

SECTION 2

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Clinical Standards

Preconception Health Care

Ideally, prenatal care begins prior to conception. All health encounters during a woman's reproductive years, particularly those that are a part of preconception care, should include counseling on appropriate behavior to optimize pregnancy outcomes. Counseling and assessment should include medical/surgical, including immunization status, obstetrical, genetic, gynecological, and family histories should be taken. Preconception health care within the health department setting generally occurs within the department's Family Planning clinics.

Folic acid, taken before pregnancy and for the first three months of pregnancy, can reduce the risk of neural tube defects. The U.S. Public Health Service suggests that all women (even if they are not trying to conceive) consume 0.4 mg of folic acid a day. Although folic acid is found in foods such as leafy dark-green vegetables, citrus fruits, and beans, it is difficult to consume enough of them to meet the daily requirement. Therefore, a daily folic acid supplement or multivitamin is suggested.

Women who have had a previous pregnancy where a neural tube defect was present in the fetus, have a higher than average risk of the problem recurring. These women should take 4 mg of folic acid daily—10 times the amount normally recommended—for 1 month before conception and during the first 3 months of pregnancy. The folic acid should be taken separately and a regular multivitamin that does not contain folic acid should be utilized to avoid overdosing on folic acid. Folic acid at this level is a medication prescribed by a physician or nurse practitioner.

Prenatal Care

Comprehensive Health History and Risk Assessment

Every woman should have a comprehensive program of antepartum care that begins as early as possible. Early diagnosis of pregnancy and on-going risk assessment is important in establishing a management plan appropriate to the individual client. Documentation of prenatal services in the Virginia Department of Health is accomplished using the documentation by exception record system. (See Appendix A VDH Standards of Care) The Virginia Department of Health in 1999 adopted documentation by exception as the preferred method of documentation. Local Medical Directors have the ultimate decision as to which Prenatal Record is used in their respective health district. For details related to the specific utilization of the documentation by exception model, which includes the Standards of Care, DBE forms and documentation instructions, refer to the Documentation by Exception Record System Manual. This manual can be downloaded at <http://www.vdh/nursing/except.htm>.

Every woman seeking perinatal services at a health department clinic should be provided with basic prenatal services. These services reflect minimum expectations. The actual content of care, beyond these minimum standards, must be governed by appropriate

clinical practice and based on specific needs of the client. In situations where local health departments do not provide direct prenatal care services, arrangements should be made with local physicians, a local hospital or a nearby health clinic to provide such services.

Prenatal care consists of health promotion, risk assessment, and intervention linked to the risks and conditions uncovered. The prenatal period begins with conception and continues until labor begins.

Prenatal care providers are health professionals who offer primary, secondary, and tertiary care for pregnant women, including support for their families. Prenatal care providers include obstetricians, certified nurse midwives, family physicians, nurse practitioners, physician assistants, and community health nurses. Despite the fact that several specialized providers may be involved in one woman's care, one prenatal care provider shall have responsibility for her care and assure coordinated, comprehensive, quality services. Specialized health care professionals and others are those who offer specific services in support of prenatal care. Examples of this group include consulting physicians, social workers, nutritionists, psychologists, health educators, and community health workers such as Resource Mothers.

Prenatal visits are in-person contacts between the pregnant women and a prenatal care provider. The visits usually take place in the practice setting of the care provider, but may take place in the woman's home, at school, in the hospital, or at other sites.

For the purposes of data collection for the Virginia Department of Health, prenatal care is defined as a prenatal visit with a prenatal care provider who conducts health assessment including assessment of physical and psychosocial risks, performs clinical and laboratory tests, and establishes and/or implements the plan of care.

ACOG recommends that women with normal pregnancies should be seen by a health care provider once in the first trimester, monthly until 28 weeks, when care should be scheduled every two weeks, and weekly starting at 36 weeks of gestation. Ideally, women experiencing a normal pregnancy should have between 12-14 prenatal care visits. More frequent visits may be indicated based upon the clinician's judgment.

Signs and Symptoms of Pregnancy

If a woman expects pregnancy, most health departments will provide pregnancy testing. The signs and symptoms that may be reported by the woman are usually categorized by presumptive, which frequently are reported but not conclusive of pregnancy; probable, which are more reliable indicators of pregnancy and can be noted upon physical exam or laboratory testing; or positive, when absolute confirmation of pregnancy is made. Many clinics require a positive pregnancy test before a prenatal care visit is scheduled. The exception is the woman who is well into her pregnancy and pregnancy is confirmed by presence of fetal heart beats or fetal movements.

Provider standards of care for maternity patients have been established in association with the Document by Exception record. The standards represent the core components of

care that shall be provided to achieve optimal outcomes. Adherence to these standards is required regardless of actual record system used for documentation.

At the first prenatal visit a health record should be established on every patient, if not previously established prior to conception. The health record should include a comprehensive general medical history of the client, family history, a psychosocial risk assessment and a genetics assessment. In addition, health departments provide services that include:

- Pregnancy evaluation
- Case management
- Specialized testing
- Nutrition assessment and intervention
- Patient education relative to health maintenance, preparation for childbirth and parenting

Client History: The first step in the assessment of the prenatal patient is the medical history. Taking and documenting the medical history is recommended for all pregnant women at the first prenatal visit. Those items to be assessed are the following:

- Sociodemographic data: age, race/ethnicity, education level
- Menstrual history: age at onset, regular or irregular, LMP
- Past obstetrical history: uterine or cervical abnormalities, history of two or more miscarriages, fetal deaths, infant with birth defect, or born less than five and a half pounds weight.
- Contraceptive history: method used, satisfaction with method, last time used
- Sexual history: difficulty with intercourse, problems with conception, high-risk behaviors
- Medical/surgical history: any surgeries, diagnosed chronic diseases, prescription drugs
- Infection history: diagnosis of STDs, history of blood transfusions or other bodily secretions, HIV status (see Appendix H)
- Family and genetic history counseling
- Nutrition: vegetarian, eat unusual substances, such as laundry starch or clay, history of bulimia or anorexia, any special diet, uses any diet supplements or vitamins (See Appendix B for Prenatal Nutrition information)
- Immunization history: record status with routine vaccinations. (Hepatitis A, Hepatitis B, Influenza, Measles, Mumps, Pneumococcal, Polio, Rubella, Tetanus/Diphtheria, Varicella, see Appendix M) “No evidence exists of the risk from vaccinating pregnant women with the inactivated virus or bacterial vaccines or toxoid”. (MMWR 2-8-02) Healthy women who will be in their second and third trimesters of pregnancy during the influenza season should consider receiving the routine influenza vaccination. Pregnant women at risk for the Hepatitis B virus should be offered the Hepatitis B Vaccine. (MMWR 2-8-02)

Genetic History and Counseling

At the time of the first prenatal visit, routine inquiries should be made about both the mother and the father of the baby. Assessment areas should include:

- ◆ Family history of congenital abnormalities, mental retardation, and known inherited metabolic disorders
- ◆ Previous child with Downs Syndrome or other chromosomal abnormalities
- ◆ Previous stillborn
- ◆ Known hemoglobinopathies
- ◆ Two or more spontaneous abortions
- ◆ Maternal age over 35
- ◆ Family history or previous pregnancy with a neural tube defect such as spina bifida, meningomyelocele, anencephaly
- ◆ Family history of close relative with mental retardation
- ◆ Any history of chromosomal studies
- ◆ Jewish heritage in either parent
- ◆ Screening for Sickle Cell Disease
- ◆ Screening for Cystic Fibrosis

When the risk of a genetic or other birth defect is identified, an accurate, specific diagnosis or etiology is necessary to define the prognosis and to establish the risk of occurrence or recurrence. Careful, sensitive counseling should be provided to the client, the father of the baby, and her family. When possible, the client should be referred to the regional genetics center for further testing and counseling. (see Section 5, Virginia Genetics Program)

Genetic Screening in Various Ethnic Groups

Ethnic Group	Disorder	Screening Test	Definitive Test
Ashkenazi Jews	Tay-Sachs disease	Decreased serum hexosamidase-A, possibly molecular analysis	Chorionic villus sampling (CVS) or amniocentesis for enzymatic assay or molecular analysis to detect affected fetus
	Canavans disease	DNA analysis to detect most common alleles	CVS or amniocentesis for molecular analysis to detect affected fetus
African-Americans	Sickle cell anemia	Presence of sickle cell hemoglobin, confirmatory hemoglobin electrophoresis	CVS or amniocentesis for genotype determination (direct molecular analysis)

Ethnic Group	Disorder	Screening Test	Definitive Test
Mediterranean people	B-Thalassemia	Mean corpuscular volume (MCV) < 80%, followed by hemoglobin electrophoresis	CVS or amniocentesis for genotype determination (direct molecular analysis or linkage analysis)
Southeast Asians and Chinese (Vietnamese, Laotian, Cambodian, Filipino)	a-Thalassemia	MCV < 80%, followed by hemoglobin electrophoresis	CVS or amniocentesis for genotype determination; (direct molecular studies) (direct linkage analysis)
All ethnic groups	Cystic fibrosis	DNA analysis of specified panel of 25 CFTR mutations (those present in \geq 0.1% of the general U.S. population)	CVS or amniocentesis for genotype determination; definitive diagnosis on all fetuses is not possible; sensitivity varying by ethnic group
	In Caucasians and Ashkenazi Jews should be offered; in other ethnic groups (Asians, Hispanics, African-Americans) should be made available		

Psychosocial Assessment

A basic psychosocial assessment is an integral component of comprehensive prenatal care. Psychosocial screening of all patients presenting for prenatal evaluation or prenatal care is an important step toward improving women's health and birth outcomes. Because problems may arise during the pregnancy that were not present at the initial visit, it is best to perform psychosocial screening once each trimester to increase the likelihood of identifying important issues and reducing poor birth outcomes. (ACOG Compendium, 2003)

Basic components of a psychosocial history may include:

- * family composition and function, other social support
- * adjustment to pregnancy, perceptions, attitude
- * existing support systems
- * presence or history of abuse, physical or emotional
- * substance use, type, frequency, last used, including smoking, alcohol, and illicit drugs (See Appendix C for Virginia screening requirement.)
- * cultural issues affecting pregnancy, health care
- * mental health status, current or past diagnosis, depression, suicidal attempts/ideation (See Appendix D on Prenatal Depression.)
- * environmental need and resources – housing, financial, employment, transportation, child care, work environment

Due to the sensitive nature of subjects assessed, a private location should be utilized for the interview.

Assessment of Teaching Needs

Education of the prenatal client should be based upon an assessment of the clients needs and be individualized to her level of understanding, prioritized to address her immediate interests. Education should occur throughout the pregnancy based upon the periodicity schedule as outlined in Appendix A.

Physical Examination

The physical examination is a comprehensive physical exam by a clinician which in VDH could be a physician or nurse practitioner. See Appendix A for a copy of the Standards of Care: Normal Pregnant Female Exam from the VDH Documentation by Exception.

Laboratory Tests

There are several laboratory tests that should be performed routinely in pregnant women. Many of them are done initially to screen for various conditions and then other tests are ordered periodically throughout the pregnancy based upon national standards or client factors. The following are the minimum laboratory tests recommended by ACOG. (See Table 1.)

- Hemoatocrit or hemoglobin levels (see Appendix E: Rh D Hemolytic Disease)
- Urinalysis, including microscopic examination
- Urine testing to detect asymptomatic bacteriuria
- Determination of blood group and CDE (Rh) type
- Antibody screen for Rh negative women
- Determination of immunity to rubella virus (Clients without the adequate immunity should receive vaccination during the immediate postpartum period.)
- Syphilis screen (see Appendix F for STD information)
- Cervical cytology (as needed) (see Appendix G for Cervical Pathology algorithms)

- Hepatitis B virus surface antigen
- Human immunodeficiency virus antibody testing (see Appendix H)
- Sickle Cell (see Appendix I)
- Gestational Diabetes (see Appendix J)
- Cystic Fibrosis (see Appendix K)

All prenatal clients should be screened for gestational diabetes (GDM) either through assessment of high-risk factors, patient history, or laboratory screening using the 1-hour post 50 g glucola plasma screen 24-28 weeks gestation. This test may be waived in very low-risk groups such as a teen without other risk factors. (See Appendix E.)

Women with gestational diabetes may be asymptomatic throughout pregnancy or have only subtle signs. Therefore, earlier testing (prior to the 26 to 28 weeks' gestation) of symptomatic women will facilitate prompt intervention. Identification of these high-risk for gestational diabetic women should consider both historical factors and/or findings in the current pregnancy.

Subsequent Prenatal Care Assessments

At each subsequent prenatal visit, measurement of the client's weight and blood pressure, assessment for fetal movement, fetal heart tones, evaluation of the client's urine for blood, protein, ketones, nitrites and glucose; and determination of fundal height must occur and be recorded. The clinician is responsible for assessing other items that may indicate high-risk or complications of pregnancy (see Appendix A for Maternity Visit Record) which includes but is not limited to items such as nausea and vomiting, backache, vaginal discharge, fetal position, uterine cramps or bleeding. The visit is an excellent time for the client and/or her family to ask questions and discuss concerns and should be encouraged by all members of the health care team.

Weeks 12-16

See the laboratory periodicity table for required or indicated laboratory tests to be performed. (see Table 1)

Weeks 16-20

Fetal movements (quickening) should occur between the 18th – 20th week of gestation. It is helpful if the client's report of fetal movement is recorded.

Weeks 24-28

Again, see the periodicity table for required or indicated laboratory tests. Signs and symptoms of premature labor should be assessed. (see Appendix L on Preterm Labor)

Weeks 28-32

If not already decided, arrangements for newborn and pediatric care should be discussed. Arrangements or counseling information will vary dependent upon the health district.

Weeks 34-36

Again, see the periodicity for required or indicated tests. Plans for delivery such as a transportation plan and arrangements with the birth hospital should be completed. The copying and sending of client records to the birth facility will vary depending upon the health district protocols.

Weeks 36-40

Any education regarding infant feeding, postpartum family planning, or availability of infant car seat should be completed. Any formal preparation for childbirth classes should also be completed.

Weeks 40 and beyond

The clinician will devise a plan for postdate delivery. Counseling as to any fetal surveillance should be provided.

Postpartum Evaluation

Postpartum review and examination should be accomplished 4-8 weeks after delivery. Earlier evaluations may be done in the home or clinic setting depending on client need. The first postpartum review should include the following:

- I. Delivery Data
 1. Date and place of delivery
 2. Length of gestation
 3. Type of delivery
 4. Sex and birthweight of the baby
 5. Apgar score
 6. Complications
 7. Medications
 8. Infant feeding method (see Appendix B on Breastfeeding)
 9. Place of birth (hospital or home)

- II. History

The client's labor and delivery experience should be reviewed. The interview should also include questions relating to physical, emotional, or psychological problems encountered during the postpartum period. Assessment should be made regarding the following:

- ◆ Adjustment to parenting - attitudes, perceptions of need for care
- ◆ Coping abilities of client and family; support system (see Appendix D)
- ◆ Sexual relations
- ◆ Contraception
- ◆ Determination of need for immunizations (including rubella) if not done immediately postpartum
- ◆ Exercise
- ◆ Infant care (see Child Health Section)
- ◆ Maternal plans for continued well child care

- ◆ Other learning needs as appropriate

III. Physical Examination by clinician should include the following:

- ◆ Weight
- ◆ Blood pressure
- ◆ Breasts
- ◆ Abdomen
- ◆ External and internal genitalia
- ◆ Lochia/vaginal discharge

Newborn Assessment: Refer to the Bright Futures Guidelines for Health Supervision of Infants, Children and Adolescents, Second Edition.

Neonatal Hearing Assessment

A history or presence of one or more of the following identifies the newborn at risk for hearing impairment and is the basis for referral for an audiological evaluation. This assessment may be done at the delivering hospital.

- ◆ History of any blood relative with childhood hearing impairment
- ◆ Congenital infection such as toxoplasmosis, syphilis, rubella, cytomegalovirus and herpes
- ◆ Defects of ear, nose, or throat
- ◆ Cleft palate (including submucous cleft)
- ◆ Pre-auricular pits or tags
- ◆ Any residual abnormality of the otorhinolaryngeal system
- ◆ Birthweight less than or equal to 1500 grams
- ◆ Hyperbilirubinemia at a level exceeding indication for exchange transfusion
- ◆ Severe asphyxia or depression at birth
- ◆ APGAR of 0-3 at 5 minutes or failure to institute spontaneous respiration by ten minutes
- ◆ Hypotonia persisting to two hours of age
- ◆ Bacterial meningitis
- ◆ Mechanical ventilation equal to or greater than ten days
- ◆ Syndromes known to include sensorineural hearing loss
- ◆ Children with neurodegenerative disorders
- ◆ Childhood infectious diseases, e.g. mumps, measles, chronic otitis
- ◆ Significant head trauma

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