

**APPENDIX A**  
**Virginia Department of Health**  
**Standards of Care**

## Virginia Department of Health Standards of Care: Maternity

**Quality Standard:** Clients seeking maternity services through the Virginia Department of Health (VDH) can expect to receive information, diagnostic testing, clinical examinations, ongoing perinatal risk assessment, nutrition counseling and referrals appropriate to their individual needs. The Guidelines for Perinatal Care, 5<sup>th</sup> Edition, of the American Academy of Pediatrics and the American College of Obstetricians and Gynecologists are the basis for the core components of care in the maternity program. The following core components are considered acceptable practice.

**Assessment:** All clients will complete a VDH Confidential Health History, which includes past and present obstetrical history, medical and family history, psychosocial and occupational information, and substance use history. Clients will receive genetic screening, assessment of physical and laboratory findings, learning needs, and overall nutritional risk assessment done by the provider. Protocols for these assessments are referenced in the Guidelines and the VDH Standards of Care: Maternity Addendum I Periodicity Chart. Normal parameters for physical findings of pregnancy are defined in VDH Standards of Care: Normal Male/Female Adult Exam and the VDH Standards of Care: Normal Pregnant Female Exam. Nutrition assessment will be based on the VDH Division of Chronic Disease Prevention's Nutrition Guide: Nutrition Standards for Documentation by Exception Record System: Maternity.

**Intervention:** Comprehensive prenatal services are provided in the clinic setting. These interventions include appropriate treatment and/or referral for any diagnosed medical problem, patient/family education designed to meet individual needs and referrals for resources based on client need and community availability. Interventions are referenced in the Guidelines and the VDH Standards of Care: Sexually Transmitted Diseases. Individual health districts are responsible for having written standards for education content and information assessment and interventions appropriate to their practice and the use of printed material to convey that content. Nutrition intervention will be based on the VDH Division of Chronic Disease Prevention's Nutrition Guide: Nutrition Standards for Documentation by Exception Record System: Maternity.

**Outcome:** Outcome criteria for maternity services will be based on the uncomplicated delivery of a viable infant > 37 weeks gestation with a birth weight of > 2500 grams and a 5-minute APGAR score of 6 or better.

## Virginia Department of Health Standards of Care: Normal Pregnant Female Exam

**Quality Standard:** Maternity clients receiving ongoing medical evaluation in a health department clinic during their pregnancy can expect the following health screening assessment to be performed. Parameters and normal values are based on Physical Examination and Health Assessment by Carolyn Jarvis, W. B. Saunders Co., 3rd Edition, and A Guide to Physical Examination and History taking by Barbara Bates, J.P. Lippincott Co., 1998 and the Guidelines for Perinatal Care, 4<sup>th</sup> Edition, American Academy of Pediatrics, and the American College of Obstetrics and Gynecology.

Refer to normal parameters already detailed in the VDH Standards of Care: Normal Male/Female Adult Exam. Normal variances due to pregnancy are presented below.

### GENERAL SURVEY/SKIN

- Baseline measurement of blood pressure at entry into care within first trimester determines the usual range of normal for the individual client. Hypertension is defined as a sustained blood pressure increase to levels of 140 systolic or 90 diastolic. Baseline weight is that reported by the patient as normal weight prior to pregnancy. A gain or loss of 5 lbs or more in a week indicates a variance from normal.

### HEENT

#### Head

- The mask of pregnancy (chloasma) is normal. This consists of irregular brownish patches around the eyes or across the bridge of the nose.
- Oiliness or dryness of the hair may be noted.
- Generalized minor hair loss may occur.

#### Nose

- Nasal congestion and nosebleed are common during pregnancy.

#### Mouth and Throat

- Gingival enlargement with bleeding is common during pregnancy.

#### Neck

- Symmetrical enlargement of the thyroid is expected in pregnancy.

### BREAST/CHEST

- Breast enlargement, tenderness and increased nodularity are normal during pregnancy. The nipples and areola are dark and the venous pattern may be marked. Compression of the nipple may express a normal discharge of colostrum. Inverted nipples are a normal finding, but must be addressed for the client intending to breastfeed.

### HEART/LUNGS

#### Heart

- Soft blowing murmurs are common in pregnancy.

### **ABDOMEN**

- Purplish striae and linea nigra are normal in pregnancy.
- Fetal movements can be felt by the examiner after 24 weeks.
- Palpate the abdomen for organs or masses, fetal movements and measure fundal height if client is 16 weeks or more gestation.
- Auscultate the fetal heart rate using the Doppler at 10 weeks or the fetoscope at 18 weeks. Normal FHT's are 120-160.

### **GENITOURINARY**

- Enlargement of labia and clitoris are normal in pregnancy.
- Frequency of urination may be normal in the absence of infection.
- The cervix is friable and may bleed.
- Check the cervix for any dilatation or effacement. Normal cervical length prior to 34-36 weeks is 1.5 cm to 2 cm.
- The vaginal walls are violet or bluish in color with deep rugae and may have increased white discharge.

### **MUSCULOSKELETAL**

- Physiologic, dependent edema is normal in pregnancy.
- Pretibial edema < 2+ may be normal in the absence of elevated blood pressure.

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## **Virginia Department of Health Standards of Care: Maternity Addendum I: Minimum Periodicity Chart**

The following schedule for diagnostic testing and clinical exams during pregnancy will provide the basis for acceptable medical practice. Individual clinicians may adjust and/or add testing as they deem necessary in their medical judgment.

**Physical Exam:** Comprehensive exams must be performed on the initial visit and postpartum visit. Record on the appropriate visit record for maternity or family planning services. Other than the designated times in the periodicity chart, cervical checks are to be done at the discretion of the clinician, but should coincide with selected times for repeat or follow-up cervical cultures. The regular schedule of visits will be monthly until twenty-eight weeks, every two weeks from twenty-eight to thirty-six weeks and weekly thereafter until delivery.

**Laboratory Testing:** Laboratory testing will be performed according to the schedule in the periodicity chart. Other testing may be indicated by psychosocial, medical or cultural assessment. These include urine culture, blood glucose, PPD, Hgb electrophoresis or STD testing not included in the regular testing. A rubella antibody screen must be done if the client does not have a previous antibody titer or documented rubella immunization. Ultrasounds will be ordered by the clinician based upon medical need. Postpartum lab testing will follow the guidelines outlined in the Family Planning protocol. For Nutrition Assessment, refer to Division of Chronic Disease Prevention and Nutrition's Nutrition Guide: Nutrition Standards for Documentation by Exception Record System: Maternity.

The following minimum periodicity schedule may be altered based upon EGA at entry into care, local health department policy, or clinician discretion.

PERINATAL GUIDELINES AND RESOURCES

	Initial Visit/First Trimester	Second Trimester	Third Trimester
Comprehensive P.E.	X		
Cervical Check	X		
Blood group/RH	X		
HBV surface antigen	X		
Atypical. antibody screen	X	X draw at 28 wk visit & give Rhogam as indicated	
HIV antibody	X		
Rubella screen	X		
Hgb/Hct	X	X	X
MSAFP		offer 16-20 wks	
Urinalysis/Culture	As ordered during	any trimester	
Urine protein/glucose ketone/nitrates	q visit X	q visit X	q visit X
Pap Smear	X		
STD testing	X	X or	X (at clinician's discretion)
G.C. culture	X		X
Chlamydia	X		
1 hr. 50 gm glucose		24-28 wks	
Nutrition Assessment	X	X	X
Group B strep			X (prevalence based)

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## **INSTRUCTIONS: VDH MATERNITY VISIT RECORD**

### **Purpose:**

This form will be used to record assessment and intervention data for each prenatal visit. It may also be used for office or home visits if assessing the same parameters.

### **NOTE: Reference the overall standard plan of care for the patient on the VDH Standard Plan of Care.**

### **Assessment:**

Enter client's height and pre-pregnancy weight in spaces at top of record.

Enter the date at each visit. Record assessment data including weight, BP, HGB/ HCT and urine dip in actual values. Record all other critical data gathered in this section of the form using the key at the bottom of the form. A √ means the parameter was assessed and was normal. An \* means variance from normal was found and will be noted on the VDH Communication/Exception Record. No entry indicates not required by standard. If required by the standard and not done, an \* must be entered and an explanation of the omission placed in the exception notes. The interviewer initials this portion of the assessment upon completion.

Where two parameters share a single box, if either is abnormal, enter an \* and make an exception note explaining the abnormality.

Some signs and symptoms are normal in pregnancy. If the client indicates a positive response for nausea, vomiting, headaches, edema, backache, cramping, bleeding, or vaginal pressure or discharge, and these signs or symptoms are a change from what the client has been experiencing, or are significant to the pregnancy, then enter an exception note addressing them as variances from normal.

If client indicates fetal activity prior to 16 weeks or the absence of it after 20 weeks, enter an \* and document in exception notes. Otherwise a √ indicates fetal activity was experienced by the client.

The clinician will record assessment data by actual value rather than using the key and initialing upon completion. Name and initials of all providers will be recorded on the VDH Summary of Providers of Care. If an interpreter is used, the Interviewer should place an \* beside initials and record that an interpreter and name was used for interview (and exam, if appropriate). Normal parameters for assessing signs and symptoms are found in the VDH Standard of Care: Normal Pregnant Female Exam.

Perform nutrition assessment **at least once each trimester** following the VDH Division of Chronic Disease Prevention and Nutrition's Nutrition Guide: Nutrition Standards for DBE: Maternity. A √ indicates the assessment was performed; an \* indicates nutrition assessment was not done or only part was done and will be documented in the exception notes. Intervention recommended for a dietary deficiency may be documented in exception notes in either case.

### History and Dating Criteria:

Record pertinent data requested in these sections.

### Orders and Interventions:

This section will be a chronological summary of medications, orders, referrals, and other interventions not in the standards or routine protocols. Medications ordered during clinic visits (such as treatment for UTI or STD) will be written here to serve as the medical record copy of the prescription; therefore, orders must be signed and dated. Referrals and those orders not addressed in the VDH Standards of Care: Maternity (such as ultrasound, 3 hr GTT or Genetics referral) will be written in this section with date and provider signature.

This section is not to be used for routine orders such as MSAFP, 1 Hr. Glucola or FMC, PIH and PTL precautions.

Any other summary data or progress type notes must be entered in Exception notes.

Nurses may initial by an order that it has been done, then initial the posting section when the client has been counseled about her visit.

### Significant Findings:

Document present medications, significant risks and cumulative events occurring during pregnancy which have the potential to impact the outcome in this section. If client is on a medication such as an anticonvulsant or antidepressant, document here as a risk. If the clinician orders an antibiotic for UTI, the diagnosis of UTI will be entered here with the medication written in Orders and Interventions.

### Breast and Bottle:

Circle infant feeding method selected by the client.

### Allergies:

Record allergies in the space provided.

### Post-Delivery Contraceptive Method:

Record patient's planned method.

### Physical/Pelvic Examination:

The clinician records the initial exam data using the key at the bottom of the form. Describe variances from normal in the Exception Notes Section. Use Form 01-8 Anatomical Supplement for noting significant findings.

### Education Information Assessment and Intervention:

Contents of information packets for each trimester must be archived and updated by the district.

The provider may make the determination that the client understands or may give the information or instruction to the client and should date and initial each trimester, or as done if off schedule.

Virginia State Code 32.1-37.2 requires informed consent for HIV antibody testing.

This is indicated by client signature on the HIV Consent Form and does not require entry under teaching topic.

Laboratory/Diagnostic Procedures:

Enter date when done and results when available. Mount lab reports on the lab sheet in the chart.

**NOTE: ADDITIONAL ROOM FOR EXCEPTION RECORDING MAY BE FOUND ON THE VDH COMMUNICATION/EXCEPTION RECORD. SHORT ENCOUNTERS, SUCH AS OFFICE VISITS, WILL ALSO BE RECORDED ON THE VDH COMMUNICATION/EXCEPTION RECORD.**

When records are forwarded to delivering hospital, note the hospital name and dates of forwarding in the space provided on the bottom of page two of Form 00-M-1.

**I-01-M-1, 1b (Revised)**

**Virginia Department of Health  
Standards of Care: Maternity Addendum II:  
Education/Information Assessment and Interventions**

**QUALITY STANDARD:** All clients receiving maternity care will be assessed regarding learning needs in the areas listed below. Provider will use assessment to guide patient education at appropriate time. The information conveyed must be appropriate to learning capability and individualized to clinical course.

<b>Topic:</b>	<b>When to review:</b>
Nutrition/Weight gain	each trimester
STD Risk Reduction	1st trimester
Substance Use Avoidance	1st trimester
Normal Physical Changes	ongoing
Physical Discomforts	ongoing
Danger Signs of Pregnancy	ongoing
Feeding Method	1st and 3rd trimester
Fetal Development	1st trimester and ongoing
Post-Delivery Contraception	3rd trimester
Labor and Delivery	3rd trimester
Preparation for infant (including circumcision for male infant)	3rd trimester
PTL/PIH Precautions	2nd and 3rd trimester
Fetal Movement Count	3rd trimester

The individual health districts are responsible for having written standards for content appropriate to their practice and use of printed material to convey that content.

Education assessment and interventions will be documented on the Maternity Clinic Visit Record, page 2. Each entry is dated and the initials of the provider are to be entered.

SOC-M-01-II (Revised)

# **APPENDIX B**

## **Prenatal Nutrition**

## Prenatal Nutrition

The nutritional status of a prenatal client influences her own health and that of her growing fetus. Every expectant mother needs nutrition care throughout her pregnancy based on her individual requirements.

### Nutrition Needs During Pregnancy

The National Research Council indicates that an additional 300 calories are required daily during pregnancy providing approximately 2,500 calories per day, or about 15% over her usual intake. Factors that may modify caloric requirements include:

The pre-pregnant weight. Obese women require energy intakes higher than those of normal weight women. For women whose normal caloric intake is very low, supplementation of additional calories will likely improve gestational weight gain.

Patterns of physical activity. Women who remain physically active will likely have energy requirements higher than those of less active women.

Growth requirements for the young adolescent.

Multiple gestations<sup>1</sup>

The Institute of Medicine (IOM) states that weight gains associated with the most favorable outcome for women of normal pre-pregnancy weight is between 25-35 pounds. More important than the total weight gain during pregnancy is the pattern of weight gain. The gain is essentially linear after the 10<sup>th</sup> week of pregnancy and averages about 3 to 4 pounds per month. The underweight women will need to gain more than the average amount. Young adolescents and African-American women should strive for gains in the upper end of their suggested weight gain range.<sup>2</sup>

Present recommendations are that obese women gain less (15-25 lbs.) during pregnancy than normal weight women.<sup>3</sup> A gain of at least 15 pounds is suggested even for the extremely obese women.<sup>4</sup> Weight reduction is contraindicated during pregnancy and lactation. Among the massively obese, the quality of diet is most important. Women should be encouraged to consume moderate amounts of nutritious food according to appetite and be monitored for ketonuria and fetal growth.

The IOM recommends a protein intake of 10g/day over the Recommended Dietary Allowance (RDA) for Protein (60 grams per day). The recommendation for protein consumption during lactation is 65 g in the first 6 months, and 62 g in the second 6 months.<sup>5</sup>

A moderate increase in the use of food sources for protein, such as whole grains, milk, and legumes, as part of a balanced diet, is encouraged during pregnancy since these foods are valuable sources of other nutrients. Assessment of adequacy of protein status is most important in women whose energy intake is low.

Use of specially formulated protein supplements (e.g., protein powders) is not recommended during pregnancy with the exception of iron and folic acid, most of the additional vitamin/mineral needs during pregnancy and lactation can be met by following the recommended *Food Guide Pyramid*. For the general population of pregnant women, supplements of 30 mg of ferrous iron are recommended daily during the second and third trimesters. Although routine supplementation of folic acid is not recommended, a supplement of 300 micrograms a day may be given when there are doubts about the adequacy of dietary folate. For women who do not ordinarily consume an adequate diet and for those in high-risk categories, a

daily multivitamin of the following preparation may be recommended at the beginning of the second trimester.

Iron	30 mg	Vitamin B <sub>6</sub>	2 mg
Zinc	15 mg	Folate 300	300 $\mu$ g
Copper	2 mg	Vitamin C	50 mg
Calcium	250 mg	Vitamin D	5 $\mu$ g

In special circumstances, additional supplementation may be indicated:

Vitamin D: 10  $\mu$ g (400 IU) daily for vegans and others with a low intake of Vitamin D fortified milk.

Calcium: 600 mg daily for women under age 25 whose dietary calcium intake is less than 600 mg.

Vitamin B<sub>12</sub>: 2.0  $\mu$ g daily for vegans. The recommended Vitamin B<sub>12</sub> supplementation for vegans (complete vegetarians) is 2.0  $\mu$ g daily

Sodium is required in pregnancy for the expanded maternal tissues and fluid compartments as well as to provide for fetal needs. Women with uncomplicated pregnancies may use sodium at levels they prefer. Routine sodium restriction is not advised.

Zinc and Copper: When therapeutic levels of iron (>30 mg/day) are given to treat anemia, supplementation with approximately 15 mg of zinc and 2 mg of copper is recommended because the iron may interfere with the absorption and utilization of those trace elements.<sup>7</sup>

The Virginia Department of Health has local public health nutritionists who may be consulted for assistance in the nutrition management of prenatal and lactating clients. They provide training for health care professionals, group education classes and individual counseling for high-risk clients.

#### Nutritional Assessment of the Prenatal Client

##### A. Dietary Intake

Dietary intake should be assessed initially and at least once during each trimester. All of the following areas should be assessed:

Socioeconomic factors impacting on ability to purchase, store, prepare, and eat an adequate diet.

Alcohol intake, smoking, substance abuse.

Nausea, vomiting, constipation, heartburn.

Feelings concerning breastfeeding.

##### B. Anthropometric

Height and weight taken at first visit, and weight plotted on prenatal weight grid according to gestational age at each visit. If known, the pregravid weight can be utilized to calculate suggested weight gain. The BMI is the preferred method to assess weight.

Classify pregravid weight for height as follows:

Underweight	BMI <19.8 (<90% of desirable weight)
Normal Weight	BMI 19.8 to 26.0 (90-120% of desirable weight)
Overweight	BMI 26.1 – 29.0 (120-135 % of desirable weight)
Obese	BMI > 30.0 (>130% of desirable weight) <sup>8</sup>

Assess adequacy of weight gain as follows:

2-5 lbs. in the 1<sup>st</sup> trimester.

Approximately 1 lb. per week in the 2<sup>nd</sup> and 3<sup>rd</sup> trimesters.

Overweight women can gain somewhat less (.66 lb/wk) and underweight women can gain somewhat more.

Total pregnancy weight gains for underweight women will range from 28 to 40 lbs; normal weight women will gain from 25-35 lbs; and overweight women will gain from 15 to 25 lbs. For obese women, 15 lbs of weight gain is recommended.<sup>3,4</sup>

Black women and very young women should gain in the upper part of the range and short women should gain in the lower part of the range.

### C. Biochemical

Hemoglobin or hematocrit, blood and urine glucose, urine protein, ketones and any other tests which indicate the presence of conditions requiring nutrition intervention.

Normal values for hemoglobin or hematocrit are found in the *Documentation by Exception Record Systems*. A hemoglobin level below 11.0 g/dl during the first or third trimesters or below 10.5 g/dl during the second trimester is defined as anemia.<sup>9</sup>

If ketones are positive, assess eating habits (especially long time periods between eating). If glucose is positive, assess meal patterns and diet composition, especially simple sugars.

### D. Clinical

Check for edema, healthy appearance of skin, hair, eyes, teeth and gums. Fundal height compared to gestational age. Presence of inverted nipples.

Assess adequacy of diet, especially for calories and protein.

Assess ability to attain and maintain diet adequacy.

## III. Nutrition Intervention

### A. Low-Risk Prenatal Client

All prenatal clients should be instructed in normal diet for pregnancy. The diet should be nutritionally adequate and acceptable to the client. Discuss desirable weight gain patterns. Small changes fitting high quality foods into the client's current eating patterns are most acceptable. Appropriate physical activity should be discussed, as well as the avoidance of harmful substances. Every prenatal client should receive information and encouragement regarding breastfeeding.

### B. High-Risk Prenatal Clients Requiring Medical Nutrition Therapy<sup>10</sup>

Clients with the following high-risk nutrition conditions should receive special attention to meet their individual conditions. A referral to an RD is recommended:

- Underweight at the beginning of pregnancy – less than BMI <19.8 or 90% of standard weight.
- Inadequate weight gain – less than 2 pounds per month for women of normal weight and less than 1 pound per month for obese women or actual weight loss. Underweight clients should be expected to make up their weight deficit plus gain the standard pregnancy weight gain.
- Poor or delayed uterine/fetal growth.
- Prenatal care beginning after the 1<sup>st</sup> trimester.

- Excessive weight gain – more than two pounds per week or seven pounds per month which is not due to replenishment of nutritional stores depleted by underweight, nausea and vomiting, multiple births, etc.
- Special medical conditions requiring medical nutrition therapy (diabetes, hypertension, PKU, etc.), ketonuria, and pernicious vomiting.
- Anemia as outlined under the nutrition assessment above.
- Three or more pregnancies within two years.
- Previous poor reproductive performance.
- Conception before 16 months postpartum.
- Adolescent less than 16 years of age.
- Drug addiction, alcoholism, and heavy smoking.
- Poor dietary intake as described under the nutrition assessment above.
- Inability to consume adequate diet because of inadequate finances, facilities or skills.
- Multiple gestation.

In extreme cases of poor intake, when attempts to educate the patient in diet improvement have failed, high calorie/high protein nutritional supplements may be recommended on a temporary basis. When such supplements have been recommended, instructions for their use should be documented in the client's record

#### IV. Referrals

##### A. WIC Program

If the client meets the financial and nutritional requirements for the Special Supplemental Nutrition Program for Woman, Infants and Children, she should be certified as soon as possible to obtain maximum benefits. It is recommended that WIC services be available in all prenatal clinics.

##### B. Baby Care

Under the Medicaid Baby Care Program, medical nutrition therapy is available for Medicaid clients who have been identified as at-risk for poor pregnancy outcome and needing nutritional intervention.

##### C. Other Resources

- Local Department of Social Services for Food Stamp Program or other food assistance.
- Local Cooperative Extension Service's Expanded Food and Nutrition Education Program for assistance in meal planning, purchasing, and preparation.
- Local resources for substance abuse counseling and treatment.
- Local resources for family or domestic violence.
- Breastfeeding counselors for prenatal clients who are planning to breastfeed.
- Community resources for Registered Dietitians when medical nutrition therapy is needed and no resources are available within the local health department.<sup>9</sup>

## V. Follow-up

### A. Weight

Weight gain should be plotted at each visit. If weight gain is inadequate or excessive, a diet history should be taken to assess whether caloric intake seems inadequate or excessive. If information from the diet history is inconclusive, the client should be referred to the nutritionist for assessment and counseling.

### B. Diet

All clients should have a dietary assessment during each trimester. Use the Nutrition Assessment and Intervention Standards of Care: Maternity as a guide.

### C. Anemia

Assure that pregnant women get 30 mg. of ferrous iron beginning in the second trimester and 60 to 120 mg. ferrous iron if anemic.

### D. Breastfeeding

Breastfeeding women should be assessed and counseled so that they will maintain their own nutritional stores and provide adequate nutrition to their infants. Caloric requirements during lactation are approximately 500 above the non-pregnant women. Further information on nutritional assessment of the lactating woman can be found in the section on Nutrition for the Breastfeeding Client in this manual.

### E. Counseling

Clients with nutritional problems such as inadequate weight gain, very poor diets, etc., may need to be seen more frequently than the regular clinic schedule. Follow-up appointments with the nutritionist may be scheduled between regular clinic visits or home visits may be planned.

Counseling of the patient with inadequate food intake should center around familiar and affordable foods that may be incorporated into the daily diet. In some extreme cases of poor intake when attempts to educate the patient in diet improvement have failed, high calorie/high protein nutritional supplements may be recommended on a temporary basis. When such supplements have been recommended, instructions for their use should be documented on the Communication/Exception record.

1. Institute of Medicine. Nutrition During Pregnancy: Weight Gain, Nutrient Supplements, Washington, DC; 1990:171.
2. Suitor CW. 1996. *Maternal Weight Gain: A Report of an Expert Work Group*. Arlington, VA: National Center for Education in Maternal and Child Health
3. Schieve LA, Cogswell ME, Scanlon KS. An Empiric Evaluation of the Institute of Medicine's Pregnancy Weight Gain Guidelines by Race. *Obstetrics and Gynecology* 1998; 91: 878.
4. Schieve LA, Cogswell ME, Scanlon KS. Trends in Pregnancy Weight Gain Within and Outside Ranges Recommended by the Institute of Medicine in a WIC Population. *Maternal and Child Health Journal*. 1998; 2:111.
5. Institute of Medicine. Nutrition During Pregnancy: Weight Gain, Nutrient Supplements, Washington, DC; 1990:384.

6. Reifsnider E, Gill S. *Journal of Obstetric, Gynecologic and Neonatal Nursing*. 2000; 29.11.
7. Institute of Medicine. *Nutrition During Pregnancy: Weight Gain, Nutrient Supplements*, Washington, DC; 1990:20.
8. Institute of Medicine. *Nutrition During Pregnancy: An Implementation Guide*, Washington, DC; 1992:13.
9. Institute of Medicine. *Nutrition During Pregnancy: Weight Gain, Nutrient Supplements*, Washington, DC; 1990:293.
10. Mahan L, Escott-Stump S. *Food, Nutrition and Diet Therapy*, Philadelphia, PA; 2000:170.

### Nutrition for the Breastfeeding Client

The nutritional status of a lactating woman influences her own health and that of her infant. Every breastfeeding client needs nutritional assessment and breastfeeding support.

### Nutrition Needs During Lactation

Diet should have an additional 500 calories above pre-pregnancy needs of 2700kcal and should not go below 1800 calories per day.<sup>1</sup> Maternal fat stores accumulated during pregnancy provide about 100 to 150 kcal/day during the early months of lactation so not all the extra energy has to come from the diet. If excessive weight loss or gain, refer to nutritionist.

Most nutrients in breast milk remain constant regardless of maternal diet, except fatty acids, Vitamin D and some B vitamins. Milk volume is not affected by a mother's diet except when the mother is severely dehydrated or malnourished. The primary influence on milk volume is the frequency of infant feeds.<sup>2</sup>

### Basic guidance for diet:

Drink enough fluids to keep from getting thirsty, such as milk, juice, water and soup.

Limit intake of coffee, cola or other sources of caffeine to 2 eight-ounce servings or less per day.

It is best to avoid drinking alcoholic beverages, but certainly have no more than 2 to 2.5 oz. of liquor, 8 oz of table wine or 24 oz. of beer on any one day (less for smaller women).

Reassure mothers that their diets do not need to be "perfect" to nourish their baby well.<sup>3</sup>

Smoking can reduce milk volume and should be discouraged.<sup>4</sup> Babies whose mother breastfed and smoked have less acute respiratory illness than babies whose mother formula fed and smoked. It may be that breastfeeding and smoking is less detrimental to the child than formula feeding and smoking.

### Nutrition Assessment

#### Subjective

Attitude, experience, knowledge, support system of breastfeeding woman prenatally and post-natally.

Diet assessment using WIC 305, food frequency or 24-hour recall. Explore for alcohol, smoking, substance abuse, caffeine intake, sugary beverages and medications.

## Objective

Height, weight, pregravid weight. Classify weight for height using BMI as described for prenatal client. It is normal to lose weight during the first six months of lactation. The average rate of weight loss is 1 to 2 lbs./month after the first month postpartum. If overweight, a weight loss of 4 to 5 lbs. per month is unlikely to affect milk volume but such women should be alert for any indications that the infant's appetite is not being satisfied. Rapid weight loss of more than 5 lbs. per month is not advised as can result in maternal malnutrition and subsequent low milk production.<sup>5</sup>

Hemoglobin or hematocrit. Anemia if hematocrit < 36.0% and hemoglobin <12.0 mg./dl. <sup>6</sup> Results of screening for diabetes, ketones and other tests that will indicate presence of conditions requiring nutrition intervention.

Assess adequacy of diet especially for calories and major nutrients such as Vitamin C and D and iron.

Assess ability to consume adequate diet/calories for breastfeeding and ability to be a successful breastfeeder, especially assess for inverted nipples.

## Counseling

Discuss such issues with the mother as to how to tell if their baby is getting enough milk, growth spurts and that milk production is based on supply and demand. Weight gain of the breastfed infant follows about the same pattern as formula-fed infants in the first 2 to 3 months of life. After the first few months, healthy breastfed infants' gain weights more slowly than formula-fed infants.<sup>7</sup> This does not justify the use of supplemental formulas. Mothers should watch for 2 to 3 stools after day four and at least 6 wet diapers per day to assess whether baby is getting sufficient milk.<sup>8</sup> Refer to VDH publications on breastfeeding for further information.

It has not been determined if HIV-1 is transmitted via breast milk. The Centers for Disease Control (CDC, 1985) advised mothers who are seropositive for HIV-1 not to breastfeed; the World Health Organization (WHO, 1987) took the view that breastfeeding should be encouraged, especially in developing countries, because of the known health benefits of human milk.

For mothers requiring medications and desiring to breastfeed, the clinician should select the medication least likely to pass into the breast milk to the infant.<sup>9</sup>

Contraindicated drugs include antineoplastic agents, therapeutic radiopharmaceuticals, some but not all antithyroid agents, and antiprotozoan agents. Medications that can be given to infants can be taken by the lactating woman.<sup>10</sup>

## Referrals

All women, and especially first time breastfeeders, need a referral to a support system such as a breastfeeding counselor, lactation consultant, or a community group such as La Leche League.

Women with substance abuse problems should be referred for counseling services.

## Follow-up

Ideally, frequent contact should be made with newly breastfeeding mothers to support them and to answer any questions they may have. Follow-up can be made by telephone, home visits, and during clinic or WIC visits. Breastfeeding peer counselors provide continuous support which research has shown to be an effective way to increase breastfeeding initiation and duration.

## **APPENDIX C**

- Perinatal Substance Abuse**
- Virginia Legal Requirement**
- Tobacco Use, Prevention and Control**
- Fetal Alcohol Syndrome**

## Substance Abuse Screening of All Pregnant Women (1992)

### § 54.1-2403.1. Protocol for certain medical history screening required.

A. As a routine component of every pregnant woman's prenatal care, every practitioner licensed pursuant to this subtitle who renders prenatal care, regardless of the site of such practice, shall establish and implement a medical history protocol for screening pregnant women for substance abuse to determine the need for a specific substance abuse evaluation. The medical history protocol shall include, but need not be limited to, a description of the screening device and shall address abuse of both legal and illegal substances. The medical history screening may be followed, as necessary and appropriate, with a thorough substance abuse evaluation.

B. The results of such medical history screening and of any specific substance abuse evaluation which may be conducted shall be confidential and, if the woman is enrolled in a treatment program operated by any facility receiving federal funds, shall only be released as provided in federal law and regulations. However, if the woman is not enrolled in a treatment program or is not enrolled in a program operated by a facility receiving federal funds, the results may only be released to the following persons:

1. The subject of the medical history screening or her legally authorized representative.
2. Any person designated in a written release signed by the subject of the medical history screening or her legally authorized representative.
3. Health care providers for the purposes of consultation or providing care and treatment to the person who was the subject of the medical history screening.

C. The results of the medical history screening required by this section or any specific substance abuse evaluation which may be conducted as part of the prenatal care shall not be admissible in any criminal proceeding.

D. Practitioners shall advise their patients of the results of the medical history screening and specific substance abuse evaluation, and shall provide such information to third-party payers as may be required for reimbursement of the costs of medical care. However, such information shall not be admissible in any criminal proceedings. Practitioners shall advise all pregnant women whose medical history screenings and specific substance abuse evaluations are positive for substance abuse of appropriate treatment and shall inform such women of the potential for poor birth outcomes from substance abuse.

## Physician Referral of Suspected Substance Exposed Infants (1998)

### § 63.2-1509 Physicians, nurses, teachers, etc., to report certain injuries to children; penalty for failure to report.

A1. For purposes of subsection A, "reason to suspect that a child is abused or neglected" shall include (i) a finding made by an attending physician within seven days of a child's birth that the results of a blood or urine test conducted within forty-eight hours of the birth of the child indicate the presence of a controlled substance not prescribed for the mother by a physician; (ii) a finding by an attending physician made within forty-eight hours of a child's birth that the child was born dependent on a controlled substance which was not prescribed by a physician for the mother and has demonstrated withdrawal symptoms; (iii) a diagnosis by an attending physician made within seven days of a child's birth that the child has an illness, disease or condition which, to a reasonable degree of medical certainty, is attributable to in utero exposure to a controlled substance which was not prescribed by a physician for the mother or the child; or (iv) a diagnosis by an attending physician made within seven days of a child's birth that the child has fetal alcohol syndrome attributable to in utero exposure to alcohol. When "reason to suspect" is based upon this subsection, such fact shall be included in the report along with the facts relied upon by the person making the report.

B. Any person required to file a report pursuant to this section who fails to do so within seventy-two hours of his first suspicion of child abuse or neglect shall be fined not more than \$500 for the first failure and for any subsequent failures not less than \$100 nor more than \$1,000.

## Hospital Referral of Identified Substance Using Postpartum Women to Their Community Service Board (CSB) for Assessment and Services (1998)

### § 32.1-127 B 6 Regulations.

6. Shall also require that each licensed hospital develop and implement a protocol requiring written discharge plans for identified, substance-abusing, postpartum women and their infants. The protocol shall require that the discharge plan be discussed with the patient and that appropriate referrals for the mother and the infant be made and documented. Appropriate referrals may include, but need not be limited to, treatment services, comprehensive early intervention services for infants and toddlers with disabilities and their families pursuant to Part H of the Individuals with Disabilities Education Act, 20 U.S.C. § 1471 et seq., and family-oriented prevention services. The discharge planning process shall involve, to the extent possible, the father of the infant and any members of the patient's extended family who may participate in the follow-up care for the mother and the infant. Immediately upon identification, pursuant to § 54.1-2403.1, of any substance-abusing, postpartum woman, the hospital shall notify, subject to federal law restrictions, the community services board of the jurisdiction in which the woman resides to appoint a discharge plan manager. The community services board shall implement and manage the discharge plan.

## **Tobacco Use, Prevention and Control**

*Treating Tobacco Use and Dependence* is a Public Health Service sponsored Clinical Practice Guideline, which is the product of the Tobacco Use and Dependence Guideline Panel of consortium representatives, consultants, and staff. These guidelines are relevant to all tobacco users for the purpose of providing clinicians; public health professionals; tobacco dependence specialists; health care administrators, insurers, and purchasers; and tobacco users, with evidence-based recommendations regarding clinical and systems interventions that will increase the likelihood of successful quitting. The interventions suggested are used with men and women.

Women may face different stressors and barriers to quitting that may be addressed in treatment. Providers will need to consider factors such as depression, concerns for weight control, hormonal cycles and pregnancy to name a few. A recommendations for pregnant women because of the serious risks of smoking to the women and the fetus are the following: whenever possible pregnant smokers should be offered psychosocial interventions that exceed minimal advice to quit; offer effective smoking cessation interventions to pregnant smokers at the first prenatal visit and throughout the pregnancy; and consider pharmacotherapy for pregnant smokers who have been unable to quit using psychosocial interventions.

Cigarette smoking in pregnancy has been shown to cause adverse fetal outcomes, including stillbirths, spontaneous abortions, decreased fetal growth, premature births, low birth weight, placental abruption, sudden infant death, cleft palates, and cleft lips, and childhood cancers. The health care professionals can encourage a pregnant women motivated to quit by reinforcing the knowledge that cessation will reduce health risk for the fetus, newborn and her.

The first step is to assess for the use of tobacco. Health care providers should assess for tobacco use at each visit and intervene with those individuals who are willing to quit. The five major steps to interventions are the “5A’s”: Ask, Advise, Assess, Assist, and Arrange. These strategies are designed to be brief, requiring 3 minutes or less of direct clinicians’ time.

### **Reference :**

U. S. Department of Health and Human Services, Public Health Service (2000). *Treating Tobacco Use and Dependence*, Rockville, MD.

## Treating Tobacco Use and Dependence: PHS Clinical Practice Guideline

### What is the PHS Clinical Practice Guideline?

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Treating Tobacco Use and Dependence, a Public Health Service-sponsored Clinical Practice Guideline, is the result of an extraordinary partnership among Federal Government and nonprofit organizations comprised of the:

- Agency for Healthcare Research and Quality.
- Centers for Disease Control and Prevention.
- National Heart, Lung, and Blood Institute.
- National Institute on Drug Abuse.
- Robert Wood Johnson Foundation.
- University of Wisconsin Medical School's Center for Tobacco Research and Intervention.

*"Progress in tobacco control has been recognized as one of the 10 greatest public health achievements of the century, but we still have a long way to go."*

—Richard H. Carmona, MD, MPH, FACS  
U.S. Surgeon General

It is the product of a 2-year effort by a panel of tobacco dependence experts, representatives from the sponsoring organizations, and professional staff. The panel employed an explicit science-based methodology and expert clinical judgment to develop recommendations on the successful treatment of tobacco use and dependence.

The purpose of the guideline is to provide clinicians; public health professionals; tobacco dependence specialists; health care administrators, insurers, and purchasers; and tobacco users, with evidence-based recommendations regarding clinical and systems interventions that will increase the likelihood of successful quitting.

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#### **Internet Citation:**

*What is the PHS Clinical Practice Guideline?* U.S. Public Health Service.  
<http://www.surgeongeneral.gov/tobacco/whatisphs.htm>

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Last Revised: April 23, 2004

## Treating Tobacco Use and Dependence: PHS Clinical Practice Guideline

### Developing a Successful System-Wide Tobacco Cessation Program—Clinicians

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#### Clinicians

*Physicians, pharmacists, nurses, physician's assistants, and other professions working with patients who use tobacco.*

Clinicians should identify tobacco users at each visit and intervene with those individuals who are willing to quit (go to [Five Major Steps to Intervention \[The "5 A's"\]](#)). Tobacco users willing to make a quit attempt should receive both counseling and pharmacotherapy, except in the presence of special circumstances.

*"In my view, a doctor isn't providing an appropriate standard of care for his or her patients if he or she doesn't ask two key questions —'Do you smoke?' and 'Do you want to quit?'—and then work with that individual to make it happen."*

—Michael C. Fiore, MD, M.P.H., Director  
Center for Tobacco Research and Intervention  
University of Wisconsin Medical School

For patients not willing to make a quit attempt now, clinicians should motivate the patient to consider quitting (go to [Patients Not Ready To Make a Quit Attempt Now \[The "5 R's"\]](#)).

Because of the chronic nature of tobacco dependence, the guideline offers clinicians information on how to prevent relapse, especially in the first 3 months after cessation.

All tobacco users have the potential to successfully quit, and every clinician should commit to delivering treatment that can help.

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#### Internet Citation:

*Developing a Successful System-Wide Tobacco Cessation Program—Clinicians.* U.S. Public Health Service.  
<http://www.surgeongeneral.gov/tobacco/systemsclin.htm>

## Recommended Protocol for Treating Tobacco Use and Dependence

### Step 1: Office Environment

Establish an environment conducive to smoking/tobacco use cessation by:

- **SIGN(S):** Prominent display of no smoking sign (s)
- **POSTERS:** Use of posters that encourage cessation
- **MATERIALS:** Making patient education materials available in the lobby/exam rooms (including information on nicotine replacement products and medications)
- **MAGAZINES:** Providing magazines in the lobby that don't contain tobacco product ads

### Step 2: Screen Patients

Identify every patient at every visit by:

- **ASK STATUS:** Asking about smoking/tobacco use (e.g., using vital signs sticker)
- **TAG CHARTS:** Identifying smoking/tobacco use status in/on chart in a prominent manner (e.g., using color-coded chart stickers, stamps) as a “reminder”
- **ASK READINESS:** Asking patient about readiness/willingness to quit
- **CHARTING:** Charting patient's smoking/tobacco use status and level of readiness to quit (e.g., using tobacco cessation progress record form)

### Step 3: Intervene with Patients

Intervene at every visit with every patient who smokes/uses tobacco by:

- **ADVISE/MOTIVATE:** Providing advice appropriate to patient's level of readiness to quit (e.g., use the 5A's for those ready and the 5R's for those not ready)
- **MATERIALS:** Providing education materials relevant to the individual patient
- **REFERRALS:** Providing comprehensive referrals for those ready to quit (e.g., using the postcard and/or PHS handout for referral to: 1. Classes/Self-Help, 2. Support and 3. Pharmacotherapy)
- **FOLLOW-UP:** Providing follow-up when appropriate (e.g., when prescribing pharmacological adjuncts, referring to a cessation specialist)

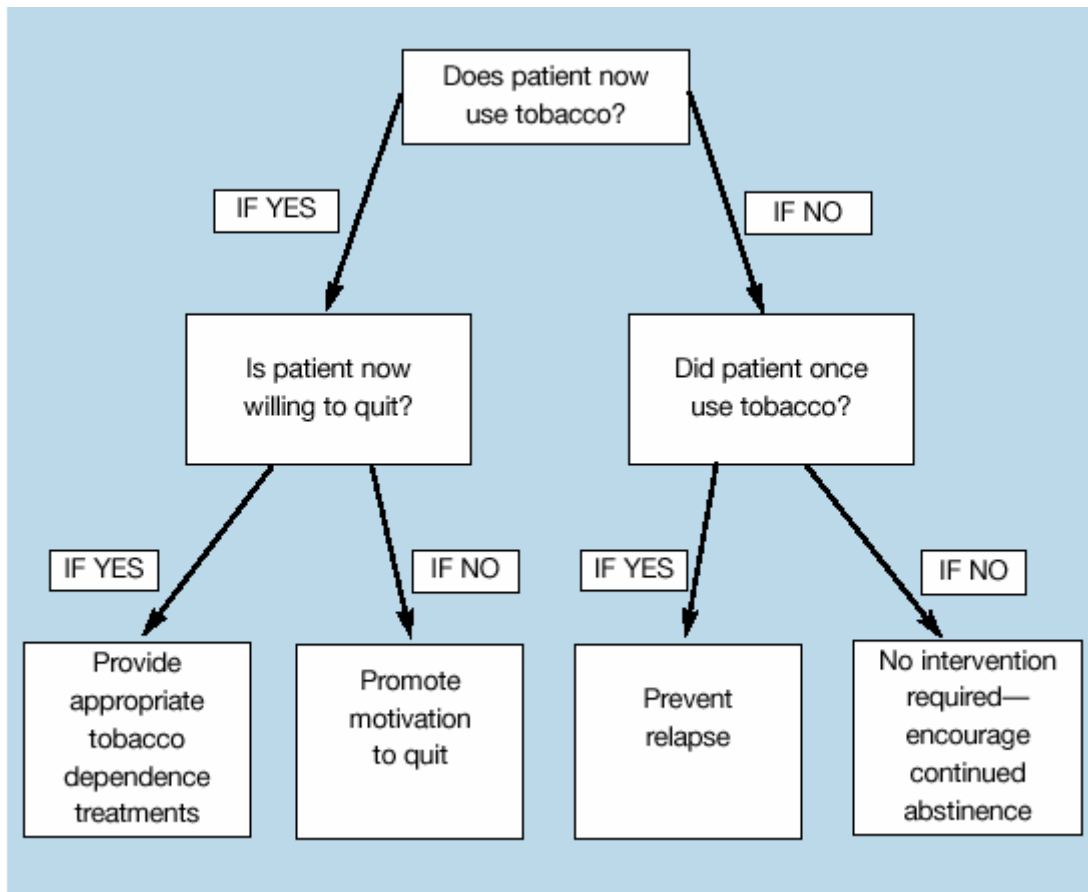
### Step 4: Track Progress

Monitor patient progress each visit by:

- **CHARTING:** Charting readiness to quit and type of assistance given (e.g., using tobacco cessation progress record form)
- **FOLLOW-UP:** Following up on patients who select a quit date (e.g., phone or office contact soon after patient's quit date)

## Treating Tobacco Use and Dependence: PHS Clinical Practice Guideline

### Screen for Tobacco Use Status



Recent surveys show that 25 percent of all adult Americans smoke.

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#### Internet Citation:

*Screen for Tobacco Use Status.* U.S. Public Health Service.  
<http://www.surgeongeneral.gov/tobacco/screen.htm>

## Treating Tobacco Use and Dependence: PHS Clinical Practice Guideline

### Five Major Steps to Intervention (The "5A's")

Successful intervention begins with identifying users and appropriate interventions based upon the patient's willingness to quit. The five major steps to intervention are the "5 A's": Ask, Advise, Assess, Assist, and Arrange.

Tobacco is the single greatest preventable cause of disease and premature death in America today.

"Starting today, every doctor, nurse, health plan, purchaser, and medical school in America should make treating tobacco dependence a top priority."

—David Satcher, MD, Ph.D.  
Former U.S. Surgeon General  
Director, National Center for Primary  
Care, Morehouse School of Medicine

#### **Ask**

Identify and document tobacco use status for every patient at every visit. (You may wish to develop your own vital signs sticker, based on the sample below).

#### **Advise**

In a clear, strong, and personalized manner, urge every tobacco user to quit.

#### **Assess**

Is the tobacco user willing to make a quit attempt at this time?

#### **Assist**

For the patient willing to make a quit attempt, use counseling and pharmacotherapy to help him or her quit. (See Counseling Patients To Quit and pharmacotherapy information in this packet).

#### **Arrange**

Schedule follow-up contact, in person or by telephone, preferably within the first week after the quit date.

#### VITAL SIGNS

**Blood Pressure:** \_\_\_\_\_

**Pulse:** \_\_\_\_\_ **Weight:** \_\_\_\_\_

**Temperature:** \_\_\_\_\_

**Respiratory Rate:** \_\_\_\_\_

**Tobacco Use:**    **Current**    **Former**    **Never**    (*circle one*)

*\* Alternatives to expanding the vital signs are to place tobacco-use status stickers on all patient charts or to indicate tobacco use status using electronic medical records or computer reminder systems.*

#### **Internet Citation:**

*Five Major Steps to Intervention (The "5A's").* U.S. Public Health Service. Agency for Healthcare Research and Quality. Rockville, MD. <http://www.ahrq.gov/clinic/tobacco/5steps.htm>

## Treating Tobacco Use and Dependence: PHS Clinical Practice Guideline

### Patients Not Ready To Make A Quit Attempt Now (The "5 R's")

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*Approximately 46 percent try to quit each year. Most try to quit "cold turkey." Of those, only about 5 percent succeed. Most smokers make several quit attempts before they successfully quit for good.*

Patients not ready to make a quit attempt may respond to a motivational intervention. The clinician can motivate patients to consider a quit attempt with the "5 R's": Relevance, Risks, Rewards, Roadblocks, and Repetition.

#### **Relevance**

Encourage the patient to indicate why quitting is personally relevant.

#### **Risks**

Ask the patient to identify potential negative consequences of tobacco use.

#### **Rewards**

Ask the patient to identify potential benefits of stopping tobacco use.

#### **Roadblocks**

Ask the patient to identify barriers or impediments to quitting.

#### **Repetition**

The motivational intervention should be repeated every time an unmotivated patient has an interaction with a clinician. Tobacco users who have failed in previous quit attempts should be told that most people make repeated quit attempts before they are successful.

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#### **Internet Citation:**

*Patients Not Ready To Make A Quit Attempt Now (The "5 R's")*. U.S. Public Health Service. Agency for Healthcare Research and Quality. Rockville, MD. <http://www.ahrq.gov/clinic/tobacco/5rs.htm>

**Treating Tobacco Use and Dependence: PHS Clinical Practice Guideline**

**Counseling Patients To Quit**

Effective smoking cessation counseling can be divided into practical and supportive counseling advice.

Practical counseling advice (problemsolving/skills training)	Examples
<p>Recognize danger situations. Identify events, internal states, or activities that increase the risk of smoking or relapse.</p>	<ul style="list-style-type: none"> <li>• Negative affect.</li> <li>• Being around other smokers.</li> <li>• Drinking alcohol.</li> <li>• Experiencing urges.</li> <li>• Being under time pressure.</li> </ul>
<p>Develop coping skills. Identify and practice coping or problem-solving skills. Typically, these skills are intended to cope with danger situations.</p>	<ul style="list-style-type: none"> <li>• Learning to anticipate and avoid temptation.</li> <li>• Learning cognitive strategies that will reduce negative moods.</li> <li>• Accomplishing lifestyle changes that reduce stress, improve quality of life, or produce pleasure.</li> <li>• Learning cognitive and behavioral activities to cope with smoking urges (e.g., distracting attention).</li> </ul>
<p>Provide basic information. Provide basic information about smoking and successful quitting.</p>	<ul style="list-style-type: none"> <li>• Any smoking (even a single puff) increases the likelihood of full relapse.</li> <li>• Withdrawal typically peaks within 1-3 weeks after quitting.</li> <li>• Withdrawal symptoms include negative mood, urges to smoke, and difficulty concentrating.</li> <li>• Smoking is addictive.</li> </ul>

Supportive counseling advice	Examples
<p>Encourage the patient in the quit attempt.</p>	<ul style="list-style-type: none"> <li>• Communicate belief in the patient's ability to quit.</li> <li>• Note that effective tobacco dependence treatments are now available.</li> <li>• Note that half of all people who have ever</li> </ul>

	smoked have now quit.
Communicate caring and concern.	<ul style="list-style-type: none"> <li>• Ask how the patient feels about quitting.</li> <li>• Directly express concern and willingness to help.</li> <li>• Be open to the patient's expression of fears of quitting, difficulties experienced, and ambivalent feelings.</li> </ul>
Encourage the patient to talk about the quitting process.	<p><i>Ask about:</i></p> <ul style="list-style-type: none"> <li>• Reasons the patient wants to quit.</li> <li>• Concerns or worries about quitting.</li> <li>• Success the patient has achieved.</li> <li>• Difficulties encountered while quitting.</li> </ul>

Internet Citation:

*Counseling Patients To Quit.* U.S. Public Health Service. Agency for Healthcare Research and Quality. Rockville, MD. <http://www.ahrq.gov/clinic/tobacco/counsel.htm>

**Patients Who Have Recently Quit and/or Relapsed**

*"Anyone who has ever been addicted to nicotine recognizes that quitting tobacco use is among the most difficult challenges he or she will ever face."*

*"Each quit attempt makes the next one more successful than the last."*

—Michael C. Fiore, M.D., M.P.H.  
 Director, Center for Tobacco Research and Intervention

Patients who have recently quit tobacco use should be offered reinforcement in their decision to quit, a review of the benefits of quitting, and assistance in resolving problems arising from quitting. Because of the chronic relapsing nature of tobacco dependence, clinicians should provide brief relapse prevention treatment. Although most relapse occurs early in the quitting process, some relapse occurs months or even years after the quit date. Prevention interventions can be delivered by clinic visits and telephone calls.

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**Internet Citation:**

*Patients Who Have Recently Quit and/or Relapsed.* U.S. Public Health Service. Agency for Healthcare Research and Quality. Rockville, MD. <http://www.ahrq.gov/clinic/tobacco/recent.htm>

## Treating Tobacco Use and Dependence: PHS Clinical Practice Guideline

### Pregnant Women

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*"Smoking during pregnancy is the single most preventable cause of premature birth and low birthweight babies."*

—Cathy Melvin, Ph.D., M.P.H.  
Chair, The National Partnership to Help Pregnant Smokers Quit

Many women are motivated to quit during pregnancy because of the risks to the woman and the fetus. Clinicians can reinforce the understanding that cessation will reduce health risks.

Quitting tobacco use prior to conception or early in pregnancy is most beneficial, but health benefits result from abstinence at any time.

A pregnant tobacco user should receive encouragement and assistance throughout the pregnancy.

Pregnant tobacco users should be offered extended or augmented psychosocial interventions that exceed minimal advice to quit.

Thirty percent of pregnant smokers who quit start again after the baby is born.

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#### **Internet Citation:**

*Pregnant Women*. U.S. Public Health Service. Agency for Healthcare Research and Quality. Rockville, MD. <http://www.ahrq.gov/clinic/tobacco/pregnant.htm>

## Support and Advice From Your Prenatal Care Provider

### Help for Pregnant Smokers

#### Now Is a Good Time to Quit for You and Your Baby

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Both you and your baby benefit when you quit smoking. The benefits for both of you are explained below, as are the key steps to quitting successfully.

All information is based on scientific research about what will give you the best chances of quitting.

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#### Good Things Happen as Soon as You Quit

For Your baby:

- Your baby will be healthier.
- Your baby will get more oxygen.
- Your baby will be less likely to be born too soon.
- Your baby will be more likely to come home from the hospital with you.
- Your baby will have fewer colds and ear infections.
- Your baby will cough and cry less.
- Your baby will have fewer asthma and wheezing problems.

For you:

- You will have more energy and breathe easier.
- You will save money that you can spend on other things.
- Your clothes, car, and home will smell better.
- Your skin and nails won't be stained, and you will have fewer wrinkles.
- Food will smell and taste better.
- You will feel good about quitting.

#### Keys for Quitting

##### 1. Get Ready

- Think about how quitting will help you and your baby.
- Set a quit date and stick to it—not even a single puff!
- Get rid of ALL cigarettes and ashtrays in your home, car, or workplace. Make it hard to get a cigarette.
- Set up smoke-free areas in your home, and make your car smoke-free.

##### 2. Get Support and Encouragement

- Tell your family, friends, and coworkers you are quitting and ask for their help.
- Ask smokers not to smoke around you.
- Talk to women who quit smoking when they were pregnant.
- Talk with your prenatal care provider about your plan to quit.

### 3. Learn New Skills and Behaviors

- Try to change some of your daily habits to lower your chances of smoking.
- Plan something fun to do every day.
- Practice new ways to relax.
- When you want to smoke, do something else: find a way to occupy your hands, your mouth, and your mind.
- Think about your reasons for quitting.

### 4. Be Prepared to Handle "Slips"

- If you "slip" and smoke, don't give up.
- People who quit after they "slip" tell themselves, "This was a mistake, not a failure."
- Set a new date to get back on track.
- Remember that by quitting, you are protecting your baby's health and your own.

**Your Quit Plan**

1. Your reasons to quit:

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**Your Quit Date:** \_\_\_\_\_

2. Friends and Family Who Can Help You:

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3. Skills and Behaviors You Can Use To Help You Quit:

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4. Ways You Can Handle "Slips":

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Your Prenatal Care Provider's

Name: \_\_\_\_\_

Telephone number: \_\_\_\_\_

Next appointment date: \_\_\_\_\_

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**Quitting smoking is one of the most important things you can do for you and your baby.**

Follow up plan: \_\_\_\_\_

Other information: \_\_\_\_\_

Referral: \_\_\_\_\_

PNCP: \_\_\_\_\_ Date: \_\_\_\_\_

**U.S. Department of Health and Human Services**

Public Health Service

**Smoke-Free Families**

www.smokefreefamilies.org

A national program supported by The Robert Wood Johnson Foundation

*Current as of March 2002*

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**Internet Citation:**

*Help for Pregnant Smokers. Support and Advice from Your Prenatal Care Provider. Consumer Tear Sheet, March 2002. U.S. Public Health Service. Agency for Healthcare Research and Quality. Rockville, MD.*

<http://www.ahrq.gov/clinic/tobacco/prenatal.htm>

## Frequently Asked Questions about Quitting Smoking

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*Are you or someone you know trying to quit smoking? If so, the following information may help you. These 10 questions and answers are excerpted from a new consumer brochure by the U.S. Surgeon General.*

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**Question: Why should I quit?**

Answer: You will live longer and feel better. Quitting will lower your chances of having a heart attack, stroke, or cancer. The people you live with, especially children, will be healthier. If you are pregnant, you will improve your chances of having a healthy baby. And you will have extra money to spend on things other than cigarettes.

**Question: What is the first thing I need to do once I've decided to quit?**

Answer: You should set a quit date—the day when you will break free of your tobacco addiction. Then, consider visiting your doctor or other health care provider before the quit date. She or he can help by providing practical advice and information on the medication that is best for you.

**Question: What medication would work best for me?**

Answer: Different people do better with different methods. You have five choices of medications that are currently approved by the U.S. Food and Drug Administration:

- A non-nicotine pill (bupropion SR).
- Nicotine gum.
- A nicotine inhaler.
- A nicotine nasal spray.
- Nicotine patch.

The gum and patches are available at your local pharmacy, or you can ask your health care provider to write you a prescription for one of the other medications. The good news is that all five medications have been shown to be effective in helping smokers who are motivated to quit.

**Question: How will I feel when I quit smoking? Will I gain weight?**

Answer: Many smokers gain weight when they quit, but it is usually less than 10 pounds. Eat a healthy diet, stay active, and try not to let weight gain distract you from your main goal—quitting smoking. Some of the medications to help you quit may help delay weight gain.

**Question: Some of my friends and family are smokers. What should I do when I'm with them?**

Answer: Tell them that you are quitting, and ask them to assist you in this effort. Specifically, ask them not to smoke or leave cigarettes around you.

**Question: What kinds of activities can I do when I feel the urge to smoke?**

Answer: Talk with someone, go for a walk, drink water, or get busy with a task. Reduce your stress by taking a hot bath, exercising, or reading a book.

**Question: How can I change my daily routine, which includes smoking a cigarette with my breakfast?**

Answer: When you first try to quit, change your routine. Eat breakfast in a different place, and drink tea instead of coffee. Take a different route to work.

**Question: I like to smoke when I have a drink. Do I have to give up both?**

Answer: It's best to avoid drinking alcohol for the first 3 months after quitting because drinking lowers your chances of success at quitting. It helps to drink a lot of water and other nonalcoholic drinks when you are trying to quit.

**Question: I've tried to quit before and it didn't work. What can I do?**

Answer: Remember that most people have to try to quit at least 2 or 3 times before they are successful. Review your past attempts to quit. Think about what worked—and what didn't—and try to use your most successful strategies again.

**Question: What should I do if I need more help?**

Answer: Get individual, group, or telephone counseling. The more counseling you get, the better your chances are of quitting for good. Programs are given at local hospitals and health centers. Call your local health department for information about programs in your area. Also, talk with your doctor or other health care provider.

**For More Information**

To get a free print copy of the consumer brochure, *You Can Quit Smoking*, call any of the following toll-free numbers:

- Agency for Healthcare Research and Quality (AHRQ)  
800-358-9295
- Centers for Disease Control and Prevention (CDC)  
800-CDC-1311
- National Cancer Institute (NCI)  
800-4-CANCER

More information on quitting is available online at the Surgeon General's Web site (<http://www.surgeongeneral.gov/tobacco>).

*Current as of November 2000*

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**Internet Citation:**

*Frequently Asked Questions about Quitting Smoking*. November 2000. U.S. Public Health Service.  
<http://www.surgeongeneral.gov/tobacco/faq.htm>

## **Fetal Alcohol Syndrome (FAS) & Fetal Alcohol Effect (FAE)**

Prenatal alcohol use is one of the leading preventable causes of birth defects and developmental disabilities. Drinking alcohol during pregnancy may cause Fetal Alcohol Syndrome, which is a lifelong, physical and mentally disabling condition. FAS is one of the most severe preventable causes of mental retardation and birth defects. Children exposed to alcohol during fetal development can suffer multiple disorders that range from subtle changes in I.Q. to profound mental retardation. They can also suffer growth retardation and be born with birth defects of major organ systems. FAS can contribute to problems with learning, memory, attention span, communication, vision, and/or hearing. FAS is 100% preventable, if a woman does not drink alcohol during her pregnancy. (CDC – National Center on Birth Defects and Developmental Disabilities, 2004)

Fetal Alcohol Effect (FAE) is used to describe children who have all of the diagnostic features of FAS, but are experiencing a milder or less severe clinical signs. In 1996, the Institute of Medicine replaced FAE with the terms alcohol-related birth defects (ARBD) and alcohol-related neurodevelopmental disorder (ARND), because not all babies exposed to alcohol develop the full syndrome. Children with FAS or ARND may have the following characteristics or exhibit the following behaviors:

- Small for gestational age or small in stature in relation to peers
- Facial abnormalities such as small eye openings
- Poor coordination
- Hyperactive behavior
- Learning disabilities
- Developmental disabilities
- Mental retardation or low IQ
- Problems with daily living
- Poor reasoning and judgment skills
- Sleep and sucking disturbances in infancy.

Psychiatric problems, criminal behavior, unemployment, and incomplete education occur frequently with children with FAS. Although there is no cure for FAS or ARND, children identified early and receive help early may perform better in school and with life. (CDC – National Center on Birth Defects and Developmental Disabilities, 2004)

### **References :**

CDC - National Center on Birth Defects and Developmental Disabilities (2004). 13 April, Fetal Alcohol Information, Atlanta, GA.

### **Resources:**

CDC

[www.cdc.gov](http://www.cdc.gov)

March of Dimes, Virginia Chapter

[VA474@marchofdimes.com](mailto:VA474@marchofdimes.com)

PERINATAL GUIDELINES AND RESOURCES

National Organization on Fetal Alcohol Syndrome  
[www.nofas.org](http://www.nofas.org)

U.S. Department of Health and Human Services  
Center for Substance Abuse Prevention  
[www.samhsa.gov](http://www.samhsa.gov)

## **Substance Abuse-Mental Health, CSBs**

Healthy People 2010 indicates self-reported use of illicit drugs, such as cocaine and marijuana, is quite rare, with 98 percent of pregnant women reporting abstaining from these drugs. Unintentional alcohol exposure is particularly likely to occur early in pregnancy, before a woman knows she is pregnant. (Healthy People 2010) Tobacco, alcohol, and drug use can adversely affect pregnancy. Assessing substance abuse is a critical part of each prenatal care visit. Specific questions should be asked using a screening tool. Health care professionals have the basic skills to identify and refer women for treatment. (Gabbe et al.) Several tools are available. Information on screening for substance abuse can be found in "Screening for Substance Abuse During Pregnancy: Improving Care, Improving Health", website [www.nccmch.org/pubs/PDFs/SubAbuse.pdf](http://www.nccmch.org/pubs/PDFs/SubAbuse.pdf).

The National Institute on Drug Abuse (NIDA) response to how a pregnant woman's abuse of drugs affects the fetus: "Many substances including alcohol, nicotine, and drugs of abuse can have negative effects on the developing fetus because they are transferred to the fetus across the placenta. For example, nicotine has been connected with premature birth and low birth weight as has the use of cocaine. Scientific studies have shown that babies born to marijuana users were shorter, weighed less, and had smaller head sizes than those born to mothers who did not use the drug. Smaller babies are more likely to develop health problems." (NIDA)

"Whether a baby's health problems, if caused by a drug, will continue as the child grows, is not always known. Research does show that children born to mothers who used marijuana regularly during pregnancy may have trouble concentrating, even when older. Our research continues to produce insights on the negative effects of drug use on the fetus." (NIDA)

Alcohol use in pregnancy is associated with fetal alcohol syndrome. This congenital syndrome is characterized by three findings: growth retardation, facial abnormalities, and central nervous system dysfunctions. Skeletal abnormalities and structural cardiac defects are also seen in the fetal alcohol syndrome, but it is the performance deficits that are most obvious. Decreased IQ, fine motor dysfunction, and hyperactivity are all common findings. (ACOG, 1994)

Cocaine use in pregnancy poses maternal as well as fetal hazards. Some of these stem from the intense vasoconstriction associated with cocaine (malignant hypertension, cardiac arrhythmias, and cerebral infarction). Cocaine has been associated with premature rupture of membranes, preterm labor and delivery, growth retardation, cognitive development delays, and placental abruption. There are also documented cases of in utero fetal cerebral infarction. (MacGregor, 1987)

Opiate addiction during pregnancy also poses serious risk to the mother as well as the fetus. Newborn infants of narcotic-addicted mothers are at risk for several complications, including the potentially fatal narcotic withdrawal syndrome. Withdrawal syndromes may appear 24 hours after birth, but may be delayed as long as 10 days after birth. (Levy, 1993)

### **Resources:**

March of Dimes, Virginia Chapter  
[VA474@marchofdimes.com](mailto:VA474@marchofdimes.com)

Substance Abuse and Addiction Recovery Alliance  
[www.saara.org](http://www.saara.org)

PERINATAL GUIDELINES AND RESOURCES

U.S. Department of Health and Human Services  
Center for Substance Abuse Prevention  
[www.samhsa.gov](http://www.samhsa.gov)

Virginia Department of Mental Health, Retardation and Substance Abuse Services  
[www.dmhmrzas.state.va.us](http://www.dmhmrzas.state.va.us)

# **APPENDIX D**

## **Perinatal Depression**

## Perinatal Depression

Depression and anxiety affect more women than men, according to the 1998 Behavioral Risk Factor Surveillance Survey. Women of childbearing ages and low-income ethno racial minority groups are more likely to experience depression. (Obstetrics & Gynecology 97/6) Depressive periods during pregnancy place women at risk for postpartum depression. (Obstetrics & Gynecology 97/6) The consequences of untreated depression during pregnancy are great. The impact on the developing fetus is unknown, but is of increasing concern. Depression is a serious disorder that even in its milder forms results in significant social morbidity among women. Depression during a pregnancy can result in increased risks of maladaptive social, emotional, and cognitive development in children. A depressive disorder is defined as an illness that involves the body, mood and thoughts. It affects the way a person eats and sleeps, the way one feels about oneself and the way one thinks about things.

Of the women that experience depression during their lives, about 10% of these women experience postpartum depression. (Maternal and Child Health Bureau, Women's Health USA 2002) Poor maternal and poor fetal outcomes can be attributed to postpartum depression. Adverse outcomes such as low birth weight, gestational hypertension, adverse health behavior (i.e. Smoking) can be associated with postpartum depression. (Obstetrics & Gynecology 97/6)

Postpartum depression is common, serious and treatable. Screening for signs of postpartum depression during routine office visits can increase its recognition, and lead to early diagnosis and treatment.

The American College of Obstetricians and Gynecologists definitions (ACOG News Release, For Release: January 2002):

***Baby blues** are very common and affect about 70-85% of new moms. The baby blues, also known as postpartum blues, usually starts within three days of giving birth and can last up to 14 days. They typically go away on their own without treatment and rarely require more than a few days of rest and support.*

***Postpartum depression** is more intense and must be present for more than 2 weeks to distinguish it from the "baby blues." About 10% of new mothers suffer from postpartum depression (PPD) in the first year after giving birth. It can occur after a woman delivers, but usually begins two to three weeks after giving birth. PPD can last for months – up to a year and a half, or longer, if untreated. PPD often requires counseling and treatment.*

***Postpartum psychosis** affect only about 1 in 1,000 women and most often occurs during the first four weeks after delivery. Patients with postpartum psychosis (PPP) are severely impaired and may have paranoia, mood shifts, or hallucinations which often command the patient to hurt herself or others. This condition requires immediate medical attention, and usually hospitalization.*

Predisposing factors. (ACOG News Release, For Release: January 2002)

Highest risk for PPD is a personal or family history of depression or mental illness. Other factors: an unwanted pregnancy; a complicated or difficult labor; a fetal anomaly; lack of social support (has no one to rely on for assistance or share thoughts and feelings); with a temporary by serious stressful life events (recent move, death of a loved one, job change). Women who have experienced PPD following the birth of a child may suffer from depression following a subsequent delivery. The recurrence of PPD is about one in three, or to one in four, in women with a history of PPD. What causes PPD is not clear. Research leads us to believe that PPD may be triggered by the hormonal shifts that occur after delivery. Also, the stress of life's upheavals exacerbates PPD.

### Causes of PPD

Many factors have commonly occurred among women diagnosed with PPD such as: marriage problems; lack of social support; problems with the infant, pregnancy and delivery; prior history of depression and emotional problems. (Hagen, E H, 1999) If the thyroid does not function normally after delivery, the woman may develop a postpartum mood disorder. (Obstetrics, 4<sup>th</sup> edition, pg. 717)

### Warning signs (ACOG News Release, For Release: January 2002)

Symptoms include deep sadness, irritability, apathy, intense anxiety, lack of appetite, inability to sleep, crying spells, irrational behavior, highly impaired concentration, impaired decision-making, feeling of being overwhelmed, unable to cope with daily tasks, and feelings of guilt about not being a good mother.

### Screening for PPD

An open discussion with women about feelings, social support, and pregnancy can initiate an assessment of women's beliefs about depression. Knowing the predisposing factors, and the risk of recurrence, allows screening to be tailored to the individual's case. The nurse can use a depression screening tool to identify the significance of the mood disorder and the risk of depression. This information will help the nurse develop a plan of care and arrange support for the woman. Early identification of women with the signs and symptoms, with offering supportive care and reassurance is the first line of treatment. (Obstetrics, 4<sup>th</sup> edition, pg. 717)

PPD can occur anytime during the first 12 months after delivery, or the first 3 months postpartum. At a minimum PPD can last 4 to 8 weeks. ACOG recommends physicians use the Edinburgh Postnatal Depression scale. A score of 12 or greater indicates a greater risk for depression. (Obstetrics, 4<sup>th</sup> edition, pg. 719) The Beck Depression Inventory is also a well-known self-reporting tool that assesses the intensity of depressive symptomatology. The Virginia Healthy Start Program and the Resource Mothers Program will be using a screening tool to identify women during pregnancy and during the postpartum period.

### Referrals for PPD

Referrals and treatment will occur based on the intensity and severity of symptoms of the women assessed as having symptoms of depression. Referral options will depend on available resources/services and level of medical insurance or covered benefits: Local Community Service Board, Medical Treatment Facilities, Primary Care Provider, Managed Care Organization. Discuss assessment (i.e., screening score, symptoms) with the health care provider and plans to address the need to receive treatment and follow up. Screening for PPD may be associated with an increase in the identification, referrals, diagnosis, and treatment of PPD. (The Journal of Family Practice, 50/2)

### Resources:

ACOG - - <http://www.acog.com/>

AWHONN - - <http://www.awhonn.org>

Maternal and Child Health Bureau - - <http://mchb.hrsa.gov/>

Post-partum Depression - - <http://www.post-partum-depression.com>

Family Mental Health Foundation - - <http://fmhf.org/About.html>

# **APPENDIX E**

## **Rh D Hemolytic Disease**

PERINATAL GUIDELINES AND RESOURCES

## **Rh D Hemolytic Disease**

Rh D hemolytic disease of the newborn is a condition that arises because of an incompatibility between a mother's blood and that of her fetus.

The majority of the human population has Rh+ blood, meaning they produce an inherited protein on the surface of their red blood cells. This protein is known as the D antigen. Approximately 15% of Caucasians, and 7% of African Americans lack this protein and so are considered Rh negative. If an Rh negative woman and an Rh positive man conceive a baby who inherits the man's Rh+ blood, there is a danger during the pregnancy, and especially during labor and delivery, that some of the baby's blood will enter the mother's bloodstream via the placenta. This induces an immune response in the woman against the baby's blood. The woman will produce antibodies which will fight against the baby's Rh+ blood, leading to the destruction of the baby's red blood cells. If enough red blood cells are destroyed, this will lead to hemolytic anemia and possibly severe consequences to the fetus. When these red blood cells are hemolyzed quickly, the fetus may develop jaundice, edema (hydrops), brain damage, and heart failure.

### **Administration of Anti-D Immune Globulin (RhoGAM)**

The administration of anti-D immune globulin (RhoGAM) to Rh D negative women is needed to prevent Rh D sensitization. Before the advent of RhoGAM, this sensitization caused severe hemolytic disease in the fetus and newborn and was a major cause of perinatal morbidity and mortality.

Isoimmunization to the D antigen occurs most of the time at delivery from fetomaternal hemorrhage. About 10% of the cases result from spontaneous antenatal fetomaternal hemorrhage, usually in the third trimester. External cephalic version, whether successful or not, can cause this hemorrhage as well. Some events during the first and second trimesters have also been known to cause isoimmunization. These events can be any of the following: therapeutic or spontaneous abortions, ectopic pregnancies, threatened abortions, and clinical procedures such as chorionic villi sampling, amniocentesis, and cordocentesis.

Anti-D immune globulin is collected from volunteer donors who have high titers of circulating anti-D antibodies. The donated plasma is pooled and fractionated by drug manufacturers. Since the manufacture of RhoGAM is dependent upon blood donors, the supply can sometimes be limited. For this reason, recommendations for the administration of RhoGAM have been established that more than 90% of the time will prevent isoimmunization.

For the Rh D negative woman who has not been sensitized, the recommendations are to give RhoGAM at the following times:

- At approximately 28 weeks gestation (unless the father of the baby is known to be Rh negative as well). Draw an antibody screen first before administering the RhoGAM, as women can become sensitized prior to 28 wks. gestation.
- Within 72 hours of delivery
- After a first trimester pregnancy loss (e.g. therapeutic or spontaneous ab, ectopic, etc.)
- After invasive procedures such as CVS (chorionic villi sampling) and amniocentesis

The clinician may also consider giving RhoGAM in the following circumstances:

- Threatened abortion
- Second or third trimester antenatal bleeding
- External cephalic version
- Abdominal trauma

If a woman who is Rh negative presents for prenatal care late in pregnancy (after 28 wks.), she should still be given RhoGAM. If delivery occurs within three weeks of giving the anti-D immune globulin, the postnatal dose may be withheld unless excessive fetomaternal hemorrhage has occurred.

If somehow an Rh D negative woman is discharged from the hospital without receiving anti-D immune globulin, she may still benefit at least partially if she gets the RhoGAM as late as 28 days postpartum. Check with the clinician first if this situation arises.

## **Interpreting the Lab Results**

All pregnant women need blood typing for the blood group and Rh factor. In addition, the blood is tested for antibodies to foreign antigens. These foreign antigens can get into the mother's blood from past blood transfusions or from blood group factors that the fetus has inherited from the father. Any situation where fetal-maternal bleeding occurs can potentially transfer these foreign antigens to the mother and stimulate the production of antibodies.

Rh D negative women who are sensitized will need serial blood tests to titer the number of circulating antibodies. You may need to submit more blood for this titer to be done. The past pregnancy history of a sensitized woman is also important as this may predict the prognosis of the pregnancy. The severity of hemolytic disease will usually be at least equal to or greater than the prior pregnancy. Regardless of the history, though, all pregnant women need blood group and Rh factor testing, plus screening for atypical antibodies at the first prenatal visit.

Other blood incompatibilities can exist, such as an ABO incompatibility; however, this is not usually a serious cause of anemia in the newborn. About 20% of all infants have an ABO incompatibility with only about 5% being clinically affected. Fortunately, this causes only mild hemolytic anemia seen as jaundice or anemia of the newborn and is usually treated with phototherapy.

Other atypical antibodies can also be present in the mother's blood even with Rh+ women. Some of these can cause severe hemolytic anemia while others are insignificant. Contact the blood bank for more information on these antibodies.

Sometimes a report will return with blood typed as Rh negative but Du positive. Once, this was thought to be a variant of the D antigen. Currently, this designation is considered to be a "weak D positive" and therefore Rh+. No RhoGAM should be given to these women. Some centers do not test for this Du antigen and women may inadvertently receive RhoGAM. Antibodies induced from this administration may take up to 12 weeks to dissipate. In the rare instance when a woman arrives for delivery where her Rh status is negative or unknown and the postpartum screen reveals a Du positive result, RhoGAM should be given and the possibility of fetomaternal hemorrhage should be investigated by other tests.

**Resources:**

ACOG Practice Bulletin, May 1999, Number 4, "Prevention of Rh D Alloimmunization".

ACOG Educational Bulletin, August 1996, Number 227, "Management of Isoimmunization in Pregnancy".

March of Dimes Public Health Education Information Sheet, 1994, "Genetic Series: Rh Disease".

Leveno, J. and Cunningham, F. et. al., Williams Manual of Obstetrics, 21<sup>st</sup> Edition, Chapter 38, pgs. 268-274.

# **APPENDIX F**

## **Sexually Transmitted Diseases**

**SEXUALLY TRANSMITTED DISEASES  
TREATMENT GUIDELINES 2002  
MMWR MAY 10, 2002/51 (RR06);1-80**

**PREGNANT WOMEN**

Intrauterine or perinatally transmitted STDs can have severely debilitating effects on pregnant women, their partners, and their fetuses. All pregnant women and their sex partners should be asked about STDs, counseled about the possibility of perinatal infections, and ensured access to treatment, if needed.

**Recommended Screening Tests**

- All pregnant women should be offered voluntary HIV testing at the first prenatal visit. Reasons for refusal of testing should be explored, and testing should be reoffered to pregnant women who initially declined testing. Retesting in the third trimester (preferably before 36 weeks' gestation) is recommended for women at high risk for acquiring HIV infection (i.e., women who use illicit drugs, have STDs during pregnancy, have multiple sex partners during pregnancy, or have HIV-infected partners). In addition, women who have not received prenatal counseling should be encouraged to be tested for HIV infection at delivery.
- A serologic test for syphilis should be performed on all pregnant women at the first prenatal visit. In populations in which use of prenatal care is not optimal, rapid plasma reagin (RPR)-card test screening (and treatment, if that test is reactive) should be performed at the time a pregnancy is confirmed. Patients who are at high risk for syphilis, are living in areas of excess syphilis morbidity, are previously untested, or have positive serology in the first trimester should be screened again early in the third trimester (28 weeks' gestation) and at delivery. Some states require all women to be screened at delivery. Infants should not be discharged from the hospital unless the syphilis serologic status of the mother has been determined at least one time during pregnancy and preferably again at delivery. Any woman who delivers a stillborn infant should be tested for syphilis.
- A serologic test for hepatitis B surface antigen (HBsAg) should be performed on all pregnant women at the first prenatal visit. HBsAg testing should be repeated late in pregnancy for women who are HBsAg negative but who are at high risk for HBV infection (e.g., injection-drug users and women who have concomitant STDs).
- A test for *Chlamydia trachomatis* should be performed at the first prenatal visit. Women aged <25 years and those at increased risk for chlamydia (i.e., women who have a new or more than one sex partner) also should be tested during the third trimester to prevent maternal postnatal complications and chlamydial

- infection in the infant. Screening during the first trimester might enable prevention of adverse effects of chlamydia during pregnancy. However, evidence for preventing adverse effects during pregnancy is lacking. If screening is performed only during the first trimester, a longer period exists for acquiring infection before delivery.
- A test for *Neisseria gonorrhoeae* should be performed at the first prenatal visit for women at risk or for women living in an area in which the prevalence of *N. gonorrhoeae* is high. A repeat test should be performed during the third trimester for those at continued risk.
  - A test for hepatitis C antibodies (anti-HCV) should be performed at the first prenatal visit for pregnant women at high risk for exposure. Women at high risk include those with a history of injection-drug use, repeated exposure to blood products, prior blood transfusion, or organ transplants.
  - Evaluation for bacterial vaginosis (BV) may be conducted at the first prenatal visit for asymptomatic patients who are at high risk for preterm labor (e.g., those who have a history of a previous preterm delivery). Current evidence does not support routine testing for BV.
  - A Papanicolaou (Pap) smear should be obtained at the first prenatal visit if none has been documented during the preceding year.

### Other Concerns

Other STD-related concerns are as follows.

- HBsAg-positive women should be reported to the local and/or state health department to ensure that they are entered into a case-management system and that appropriate prophylaxis is provided for their infants. In addition, household and sex contacts of HBsAg-positive women should be vaccinated.
- No treatment is available for anti-HCV-positive pregnant women. However, all women found to be anti-HCV-positive should receive appropriate counseling. No vaccine is available to prevent HCV transmission.
- In the absence of lesions during the third trimester, routine serial cultures for HSV are not indicated for women who have a history of recurrent genital herpes. Prophylactic cesarean section is not indicated for women who do not have active genital lesions at the time of delivery.
- The presence of genital warts is not an indication for cesarean section.
- Not enough evidence exists to recommend routine screening for *Trichomonas vaginalis* in asymptomatic pregnant women.

For a more detailed discussion of these guidelines, as well as infections not transmitted sexually, refer to the following references: *Guide to Clinical Preventive Services*,

*Guidelines for Perinatal Care American College of Obstetricians and Gynecologists (ACOG) Educational Bulletin: Antimicrobial Therapy for Obstetric Patients , ACOG Committee Opinion: Primary and Preventive Care: Periodic Assessments, Recommendations for the Prevention and Management of Chlamydia trachomatis Infections, Hepatitis B Virus: A Comprehensive Strategy for Eliminating Transmission in the United States through Universal Childhood Vaccination --- Recommendations of the Immunization Practices Advisory Committee (ACIP), Mother-to-infant transmission of hepatitis C virus, Hepatitis C: Screening in pregnancy, American College of Obstetricians and Gynecologists (ACOG) Educational Bulletin: Viral hepatitis in pregnancy , Human Immunodeficiency Virus Screening: Joint statement of the AAP and ACOG , Preventing Perinatal Transmission of HIV and the Revised Public Health Service Recommendations for HIV Screening of Pregnant Women.*

These sources are not entirely consistent in their recommendations. The *Guide to Clinical Preventive Services* recommends screening of patients at high risk for chlamydia, but indicates that the optimal timing for screening is uncertain. The *Guidelines for Perinatal Care* recommend that pregnant women at high risk for chlamydia be screened for infection during the first prenatal-care visit and during the third trimester.

Recommendations to screen pregnant women for STDs are based on disease severity and sequelae, prevalence in the population, costs, medicolegal considerations (e.g., state laws), and other factors. The screening recommendations in this report are more extensive (i.e., if followed, more women will be screened

for more STDs than would be screened by following other recommendations) and are compatible with other CDC guidelines.

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# **APPENDIX G**

## **American Society for Colposcopy and Cervical Pathology Algorithms**

## ***Definitions of Terms Utilized in the Consensus Guidelines***

***Colposcopy*** is the examination of the cervix, vagina, and, in some instances the vulva, with the colposcope after the application of a 3-5% acetic acid solution coupled with obtaining colposcopically-directed biopsies of all lesions suspected of representing neoplasia.

***Endocervical sampling*** includes obtaining a specimen for either histological evaluation using an endocervical curette or a cytobrush or for cytological evaluation using a cytobrush.

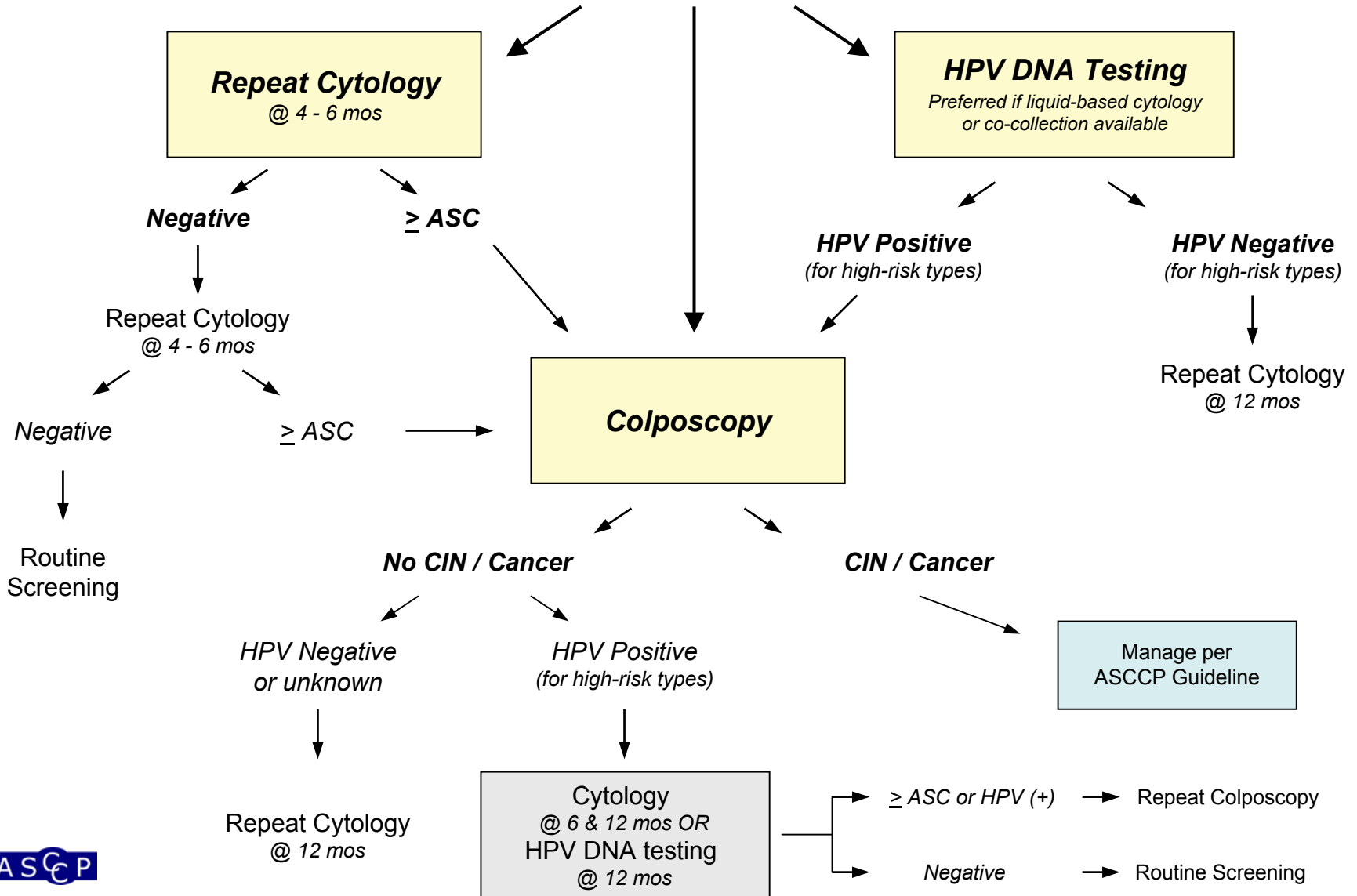
***Endocervical assessment*** is the process of evaluating the endocervical canal for the presence of neoplasia using either a colposcope or endocervical sampling.

***Diagnostic excisional procedure*** is the process of obtaining a specimen from the transformation zone and endocervical canal for histological evaluation and includes laser conization, cold-knife conization, loop electrosurgical excision (i.e., LEEP), and loop electrosurgical conization.

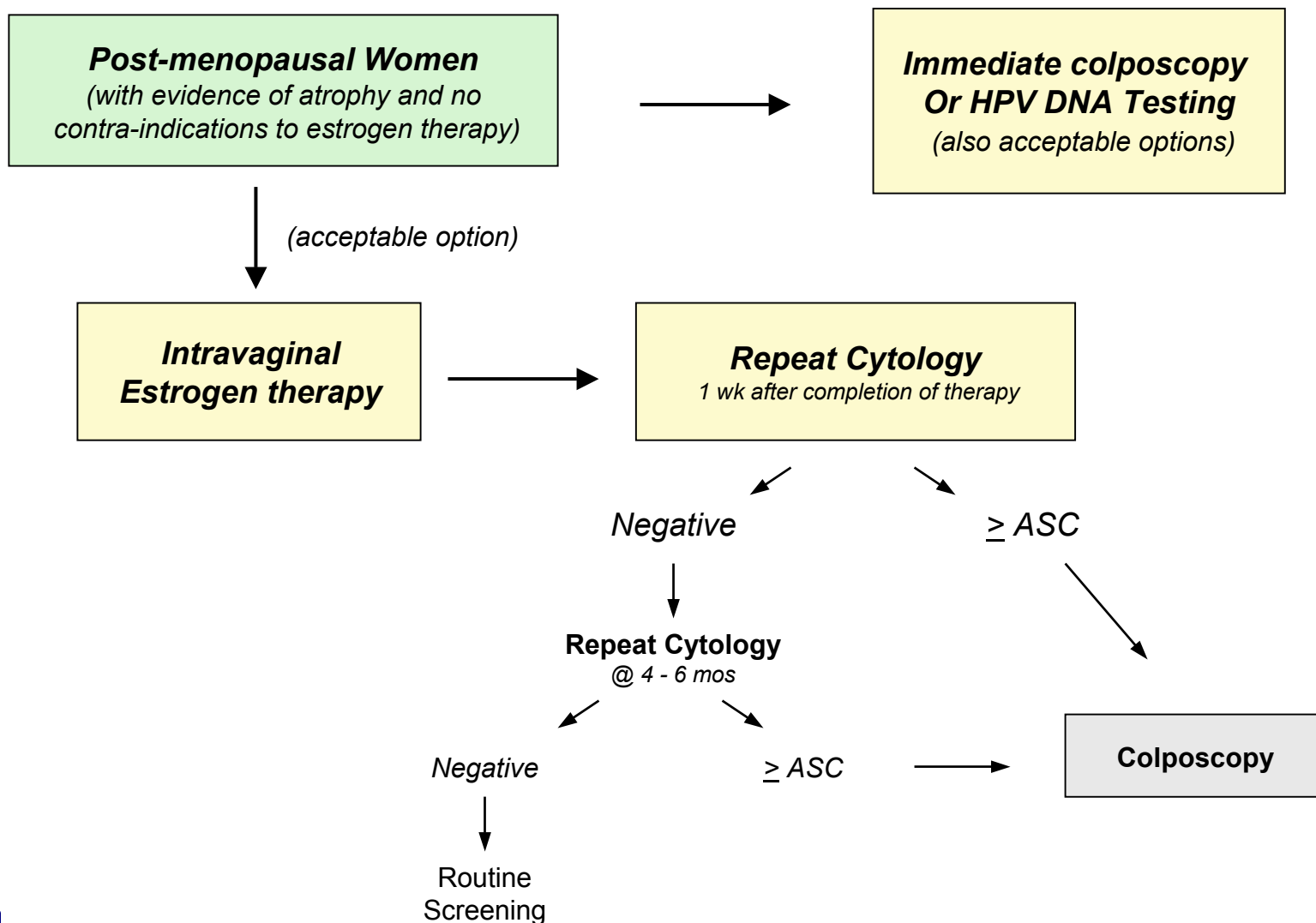
***Satisfactory colposcopy*** indicates that the entire squamocolumnar junction and the margin of any visible lesion can be visualized with the colposcope.

***Endometrial sampling*** includes obtaining a specimen for histological evaluation using an endometrial biopsy or a “dilatation and curettage” or hysteroscopy.

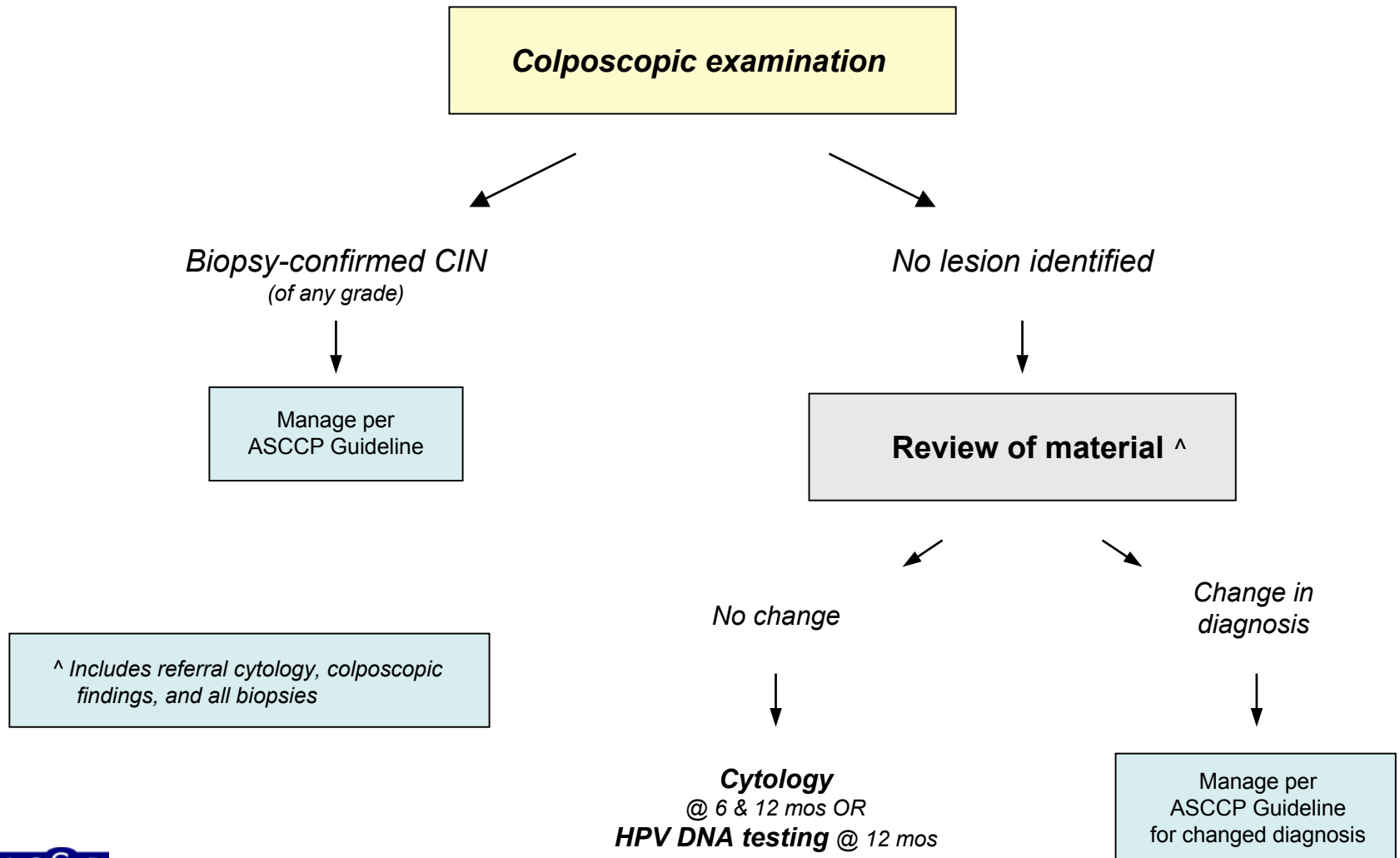
# Management of Women with Atypical Squamous Cells of Undetermined Significance (ASC-US)



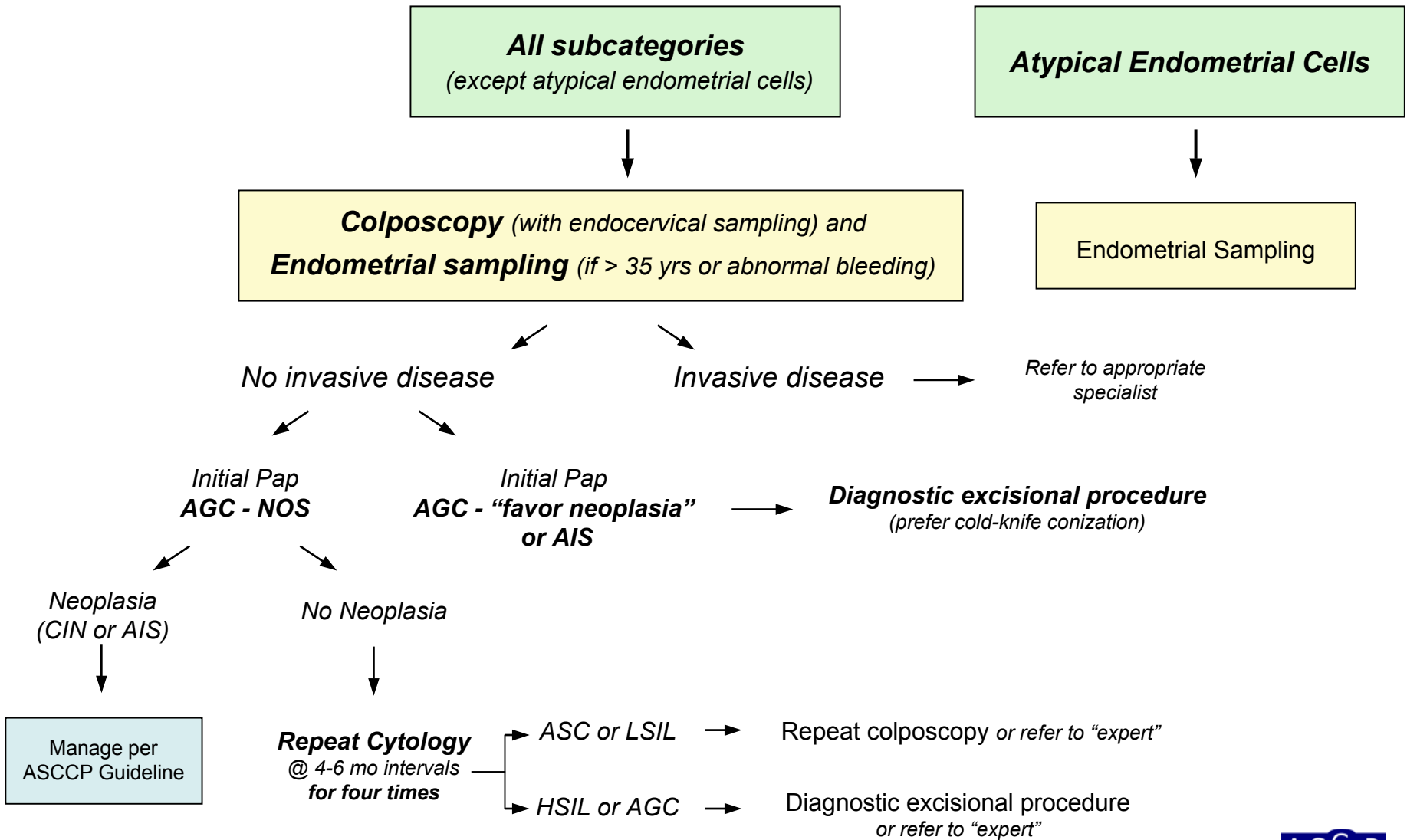
# Management of Women with Atypical Squamous Cells of Undetermined Significance (ASC-US) In Special Circumstances



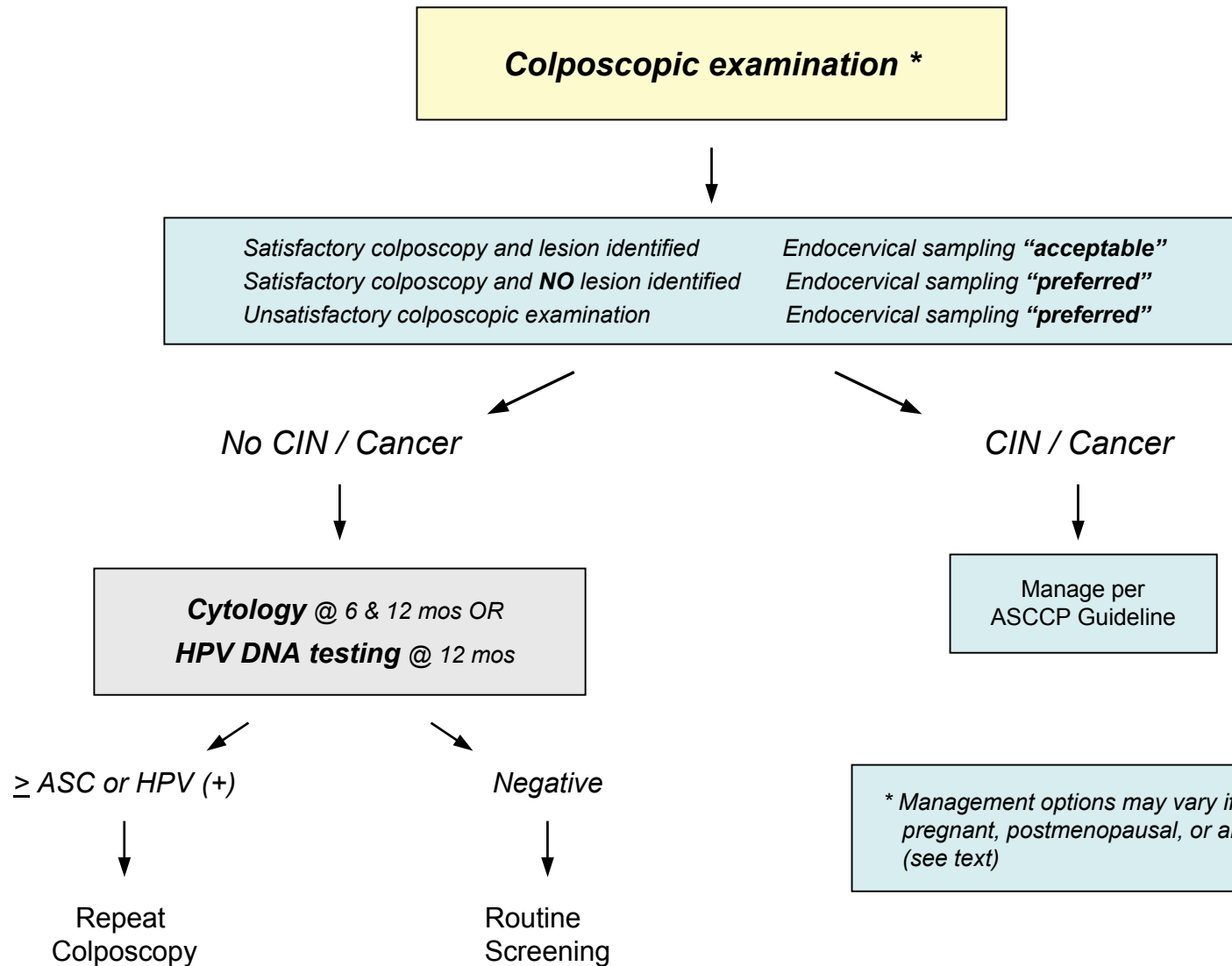
# Management of Women with Atypical Squamous Cells: Cannot Exclude High-grade SIL (ASC - H)



# Management of Women with Atypical Glandular Cells (AGC)

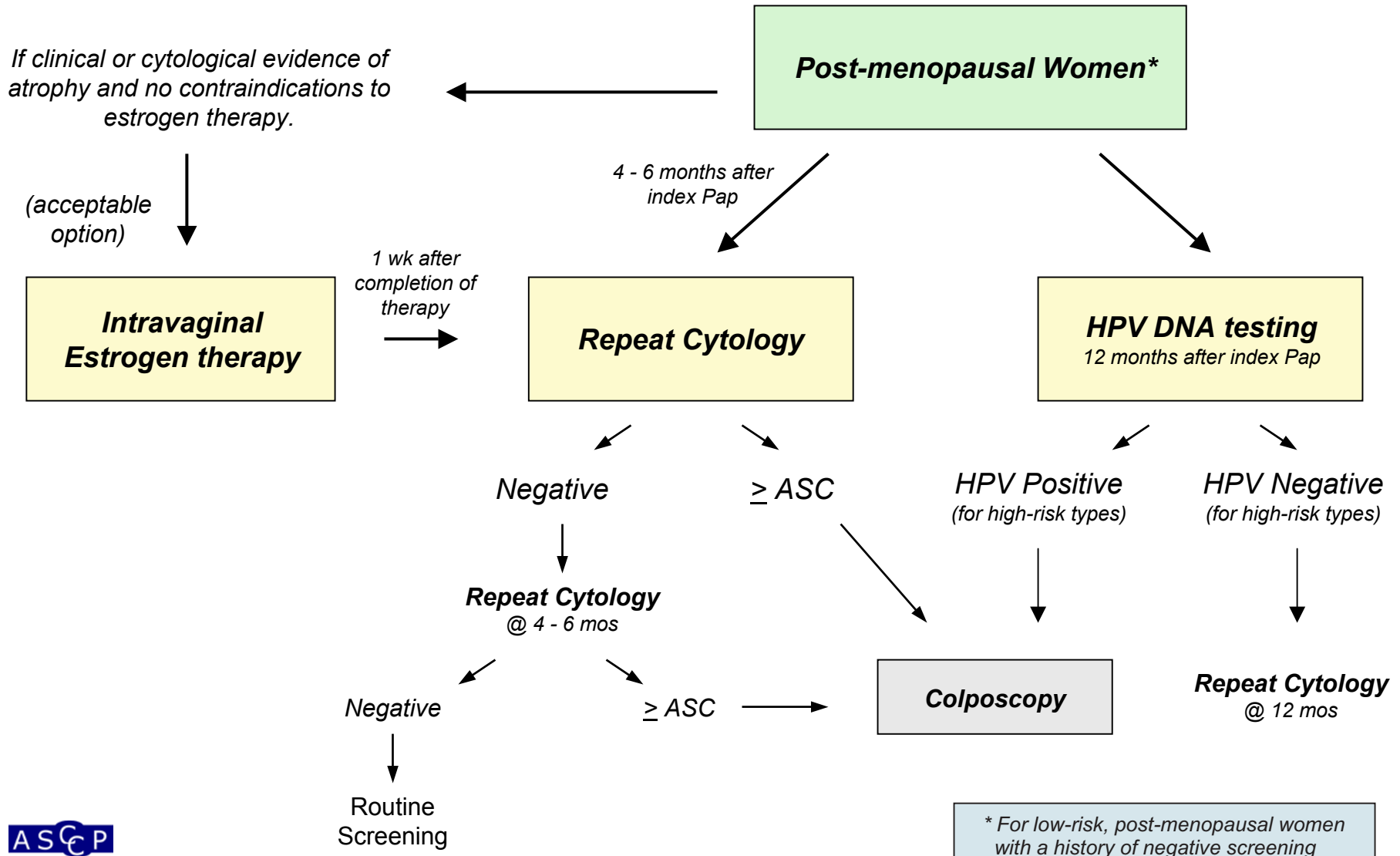


# Management of Women with Low-grade Squamous Intraepithelial Lesions (LSIL) \*



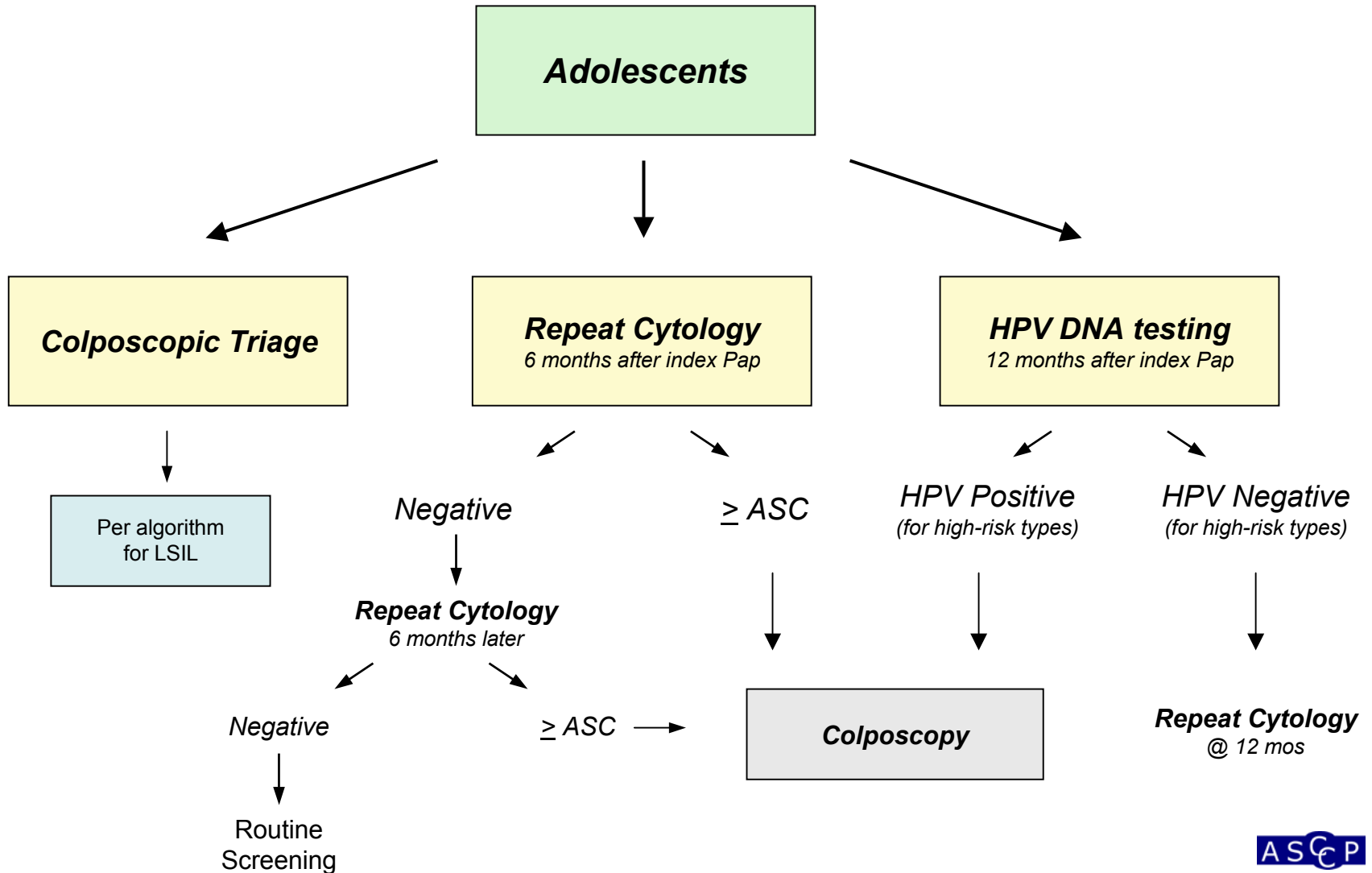
\* Management options may vary if the woman is pregnant, postmenopausal, or an adolescent - (see text)

# Management of Women with Low-grade Squamous Intraepithelial Lesions In Special Circumstances

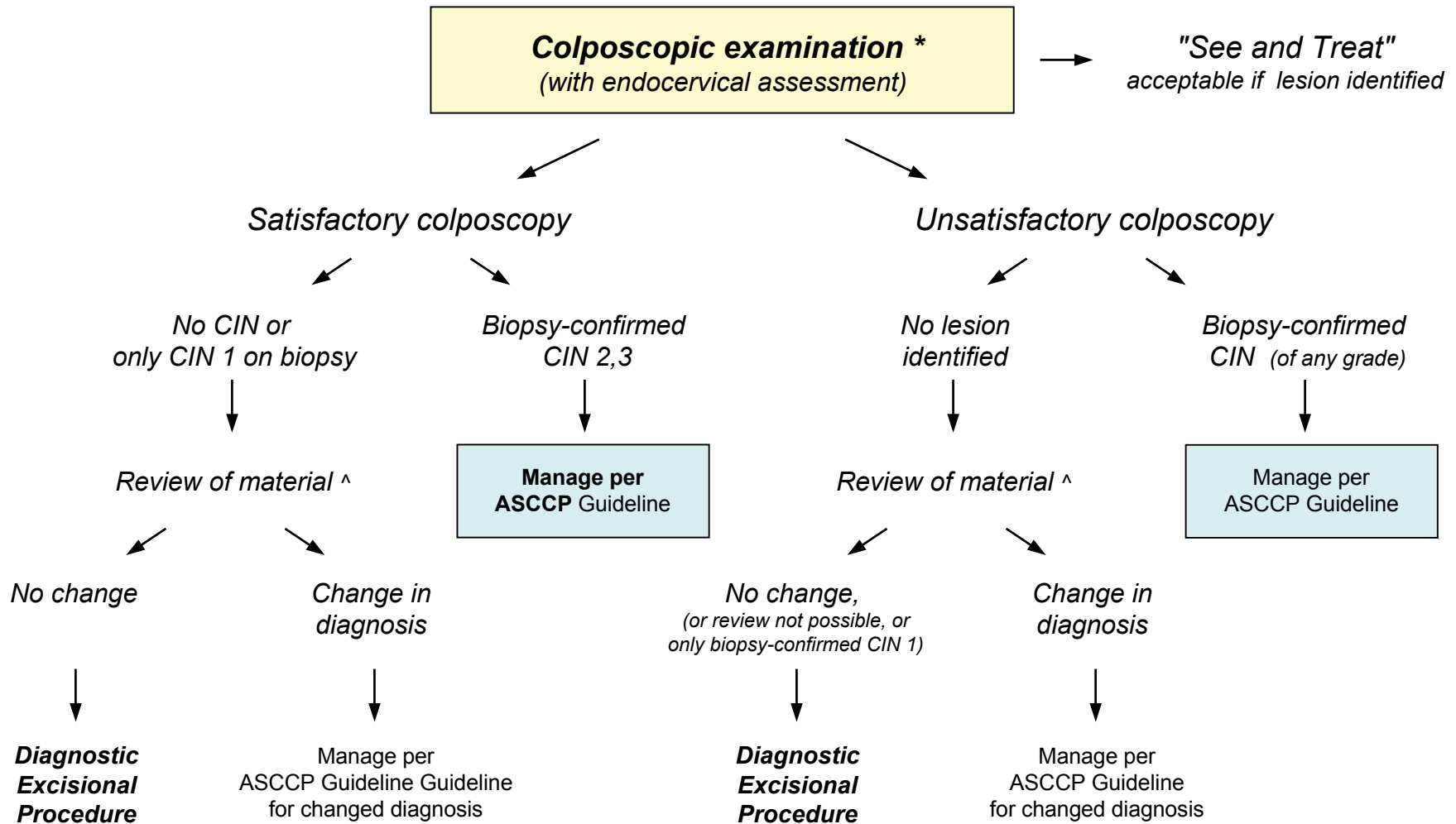


\* For low-risk, post-menopausal women with a history of negative screening

# Management of Women with Low-grade Squamous Intraepithelial Lesions In Special Circumstances



# Management of Women with High-grade Squamous Intraepithelial Lesions (HSIL) \*



^ Includes referral cytology, colposcopic findings, and all biopsies

\* Management options may vary if the woman is pregnant, postmenopausal, or an adolescent

## **APPENDIX H**

- Human Immunodeficiency Virus (HIV)**
- Virginia Legal Requirements**

## **PREVENTION OF PERINATAL TRANSMISSION THROUGH PRENATAL TESTING AND MANAGEMENT OF HIV+ PREGNANT WOMEN**

### **INTRODUCTION:**

In 1994, after the announcement of the results of the PACTG protocol 076, the Public Health Service (PHS) published guidelines for using zidovudine to reduce Perinatal HIV transmission. In 1998, the Institute of Medicine (IOM) also recommended universal counseling and voluntary HIV testing of all pregnant women and treatment of those infected, given the effective interventions available to treat HIV-infected women and reduce risk for perinatal HIV transmission. With implementation of these recommendations by the PHS, there was a subsequent steep decline in perinatal HIV transmission. Despite this progress, children are still being infected perinatally, largely because of missed opportunities for prevention. These continued infections underscore the need for improved strategies to ensure that all pregnant women are offered HIV testing and, if positive, treatment to reduce their transmission risk and to safeguard their health and the health of their infants.

Most women with HIV/AIDS in the United States reside in the Northeast and the South. African-American and Hispanic women are disproportionately affected. In addition, the proportion of cases from heterosexual contact has increased, particularly among young women. This means that women seen in VDH Prenatal Clinics are at somewhat higher risk of possible HIV infection than in other areas of the country.

### **BACKGROUND INFORMATION:**

Perinatal transmission can occur during pregnancy (intrauterine), during labor and delivery (intrapartum), or after delivery through breast-feeding (postpartum). An opportunity is missed whenever a woman of childbearing age is unaware of her HIV status or her risk for HIV, or when an HIV-infected pregnant woman: does not receive prenatal care, is not offered HIV testing, is unable to obtain HIV testing, is not offered chemoprophylaxis, is unable to obtain chemoprophylaxis, or does not complete the chemoprophylaxis regimen. Prevention of vertical transmission involves interventions on many fronts, including: early prenatal care, offer and acceptance of HIV testing, receipt of chemoprophylaxis, abbreviated antiretroviral regimens, cesarean delivery, follow-up of infants, and refraining from breast-feeding.

Cesarean delivery performed before onset of labor and membrane rupture lowers the risk for HIV transmission compared with vaginal delivery in certain populations of women. In 1999 and 2000, the American College of Obstetricians and Gynecologists (ACOG) recommended offering scheduled cesarean delivery at 38 weeks gestation to reduce the risk for vertical transmission of HIV infection.

**TESTING GUIDELINES for Health Department Clinics:**

1. HIV testing should be considered a routine part of prenatal care, and all pregnant women should be tested. Providers should recommend testing (not just passively offer it) and point out the substantial benefits of knowledge of HIV status for the health of women and their infants.
2. The testing process (consent, logistics, scheduling, etc.) should be simplified as much as possible so that pretest counseling is not a barrier to testing. Testing through Division of Consolidated Laboratory Services and procedures as recommended by VDH should be followed. When the pretest process is simplified to providing only essential information, the value of prevention counseling should not be lost. For some women, the prenatal care period could be an ideal opportunity for HIV prevention and subsequent behavior change to reduce risk for acquiring HIV infection later in life.
3. Testing should be done as early in pregnancy as possible in consenting women to promote informed and timely therapeutic decisions. Retesting in the third trimester (preferably before 36 weeks gestation) is recommended for women at high risk for acquiring HIV (e.g. those with history of STDs, who exchange sex for money or drugs, who have multiple sex partners during pregnancy, who use illicit drugs, who have HIV positive partners, or who have signs of seroconversion), but is not generally necessary for the majority of the population.
4. Informed consent before HIV testing is essential. The consent process should be flexible enough to allow for various types of informed consent. Information can be presented orally or in writing and should use language the client understands. Documentation of informed consent should be in writing.
5. HIV testing should be voluntary and free of coercion. Prenatal clinics should maintain a voluntary approach to testing that preserves a woman's right to make decisions regarding testing and supports her right to refuse testing if she does not think it is in her best interest.
6. Although HIV testing is recommended, women should be allowed to refuse testing. However, since testing is so important and highly recommended, any refusal of testing should be explored and the reasons addressed (e.g. lack of awareness of risk, fear of the disease, partner violence, potential stigma, or discrimination). This effort promotes health education and builds trust, possibly allowing for consent to testing at a future date. Anonymous testing can be offered, but women should be informed of the limitations of that process (inability to provide treatment if needed without retesting).
7. Testing procedures and interpretation of test results should be based on standard testing protocols. PHS recommends initial screening with an FDA-licensed

- enzyme immunoassay (EIA) followed by confirmatory testing of repeatedly reactive EIAs with an FDA-licensed supplemental test (e.g. Western Blot). An HIV test should be considered positive only after screening and confirmatory tests are reactive.
8. HIV testing and treatment at the time of labor and delivery should be considered an option for women who are not tested during their pregnancies. Women should be informed about rapid tests for HIV that can be done at the time of delivery, and further informed that those results might be incomplete. Sensitivity and specificity of rapid assays are comparable with EIA's. However, the predictive value of a single screening test varies with the prevalence of HIV infection among the population, and thus it is more likely that the positive predictive value would be low, requiring further testing and uncertainty at the time of delivery. Again, it is better to encourage early testing rather than delaying until delivery.

#### **GUIDELINES FOR MANAGEMENT OF HIV POSITIVE WOMEN:**

1. HIV-infected pregnant women should receive HIV prevention counseling as recommended by CDC (see *Revised Guidelines for HIV Counseling, Testing, and Referral*). This counseling should include discussion of the risk for perinatal HIV transmission, ways to reduce this risk, and the prognosis for infants who become infected. Women should also be told of the clinical implications of a positive HIV antibody test and the need for early intervention services.
2. Women should be counseled regarding antiretroviral therapy during pregnancy to improve their health and prevent perinatal transmission. Pregnancy is not an adequate reason to defer therapy for HIV infection, and in fact, is generally recommended to prevent perinatal transmission.
3. Several risk factors are associated with increased risk of perinatal transmission including: immunologically or clinically advanced HIV disease in the mother, high plasma viral load, maternal injection-drug use during pregnancy, preterm delivery, failure to receive prenatal prophylaxis, and breast-feeding. HIV positive women should be counseled about these increased risks and advised to consider prophylaxis and cesarean delivery.
4. Since most Local Health Districts do not provide for direct primary care services for HIV, providers in prenatal clinics should ensure that infected women are properly referred to available specialty resources and that they initiate and adhere to recommended treatment regimens throughout their pregnancies.
5. Obstetric providers in VDH prenatal clinics should adhere to best obstetric practices, including offering scheduled cesarean section at 38 weeks to reduce the risk for perinatal transmission.
6. HIV infected women should receive information regarding all reproductive options during pregnancy and birth control methods postpartum.

7. To eliminate the risk for postnatal transmission, HIV infected women in the United States should not breast-feed. Prenatal clinic providers should reinforce this recommendation and ensure that women have adequate resources for obtaining infant formula.
8. HIV infected women should be informed of the importance of follow-up for their children, since the child's HIV status will remain uncertain until at least 18 months of age. Initial antiretroviral therapy is almost always indicated for a newborn, and in some cases, additional prophylaxis for opportunistic infections is recommended.

## **SUMMARY**

Because of recent advances in antiretroviral therapy and prevention of perinatal transmission, it is more important than ever for women to be tested for HIV as a routine part of prenatal care. This will ensure that infected women can be identified and treated for the protection of their own health and that of their baby. VDH prenatal clinics should follow the CDC recommendations for testing and counseling and incorporate them into their local policies and procedures.

## **REFERENCES :**

1. Public Health Service Task Force Recommendations for Use of antiretroviral Drugs in Pregnant HIV-1 Infected Women for Maternal Health and Interventions to Reduce Perinatal HIV-1 Transmission in the United States. HIV/AIDS Treatment Information Service (ATIS) website at <<http://www.hivatis.org>>. Accessed August 30, 2002.
2. CDC, Revised Recommendations for HIV Screening of Pregnant Women, MMWR 2001; 50 (No. RR-19): 63-81.
3. CDC website: [www.cdc.gov/](http://www.cdc.gov/)

## **HIV AND PREGNANCY UPDATE ID CLINIC TREATMENT UPDATE: HIV AND PREGNANCY**

Start HIV meds 2<sup>nd</sup> trimester, but continue meds if patient is taking them prior to pregnancy. Standard care is to use 3 drugs.

Have not found any bad effects in babies born to mothers who took HIV meds during the pregnancy. AZT has been the most studied drug with HIV and pregnancy. No problems found in children so far, 4-6 years out.

Sustiva is contraindicated in pregnancy; has caused anencephaly in monkeys. If patient is taking Sustiva when she becomes pregnant, discontinue.

Combivir (AZT & 3TC) and Nelfinivir (sometimes Neviripine) most often used in pregnancy. Meds cause nausea, diarrhea, fatigue, and anemia. If the MCV and MCH value are high, but the Hgb is low, on a Heme-18, the anemia is probably related to AZT. Diarrhea is common with Nelfinivir; may use Imodium.

D14 and DDI can cause a HELLP-like syndrome, with lactic acidosis and liver toxicity, and are not used in pregnancy.

Labs to expect in pregnancy include: liver enzymes q trimester, either by Comprehensive Metabolic panel or Hepatic panel, HIV Viral Load, CD4/CD8, and Heme 18.

The pregnant woman will receive IV AZT during labor and delivery. Babies receive AZT PO for 6 weeks after delivery.

HIV Genotype is done if suspect resistance to meds.

PPROM, >4 hours, increases risk of transmission of virus to fetus.

Offer flu vaccine to all pregnant, HIV-positive patients. The vaccine may temporarily increase the Viral Load. These patients should also receive the Hepatitis vaccine to protect the liver, due to many meds.

Screen all patients for Hepatitis C, and do a Hepatitis B Convalescent panel.

If CD4 count is <2000, patient needs to be on Bactrim to prevent pneumocystis carinii pneumonia. If CD4 count is <100, should be on Azithromycin, also.

Orasure is available, and is rapid testing for HIV. This is an oral swab, and is useful in labor, so that AZT can be given if positive.

60% of women who deliver become non-adherent to medicine regimen.

PERINATAL GUIDELINES AND RESOURCES

Contact: Denese Goehle, PNP, VCU Medical Center, Infectious Disease Clinic, 804-828-3533 Email: [dcgoehle@vcu.edu](mailto:dcgoehle@vcu.edu)

10/8/03

## **Pre- and Post test H.I.V. Counseling for Pregnant Women by Prenatal Care Providers (1995)**

### **§ 54.1-2403.01. Routine component of prenatal care.**

As a routine component of prenatal care, every practitioner licensed pursuant to this subtitle who renders prenatal care, regardless of the site of such practice, shall advise every pregnant woman who is his patient of the value of testing for Human Immunodeficiency Viruses (HIV) infection and shall request of each such pregnant woman consent to such testing. The confidentiality provisions of § [32.1-36.1](#), the informed consent stipulations, test result disclosure conditions, and appropriate counseling requirements of § [32.1-37.2](#) shall apply to any HIV testing conducted pursuant to this section. Practitioners shall counsel all pregnant women with HIV-positive test results about the dangers to the fetus and the advisability of receiving treatment in accordance with the then current Centers for Disease Control recommendations for HIV-positive pregnant women. Any pregnant woman shall have the right to refuse consent to testing for HIV infection and any recommended treatment. Documentation of such refusal shall be maintained in the patient's medical record.

(1995, c. 309.)

# **APPENDIX I**

## **Hemoglobinopathy Screening and Follow-Up**

## Sickle Cell Testing: Hemoglobinopathy Screening and Follow-up

The hemoglobinopathies are genetic disorders that affect the production and function of hemoglobin molecules. These disorders include sickle cell disease and trait, hemoglobin C, E and other rare variants as well as the thalassemias. Fewer than 1000 Americans have beta thalassemia major, but sizable numbers of Italian Americans, Greek Americans, and immigrants from Southeast Asia carry the genetic trait.

### I. Incidence of Sickle Cell Disease by Ethnicity

- In the United States, sickle cell disease affects approximately 72,000 people. The vast majority of people with sickle cell disease are of sub-Saharan African descent. In the United States, this accounts for about 90% of all sickle cell disease patients.
- In the United States, the incidence of sickle cell disease is approximately:
  - 1 in every 350 African-American births
  - 1 in 58,000 Caucasians
  - 1 in every 1000 to 1400 Hispanic American births.
  - 1 in 11,500 Asians (Sickle/E Disease)
  - 1 in 2,700 Native Americans
- Approximately 2 million Americans, or 1 in 12 African Americans, carry the sickle cell trait.

In the United States, sickle cell disease is also found in a small percentage of individuals of Caribbean, South and Central America and the Mediterranean ancestry.

#### **SICKLE CELL TESTING IS NOT A ROUTINE SCREEN**

- **In adult populations, screening is useful primarily for providing preconception and prenatal genetic counseling to carriers.**
- **Blood for Hemoglobin Electrophoresis should NOT be drawn unless requested by a client after education regarding the purpose for screening.**

### II. Purpose for screening

- **Diagnosis of disease in adult.**  
The purpose for screening for hemoglobinopathies is to identify any hemoglobin trait or disease that may affect the health of the client.
- **Couple “At-Risk” Status**  
Screening tests may also be done on young adults who wish to determine whether or not they and/or their partner carry the sickle cell trait prior to beginning a family.

- **Prenatal Diagnosis/Genetic Counseling**

If a pregnant woman and her partner are identified as “At-Risk” for having a child with sickle cell disease, they can choose to have their unborn babies tested for the presence of sickle cell trait or disease.

- **Newborn Screening**

In Virginia, newborn testing for the identification of sickle cell disease began in July 1989. All babies, regardless of race are screened for sickle cell disease and other hemoglobinopathies. Currently 44 states, the District of Columbia and Puerto Rico screen for sickle cell disease.

**Who should be provided education about the importance of screening for hemoglobin variants?**

- All clients

**Who should be provided screening?**

- All clients in the high-risk populations who request the testing and meet the eligibility requirements. (See Tables)
- Partners of pregnant woman identified with a hemoglobin variant.

**Who should not be screened through the health department?**

- Anyone who indicates that they have been previously tested
- Minors and children enrolling in Head Start

Clients who indicate that they have been tested but do not have a copy of their test results should be encouraged to contact their provider to obtain a copy.

**III. Criteria for Hemoglobinopathy Screening through the Division of Consolidated Laboratory Services**

**Solubility testing must not be used as a primary screening method for the detection of hemoglobin variants.**

**Hemoglobin Electrophoresis will be provided for individuals meeting the following criteria:**

- a) Family planning and maternity patients who have had financial screening and are designated as Income A.
- b) Parents and siblings of infants identified with sickle cell disease or other hemoglobinopathy through Virginia’s Newborn Screening Program.
- c) Partners of women identified with a hemoglobinopathy through prenatal screening.
- d) Limited and planned community health education and screening programs targeted at high risk populations in the childbearing ages.

**VASCAP will provide:**

- a) Staff development and materials for nurses providing education and follow-up counseling to clients identified with a hemoglobinopathy.
- b) Hemoglobin identification cards and educational materials for all individuals identified with a hemoglobin variant through our screening contract with DCLS.

## Contact Information for Sickle Cell Services

### The Virginia Sickle Cell Awareness Program (VASCAP)

The Virginia Sickle Cell Awareness Program is designed to offer access to current and accurate information regarding sickle cell disorders and other hemoglobin variants through both community partners and collaboration with Family Planning and Maternity clinics operating through Virginia Department of Health.

**Program Contact Person:**

Jene Radcliffe-Shipman, Program Manager

Virginia Department of Health

109 Governor Street – 825E

Richmond, Virginia 23219

**Phone:** (804) 864-7769                      **FAX:** (804) 864-7771

E-mail: [jene.radcliffe-shipman@vdh.virginia.gov](mailto:jene.radcliffe-shipman@vdh.virginia.gov)

Patient Educational Materials can be downloaded from our website:

<http://fhsweb/sicklecell/>

**Table 1:** Common Hemoglobin Types

Hemoglobin	Incidence	Race/Ethnicity
A/S Sickle Trait	8-10%	African American
	2%	Hispanic Italians, East Indians, Saudi Arabians
A/C C Trait	2-5%	African Americans
	20-25%	West Africans (Ghana)
A/E E Trait	30-40%	South East Asians
Beta Thalassemia	5%	Mediterranean
	5%	Asian
	4%	East Indians
	2%	African Americans

**Table 2:** Incidence of sickle hemoglobin by race/ethnicity

Race/Ethnicity	Sickle Trait	All Types of SCD
African American	1:10	1:350
Asians		1: 11,5000 (SE)
Central and South American	1:183	1:45,622 (SS)
Hispanic/Americans		1:1000 to 1400 (Eastern States) 1:32,000 (Western States)
Native Americans		1:2,700
Caucasians of European Ancestry	1:625	1:58,000

# **APPENDIX J**

## **Gestational Diabetes**

## Gestational Diabetes

Gestational diabetes or pregnancy-induced glucose intolerance is the development of diabetes during pregnancy, which resolves following delivery.

There can be serious effects if the diabetes is not recognized and treated. Urinary tract infections are more common in diabetics because more glucose is filtered due to their increased glomerular filtration rate. Glycosuria predisposes to bacterial infection. (Rosenn & Miodovnik, 2000) Diabetics also have a predisposition to hypertension in pregnancy. (Roach, Hin, Tam, et. al., 2000) Ten percent of diabetics have hydramnios. The reason is poorly understood, but is explained as caused by fetal glycosuria. The urine in amniotic fluid attracts water to balance the high osmolarity of the fluid. (Uvena-Celebrezze & Catalano, 2000) The fetus who remains in an environment of maternal hyperglycemia may demonstrate macrosomia, teratogenesis, or death. The macrosomia is a result of the accelerated fetal growth that occurs when the mother has poorly controlled diabetes. (Langer, 2000; Uvena-Celebrezze & Catalano, 2000) Significant hyperglycemia can lead to ketoacidosis and to movement of ketones across the placental membrane. Elevated ketones have been associated with structural limb defects, cardiac anomalies, early pregnancy loss, and stillborn. Neonates of women with gestational diabetes have more problems with hypoglycemia, hypocalcemia, polycythemia, and hyperbilirubinemia. (Uvena-Celebrezze & Catalano, 2000)

The woman may remain asymptomatic throughout the pregnancy or have subtle clinical signs. Clinical signs are fundal height greater than expected, signs of hydramnios such as tympanic, tight abdomen, excessive maternal weight gain, and glycosuria.

Prompt identification and treatment of these women is important for both mother and infant health. The key to treatment of these women is control of blood sugar within strict parameters. Several tests may be done throughout the pregnancy to provide information about maternal and fetal health. Women are usually seen weekly to assess glucose levels using a fasting blood glucose with a two-hour post-prandial. Other clinics teach clients home glucose monitoring, which may be ordered two to four times a day, daily, or intermittently throughout the week. The glycosylated hemoglobin A1c (HbA1c) test measures glucose saturation of red blood cells, that is, the amount of glucose that will last the cell's lifetime. The test reflects serum glucose levels over the previous four to six weeks. The test is only useful in evaluating past glucose control and client compliance but not weekly surveillance. Routine urine screening is necessary to screen for urinary tract infections, but not useful to monitor the diabetes because the test is unreliable and frequently positive in normal pregnant women. Sonograms and nonstress tests may be ordered to assess fetal well-being.

All pregnant women should be screened either through assessment of high-risk factors, patient history, or laboratory screening for glucose tolerance. (ACOG Practice Bulletin, 2001)

The first step is to identify the population at risk. The client's history may suggest gestational diabetes and warrant screening in the early second trimester at 18-20 weeks. Some clinicians have suggested screening women at high risk for GD at the initial prenatal visit, but this is controversial and has not been a reliable detection of GD.

High-risk historical factors:

- Family history of diabetes
- Poor obstetrical history such as unexplained stillbirths or spontaneous abortions
- Previous unexplained birth of preterm or low birth-weight infant
- Previous newborn weighing 4,000 g or more
- Previous infant with a major congenital anomaly
- Previous history of gestational diabetes

High-risk pregnancy factors:

- Maternal age more than 25 years
- Maternal obesity (weight more than 200 pounds) or body mass index greater than 25
- Recurrent monilial vaginitis
- Glycosuria determined with urine dipstick on two consecutive occasions
- Hydramnios
- Excessive weight gain or fundal height greater than expected, or both

Universal screening of all pregnant women has not shown to be justified because interview screening of high-risk women will identify most of the affected women. (Coustan, 2000) The American Diabetes Association, ACOG, and the Fourth International Workshop Conference on Gestational Diabetes recommend screening of risk groups. In actual practice, most private physicians and academic centers practice universal screening. (ACOG Practice Bulletin, 2001) Universal screening is practiced at the Virginia Department of Health. A reliable, specific, and cost effective screening for gestational diabetes is the 1-hour post-50-g glucola plasma screen. Optimal time to do the plasma screen is between 26-28 weeks of gestation. (ACOG Practice Bulletin, 2001)

If the 1-hour plasma glucola is between 130 – 140 mg/dl, the client should undergo a 3-hour glucose tolerance test (GTT) to establish the diagnosis. In clients with a 1-hour glucola screen above 185-190 mg/dl, the glucose tolerance test is unnecessary. Some experts suggest that treatment should be initiated immediately without performing the GTT. Other experts suggest performing a fasting blood glucose, and if that level is 105 mg/dl or greater, treat the woman for gestational diabetes. Two elevated values on the 3-hour GTT are diagnostic of gestational diabetes. There is recent consideration for lowering the criteria values for diagnosis but consensus does not exist at present. If one value is elevated, the 1-hour glucola should be repeated at 32-34 weeks.

The client diagnosed with gestational diabetes is considered high-risk and should be followed appropriately in the health department. Nutrition counseling is recommended. Arrangements to care for these patients should be determined locally as other high-risk patients.

Treatment for gestational diabetes includes diet and insulin, if necessary. Most oral hypoglycemic agents have historically been associated with teratogenesis, and their use has not been recommended in pregnancy. Some researchers are evaluating the usefulness of some of the newer oral hypoglycemic agents. There are some promising results using these agents. Metformin, which has been used for the treatment of polycystic ovarian syndrome has increased ovulation and resulted in fertilization and birth without teratogenesis. Use of some of these newer agents may become common. (Glueck, Wang, Goldenberg, & Sieve-Smith, 2002)

### **Postpartum**

The gestational diabetic woman who was taking insulin therapy will not need to continue. She should be screened with a 100g five-hour glucose tolerance test at the six-week postpartum exam to assess for underlying diabetes. (MacNeill, Dodds, Hamilton, et.al., 2001) A significant number of these women will later be diagnosed with Type 2 diabetes. This can be an opportunity to counsel the woman regarding lifestyle changes, which could delay or prevent the development of diabetes.

### **References :**

ACOG Practice Bulletin, (2001, October), Assessment of risk factors for preterm birth. No. 31. Washington, DC: American College of Obstetricians and Gynecologists.

Glueck, C.J., Wang, P., Goldenberg, N., Sieve-Smith, L. (2002) Pregnancy outcomes among women with polycystic ovarian syndrome treated with metformin. *Human Reproduction*, 17 (11), 2858-2864.

Langer, O. (2000). Management of gestational diabetes. *Clinical Obstetrics and Gynecology*, 43 (1), 106-115.

Roach, V.J. Hin, L.Y., Tam, W.H., Ng, K.B., & Rogers, M.S. (2000). The incidence of pregnancy-induced hypertension among patients with carbohydrate intolerance. *Hypertension in Pregnancy*, 19 (2), 183-189.

Rosenn, B.M., & Miodovnik, M. (2000). Medical complications of diabetes mellitus in pregnancy. *Clinical Obstetrics and Gynecology*, 43 (1), 17-31

Uvena-Belebreeze, J., & Catalano, P.M. (2000). The infant of the woman with gestational diabetes mellitus. *Clinical Obstetrics and Gynecology*, 43 (1), 127-139.

Youngkin., E.Q. & Davis, M.S. (2004). *Women's Health A Primary Care Clinical Guide*. 3<sup>rd</sup>. edition. Upper Saddle River, New Jersey: Prentice Hall.

# **APPENDIX K**

## **Cystic Fibrosis**

## **CYSTIC FIBROSIS (CF)**

Carrier screening for cystic fibrosis is recommended to those seeking preconception or prenatal care. Couples in ethnic or racial groups that are considered to be at a higher risk for carrying the CF gene should be offered screening. A family history of cystic fibrosis suggests that the test be offered to the person seeking medical care. Health care providers offering screening must provide patients and providers education. In addition to a screening test, offer counseling, quality control and monitoring of samples, and follow up on test results.

ACOG's recommendations are the following:

Testing will be made available to all couples, whatever their risk for carrying the CF gene, through information brochures on CD given to couples seeking preconception or prenatal care. These materials explain the relative risks for carrying CF, screening options, and what steps are next should a couple learn that they carry the CF gene.

- For couples in ethnic or racial groups considered at higher risk for carrying the CF gene – Caucasians, particularly those of European or Ashkenazi Jewish descent – physicians will specifically offer screening and will follow up with inquiries about the couple's decision on whether to be screened.
- With regard to couples to whom screening will be offered, it is recommended that this be done when they seek preconceptional counseling or infertility care, or during the first and early second trimester of pregnancy.

### **References :**

ACOG News Release (2001). Ob-Gyns Offering Large-Scale Cystic Fibrosis Screening. 12 December, American College of Obstetricians and Gynecologists, Washington, D.C.

American Medical Association Science (2003). ACOG cystic fibrosis recommendations. 24 February, American Medical Association, Chicago, IL.

Genetics & Public Policy Center (2003). Canary in the Coal Mine? Cystic Fibrosis Genetic Testing Raises Concerns About Use and Regulation of Genetic Tests. 4 April, Genetics & Public Policy Center, Washington, D.C.

### **Resources:**

American College of Obstetricians and Gynecologists  
[www.acog.org](http://www.acog.org)

American Medical Association  
[www.ama-assn.org](http://www.ama-assn.org)

CDC  
[www.cdc.gov](http://www.cdc.gov)

Cystic Fibrosis Foundation  
Bethesda, MD

[www.cff.org](http://www.cff.org)

Cystic Fibrosis Research, Inc.  
Mountain View, CA  
[www.cfri.org](http://www.cfri.org)

March of Dimes  
[www.marchofdimes.com](http://www.marchofdimes.com)

National Human Genome Research Institute  
[www.genome.gov](http://www.genome.gov)

National Institutes of Health  
[www.nih.gov](http://www.nih.gov)

# **APPENDIX L**

## **Preterm Labor and Birth**

## Premature Births

Premature birth is a serious, costly and growing public health problem. It is the leading cause of neonatal death accounting for 24 percent of the infant deaths in the first month of life. In 2002, more than 480,000 babies were born prematurely in the United States. (Martin, J, Hamilton, B., Sutton, P., Ventura, S., Menacker, F., Munson, M., 2002)

A preterm or premature birth is one that occurs prior to 37 completed weeks of gestation. (Cunningham, 2001) Premature/preterm labor has its onset prior to 37 completed weeks of gestation. (Cunningham, 2001)

Criteria for defining preterm labor:

- Gestational age of 20 to 37 weeks
- Documented regular contractions on fetal monitor; at least four in 20 minutes or eight in 60 minutes
- Cervix at least 3 cm dilated or 80 percent effaced compared to initial cervical length (fewer than 30 mms) (ACOG, 2001)

The onset of labor, which is poorly understood no matter when it occurs, involves complex interaction among fetal, hormonal/endocrine, structural, and maternal changes. Many times true preterm labor is diagnosed in retrospect. With the use of new tests, the goal is to improve the reliability and specificity of diagnosing preterm labor. Significant number of women experience painful regular contractions during pregnancy without having a preterm birth.

In many discussions of preterm birth, low birth weight is used interchangeably. Infant weight has traditionally been used as the indicator for gestational age. Evaluation of programs, drug therapy, research and policies have been developed using birth-weight as the defining variable for prematurity. With the advent of sensitive pregnancy tests in correlation with accurate menstrual history and improved technology with sonograph, gestational age can be accurately determined and differentiated from premature birth. Low birth-weight infants can be the result of prematurely, in some instances a result of poor intrauterine environment, or a combination of those factors.

There is no one explanation for the incidence of low birth weight or prematurity. Until preterm labor is better understood, prevention and treatment will be inadequate. Many of the factors are known, but how these factors interact and in what order are yet unclear. A premature, or preterm birth can occur spontaneously or by medical intervention. The spontaneous delivery includes delivery that spontaneously occurs after preterm labor, premature rupture of membranes, or premature dilation of the cervix. When a medical or obstetrical disorder is present such as diabetes, gestational hypertension, placenta previa, abruptio placenta, or intrauterine growth retardation, medical intervention may be necessary for the sake of improving the outcome for either mother or fetus. Therefore, preterm birth may occur by choice and it is not differentiated in the data released by vital statistics.

The causes of preterm labor are unknown, although several complications and conditions of pregnancy are associated with preterm birth. Demographic risks factors are probably not causative but do contribute to preterm labor because of their association with inadequate prenatal care, poor nutrition, or lifestyle. Medical risks, such as hypertension and genetic disorders, which were present before a pregnancy occurred, are associated with preterm birth. Medical conditions such as renal disease or infection occurring during the pregnancy may predispose the woman to premature labor. It has been proposed that infection promotes the release of prostaglandin, which stimulates uterine activity and cervical change. Data are not conclusive as to whether treating maternal infection such as bacterial vaginosis will prevent preterm labor, but many clinics and practices will treat prophylactically. Behavioral and environmental risks including drug usage and work environment may also contribute to the development of premature labor. The most predictive risk factor for preterm delivery is history of previous preterm delivery. (See Table 1 for a list of the Principal Risk Factors for Preterm Labor and Birth.)

Table 1. Principal Risk Factors for Preterm Labor and Birth

<b>Demographic Risks</b>	<b>Medical Risks Predating Pregnancy</b>	<b>Medical Risks in Current Pregnancy</b>	<b>Behavioral and Environmental Risks</b>
Age: < 17 years or > 34 years	Parity: 0 or > 4	Multiple gestation	Smoking
Low socioeconomic status	Nonimmune status for selected infections (e.g., rubella)	Hypotension	Alcohol and other substance abuse
Unmarried	Genitourinary anomalies/surgery	Hypertension/preeclampsia	High altitude
Race: African American	Low birthweight, preterm birth	First or second trimester bleeding	Poor nutritional status
Low educational level	Multiple spontaneous abortions	Spontaneous premature rupture of membranes	Exposure to diethylstilbestrol and other toxic components
	Low weight for height	Anemia or hemoglobinopathy	
	Selected diseases (e.g., hypertension)	Fetal anomalies	
	Poor obstetric history	Hyperemesis gravidarum	
	Maternal genetic factors	Poor weight gain	
	Short interpregnancy interval	Short interpregnancy interval: < 1 year	
		Infections	
		Placental problems	

Demographic Risks	Medical Risks Predating Pregnancy	Medical Risks in Current Pregnancy	Behavioral and Environmental Risks
		Oligohydramnios or polyhydramnios	
		Isoimmunization	
		Incompetent cervix	
		Assisted Reproductive Technology (Schieve)	

**Sources:** ACOG (2001a), CDC (2000), Lu & Goldenberg (2000), Norwitz & Robinson (2001), Robinson, Regan & Norwitz (2001), Schieve et al. (2002).

Although not proven reliable or sensitive in predicting preterm labor, risk screening is used by most providers to try to identify at risk women and intervene to prevent preterm birth. Risk screening should be done at every prenatal visit. A uniform tool for risk screening is not currently available. Cervical fetal fibronectin has limited value as a predictor of preterm delivery in a low risk population. A negative fibronectin is highly correlated with those women at low risk for delivering within a fourteen days. A positive test has been shown in some studies to predict imminent delivery, but the full clinical implication is controversial and thus, ACOG recommends that the provider does not rely on this test for the management of possible preterm labor. Fibronectin assessment is not a recommended screening test and should only be used when a woman presents with possible preterm labor.

Client education includes instruction about a variety of preventive measures. (Weiss, et.al., 2002) Information should be provided about the signs and symptoms of labor.

All pregnant women should be instructed to notify the health care provider:

- if leaking of fluid begins
- vaginal spotting or bleeding develops
- uterine contractions occur every 10 minutes or more frequently
- change or increase in vaginal discharge
- intestinal cramping, with or without diarrhea.

The client may need instruction to time contractions from the beginning of one contraction to the beginning of the next contraction. A client may need to learn self-care strategies to differentiate true uterine contraction from the common cramps or abdominal discomfort associated with pregnancy.

When uterine activity occurs, the client should be instructed to:

- lie down, preferably on her left side
- drink at least 8 oz of fluids
- palpate the uterus and time contractions.
- if contractions do not subside in 30-60 minutes, contact her health care provider.

Bed rest has traditionally been used as a frontline treatment for preterm labor. The reliance on bed rest and hydration to manage preterm labor is misguided and may be dangerous because there is no statistical evidence that bed rest is effective. (Urbanski, 1997)

In 2003, the March of Dimes has launched a national five-year \$75 million Prematurity Campaign utilizing research, awareness, and education to achieve two goals: (1) to increase public awareness of the problems of prematurity and (2) to decrease the overall rate of preterm birth in the United States. To foster the Prematurity Campaign at the state level, the two March of Dimes Virginia Chapters convened a task force of public and private stakeholders including representatives from physician and nurses groups, Virginia Department of Health, The Virginia Medical Assistance Program, the Virginia Dental Association and major insurance carriers. The task force was charged with defining the problem of prematurity in Virginia as it pertains to low-income women and providing recommendations for improvements to be made by state elected and appointed officials, health care providers, insurers, and consumers. For further information see the March of Dimes web site: [VA374@marchofdimes.com](mailto:VA374@marchofdimes.com).

### References :

ACOG Practice Bulletin. (2001, October). Assessment of risk factors for preterm birth. No.31. Washington, D.C.: American College of Obstetricians and Gynecologies.

Lu, G.C., & Goldenberg, R.L. (2000) Current concepts on the pathogenesis and markers of preterm births. *Clinics in Perinatology*, 27 (2), 263-283.

Moos, Merry-K. (2004) Understanding Prematurity: Sorting Fact from Fiction. *AWHONN Lifelines*, February/March 2004, 32-37.

Norwitz, E.R. & Robinson, J.N. (2001). A systemic approach to the management of preterm labor. *Seminars in Perinatology*, 25 (4), 223-235.

Robinson, J.N., Regan, J.A., & Norwitz, E.R. (2001) The epidemiology of preterm labor. *Seminars in Perinatology*, 25 (4), 204-214.

Urbanski, P. (1997). How does hydration affect preterm labor? *AWHONN Lifelines*, 1 (3), 25.

Weiss, M.E., Saks, N.P. & Harris, S. (2002) Resolving the uncertainty of preterm symptoms: Women's experiences with the onset of preterm labor. *Journal of Obstetric, Gynecologic, and Neonatal Nursing*. 31, 66-76.

Youngkin, E.Q. & Davis, M.S. (2004) 3<sup>rd</sup> edition *Women's Health A Primary Care Clinical Guide*. Upper Saddle River, New Jersey: Prentice: Prentice Hall.

# **APPENDIX M**

## **Adult Immunization**

## **Adult Immunizations**

The Advisory Committee on Immunization Practices approved a person 19 years of age and older, routine vaccinations schedule on February 2002. The following groups approved the Adult Immunization schedule:

- The American Academy of Family Physicians (AAFP)
- The American College of Obstetricians and Gynecologists (ACOG)
- American College of Physicians-American Society of Internal Medicine (ACP-ASIM)
- The Infectious Disease Society of America.

Follow the recommendations of the Advisory Committee on Immunization Practices (ACIP) and The American Academy of Family Physicians (AAFP) current guidelines. The guidelines are found on the VDH- Division of Immunization's website. There you can locate:

A Summary of adolescent/adult immunization recommendations.

Morbidity and Mortality Weekly Report (MMWR) updates on the immunization schedules.

Information on the Perinatal Hepatitis B Prevention Program.

“No evidence exists of the risk from vaccinating pregnant women with inactivated virus or bacterial vaccines or toxoids”. (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. Contact The Division of Immunizations at VDH for further information, by dialing 786-6246, or 800-568-1929.

### **Resource:**

National Immunization Information Hotline: 1-800-232-2522,  
<http://www.ashastd.org>

CDC's National Immunization Program: <http://www.cdc.gov/nip>

Morbidity and Mortality Weekly Report: <http://www.cdc.gov/subscribe.html>

Immunization Action Coalition: <http://www.immunize.org>

Institute for Vaccine Safety: <http://www.vaccinesafety.edu>

VDH-Division of Immunization: <http://vdh.web/imm/index.htm>

# **APPENDIX N**

## **Regional Perinatal Council Contact List**

PERINATAL GUIDELINES AND RESOURCES

Region	RPC	FIMR	Perinatal Outreach Educator	Address
I	<b>Merry McKenna, RNC</b> Phone: 276-676-4501 Fax: 276-676-0512 Email: svpc.merry@comcast.net	<b>Kathi Kiser, RNC</b> Phone: 276-676-4501 Fax: 276-676-0512 Email: kkrpcc@naxs.com	<b>Kathi Kiser, RNC</b> Phone: 276-676-4501 Fax: 276-676-0512 Email: kkrpcc@naxs.com	<b>Southwest Virginia Perinatal Council</b> Box 1016 468 E. Main St. #300 Abingdon, VA 24212-1016
II	<b>Christa Williams</b> Phone: 540-985-9838 Fax: 540-985-9099 Email: cmwilliams@carilion.com	<b>Tara West</b> Phone: 540-224-4468 Fax: 540-982-3449 Email: twest@carilion.com	<b>Barbara Pack, MSN, RN</b> Phone: 540-985-9990 Fax: 540-985-9099 Email: bpack@carilion.com	<b>Blue Ridge Perinatal Council</b> 7 Albemarle Avenue Roanoke, VA 24016
III	<b>Karen Wesley</b> Phone: 434-947-7472 Fax: 434-947-5093 Email: kmwesley@aol.com Karen.Wesley@centrahealth.com	<b>Denise Kolody</b> Phone: 434-947-5457 Fax: 434-947-5093 Email: denise.kolody@centrahealth.com	<b>Terri Lewis</b> Phone: 434-947-4653 Fax: 434-947-5093 Email: terri.lewis@centrahealth.com	<b>South Central Perinatal Council</b> Virginia Baptist Hospital 3300 Rivermont Dr. Lynchburg, VA 24503
IV	<b>John Kattwinkel, MD</b> Program Director  <b>Sharon Veith</b> Phone: 434-924-5420 Fax: 434-924-2816 Email: stv7e@virginia.edu	<b>Terri Smoot</b> Phone: 434-243-6598 Email: tjs3h@hscmail.mcc.virginia.edu	<b>Sharon Veith</b> Phone: 434-924-5420 Fax: 434-924-2816 Email: stv7e@virginia.edu	<b>Skyline Region Perinatal Council</b> Department of Pediatrics UVA Health System, PO Box 800386 Charlottesville, VA 22908
V	<b>Jennifer Sedlmeyer</b> Phone: 703-204-6782 Fax: 703-204-6078 Email: <a href="mailto:Jennifer.sedlmeyer@inova.com">Jennifer.sedlmeyer@inova.com</a>	<b>Debby Byrne</b> 1870 Ridge Rd. Haymarket, VA 20169 Phone: 703-754-0962 Work Phone: 703-204-6778 Fax: 703-204-6078 Email: debby.byrne@inova.com	<b>Jennifer Sedlmeyer</b> Phone: 703-204-6782 Fax: 703-204-6078 Email: <a href="mailto:Jennifer.sedlmeyer@inova.com">Jennifer.sedlmeyer@inova.com</a>	<b>No. Va. Perinatal Council</b> Inova Fairfax Hospital 3300 Gallows Road Falls Church, VA 22042 <a href="http://members.tripod.com/nvperinatalcouncil">members.tripod.com/nvperinatalcouncil</a>
VI	<b>Susan Lanni, MD &amp; Gary Gutcher, MD</b> Program Directors  <b>Cheryl Bodamer, RN, MPH</b> Phone: 804-828-5949 Fax: 804-828-5328 Email: ccunnally@hsc.vcu.edu		<b>Susan Lanni, MD</b> <b>Gary Gutcher, MD</b>  <b>Cheryl Bodamer, RN, MPH</b>	<b>Central Commonwealth Perinatal Council</b> Virginia Commonwealth University Medical Center Dept. of OB/GYN Box 980034 Richmond, VA 23298-0034
VII	<b>C. Donald Combs, Ph.D.</b> Program Director Office of the VP for Planning and Development Smith Rogers Hall Eastern Virginia Medical School Box 1980 Norfolk, VA 23507 Phone: 757-446-6090 Fax: 757-446-6087 Email: combscd@evms.edu  <b>Beth Kavinsky, RNC, MNSC, IBCLC</b> Phone: 757-446-6060 Fax: 757-446-6087 Email: Kavinsmb@evms.edu	<b>Kim Bogan</b> Phone: 757-446-6060 Fax: 757-446-6087 Email: <a href="mailto:bogankc@evms.edu">bogankc@evms.edu</a>	<b>Beth Kavinsky, RNC, MNSC, IBCLC</b>  Phone: 757-446-6060 Fax: 757-446-6087 Email: Kavinsmb@evms.edu	<b>Eastern Virginia Perinatal Council</b> Eastern Virginia Medical School Smith Rogers Hall P.O. Box 1980 Norfolk, VA 23501
State	<b>Theresa Taylor, RN, MPH,</b> Perinatal Nurse Consultant Phone: 804-864-7767 Fax: 804-864-7771 Email: Theresa.Taylor@vdh.virginia.gov			Virginia Department of Health Div. of Women's and Infants' Health 109 Governor St, 8 <sup>th</sup> Floor PO Box 2448 Richmond, VA 23218

PERINATAL GUIDELINES AND RESOURCES