year
- Less than half the population (38.3%) actually drink alcohol, but for those who do drink average 7 liters of pure alcohol annually
- Estimates of 275 million (5.6%) use illicit drugs such as cannabis, amphetamines, opioids, and cocaine
- Cannabis is most used with 192 million users
- Some 31 million people who use drugs suffer from drug use disorders
- 11 million people inject drugs of which 1.3 million are living with HIV, 5.5 million with hepatitis C and 1 million with both HIV and HEP C

World Health Organization

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TRENDS

DRUG OVERDOSE DEATHS (CDC)

- **70,237 drug overdose deaths occurred in the United States in 2017**. The age-adjusted rate of overdose deaths increased significantly by 9.6% from 2016 (19.8 per 100,000) to 2017 (21.7 per 100,000). Opioids—mainly synthetic opioids (other than methadone)—are currently the main driver of drug overdose deaths. **Opioids were involved in 47,600 overdose deaths in 2017** (67.8% of all drug overdose deaths).
- **In 2017, the states with the highest rates of death due to drug overdose** were West Virginia (57.8 per 100,000), Ohio (46.3 per 100,000), Pennsylvania (44.3 per 100,000), the District of Columbia (44.0 per 100,000), and Kentucky (37.2 per 100,000).[1]
- **States with statistically significant increases in drug overdose death rates from 2016 to 2017** included Alabama, Arizona, **California**, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Kentucky, Louisiana, Maine, Maryland, Michigan, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, West Virginia, and Wisconsin.[2]

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TRENDS

Prescription Opioids

- According to the CDC, ***44 people die every day*** in the United States from overdose of prescription painkillers.
- According to the National Survey on Drug Use and Health (NSDUH) – 2014 (PDF | 3.4 MB):
  - **4.3 million Americans engaged in non-medical use of prescription painkillers in the last month.**
  - Approximately 1.9 million Americans met criteria for prescription painkillers use disorder based on their use of prescription painkillers in the past year.
  - 1.4 million people used prescription painkillers non-medically for the first time in the past year.
  - The average age for prescription painkiller first-time use was 21.2 in the past year.

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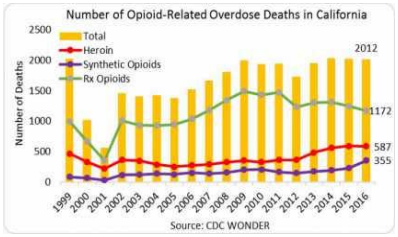
TRENDS

Heroin

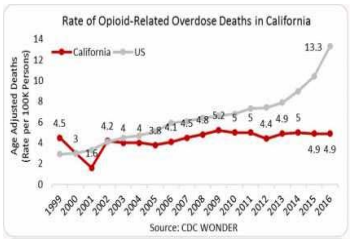
- According to SAMHSA's 2014 NSDUH (PDF | 3.4 MB):
  - **4.8 million people have used heroin at some point in their lives.**
  - Among people between the ages of 12 and 49, the average age of first use was 28.
  - 212,000 people aged 12 or older used heroin for the first time within the past 12 months.
  - Approximately 435,000 people were regular (past-month) users of heroin.

2016 CALIFORNIA OPIOID-RELATED DEATHS



National Institute on Drug Abuse (2018) Retrieved from: https://www.drugabuse.gov/drugs-abuse/opioids/opioid-summaries-by-state/california-opioid-summary

OPIOID-RELATED OVERDOSE DEATHS



National Institute on Drug Abuse (2018) Retrieved from: https://www.drugabuse.gov/drugs-abuse/opioids/opioid-summaries-by-state/california-opioid-summary

TRENDS

Between 2007 and 2017, there were nearly 2,200 accidental overdose deaths from prescribed opioids in San Diego County.

During the same period, 890 San Diegans died from accidental heroin overdoses in San Diego County.

In 2017, there were 87 deaths in the region due to fentanyl.

According to the County Health and Human Services Agency, *one of eight San Diegans has a substance use disorder but about 90 percent of those suffering from addiction do not access treatment.*

By Tom Christensen, County of San Diego Communications Office Jul. 23, 2019 | 4:19 PM

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ILLICIT DRUG USE

REASONS GIVEN FOR USING ILLICIT DRUGS		
Feel better	Lose weight	Sleep
Have fun	Relieve pain	Deal w/ problems
Relax	Deal w/ addiction	Get high
Study	Concentrate	Remain alert
Self-medicating	Mental health issues	

NIDA www.drugabuse.gov

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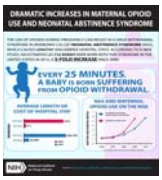
SOCIETY'S YOUNGEST VICTIMS OF THE OPIOID EPIDEMIC

- SOCIETY'S YOUNGEST VICTIMS:
  - Prenatal screening studies document 15-20% of newborns prenatally exposed to alcohol, tobacco, or illegal drugs

Linda Carpenter, Project Director, National Center on Substance Abuse and Child Welfare, June 23, 2010



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THE DISEASE OF ADDICTION = DRUG-SEEKING BEHAVIORS

BRAIN DISEASE:
Chronic,
Relapsing,
Progressive and
Fatal

CHARACTERIZED BY:
Tolerance
Physical and/or Psychological
Dependence and Organ Damage

BEHAVIORALLY
Compulsion
Loss of Control
Continued Use Despite Adverse Consequences

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ASAM DEFINITION OF ADDICTION

- Addiction is a primary, chronic disease of brain reward, motivation, memory and related circuitry. Dysfunction in these circuits leads to characteristic biological, psychological, social and spiritual manifestations. This is reflected in an individual pathologically pursuing reward and/or relief by substance use and other behaviors.
- Addiction is characterized by inability to consistently abstain, impairment in behavioral control, craving, diminished recognition of significant problems with one's behaviors and interpersonal relationships, and a dysfunctional emotional response.
- Like other chronic diseases, addiction often involves cycles of relapse and remission. Without treatment or engagement in recovery activities, addiction is progressive and can result in disability or premature death.

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THE DISEASE OF ADDICTION

- **DEPENDENCE:**
  A *physiological state of adaptation* to a substance, the absence of which produces symptoms and signs of withdrawal.

  Infants are not addicted to their Mother's drugs, they are dependent on their Mother's drugs. *Addiction implies drug-seeking behaviors.*

  Physical dependence is the result of physical changes in the brain (neurotransmitters).

  It is not a matter of will power --- it is actual brain physiology.

- **TOLERANCE:**
  A state of *adaptation in which exposure to a drug induces changes* that result in a decrease of one or more of the drug's effects over time.

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PRESENTING PROBLEM

- Substance abuse is a symptom of underlying pathology. We need to further assess for:
  - ✓ ***History of substances being used:*** ***Explore the patient's drug history***
    - o Age when started
    - o Use within the last 30 days (last month)
    - o Last use
    - o Number of years used
    - o Route of administration
    - o Frequency (how often); amount (how much or cost)
    - o What is the longest time clean and sober
  - ✓ ***History of mental illness:*** ***When were the symptoms first noticed? Diagnosis made?***
  - ✓ ***History of childhood traumas:*** ***Age, type of abuse***

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PSYCHOSOCIAL ISSUES:

- ***Predisposing Factors:***
  - ➢ Family of origin dynamics: *See ACE Studies, V. Felitti, et. Al; attachment problems*
  - ➢ **Childhood traumas and abusive family backgrounds**
  - ➢ Undiagnosed /diagnosed mental health issues: *Not dealt with*
- ***Adult relationships:*** Co-Dependent and clingy
- ***Financial dependency:*** Low to high SES
- ***Social stigma:*** Not treated as a brain disease but as a criminal justice problem
- ***Poor coping skills:*** High level of survival skills: instant gratification, manipulation, splitting and difficulty resolving conflict
- ***Low self-esteem:*** Indiscriminate attachment, use others to get their needs met, strong feelings of unworthiness and remaining with an addicted partner

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BREAK!

TAKE A FEW MINUTES TO STRETCH

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PRINCIPALS OF PRENATAL HEALTH CARE

- Health professionals are treating two patients --- the mother and the fetus.
- The primary goal of prenatal care is to ensure a healthy pregnancy resulting in a healthy mother and newborn.

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PRINCIPLES OF PRENATAL HEALTH CARE

- There usually exists a consensual and voluntary relationship between patient and practitioner.
- The mutually shared goal between patient and practitioner is to have a healthy baby.

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PRINCIPLES OF PRENATAL HEALTH CARE

- The prenatal care system attempts to provide good medical treatment to the prenatal patient who uses alcohol and/or other drugs despite a patient's denial of a problem.
- Physicians are compelled to care for an addicted woman whether or not she is compliant and sees the efficacy and purpose of the treatment.
- Continued provision of services to a non-cooperative patient is not viewed as enabling or co-dependent behavior by the provider.

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PRINCIPLES OF PRENATAL HEALTH CARE

The concept of **"hitting bottom"** or offering treatment only when a patient "is ready" to enter recovery is unacceptable in medicine.

- Medical professionals are never taught to wait and allow a patient to get sicker before accepting a patient into care.
- All to often this occurs in drug and alcohol treatment programs
- Successes in obstetrics is evaluated by biological measures in the newborn such as Apgar scores, sufficient birth weight and head circumference, good maternal nutrition and so forth.

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PRINCIPLES OF PRENATAL HEALTH CARE

- **Nursing Care Management** - Screening:
  - **All** pregnant women need to be **screened** for drug and alcohol abuse at their first prenatal visit
  - Start by screening for the use of OTC medications
  - Use of legal mood-altering substances: caffeine, nicotine and alcohol
  - Last screen for illicit drugs: heroin, cocaine, methamphetamine and marijuana

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PRINCIPLES OF PRENATAL HEALTH CARE

- **Care Management** – AOD Tools for Screening:
  - The 5 P's or the 4 P's Plus:
    - **P**arent use — **P**arent use
    - **P**eer use
    - **P**artner use — **P**artner use
    - **P**ast use — **P**ast use
    - **P**resent use — **P**regnancy use
  - Urine Drug Screen* (UDS) – only gives a diagnostic picture of the last 48 to 72 hours, does not give a history of drug use
  - **Meconium stain*,** blood tests* and hair sample* (False positives)

*(Must have a chain of custody to be admitted into a court of law.)

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PRINCIPLES OF PRENATAL HEALTH CARE

ASSESSMENT OF THE PREGNANT PATIENT	
TB, Syphilis, Hep B, Hep C and HIV infection	MRSA and abscesses of the tissue
Initial and serial ultrasound to determine GA	Nutritional status
Hygiene status	Coping mechanisms
Attachment quality	Suicide risk
Hopelessness	Powerlessness

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TREATMENT OF THE CHEMICALLY DEPENDENT PREGNANT PATIENT

- Pregnancy is an opportunity for change (*Must remember that addiction is a chronic, relapsing disease*)
  - The nurse should be able to screen the patient for drugs and alcohol
  - Determine the patient's readiness for change

Stages of Change:

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TREATMENT OF THE CHEMICALLY DEPENDENT PREGNANT PATIENT

- Use of supportive nursing interventions; i.e., mutuality and avoidance of confrontation
- Use of motivational interviewing (MI)
  - Use of empathy
  - Looking at the discrepancy of where the patient is currently and where she wants to be
  - Avoid argumentation
  - Roll with resistance
  - Support the woman's sense of self-efficacy

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AOD SERVICES AVAILABLE TO THE CHEMICALLY DEPENDENT WOMAN

AOD SERVICES IN SAN DIEGO COUNTY	
Detox Programs	12 - Step Programs (based on all 12 Steps)
SMART Recovery (Rational Recovery) vs 12-Step Programs	**Medically Assisted Treatment (MAT)** *For opiate/opioid dependent patients* *Get a release from the patient* *Make a referral to a program nearest the patient*
Regional Recovery Centers	Day Treatment --- Outpatient (5 days, 5 hours per day)
Residential Treatment	Support through faith-based programs
IOP (Intensive Outpatient Treatment)	Case Management
**All opioid-dependent patients are given Naloxone to prevent death from an opioid overdose (blocks or reverses the effects of opioids)*	

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MEDICALLY ASSISTED TREATMENT IN PREGNANCY

- **For the pregnant woman dependent on opioids:**
  - The pregnant patient must be monitored on methadone during her pregnancy – no detoxing!
  - Referred to an OB-GYN (high risk pregnancy) for prenatal care
  - The best AOD treatment for the pregnant patient dependent on opiates is to refer her for MAT (medically assisted treatment) and psychotherapy
  - MAT is a HARM reduction program; do not confuse with ZERO Tolerance AOD treatment programs
  - Methadone has been studied in pregnancy for safety since 1969 by Loretta Finnegan, MD

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MEDICALLY ASSISTED TREATMENT : THE PREGNANT WOMAN

- Contraction of the uterus may increase the likelihood of fetal withdrawal *(why we do not want to detox women during the pregnancy)*
- Medication dose will increase as the woman nears delivery in order to ensure the growing baby has enough so that fetal withdrawal in utero does not occur
- Methadone is not a teratogen, it does not cause birth defects.
- Methadone maintenance is more safe for the fetus than acute opiate detoxification.

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MYTH 1. METHADONE IS SYNTHETIC HEROIN

- **Similarities between heroin and methadone:**

HEROIN	METHADONE
Opiate – natural substance	Opioid – synthetic or man-made
Comes from a substance from milking the undeveloped seed of the poppy plant.	Comes from a substance from milking the underdeveloped seed of the poppy with added synthetic substances.
An individual becomes physiologically dependent upon the substance.	An individual becomes physiologically dependent upon the substance.
An individual builds up a tolerance to the substance.	An individual does not build up a tolerance to the substance.
Abruptly stopping the substance leads to craving and withdrawal symptoms.	Abruptly stopping the substance leads to craving and withdrawal symptoms.

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MYTH #2: METHADONE TREATMENT IS TRADING ONE DRUG FOR ANOTHER

- **Differences between heroin and methadone:**

HEROIN	METHADONE
Illegal substance	Legally prescribed medication
Uncontrolled substance	Controlled substance
No FDA approval . . . No medical use	FDA approved for treatment of opiate addiction and chronic pain
The individual will experience a rush, an intense high, euphoria	Methadone is a full agonist at the MU receptor sites in the brain and other parts of the body which blocks heroin and other opiates / opioids from those receptor sites . . . **NO RUSH, NO HIGH, NO EUPHORIA, NO CRAVING OR WITHDRAWAL SYMPTOMS!!!**

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MYTH 3. YOU CAN GET HIGH ON METHADONE

- Continued. . .

HEROIN	METHADONE
Withdrawal symptoms begin within 3 – 4 hours after using heroin (6 – 8 hours after taking prescriptions opioids)	Alleviated heroin and/or prescription opioid withdrawal symptoms • Has a half-life which lasts from 24- 36 hours
Craving for more/ opiates	Relieves the craving for both heroin and prescription opioids once the individual is off all other illicit substances and the steady state is reached
Nodding out	No nodding out unless the individual is using other opiates or illicit substances

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METHADONE STEADY STATE

DAY 1 # OF MG	DAY 2 # OF MG	DAY 3 # OF MG	DAY 4 # OF MG	DAY 5 # OF MG	DAY 6 # OF MG	DAY 7 # OF MG
10	5.0	2.5	1.25	.675	.3375	.16875
	10	5.0	2.50	1.250	.6750	.33750
		10	5.00	2.500	1.2500	.67500
			10	5.000	2.5000	1.25000
				10	5.0000	2.50000
					10	5.00000
						10/10
10	10/5	10/7.5	10/8.75	10/9.425	10/9.7625	10/9.93125

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MYTH 4: ITS EASIER TO DETOX OFF HEROIN THAN METHADONE

- Continued . . .

HEROIN	METHADONE
Use of hypodermic needles or smoke it as you would a cigarette	Oral suspension given under strict guidelines and supervision • Tablets available through private physicians
Users of heroin more likely to be incarcerated	Once on methadone, less likely to be incarcerated
Users participate/ in high risk behaviors that may be illegal and disruptive	Manages heroin / prescription high risk and addictive behaviors
Detoxing from heroin is going "cold turkey" . . . the individual will experience moderate to severe withdrawal symptoms	Detoxing from methadone is a slow process that takes time . . . the individual experiences few or no withdrawal symptoms

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EFFECTS OF SUBSTANCES COMMONLY ABUSED BY PREGNANT WOMEN: MATERNAL, FETUS, NEONATE, INFANT AND GROWING CHILD

"WHAT MAMA TAKES, BABY GETS"

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NICU – CARE FOR THE DRUG-EXPOSED INFANT

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Prenatal Drug Exposure: Potential Effects on Birth and Pregnancy Outcomes*

TOBACCO	MARIJUANA	STIMULANTS	HEROIN/OPIOIDS
Pregnancy complications	No fetal growth effects	**Cocaine**	Stillbirth
Prematurity	No physical abnormalities	Prematurity	Prematurity
Decreased birth weight		Decreased birth weight	Decreased birth weight
Decreased birth length		Decreased birth length	Decreased birth length
Decreased birth head circumference		Decreased birth head circumference	Decreased birth head circumference
Sudden infant death syndrome (SIDS)		Intraventricular hemorrhage	Fetal and neonatal abstinence syndrome
Increased infant mortality rate		**Methamphetamine**	Sudden infant death syndrome (SIDS)
		Small for gestational age	
		Decreased birth weight	

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PERINATAL DRUG EXPOSURE: POTENTIAL EFFECTS ON CNS DEVELOPMENT, COGNITIVE FUNCTION AND BEHAVIOR*

TOBACCO**	MARIJUANA**	STIMULANTS**	OPIATES**
Disturbed maternal-infant interaction Excitability Hypertonia Stress abstinence signs Conduct disorder Reduced IQ Aggression Antisocial behavior Impulsivity ADHD Tobacco use and dependence	Mild withdrawal symptoms Delayed state regulation Reading, spelling difficulty Executive function impairment Early tobacco and marijuana use	**Cocaine** Neonatal/Infancy Early neurobehavioral deficits: Orientation, state regulation, autonomic stability, attention, sensory and motor asymmetry, jitteriness Poor clarity of infant cues during feeding interaction Delayed information processing General cognitive delay Childhood Lower nonverbal perceptual reasoning Lower weight for height Lower weight curve trajectories Attention problems Disruptive behaviors by self-report and caregiver report	Neonatal abstinence syndrome Less rhythmic swallowing Strabismus Possible delay in general cognitive function Anxiety Aggression Feelings of rejection Disruptive/inattentive behavior
		Methamphetamine Poor movement quality (3rd trimester exposure) Lower arousal Increased lethargy Increased physiological stress No mental or motor delay (infant/toddler)	
**Effects may be subtle and transient			

*"Prenatal Tobacco, Marijuana, Stimulant and Opiate Exposure: Outcomes and Practice Implications." http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3188826/

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NEONATAL ABSTINANCE SYNDROME

NEUROLOGICAL SIGNS:	Hypertonia / Hypotonia / Mixed Fine motor tremors Hyper-reflexia	High pitched cry Sleep disturbance Seizures
AUTONOMIC SYSTEM DYSFUNCTION:	Yawning Nasal stuffiness Sweating	Sneezing Low grade fever Skin mottling
GASTROINTESTINAL ABNORMALITIES	Diarrhea Vomiting Poor feeding	Regurgitation Swallowing problems Failure to thrive
RESPIRATORY SIGNS:	Tachypnes Apnea	
NEUROBEHAVIORAL ABNORMALITIES	Irritability Poor response to auditory visual stimulation	

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FETAL ALCOHOL SPECTRUM DISORDER

- **ALCOHOL IS A *TERATOGEN***
- Three Major Characteristics:
  - Growth retardation
  - Central nervous system abnormalities: developmental and mental retardation
  - Structural abnormalities: characteri facial, skeletal and organ defects

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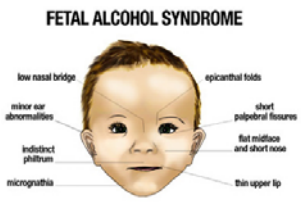
FETAL ALCOHOL SPECTRUM DISORDER



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CAFFEINE EFFECTS

- **Caffeine:** a stimulant that can affect mood by interrupting bodily functions by producing sleep disturbances and anxiety.

  The March of Dimes recommends no more than 200 mg of caffeine a day which is about 12 – 16 ounces. (2008)

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NICOTINE FETAL EFFECTS

NICOTINE EFFECTS: FETAL,NEO-NATAL AND CHILD	
Causes vasoconstriction of the blood vessels . . . the fetus does not get the necessary nutrients and oxygen for optimal growth (IUGR)	CNS functional abnormalities
Smoking during pregnancy is known to cause a decrease in placental perfusion.	Prematurity
Placental abruptio	Intrauterine death
Associated with increased risk of psychotic symptoms in their offspring	Decreased soothing ability
Abnormal sucking	Excessive gas
Gaze aversion	**Double the likelihood of SIDS**

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ROLE OF THE HEALTH CARE PROVIDER

- Acknowledge the disease and **make referrals**
- Refrain from confronting the patient
- Identify the problem (consult)
- Talk with the patient
- Give the message that recovery is possible
- Give a message of hope
- Acknowledge that recovery is the patient's choice
- Treatment is available

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ROLE OF THE HEALTHCARE PROVIDER

- Encourage the patient to spend as much time as possible with her newborn
- Role model for the patient what is expected in caring for a newborn with special problems
- Encourage "kangaroo pouching" or skin-to-skin contact with both the patient and the FOB
- Allow the mother to dress, diaper, nurse (as long as drug-free and/or HIV negative) and care for her child while the baby is hospitalized
- Allow for questions from the mother without responding with judgement and bias
- Develop empathy for this special population of women and their children

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SOAP MAT, LLC BIRTH OUTCOMES - 2018

1.	Number of enrolled pregnant women for 2018	12	100%
	Number of live births	11	92.0
	Number of TABS	0	0
	Number of SABS Miscarriage: (1ST 13 weeks GA)	0	0
	Number of Stillborn (Fetal Demise)	1	8.0
2.	Number of women entering prenatal care during 1st or 2nd trimester	9	75.0
3.	Number of women entering prenatal care during the 3rd trimester	2	17.0
4.	Number of women with no prenatal care	1	8.0
5.	Number of infants born 2500 grams or more	8	67.0
6.	Number of infants born less than 2500 grams	3	25.0
	Weight Unknown (Stillborn)	1	8.0
7.	Number of infants born at 37 weeks or over	7	58.0
8.	Number of infants born at 36 weeks, 6 days and below	5	42.0
9.	Number of males	5	42.0
10.	Number of females	7	58.0
11.	Number of vaginal births	8	67.0
12.	Number of C-Section births	4	33.0
13.	Number of tox-free infants at birth	8	67.0
14.	Number of pos-tox infants at birth	3	25.0
	TOX Status Unknown (Stillborn)	1	8.0

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PERINATAL SUBSTANCE ABUSE

- QUESTIONS?

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