

Clinical Guidelines for the 1st Prenatal Visit

Goals of the First Prenatal Visit

- 1 Obtain detailed health history, including family history
- 2 Perform *4P's Plus* screen for risk of substance use
- 3 Conduct comprehensive physical examination, focusing on the medical problems related to substance abuse
- 4 Obtain routine prenatal panel, *plus* other laboratory tests as indicated
- 5 Obtain tests specific to high risk status
- 6 If *4P's Plus* screen is positive, refer for assessment for substance use and abuse.

Guidelines for the First Prenatal Visit

- 1 **Obtain a detailed health history.** This history should include medical history; current medications; psychosocial history, including emotional problems, mental illness (including substance-induced psychiatric disorders), and housing and current living arrangements, with a special focus on the presence or lack of support systems; complete reproductive history, including current and past pregnancies, previous preterm deliveries, history of Caesarean sections, birth weight, number of therapeutic abortions, menstrual history, and methods of family planning; and sexual history, including previous sexually transmitted diseases.
- 2 **Perform *4P's Plus* screen.** Utilize the appropriate form to guide questions and interpretation of response, including the next step in screening process.
- 3 **Conduct a comprehensive physical examination.** This examination should include an evaluation of nutritional status, height, weight, and blood pressure, as well as an examination of the head, neck, breasts, heart, lungs, abdomen, pelvis, rectum, and extremities. Special attention should be given to those organ systems impacted by alcohol and other drug use, such as the liver in alcoholics and the skin in injection drug users. During the pelvic examination, attention should be given to the size of the uterus in relation to the presumed duration of the pregnancy.

In the physical examination of pregnant, substance-using women, the following areas need special attention:

- Skin: Presence of infections, abscesses, thrombosed veins, herpes infections, pyodermas, icterus, tattoos, bruises
- Dental: Status of dental hygiene, existence of pyorrhea or abscessed cavities
- Otolaryngeal: Presence of rhinitis, excoriation of nasal septum
- Respiratory: Presence of wheezes, rales; signs of interstitial pulmonary disease

Cardiovascular: Rate and rhythm abnormalities, presence of murmurs

Gastrointestinal: Presence of hepatomegaly, scars from injuries, incisional or umbilical hernias

Genitourinary: Presence of infections such as condyloma acuminatum, herpes vulvovaginitis, trichomonas vaginitis, bacterial vaginitis, and gonorrheal/chlamydial urethritis/cervicitis; condition of the uterus, including size configuration, fetal position, fetal heart rate, and fetal activity

Breast: Nipples, evidence of trauma, "lumps or bumps," breast vein used for injection

Musculoskeletal: Evidence of pitting edema, distortion of muscular landmarks due to subcutaneous abscesses, or brawny edema

Lymphatic: Presence of lymphadenopathy and abscesses

4 Obtain routine prenatal panel

Baseline workup for all women includes, but is not limited to:

- Blood group, Rh factor determination, and antibody screen
- Rubella immune status and antibody titer measurement, unless previously documented
- Serological tests for syphilis
- Hepatitis B surface antigen screen
- Complete blood count, including indices and platelets
- Baseline liver function test (optional)
- Baseline renal function test (optional)
- Platelet count (optional)
- Cervical cytology (pap smear), unless the provider has results of a test performed within the last 3 months
- Cervical culture for gonorrhea (optional culture for rectal and pharyngeal)
- Chlamydia screen

Offer and document HIV testing

Additional workup when indicated:

- Hemoglobin electrophoresis
- Purified protein derivative of tuberculin (PPD) with antigen panel. If previously PPD-positive, a chest X-ray is needed.
- Baseline sonogram. Level I scanning should be performed at a minimum to assess gestational age. Level II is recommended, especially when the gestational age is more than 18 weeks.

5 Obtain optional tests consistent with high risk status

- Urine drug screening
- Screening for human T-cell lymphotropic virus (HTLV)-I and hepatitis C
- Diabetic screening as indicated

Complete urine analysis with screening for infection

Group B streptococcal (GBS) carriage cultures (rectal and vaginal)

Maternal serum-alpha fetal protein (MS-AFP) as indicated (16 to 20 weeks gestation)

Toxoplasmosis, cytomegalovirus, and herpes screening tests as indicated

Electrocardiogram (EKG) and chest Xray as indicated

6 Refer any woman with a positive screen on the 4P's Plus for full substance use assessment

If the woman has used any alcohol at all or smoked three or more cigarettes in the month prior to knowing she was pregnant, she should undergo a full assessment for substance use in pregnancy by trained personnel

A woman at risk for substance use also may need referral for:

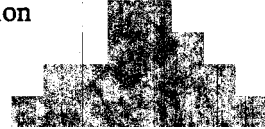
Nutritional counseling

Social services, including case management and possible home visitation

Early intervention, including parenting education

Educational and employment counseling

Smoking cessation programs



Clinical Guidelines for Prenatal Follow-up for Substance-Using Women

Goals for Prenatal Follow-up Care for Substance-Using Women

- 1 Identify and address medical and psychosocial problems as well as health education considerations
- 2 Obtain random urine toxicologies
- 3 Obtain written release from the patient to enable service providers to exchange information
- 4 Discuss reproductive options
- 5 Encourage the woman to continue treatment
- 6 Encourage involvement of the baby's father and other persons the woman considers significant
- 7 Discuss advantages of and contraindications to breastfeeding

Guidelines for Follow up Care for Substance-Using Women

- 1 Schedule visits to identify and address medical and psychosocial problems, as well as health education considerations.**

Prenatal follow-up visits should be determined by the woman's individual needs and risk assessment. Recognizing that the majority of substance-using women have high-risk pregnancies, it is desirable to see them every 2 to 3 weeks, up until 28 weeks, then weekly thereafter. It may not be necessary for all contacts to be with a physician; some contacts may be handled by a nurse or by the case manager. In some instances, a woman should be seen weekly throughout her pregnancy, particularly if she is not enrolled in a substance abuse treatment program. A woman with active medical or obstetric problems should be seen more frequently, at intervals to be determined by the nature and severity of her problems.

Up to 28 weeks

Up to 28 weeks, the following should be done at each visit:

Measure weight and blood pressure; obtain urine dipstick for sugar, protein and ketones; test for nitrites and leukocyte esterase; obtain urine toxicologies in collaboration with the treatment program.

Assess for evidence of edema, abdominal pain, abnormal vaginal discharge, bleeding, headache, visual disturbances, nausea, vomiting, signs and symptoms of urinary tract infection, uterine contractions, pregnancy-induced hypertension, and common discomforts.

Perform abdominal examination.

Review the chart to compare weeks by date and weeks by examination.

Auscultate fetal heart tones.

Obtain sonograms as needed.

Repeat blood work as needed.

Provide for health education about the signs and symptoms of pregnancy, sexual intercourse, breast feeding, preterm labor precautions, common complaints of pregnancy, childbirth, and parenting.

From 28 to 34 weeks

In addition to the above, the following should be done when appropriate:

- Repeat blood work as needed.
- Obtain diabetes screen
- Administer RhoGAM, if indicated.
- Repeat blood work as needed (syphilis, complete blood count , antibody screen, repeat screens for gonorrhea and chlamydia, and HBsAg if initially negative)
- Repeat sonogram for growth or detection of other abnormalities
- Initiate preterm labor precautions
- Provide for antepartum testing, if indicated.
- Provide for health education and parenting considerations, including preterm labor precautions and early infant care.

From 35 weeks on

Repeat blood work as needed

Provide for antepartum fetal monitoring, if indicated.


2 Obtain random urine toxicologies

The use of urine toxicologies should be limited to those women enrolled in treatment in collaboration with the woman's treatment program. In addition, the care of those women with a positive *4P's Plus* screen but negative assessment and those women with clinical indicators of substance abuse may benefit from random urine toxicologies. The purpose of urine toxicologies is not to rule in or rule out substance abuse but to provide input to clinical care and appropriate referral.

Obtain written release of information to enable service providers to exchange information

The patient in accordance with Federal confidentiality laws and regulations must sign release forms, giving permission for the exchange of information. Multidisciplinary case conferences and communication between disciplines are essential. Meetings of the prenatal care provider, alcohol and other drug counselor, child protective service worker, probation officer, case manager, outreach worker, and social worker can help facilitate optimal prenatal care for the patient.

4 Discuss reproductive options

 Beginning in the prenatal period, ethnically and culturally sensitive education on birth control and family planning should be provided and emphasized. Several routine methods of birth control are not optimal choices for the woman

Who uses alcohol and other drugs. An individual evaluation is required to determine the best methods for each patient. Condoms can be used in combination with other methods for birth control and for prevention of sexually transmitted diseases. Termination of pregnancy, adoption, and foster care are other options.

Oral estrogen-progestin (contraceptive pill) Oral estrogen-progestin, preferably given in low doses, should be prescribed with care, as many substance-using women have vascular disease secondary to prolonged abuse of alcohol and other drugs. They also may not be conscientious in taking prescribed medication as indicated.

Intrauterine devices (IUDs): These devices may be considered only if the patient's past history does not include pelvic infections. An additional complication with IUDs is the possibility, of exposure to sexually transmitted diseases.

Barriers: Barrier-type contraceptive methods, while the safest medically, are not the most effective and require consistent use. These methods include condoms-which also reduce the risk for HIV and other sexually transmitted diseases-and diaphragms.

Subcutaneous implants: Norplant is an example of a long-acting, reversible contraceptive method.

Sterilization: Permanent sterilization may be introduced as an option. The procedure can be completed before discharge postpartum.

The need for appropriate family planning must be stressed, because an unwanted pregnancy may add unnecessary anxiety to an already precarious situation. Counseling should be readily available and, at the discretion of the mother, should include significant others.

5 Encourage treatment and ongoing relationships with other service providers, including the patient's substance abuse treatment program and support groups.

Some patients need education and support for participation in a treatment program or support group, and to prepare them for change. Provide direct support for initiating treatment. If a patient is already involved in a treatment program or support group, establish a relationship with that provider after written informed consent is obtained from the patient.

6 Encourage involvement of the father of the baby and other persons the woman considers significant.

Involving persons whom the woman considers significant in her life can foster added trust in the program and facilitate discussion about reproductive choices. Their involvement can also provide insight into supports for and barriers to her sobriety.

7 Discuss advantages of and contraindications to breastfeeding.

Inform the woman of the advantages of breastfeeding her child, but stress that if she continues to use alcohol or illicit drugs, she may not breastfeed since these substances readily cross into the breast milk and can harm the child. If the woman is on methadone maintenance, she may breastfeed if she is on 40mg per day or less and she is otherwise drug and alcohol free. Also inform the woman that tobacco use depresses the amount of breast milk that is available to the baby.

Clinical Guidelines for the Care of the Drug-Exposed Infant and Child

General Principles

- Drug-exposed infants should not be viewed as a homogeneous group but as individual at-risk infants presenting with a broad spectrum of possible effects, ranging from healthy term newborns with no apparent effects to high-risk births with significant effects.
- Although the great majority of drug-exposed infants appear healthy, most are at-risk for subtle developmental and behavioral deficits that can affect long-term school achievement and learning.
- A child whose mother abuses drugs often lives in a chaotic environment. Prenatal drug exposure and sub-optimal home environments are highly correlated. In combination, they have a synergistic and devastating effect on the child's health and development.
- The single factor having the greatest impact on the drug-exposed infant's long-term cognitive development is the environment in which the child is being raised. Thus, pediatricians and other health care providers should identify the mother-infant dyad and supportive family as the patient.
- Prenatal drug exposure has a significant direct impact on behavioral outcome of the child. Thus, early intervention strategies should address behavioral problems as well as cognitive, motor and speech delays.
- Some of the most significant difficulties related to prenatal alcohol or drug exposure do not become evident until school age. Early intervention strategies provide a strong preventive component in the child's long term care.
- Pediatricians and other early childhood health care providers are uniquely placed to help drug-exposed infants and their families by providing extra vigilance and serving as the focal point for other professionals (substance abuse counselors, public health nursing, mental health staff) working with the child.

Care of the Newborn

1. Screening/Assessment

- Speak directly with the obstetrician and review the obstetric chart thoroughly, specifically seeking information relevant to maternal risk for prenatal drug use.
- If substance use screening with the *4P's Plus* was not conducted during the prenatal period, such screening should be instituted with the mother by the pediatrician or the hospital social worker. If the mother's screen is positive, refer her for further assessment for substance abuse.
- Within the newborn physical exam, every infant should be evaluated for physical and behavioral features of prenatal alcohol or drug exposure.
- Any infant whose mother has a positive history or screen for substance use or who has physical or behavioral features consistent with prenatal alcohol or drug exposure is at increased risk for exposure to AIDS, Hepatitis B, and Hepatitis C. County or State protocols for screening should be followed.
- Urine toxicology in the newborn should be used only as a tool for expectantly managing possible medical problems such as withdrawal, poor feeding, or seizures. A negative urine does not contribute to clinical decision-making, and a positive urine reflects maternal substance use only in the 48 hours prior to delivery.
- Pharmacotherapy is rarely necessary to treat neonatal neurobehavioral difficulties.
- If the woman wishes to breastfeed, she cannot use drugs since they cross over into the breast milk and can harm the child.
- Discharge planning should include a first visit within three to five days of discharge.

2. Referral

- If the child is demonstrating behavioral difficulties in the newborn nursery, request evaluation by an appropriate professional.
- Referral to Child Protection Services is required only when there is clinical concern for the welfare and safety of the child. Maternal substance abuse in and of itself does not require CPS referral.
- Consultation with CPS to review sibling status may be indicated in cases in which there is a question regarding the mother's competence to care for her child (siblings not with the mother or a woman with no prenatal care).
- Home visiting is indicated if the mother lacks a support system or extended family upon whom she can rely.
- When an infant is identified as having been prenatally exposed to drugs, the pediatrician should explore the possibility that siblings may also have been exposed to drugs *in utero*, have been living in a home affected by drug use, and have unidentified or unaddressed service needs.

Early Intervention For Infants and Young Children

1. **Screening/Assessment** Because of their distinctive needs, drug-exposed infants should receive more than the standard medical follow-up. First follow-up visit should be scheduled within 3 to 5 days of hospital discharge with a second visit approximately one week later. Routine immunizations should be given in the same schedule as indicated for the general population. In addition to routine follow-up, the pediatrician should pay special attention to:

- Nutrition (especially if inadequate sucking reflex or gastroesophageal reflux is evident)
- Growth patterns, including head circumference through five years of age
- Morphologic and behavior consistent with Fetal Alcohol Syndrome
- Psychomotor development
- Behavior, especially as related to the ability to regulate behavior
- Temperament
- Vision and hearing screening (eighth nerve deafness and esotropia occur more commonly in Fetal Alcohol Syndrome)
- Speech and language development (expressive language delays occur more commonly in drug-exposed infants)
- Emotional development and attachment to primary caregiver
- Evidence of abuse or neglect
- Reliable follow-through. If the mother does not show up for scheduled visits, initiate a CPS referral.

2. **Referral** All health care and other service providers, including physicians, should stay abreast of available community services for drug-exposed infants and their families. Beyond the requirements of the general population, drug-exposed infants frequently require referrals to:

- Physical therapy
- Occupational therapy, especially for sensory integration difficulties
- Speech and language therapy
- Dentist
- Play therapy
- Early educational needs assessments.

The Federal early intervention system, mandated under the *California Early Start Program*, should be used whenever possible to deliver family-focused services to both infant and mother. Eligible children must include those who experience developmental delays as well as children with diagnosed physical or mental conditions, such as Down Syndrome, which is likely to cause delays. States also have the option of including children who are medically or environmentally at risk of substantial delay. Thus, States can, but are not required to, include all children born to mothers who have used drugs *in utero*. However, if an infant is developmentally delayed as a result of this drug exposure, the infant must be included in the program. Thus, the pediatrician should ensure that all families take advantage of services through *Early Start* as well as other

Federal and State programs that provide services to high-risk infants:

- Early Periodic Screening, Diagnosis and Testing Program
- Healthy Start
- Early Head Start
- Head Start
- Early childhood 3 to 5 year old prekindergarten special education programs

3. Treatment A number of environmental factors may contribute to specific outcomes of the prenatally exposed child, but thorough follow through that focuses on enhancing the maternal-child dyad and assuring access to early intervention services will significantly improve the child's outcome, both behaviorally and developmentally. Of special importance is the child's ability to regulate his behavior. Early childhood marks the beginning of self-regulation. Specific strategies to teach parents that will support the child's development of self-regulation include:

- An orderly consistent, child-appropriate' environment.
- Predictable routines and consistent schedules.
- Clear expectations and rules.
- Clear patterns for transitions (such as a daily routine, warning signals, and signals to move to next activity).
- Offering choices to children.
- Using anticipatory guidance to avoid difficult situations.
- Labeling of feelings, so the child can learn to identify and express a range of emotions.
- Clear boundaries within adult-child relationships.
- If the mother is in substance abuse/mental health treatment, obtain release of information and include the behavioral health staff in reinforcing the treatment strategies.

3. Treatment

Newborns may exhibit a variety of symptoms based on the type and pattern of maternal substance use. However, it is important to understand that many infants will show no adverse effects and require no specific pharmacologic or behavioral intervention in the immediate neonatal period. Providers should acknowledge this reality so that women will not use this knowledge to discount their advice. For those infants whose symptoms are severe enough to require intervention, the following guidelines are provided.

Neonatal Abstinence Syndrome

Neonatal abstinence syndrome occurs in about 60 to 80 percent of heroin-exposed infants. Its onset is usually within 72 hours of birth, with a high mortality if the syndrome is severe and untreated. Premature infants have been reported to show a less severe abstinence syndrome following opiate exposure.

The syndrome involves the central and autonomic nervous systems, gastrointestinal system, and pulmonary system. Central nervous system (CNS) signs include irritability, hypertonia, hyperreflexia, abnormal suck, and poor feeding. Seizures are seen in 1 to 3 percent of infants. Gastrointestinal signs include diarrhea and vomiting. Respiratory signs include tachypnea, hyperpnea, and respiratory alkalosis. Autonomic signs include sneezing, yawning, lacrimation, sweating, and fever. If the infant is hypermetabolic, the postnatal weight loss may be excessive and subsequent weight gain sub-optimal. Delayed effects include subacute withdrawal with symptoms such as restlessness, agitation, irritability, and poor socialization that may persist for 4 to 6 months. There is an increased incidence of Sudden Infant Death Syndrome (SIDS).

Neonatal abstinence syndrome is best treated with a substitute opioid or with a CNS depressant such as phenobarbital. Dosage and duration of pharmacologic treatment must be individualized to provide for optimal growth, development and behavior while ensuring that the child is able to remain attentive and responsive.

Infants whose mothers have been maintained on methadone during pregnancy may suffer an abstinence syndrome similar to that seen with heroin. The abstinence syndrome for methadone is dose-related and usually starts later and lasts longer (due to longer half life) than for heroin. Central nervous system signs are prominent. Electroencephalograms (EEGs) are abnormal in about 50 percent of the infants. Seizures occur in about 7 percent of the infants, tend to occur between days 7 and 14, and are primarily myoclonic. Abstinence is more variable in onset and course than with heroin. Exposure to both heroin and methadone may produce a biphasic or atypical pattern of withdrawal.

Neonatal Effects of Cocaine and Methamphetamines

Infants whose mothers used cocaine or amphetamines during pregnancy generally have lower birth weights, smaller head circumferences, and increased rates of prematurity. There is no clinically documented neonatal abstinence syndrome for cocaine or methamphetamines as is

seen with the opioids. However, neonatal CNS dysfunction includes transient irritability, abnormal sleeping patterns, tremors, hypertonia, and lability of state. Most specifically, cocaine- and methamphetamine-exposed infants exhibit difficulties in responding appropriately to environmental stimuli and problems in behavioral regulation, especially habituation. One study has reported that about 50 percent of the infants have abnormal EEGs in the neonatal period with reversion to normal within the first few months of life. Infrequent cerebral infarctions and seizures have been reported. Congenital anomalies are for the most part vascular in origin, including limb reduction deformities and organ infarction.

Breastfeeding

Inform the woman of the advantages of breastfeeding her child, but stress that if she continues to use alcohol or illicit drugs, she may not breastfeed since these substances readily cross into the breast milk and can harm the child. If the woman is on methadone maintenance, she may breastfeed if she is otherwise drug and alcohol free. Also inform the woman that tobacco use depresses the amount of breast milk that is available to the baby. View breastfeeding as a recovery issue. Advise substance abuse counselors of your assessment and recommendations so staff can support this behavior as part of the woman's recovery.

Discharge Planning

Prior to discharge from the hospital, the pediatrician should evaluate the maternal/child dyad to ensure child safety and appropriate follow through:

- The mother should understand the child's medical and behavioral risk and be prepared to seek help if problems arise.
- The infant/mother dyad should demonstrate a secure interactive relationship.
- Feeding patterns should be stable with no evidence of excessive weight loss in the infant.
- An appointment within 3 to 5 days with the pediatrician should be confirmed. A second appointment for 2 weeks should also be made prior to discharge as a back-up. The receiving physician should receive a copy of the infant's discharge summary.