

Section 3 Healthy Kids/EPSDT Screening Components

A. HEALTH AND DEVELOPMENTAL HISTORY

Comprehensive Health History

Comprehensive health and family histories are key components in effective screening for high risk factors, as well as important tools for obtaining relevant health information and identifying health conditions that have a genetic component. At the initial Healthy Kids visit, obtain a complete medical, family, psychosocial, perinatal, immunization and developmental history. At each subsequent well child visit, update and document the child/family's health history. A standardized set of questions can improve the provider's ability to identify children/teens at risk of having significant health problems. The Maryland Healthy Kids Program provides the *Medical/Family History Form* for this purpose (Refer to Section 7 – Appendix I). The parent, guardian or patient may complete this form prior to review by the provider. Update the medical, family and psychosocial histories annually.

In general, a comprehensive health history includes:

- Personal medical and mental health history: chronic and acute illnesses, allergies, surgeries, injuries, and nutritional conditions and concerns, (i.e., failure to thrive, anorexia/bulimia, etc)
- Perinatal history: prenatal care, birth history, conditions and concerns in the neonatal period, etc
- Developmental history: attainment of developmental milestones, learning disorders/educational concerns
- Family medical and mental health history: health of the immediate and extended family (through the first generation of grandparents, aunts, uncles, etc.) including chronic and acute illnesses (physical and mental), hereditary disorders, disabilities, family violence and substance abuse
- Psychosocial history: family constellation (number of members and who is living in household) and family relationships and functioning or dynamics (any boyfriend/girlfriend of single parent, parental separation/divorce, foster care or adoption), housing, financial needs, assessment of support systems, exposure to family and community violence
- Immunization history: record of previous immunizations and assessment of current immunization status
- Adolescent history: menarche, sexual activity, substance abuse, mental health problems and current status, social functioning and academic concerns

Developmental Surveillance and Screening

Developmental surveillance is a longitudinal, continuous, and cumulative process of recognizing children who may be at risk of developmental delays. Developmental surveillance involves eliciting parents' concerns, obtaining a

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developmental history, making accurate and informed observations of the child, identifying the presence of risk and protective factors, and documenting the process and findings. *Developmental surveillance* should be performed at all Healthy Kids preventive care visits.

In contrast, *developmental screening* is the administration of a brief standardized, validated tool to aid the identification of children at risk of a developmental disorder. Periodic *developmental screening* of all children in addition to ongoing developmental surveillance can significantly increase the identification of children with developmental delays.

Based on the 2006 policy statement of the American Academy of Pediatrics¹, it is now **required that** *general developmental screening* be performed for all children at the 9-, 18-, and 24-30 month Healthy Kids preventive care visits, and whenever a concern is identified through developmental surveillance. If the child is not seen at these recommended ages, screening should be conducted at the next preventive care visit. The American Academy of Pediatrics also recommends screening specifically for autism at the 18- and 24-month visits using a standardized tool².

Both developmental surveillance and screening should address the following areas, as age-appropriate: 1) speech and language development 2) gross and fine motor development, 3) self-help and self-care skills, 4) social development, 5) cognitive development, and 6) presence of learning disabilities.

Developmental Screening Tools

Healthy Kids recommends the following standardized, validated developmental screening tools for use in general developmental screening at the intervals noted above:

- The Ages and Stages Questionnaire (ASQ) , www.agesandstages.com for information or www.brookspublishing.com to order
- Pediatric Evaluation of Developmental Status (PEDS), www.pedstest.com

An additional list of standardized, validated general developmental screening tools has been approved for use in the Healthy Kids Program to screen children through age 5 years (refer to Section 3, Addendum).

Results of developmental surveillance and screening, and the screening tool used, should be documented in the chart. Children identified as being at risk for developmental delays should have documented counseling and referral for additional evaluation services. (Refer to Section 3, Addendum - Additional Evaluation and Intervention for Developmental Disorders). Refer to Section 6 of this Manual for coding and documentation guidelines.

¹ *Pediatrics* 2006;118:405-420

² *Pediatrics* 2007;120:1183-1215

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Screening for Autism Spectrum Disorders (ASDs)

Autism Spectrum Disorders (ASDs) are neuro-developmental conditions characterized by:

- Impairments in social interaction
- Impairments in communication
- Restricted repetitive and stereotyped patterns of behavior, interests, and activities

In January 2010, the Centers for Disease Control and Prevention (CDC) estimated that autism affects 1 in every 110 children. These rates are higher among males, among families where another sibling has ASD, and among children with certain medical conditions (including Fragile X syndrome, fetal alcohol syndrome). The exact cause of ASDs is unknown.

Early identification and early intervention services are critical to optimizing educational and functional outcomes for children with ASDs. In November 2007, therefore, the American Academy of Pediatrics (AAP) recommended that primary care providers, in addition to conducting general developmental surveillance and screening, should perform autism-specific surveillance during all well child visits.³ Autism-specific surveillance includes:

- Ascertaining family history of ASDs, especially among older siblings
- Eliciting parent concerns, particularly about communication, social reciprocity, and pretend play skills
- Assessing the child's behavior and attainment of communication and social-emotional milestones

Red flags that warrant immediate referral include:

- No babbling or pointing or other gesture by 12 months
- No single word by 16 months
- No 2-word spontaneous phrases (not echolalic) by 24 months
- Loss of language or social skills at any age
- Failed results of an autism-specific screen of any child using a structured, standardized instrument at 18 and 24 months of age

In addition to requiring general developmental screening, the MD Healthy Kids Program recommends autism-specific surveillance at all visits and requires structured autism-specific screening at 18 and 24-30 month well child visits. The MD Healthy Kids Program recommends the Modified Checklist for Autism in Toddlers (MCHAT) screening instrument. The following web sites are resources for information about general developmental screening, autism-specific screening, and early intervention:

³"Identification and Evaluation of Children with Autism Spectrum Disorders", *Pediatrics*, Volume 120, Number 5, 1183-1215, November 2007.

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- AAP National Center for Medical Home Implementation:
 - General Developmental Screening:
www.medicalhomeinfo.org/screening/cdc
 - Autism:
www.medicalhomeinfo.org/health/autism
 - Early Intervention:
www.medicalhomeinfo.org/health
- CDC “Learn the Signs. Act Early” campaign, information for Healthcare Providers: www.cdc.gov/ncbddd/actearly/hcp/index

As with general developmental surveillance and screening, children with findings of concern on autism-specific surveillance or screening should be simultaneously referred for medical evaluation and to the **Maryland Infants & Toddlers Program at 1-800-535-0182** for possible early intervention services.

Mental Health Assessment

The mental health assessment provides an overall view of the child’s personality, behavior, social interactions, affect and temperament. It is the responsibility of the primary care provider to conduct a mental health assessment on each Healthy Kids visit, beginning at 3 years of age, to identify risks associated with behavioral or emotional problems. The Healthy Kids Program, in collaboration with the Mental Hygiene Administration, has developed age-specific *Mental Health Questionnaires* (Refer to Section 7 – Appendix II) to assist providers in assessing for mental health problems.

Bright Futures in Practice, a series of publications from the Maternal and Child Health Bureau and the National Center for Education in Maternal & Child Health, provides additional information regarding mental health assessment for children and adolescents. Information regarding mental health assessment can be found on the Bright Futures website (Refer to Section 3 – Addendum Websites).

Document the result of the mental health assessment in the chart. In some cases, when a mental health problem is identified, the primary care provider can counsel the patient and note this in the chart. However, when specialty mental health services are needed refer directly to the **Maryland Public Mental Health System** by contacting **1-800-888-1965 (consumers and providers)**. Access additional mental health information and resources online at: maryland.valueoptions.com/services. Document the referral in the chart.

Depression in Children

Depression is often over looked and considered to be “mood swings” that are a normal part of childhood. This is unfortunate because the early diagnosis and treatment of depressive disorders is paramount in the healthy development of the child. Depression is occurring earlier on the developmental continuum than in the past. Children/adolescents and their parents are less likely to identify symptoms of

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depression. Often the PCP is in a better position to trend the behavior and suggest that the child/adolescent should see a mental health professional.

Risk Factors for Depression

- Family history of depression
- A parent who experienced depression at an early age
- Teen cigarette smoking
- Stress
- A loss of a parent or loved one by death or divorce or other loss
- Attention, conduct, or learning disorder
- Chronic illness, such as diabetes
- Abuse or neglect
- Other trauma, including natural disasters

Signs That May Be Associated with Depression in Children and Adolescents

- Frequent vague, non-specific physical complaints such as headaches, muscle aches, stomachaches or tiredness
- Frequent absences from school or change in school performance
- Talk of or efforts to run away
- Outbursts of shouting, complaining, unexplained irritability or crying
- Being bored
- Lack of interest in playing with friends
- Alcohol or substance abuse
- Social isolation, poor communication
- Fear of death
- Extreme sensitivity to rejection or failure
- Increased irritability, anger, or hostility
- Reckless behavior
- Difficulty with relationships
- Change in sleep patterns

Depressed children have an increased risk of suicidal ideation and gestures. Early diagnosis and treatment, accurate evaluation of suicidal ideation, and limiting access to lethal agents, including firearms and medications, may hold the greatest suicide prevention value.

Child Abuse Assessment

Provider awareness of the physical and behavioral indicators of child abuse, neglect or mental injury is critical to identification of mistreatment in children.

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Child abuse tends to be repetitive and usually escalates over time. In many cases, the abuse is the result of unrealistic caretaker expectations and the abuser is not intending to hurt the child. This is particularly true with shaken baby syndrome. Multiple socioeconomic or physical factors may place children at greater risk for child abuse. It is important to be aware of the child and parent risk factors that predispose children to abuse and neglect.

Child Risk Factors for Abuse

- Separation from parents at birth due to prematurity or illness
- Difficult temperaments
- Developmental disabilities
- Congenital anomalies or chronic medical conditions
- Foster care
- Behavior problems
- Younger than 3 years of age

Parent Risk Factors for Child Abuse

- Adolescent/young parents
- Single parent with few support systems
- Parental history of abuse
- Unwanted pregnancy
- Poverty or changes in socioeconomic status
- Social stressors
- Parental history of substance abuse
- Parental history of mental illness/developmental delay
- Parent with poor impulse control
- Domestic violence

Behavioral Indicators for Possible Abuse

- Extremes in child behavior
- Substance abuse by child
- School problems
- Depression
- Frequent runaway activity
- Suicide attempts
- Poor social interactions
- Sudden changes in daily routines

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The *SEEK Questionnaire* (Refer to Section 7 – Appendix II) is designed to assist providers to identify and address potential risks for abuse and neglect for children younger than 3 years of age.

Child abuse and neglect is a serious problem that requires the involvement of professionals in the community for the purpose of prevention, identification and treatment. The medical history is integral to the evaluation. The provider should obtain sufficient information to complete the physical and decide if local protective services (Refer to Section 8 – Telephone Directories) or police are needed. When suspicions of inflicted injury occur, interview the parent and child separately. Past medical history, the child's social situation and the parent's response to the event are necessary components of the history. Not all child abuse occurs in high-risk families. Although the incidence is higher in high-risk families, the provider should thoroughly evaluate every child with a suspicious injury.

Red Flags that Signal Possible Abuse

- Inconsistent history
- No explanation for injury/bruises
- Delay in seeking care
- Incident inconsistent with child's developmental level
- Severe injury not witnessed or corroborated
- Scene of injury not consistent with history
- High risk social situation
- Previous suspicious and/or multiple injuries
- Blaming of injury on sibling

In Maryland, Subtitle 7 of the Maryland Family Law Code Annotated requires professionals, including health practitioners, police officers, educators and social workers, to report suspected child abuse or face possible professional sanctions. The law requires that anyone who suspects a child has been, or is being, mistreated must report the matter to the Department of Social Services (Refer to Section 8 – Telephone Directories) or the police. Any person who, in good faith, makes a report of abuse or neglect is immune from civil liability or criminal penalty.

Bullying and Cyber-bullying

Bullying including cyber-bullying is of increasing concern in the pediatric population. Health care providers should:

- Ask children and adolescents about their experiences, if any, regarding bullying and cyber bullying
- Provide information in their offices for families to educate them on this topic

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- Encourage children and adolescents to "report" if they are victims so that appropriate referrals can be initiated
- Encourage parents to work with schools to promote awareness, prevention, and appropriate intervention

Attention Deficit Hyperactive Disorder (ADHD)

ADHD is a disorder characterized by behavior and attention difficulties exhibited in multiple settings. It begins in childhood and is identified by specific attention, hyperactivity and impulsiveness criteria found in the *American Psychiatric Association's Diagnostic and Statistical Manual (DSMIVR)*.

A clinician with skills and knowledge in the area of mental health, developmental or behavioral pediatrics must perform the ADHD evaluation. A provider who specializes in developmental or behavioral pediatrics can become a specialty mental health provider through Maryland Medical Assistance by registering with the Mental Hygiene Administration (MHA). The overall approach to diagnosing a child with ADHD involves the following:

- A comprehensive interview with the child's adult caregiver
- A mental status examination of the child
- A medical evaluation for general health and neurological status
- A cognitive assessment of ability and achievement
- Use of ADHD-focused parent and teacher rating scales
- School reports and other adjunctive evaluations separate from the school reports such as speech, language assessment, etc.

A child diagnosed with ADHD without any accompanying emotional disorders can receive care from a primary care provider for management of medications. However, medication is only one component in the comprehensive treatment of ADHD. Adjunctive services can significantly improve a child's response. Teaching and reinforcing organizational skills and social skills are adjunctive interventions that can significantly improve outcomes. In addition, on-going contact and follow-up with the parents of a child with ADHD on medication is a critical component of the medication management.

A number of psychiatric conditions frequently occur with ADHD, i.e. mood disorder, conduct disorder, oppositional defiant disorder and bipolar disorder. ADHD is classified as a specialty mental health disorder, possibly requiring multiple therapeutic approaches (Refer to Section V - Specialty Mental Health Services). If the child's behavior changes significantly, re-evaluation is necessary through a mental health referral by calling **1-800-888-1965** (consumers and providers). Access additional mental health information and resources online at: maryland.valueoptions.com/services.

For more information, the American Academy of Pediatrics' website (Refer to Section 3 – Addendum Websites) contains *Guidelines for Diagnosis of ADHD* and a copy of their *Guidelines for Treatment of Attention-Deficit/Hyperactivity Disorder*.

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Alcohol and Substance Abuse Assessment

Performing an assessment or screening for substance abuse is critical because of the increased number of adolescents and young adults using drugs and alcohol. Primary care providers play an important role in identifying those who abuse substances. Completion of at least an assessment for substance abuse at every well child visit is required annually starting at 12 years of age. Screening for substance abuse using a standardized tool such as the CRAFFT (Refer to Section 7– Appendix II) with documented counseling at the time of the visit may be billable (Refer to Section 6).

B. COMPREHENSIVE PHYSICAL EXAMINATION REQUIREMENT

The comprehensive physical examination component of a Healthy Kids preventive visit must include documentation of an unclothed physical examination in a systems approach with age-appropriate assessments of vision and hearing, blood pressure measurement, growth measurements with BMI and nutritional assessment.

Unclothed Physical Examination by Systems

A licensed physician, MD or osteopath, or certified nurse practitioner must perform an unclothed physical examination. A certified physician's assistant working under a licensed MD or osteopath may also perform the exam. Documentation of a systems approach is required. A minimum of five systems constitutes a complete physical examination. Recording "PE within-normal-limits" or "PE WNL" as the complete physical is not acceptable. Documentation of individual systems as "within normal limits" or "WNL" is acceptable. Document all suspect findings, discuss with the parent/child and develop a plan of care. Monitor, treat and/or refer the child to an appropriate specialty service for any identified problems.

The physical examination includes assessment of the following:

- General physical appearance
- Skin (evidence of scars, burns, bruises) and hair
- Head & neck (including facial features, thyroid palpation and fontanels for infants)
- Eyes and ears, including ability to see and hear
- Nose/throat
- Age appropriate growth parameters with BMI, graphing and interpretation of measurements
- Oral cavity including palate, cheeks, tongue and floor of mouth; dental ridges (including erupting teeth); gums for evidence of infection, bleeding or inflammation; malformation or decay of erupting teeth
- Blood pressure measurement (≥ 3 years of age)

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- Cardiopulmonary evaluation, including pulses (palpation of femoral arteries)
- Abdomen (musculature, organs, masses)
- Urogenital evaluation
- Orthopedic evaluation, including muscle tone and scoliosis
- Neurological evaluation, including gross and fine motor coordination

Assessment of Hearing

An assessment of the child's ability to hear is required at each Healthy Kids preventive visit. Screen using the health history, physical examination and a gross subjective or an objective hearing assessment. The physical examination includes an external and internal (otoscopic) examination of the ears.

Maryland hospitals test for hearing impairments in newborn infants. Contact the **Infant Hearing Helpline at 1-800-633-1316** with questions or for assistance with follow-up of suspect or positive screens. Refer to the Guide for Newborn Hearing Screens (Section 3, Addendum).

Assess children through 5 years of age for hearing impairment by means of a complete health history, physical examination and gross subjective assessment. The initial health history should include an assessment for a family history of hereditary deafness, in particular any blood relative; i.e., grandparents, aunts, uncles or cousins known to have a childhood hearing impairment. This does not include hearing impairment due to aging, ear infections, meningitis, measles, mumps, trauma or serious complications at birth.

Subjective Hearing Assessment

A gross subjective assessment can be completed during the developmental assessment by noting response to auditory stimuli and assessing for speech and language delays. Assess school-age children and adolescents for hearing impairment by means of a health history, physical examination and gross subjective or objective assessment. A subjective assessment is required at every well visit. Schools generally conduct hearing and vision screening in grades K, 3, 5 and 9. Results of these hearing screens suffice as a "subjective assessment."

Optional Objective Hearing Test Using an Audiometer/Audioscope

Objective testing is recommended at 4-6 years of age, and at the following ages: 12, 15 and 18 years of age. Providers can bill Medical Assistance for objective hearing tests on children not enrolled in a MCO. Objective hearing forms are available to document the results (Refer to Section 7 – Appendix I). The audiometer must be used according to the manufacturer's specifications and meet with ANSI 1969 standards. Yearly calibration of equipment is required. Recommended test frequencies and screening levels are 1000 HZ, 2000 HZ and 4000 HZ at 20 decibels (dB); test each ear separately.

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Tympanometry and impedance testing are not required for a Healthy Kids preventive visit. These tests are covered if they are medically necessary for diagnosis and treatment.

Referral and Follow-up

If the child responds to all presented tones at 20 dB in each ear, the test is normal. If the child fails to respond to any one frequency in either ear at 20 dB, the test is suspect/positive. Providers may elect to re-screen the child in approximately 2 weeks or refer directly for evaluation. For assistance in locating community-based services for children with suspect or positive hearing problems, call the appropriate MCO network or the **Division of Children's Services at 410-767-1903**.

Assessment of Vision

An assessment of the ability to see is required at each Healthy Kids preventive visit. Screen using the health history, physical examination and a gross subjective or an objective vision assessment. Children should have age-appropriate assessments for eye problems in the newborn period and at all subsequent health supervision visits. Vision screening and eye examinations are vital for the detection of conditions that distort or suppress the normal visual image that may lead to inadequate school performance or blindness in children. Retinal abnormalities, cataracts, glaucoma, retinoblastoma, eye muscle imbalances and systemic diseases with ocular manifestations may all be identified by careful examination. Before objective testing, obtain an adequate history to elicit evidence of any visual difficulties.

The physical examination should include an ophthalmoscopic examination of the eye; response to light stimulation and direction of light; an estimate of alignment of the eyes using the monocular cover test (as early as one year of age) and the Hirschberg (corneal) reflex to observe eye movements. The examination of ocular mobility, muscle balance and visual acuity may be performed together. The assessment of ocular alignment in the preschool and early school-age child is of considerable importance. The development of ocular muscle imbalance may occur at any age in children and may represent not only simple strabismus but also serious orbital, intraocular, and intracranial disease. Examination of the eyelids and orbits consists of evaluating the structures for symmetry and function, such as the ability to open both eyes. External examination of the eyes consists of a penlight evaluation of the conjunctiva, sclera, cornea and iris.

Subjective Vision Assessment

Assess children through 5 years of age for vision impairment by means of a health history, physical examination and gross subjective assessment. A gross subjective assessment can be completed during the developmental assessment by noting response to visual stimuli and assessing for delays in fine motor development.

For school-aged children and adolescents, providers may use the results of school vision screening reports in their assessment in addition to the history and

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complete physical examination. Schools generally conduct vision screenings in grades K, 3, 5 and 9. The Snellen eye chart can also be used for a gross vision assessment.

Optional Objective Vision Tests

An objective vision test is recommended at **4-6 years of age**, 12, 15 and 18 years of age. Objective vision forms are available to document vision results (See Section 7 – Appendix I). Objective vision screening guidelines will assist in evaluating results (Refer Section 3 – Tables and Charts: #4). In general, the following vision screens are conducted according to Maryland standards:

<u>Screening Test</u>	<u>Age at Screening</u>
Acuity	4 through 20 years
Muscle Balance	4 through 20 years
Visual Fusion	4 through 6 years
Hyperopia	7 through 20 years

Referral and Follow-up

For assistance in locating community-based services for children with suspect or positive vision problems, call the appropriate MCO network or the **Division of Children's Services at 410-767-1903**.

Blood Pressure Measurements

Blood pressure (BP) measurement is a standard procedure of the physical examination for all children 3 through 20 years of age. Correct measurement of BP in children requires use of a cuff that is appropriate to the size of the child's upper right arm. The right arm is preferred for consistency and comparison to the standard tables. Ideally, BP should be recorded at least twice on each occasion, and the average of each of the systolic and diastolic BP measurements should be used to estimate BP level. Automated blood pressure devices can be used if properly maintained and calibrated yearly.

The definition of normal BP is a systolic and diastolic BP below the 90th percentile for age, sex and height. High-normal BP is defined as average systolic or diastolic BP greater than or equal to the 90th percentile but less than the 95th percentile. The definition of hypertension is an average systolic or diastolic blood pressure greater than or equal to the 95th percentile for age and sex measured on at least three separate occasions (Refer to Section 3 – Tables & Charts: #1 & #2).

Introduce non-pharmacological therapy including weight reduction, exercise and dietary intervention in the care of patients with hypertension, as well as in children with high-normal BP. Employ these strategies for non-pharmacological therapy as initial treatment maneuvers for children with BP above the 90th percentile for age, gender and height. Additionally, ethnic groups with a higher

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prevalence of hypertension or individuals with a family history of high BP need to have more intense education regarding a healthy diet, exercise and weight control.

It is appropriate to consult with a physician experienced in the field of childhood hypertension for those children where further testing for underlying causes of hypertension is indicated to determine the type and extent of diagnostic testing necessary. According to the National Institute of Health, if recommendations for follow-up of the child's diastolic and systolic blood pressure differ, follow the shortest recommended time for recheck and referral (Refer to Section 3 – Tables and Charts: #3).

Physical Growth Measurements

Growth parameters are important indicators of appropriate nutrition and normal physical development. Therefore, measure each child/adolescent's height and weight at all Healthy Kids visits and plot on growth charts from birth through 20 years of age. Use the most current CDC growth charts (recommended) for graphing and measurements (Refer to Section 7 – Appendix I).

Guidelines for Obtaining Measurements

Head circumference is required on each visit from birth to 2 years of age. Measurement of head circumference may continue past 2 years of age for children with suspected abnormal growth patterns. Measure the occipital prominence to the brow using a non-stretchable flexible tape; measure to the nearest eighth-inch or millimeter.

Weight is required at each visit for all ages. Weigh infants and small children on a table model beam scale. Weigh older children who can stand without support on a floor model beam scale. Balance scales prior to weighing and check and adjust for accuracy according to the manufacturer's specifications.

Height is required at each visit for all ages. Use a firm surface with, when possible, a fixed headboard and footboard, for supine measurement of infants and children up to 2 years of age and those who cannot stand. Older children, who are able to stand without support, use a non-stretchable measuring tape, or ruler, fixed to a true vertical flat surface.

Body Mass Index (BMI)

Plotting weight and height for age allows comparison with all children the same age and is the best initial indicator of growth problems. The use of Body Mass Index (BMI) is required to monitor changes in body weight and to consistently assess risk of underweight and overweight in children and adolescents from 2 to 20 years of age. Calculate BMI using the English or metric formula, or by referring to a BMI chart or wheel (Refer to Section 7 – Appendix I).

Once BMI is calculated, plot the result on gender specific BMI-for-age growth charts, available from the CDC, to determine the BMI-for-age percentile. It is important to review and interpret the results of the automatic BMI calculations

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provided by electronic medical records (EMR) or electronic health records (EHR) used in many practices today. Provider interpretation of results is paramount in identifying underweight, overweight and obese children and those at risk for obesity related complications.

How to Calculate Body Mass Index (BMI)

English Formula: **BMI = weight (lb) ÷ height (in) ÷ height (in) x 703**

Metric Formula: **BMI = weight (kg) ÷ height (cm) ÷ height (cm) x 10,000**

What do BMI-for-age and gender percentiles mean?

≥99 th percentile.....	“Morbid” Obesity
95 th to 98 th percentile.....	Obesity
85 th to 94 th percentile.....	Overweight
5 th to 84 th percentile.....	Healthy weight
<5 th percentile.....	Underweight

An excellent learning module on overweight and obesity in children and adolescents and the use and interpretation of the CDC growth charts can be found on the CDC web site (Refer to Section 3 – Addendum Websites).

BMI-for-age and gender is an effective screening tool, but it is not a diagnostic tool. Children who fall into the following categories need further assessment:

- If BMI is below fifth percentile, assess for acute or chronic illnesses that can lead to underweight
- If BMI is between 85th and 94th percentiles, child is overweight and needs further screening
- If BMI is at or above 95th percentile for age and sex, the child is obese and needs in-depth medical and dietary assessment according to current guidelines (Refer to Section 7 – Appendix I)

Medical Management of Overweight and Obesity in Children and Adolescents

Consequences of overweight and obesity in youth are Type 2 diabetes, high blood pressure, high blood lipids, early maturation, orthopedic problems and social problems related to stigmatizing and discrimination. Childhood overweight often leads to adult obesity. Obese children have a 50% probability of becoming obese adults; obese adolescents have a 70-80% probability of becoming obese adults. Establishing good eating habits and activity patterns in childhood is the key to preventing future health problems and postponing the health consequences of chronic diseases. Health care and other economic costs are rising with the increasing prevalence of childhood overweight and obesity.

The 2007 recommendations by the *Expert Committee on the Assessment, Prevention, and Treatment of Child and Adolescent Overweight and Obesity* (Refer to Section 3, Addendum) provides guidance on management of weight in all

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children. Primary care physicians are urged to implement Step 1, Obesity Prevention at Well Care Visits at least once a year that includes the following:

- Assess key dietary habits (e.g. consumption of sweetened beverages)
- Assess physical activity habits
- Assess readiness to change lifestyle habits
- Conduct a focused family history of obesity and obesity-related illnesses

Laboratory testing recommendations depend on the degree of obesity and associated risk factors as follows:

- Children with a body mass index between the 85th and 94th percentiles with no obesity-related risk factors should have a fasting lipid profile
- Children ages 10 years and older with body mass index between the 85th and 94th percentiles and obesity-related risk factors should have additional testing for liver function (ALT and AST) and fasting blood glucose
- Children ages 10 years and older with a body mass index above the 95th percentile should have measurement of blood urea nitrogen and creatinine levels added to the above tests

A four-stage approach to treatment of childhood obesity is recommended and includes advising parents and children to:

- Limit consumption of sweetened beverages and fast food
- Limit the amount of screen time (TV and Computers) per day
- Increase physical activity for at least 60 minutes per day
- Eat family meals on most, and preferably all, days of the week

Additional information on these recommendations can be found at:

- www.Letsmove.gov
- www.pediatrics.org/cgi/content
- www.nichq.org

Nutritional Status Assessment

Assessment of eating and physical activity habits should be part of every office visit for all children regardless of current weight. At a minimum during a preventive care visit, the Healthy Kids Program requires review and documentation of current diet addressing all food groups, preventive dietary counseling and education, and assessment of child's physical activities. Monitor children/adolescents with nutritional risk factors and refer when appropriate to resources and/or for counseling.

Age specific nutrition questionnaires are available from Bright Futures (Refer to Section 7 – Appendix II). Additional nutrition and physical activity assessment tools with guidelines for interpreting responses are also available on the Bright Futures

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web site (Refer to Section 3 – Addendum Websites). Refer children/adolescents enrolled in a MCO to nutrition services within the MCO network. For assistance in locating Medicaid enrolled nutritionists/dieticians who accept referrals for fee-for-service, contact the **Division of Children Services at 410-767-1903**.

Give special emphasis to referrals for the following groups:

- Children who demonstrate weight loss or no weight gain (according to age) at scheduled pediatric visits
- Overweight and obese children
- Children with other variations from expected growth, such as weight for age and height for age that are below the 5th percentile - adjust for:
 - Prematurity (at least up to 2 years of age)
 - Parental height
 - Ethnic group or race
 - Congenital conditions such as Down Syndrome or cerebral palsy
- Children with congenital or chronic conditions affecting ability to meet nutrient needs, for example; cleft palate, congenital heart defects, cystic fibrosis, inborn errors of metabolism and physical or mental disabilities
- Children with elevated blood lead levels, iron-deficiency anemia, food allergies or intolerances/sensitivities, high cholesterol and/or drug-nutrient interactions
- Children at risk for sub-optimal nutritional status as a result of environmental influences such as:
 - Inappropriate feeding practices including over-dilution of infant formula
 - Unhealthy feeding relationships (such as consistently using food as a reward for good behavior, etc)
 - Inadequate financial resources in the family
 - Attitudes or behaviors of the primary care-giver and/or persons with significant influence on the primary care-giver

Nutritional Education

Provide all children or their caregivers with anticipatory guidance on nutrition according to the age and developmental stage of the child. Guidance can include discussion of the following:

- Nutritional needs of infants, children, and adolescents
- Developmental readiness of the infant for complementary foods
- Transition of the older infant to table foods and the development of self-feeding skills
- Normal eating and activity habits of young children
- Development of healthful eating and activity habits in school-age children and adolescents

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Use the *Dietary Guidelines for Americans* and the *My Plate* as guides for children and adolescents to select healthy foods for meals and snacks (Refer to Section 7 – Appendix IV). Further nutrition and physical activity education should include the following evidence-based messages for all children regardless of age:

- Limit sugar-sweetened beverages
- Fill half the plate with fruits and vegetables. Grains and proteins should each incorporate less than one quarter of the plate. Dairy should include fat-free or low fat milk or yogurt products.
- Eat breakfast every day
- Limit eating out, especially fast food
- Have regular family meals
- Limit portion sizes
- Engage in moderate to vigorous physical activity for at least 60 minutes a day
- Limit screen time to no more than 2 hours/day
- Remove television from children's bedrooms

Nutrition Resources and Referral Information

Children up to 5 years of age may be eligible for the **Special Supplemental Nutrition Program for Women, Infants and Children (WIC) Program**. This federal program provides nutritious food and nutrition education, including breast-feeding counseling and support. Use the *WIC Program Referral Form* (Refer to Section 3 – Addendum) or call **1-800-242-4WIC** (inside Maryland only) or **1-410-767-5233** (outside of Maryland) to refer patients. *Physician Referral Forms* and other materials may also be ordered.

Refer children who would benefit from medical nutrition therapy to a licensed dietitian or licensed nutritionist.

Lactation consultants provide counseling and support to breast-feeding mothers. Contact local hospitals, local health departments or the Maryland WIC Program to access a lactation consultant.

There is growing interest in childhood obesity prevention. The Maryland Department of Health & Mental Hygiene (DHMH) continues to address the issue of childhood overweight and obesity. For information, contact the **DHMH Center for Maternal & Child Health at 410-767-6713**.

Oral Health

Oral assessment by the primary care provider is a part of the physical examination and includes an oral examination, medical and dental history and parental counseling. Refer to tooth eruption schedule (Refer to Section 3 – Tables and Charts: #6).

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The oral screening, provided as part of a Healthy Kids preventive health visit, should include the following:

- Intraoral exam – tonsils, throat, palate, cheeks, tongue and floor of mouth
- Extraoral exam – lips, head and neck region
- Dental ridges (including gums for evidence of infection, bleeding or inflammation and erupting teeth)
- Tooth decay
- Malformation of teeth
- Need for dietary fluoride supplements (if on non-fluoridated water system and fluoride content of water is known and/or has been tested)
- Early predictor of tooth decay (white spot lesions)
- Presence of dental plaque
- Signs of orofacial trauma from accidental injury
- Signs of orofacial trauma from intentional abuse and/or neglect
- Other risk factors for oral diseases
- Tobacco use including smokeless/spit tobacco

The first visit to the dentist should occur within six months of the eruption of the first primary tooth and no later than 12 months of age. A child should see the dentist once every six months beginning at 12 months of age. Advise any patient, regardless of age, to seek dental care if problems are identified in the oral assessment. Providers may contact the **Maryland Healthy Smiles Program** at 1-888-696-9596 for questions about dental services and in assistance in locating a dentist. The *Maryland Oral Health Resource Guide* may be obtained online at http://fha.dhmdh.maryland.gov/oralhealth/docs1/Oral_Health_Resource_Guide.pdf Parents or caregivers can self-refer to a dentist without a referral from the primary care provider (PCP).

An additional benefit for children 9 months – 36 months old at their Healthy Kids preventive health visit is the application of fluoride varnish by an appropriate and trained medical provider. The Maryland Department of Health and Mental Hygiene implemented the **Maryland's Mouths Matter Fluoride Varnish and Oral Health Screening Program for Kids on July 1, 2009**. Maryland Medicaid reimburses for the application of fluoride varnish in primary care provider offices. Reimbursement by Medicaid is limited to EPSTD certified primary care providers who:

- Participate in the Maryland Medicaid Program with an active Medicaid provider number, and
- Have successfully completed a state approved oral health screening and fluoride varnish program training program

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To register for the fluoride varnish training, contact the Department of Health and Mental Hygiene, Office of Oral Health at:

- www.fha.dhmdh.maryland.gov/oralhealth/SitePages/Home.aspx
- By email at DHMH.fvprogram@maryland.gov
- By phone at 410-767-3081 or
- Access the fluoride varnish training program at:
<http://www.mchoralhealth.org/flvarnish>

Refer to Section 6 of this Manual for billing information on fluoride varnish application.

Prior to the fluoride varnish application, the EPSDT certified provider **must** conduct an oral health screening. The provider should record any notable findings in the oral cavity, preventive oral health and dietary counseling, the administration of topical fluoride varnish, and if necessary, a referral to a dentist.

A notation of “negative oral assessment” is an accepted method of documentation in the patient’s record. Record any positive findings. Advise that all children through 20 years of age see a dentist twice yearly for a comprehensive dental examination, regardless of oral health status. This exam includes a treatment plan recording the need for prophylaxis and the prevention and treatment of oral diseases including dental caries, gingival and periodontal diseases, tissue lesions or other abnormalities. Document education given to seek dental care at each preventive health visit.

Provide oral health education, counseling and disease prevention and the need to make and keep dental appointments, stressing self-responsibility, at each visit to parents or caregivers and children. The content of these oral health education and counseling activities includes but is not limited to the following topics:

Prevention of Infant and Early Childhood Caries (cavities)

- Assessment of systemic fluoride sources (Refer to Tables and Charts: #5)
 - Home water content
 - Bottled water
 - Community water fluoridation
 - Dietary fluoride supplements
- Assessment of topical fluoride use
 - Monitored use and amount of fluoride dentifrices
 - Professionally applied topical fluoride application including gel and varnish
 - Self or parentally applied topical fluoride rinses
- Use of pit and fissure dental sealants
- Adequate oral hygiene practices

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- Proper diet
 - Appropriate bottle and other feeding practices
 - Daily sugar intake
 - Snacking content and frequency
- Recognizing early signs of dental cavities (white spot lesions and plaque)
- Routine visits to a dentist

Prevention of Gingival and Periodontal Diseases (gum diseases)

- Role of plaque
- Plaque removal
- Tooth brushing with fluoridated toothpaste
- Flossing
- Professional prophylaxis
- Routine visits to a dentist

Prevention of Oral Cancers

- Knowledge of risk factors, early signs and symptoms
- Need for age-appropriate annual oral cancer exam
- Assessment of risk behaviors including tobacco use

Prevention of Oral and Facial Injuries (all ages)

- Use of athletic mouth guards
- Use of playground and other age-appropriate equipment
- Use of seat belts and bicycle helmets
- Knowledge, awareness and management of signs of abuse and neglect

C. LABORATORY TESTS

Hereditary/Metabolic Screening

Maryland hospitals and birthing centers are required to offer newborn screening for hereditary/metabolic diseases. Most of the tests require that the infant have a minimum of 24 hours of milk feedings prior to the collection of the specimen. The minimum length of stay in the hospital following delivery has been extended to at least 48 hours; however, the mother may request shorter length of stay. Early maternal/infant discharge can interfere with effective screening. If the infant is discharged before having 24 hours of milk feedings, the primary care provider should repeat the test before the infant is 2 weeks old.

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The Healthy Kids Program requires a second routine hereditary/metabolic screen at 2-4 weeks of age with documentation of the results in the chart. A listing of the most common metabolic disorders included in the hereditary/metabolic screen is available (Refer Section 3 – Tables and Charts: #7).

Obtain newborn screening results for children born in Maryland, from the **DHMH Maryland State Newborn and Childhood Screening Laboratory**. A paper copy of the newborn screening report can be obtained by sending a fax using your practice coversheet to **410-333-7112**. The faxed request should include the baby's birth name, mother's name at the time of birth, the baby's birth date and hospital of birth. Results can also be obtained by calling **410-767- 6099**. Have the information listed above when calling.

Document results in the child's medical record. A positive screening test does not establish a diagnosis but is an indication for further evaluation. Consult the **DHMH Maryland State Newborn Screening Follow-Up Unit at 410-767- 6736** for assistance with interpretation of results and arranging an appropriate evaluation. Additionally, the DHMH Office for Genetics and Children with Special Health Care Needs (OG/CSHCN) at 410-767-6730 can provide clinical information to assist in the management of a child diagnosed with sickle cell disease. Immunization records and other clinical history may also be available through the OG/CSHCN for newly established patients with a known history of sickle cell disease.

Hemoglobinopathy Screening

It is important to screen all infants for hemoglobin disorders, regardless of apparent racial or ethnic group. Tests for both sickle cell disease and trait have been included in the initial newborn screen since 1985. A negative sickle cell test documented on the newborn screen for hereditary/metabolic diseases is sufficient. Screen any infant who does not have a documented negative hemoglobinopathy screen. Document attempts to get test results from prior primary care providers.

If using the State Lab and the infant is under 3 months of age, use the *Hereditary Metabolic Disorders Lab Slip (DHMH 79)* for isoelectric focusing test. Be sure to mark "Hemoglobin Test" in red on the slip. After 3 months of age, use a *Hemoglobin Disorder Lab Slip (DHMH 189)*. The **Maryland State Laboratory at 410-767-6120** will provide lab slips to providers who have their tests analyzed by the Maryland State lab.

Hemoglobinopathy Testing

Review sickle cell trait results at 12 years of age. If a negative sickle cell trait result is not documented in the child's chart, and the child/adolescent was born in Maryland, contact the **DHMH Maryland State Newborn and Childhood Screening Laboratory at 410-767-6099** for assistance in determining the results. If results are not available or the child was not born in Maryland, a hemoglobin electrophoresis is recommended, regardless of apparent racial or ethnic group. Refer the adolescent for genetic counseling if sickle cell trait is present.

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Anemia Screening

Perform a hematocrit (Hct) or hemoglobin (Hgb) determination to screen for the presence of anemia at 12 months and 24 months of age. Additionally, complete an anemia screen on the initial visit for all children up to 6 years of age unless results are available from the previous provider. Age specific hematocrit and hemoglobin values for healthy children are available (Refer to Section 3 – Tables and Charts: #8). Periodic anemia screens are not required for a Healthy Kids visit after 2 years of age, unless clinically indicated, or the results of a previous test are not available (Refer to Section 4 – Adolescent Anemia Screening).

Lead Risk Assessment and Blood Lead Testing

A lead risk assessment is a series of questions used to determine if the child is at risk for high-dose lead exposure. The *Preventive Screen Questionnaire* (Refer to Section 7 – Appendix II) can be used for this assessment. A lead risk assessment is required at each preventive health care visit starting at 6 months of age up to 6 years of age. Consider a “yes” or “I don’t know” response to any of the questions a positive risk assessment. Documented results of the lead risk assessment must be in the clinical record at each well child visit. Document the results of the lead risk assessment on either the visit sheet or the Preventive Screen Questionnaire.

Lead Risk Assessment Follow-Up

If the child is at risk; i.e., if the response to any of the lead risk assessment questions is “yes” or “don’t know” or if there is any history, symptoms, or signs that may be related to possible lead poisoning, a blood lead level must be done.

Blood Lead Level (BLL) Testing and Laboratory Information

Regardless of the results of the lead risk assessments or zip code of residence, all MA children must have a BLL at 12 months of age and again at 24 months of age. Additionally, obtain a baseline blood lead level on the initial visit for all children up to 6 years of age, if the child has not been previously tested or if results are not available. As noted above, initiate testing at any age, whenever a child is determined to be at risk for lead exposure using a lead risk assessment. The primary care provider must document that a blood lead level was ordered. Direct any questions regarding the lead testing requirements for Medicaid children to the **Healthy Kids Program Program at 410-767-1903**.

The primary care provider may refer the child to a CLIA (Clinical Laboratory Improvement Amendments of 1988) certified laboratory to obtain and process the blood lead specimen. All laboratories must be CLIA certified to participate in the Maryland Medical Assistance Program. The MCOs have contracts with specific laboratories in your geographical area. Contact each MCO to determine which laboratory to use.

Based on MCO contracts, the primary care provider may have the option of collecting the blood lead specimen in his or her office. The venipuncture method for specimen collection is recommended to minimize false positive results.

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State law requires that all laboratories send blood lead results to the Childhood Lead Registry at the Maryland Department of the Environment, Childhood Lead Poisoning Prevention Program (CLPPP). Laboratory slips should contain all patient demographic information: name, complete street address and zip code. This information is used to track children exposed to lead and identify areas at risk for lead poisoning.

Maryland Targeting Plan for Childhood Lead Poisoning

In addition to the blood lead testing requirements for medical assistance recipients, there are requirements for all children, regardless of insurance coverage, residing in at-risk areas. For further information regarding the *Maryland Targeting Plan* contact the **Center for Maternal Child Health, Childhood Lead Screening Program** at **410-767-6748 or 6713**. Information and “Maryland Risk Areas by Zip Code” are also available on the Childhood Lead Screening Program’s web site (Refer to Section 3 – Addendum Websites).

Additionally, with the passage of *Baltimore City Ordinance 00-20 Council Bill 00-0044*, effective July 2000, Baltimore City pediatric and primary care providers are required to order blood lead testing for all children, 12 and 24 months of age, living within Baltimore City. Providers who fail to order a blood lead test are subject to civil penalties of \$100 per violation.

Elevated Blood Lead Level Follow-Up

Lead poisoning is a serious disease, and elevations require confirmation, assessment of increasing/decreasing trend, and prompt follow-up. The child's primary care provider is responsible for the child's medical case management. When children have documented blood lead levels between 1-5 mcg/dl, venous and capillary, the child’s caregiver needs health education and anticipatory guidance about lead and lead poisoning. The second blood lead level at 24 months is still required, even if the blood lead level at 12 months is between 0-9 mcg/dl. Continue to conduct lead risk assessments at every visit up to 6 years of age. Perform additional testing if lead risk has increased.

Children who have blood lead levels between 5-9 mcg/dl must be retested in 3 months. In addition, families whose children have a confirmed level of 5 mg/dl and above should receive lead and nutritional education, and be assessed for possible sources of lead exposure. and above need follow-up according to the protocols established by the Centers for Disease Control and Prevention and the Maryland Department of the Environment, CLPPP (Refer to Section 3 – Tables and Charts: #9a & #9b). For assistance in locating tertiary centers that provide chelation treatment for BLL over 40, call the Department of the Environment at **1-800-776-2706 or 410-537-3859**. Local health departments provide environmental inspections, nursing case management and individualized health education to families with lead poisoned children (Refer to Section 8 – Telephone Directories).

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Additional Health Risk Assessments

Health risk assessments are used to determine risks for a variety of health-related problems. A risk assessment consists of a series of questions asked to determine if the child/adolescent needs counseling, education, testing and/or referral to a specialty care provider. The age appropriate risk assessments are described below.

Tuberculosis Risk Assessment (Annually starting at 1 Month of age)

The recommendations for testing for tuberculosis (TB) reflect the relatively low incidence of TB in children in the United States. In Maryland, immigrants from countries where TB is endemic have the highest rates of TB infection. The complete list of countries in which TB is endemic is on the Maryland TB Control web site (Refer to Section 3 – Addendum Websites).

Current Professional Recommendations Regarding TB:

- Carefully screen for risk of tuberculosis exposure; tuberculin skin testing for low risk children is NOT recommended
- Selectively and appropriately test those at risk for tuberculosis using intradermal Tuberculin Skin Test (TST)
- Use only trained health care providers to administer and read the results
- Implement prompt medical evaluation for anyone with positive a TST

Perform a tuberculosis risk assessment annually at the Healthy Kids preventive visit beginning at 1 month of age or on the first visit and yearly thereafter, to determine if the child is at risk. The questions for the tuberculosis risk assessment are on the *Preventive Screen Questionnaire* (Refer to Section 7 – Appendix II). A “yes” response to any of the questions indicates a “positive” tuberculosis risk assessment. Document the result of the tuberculosis risk assessment, “positive” or “negative”, on the questionnaire form or on the visit sheet. Be sure to date and sign off on the questionnaire after review. If a child has a “positive” tuberculosis risk assessment, perform testing. Routine TST placement is discouraged for low risk children because of possible false-positive skin tests. If the practice is completing a pediatric health form requesting TST results for a child assessed as low risk, document “not indicated” on the form.

Testing: Determine the frequency and timing of tuberculin skin testing (Refer to Section 3 – Tables and Charts: #12) based on individual health history and evidence of risk factors. Use only the Mantoux TST test (5 tuberculin units of purified protein derivative placed intra-dermally) for Tuberculin skin testing. Multiple puncture or Tine tests are inadequate for tuberculin skin testing and should not be used.

A trained health care provider must place and read the test results. Use a ruler to measure, in millimeters, the induration (not erythema). Record the results in the clinical chart based on correct interpretation of skin-test reactions (Refer to Section 3 – Tables and Charts: #13). Do not allow parents or other caregivers to

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read the skin test. A history of BCG vaccinations is not a contraindication to tuberculin skin testing and is generally not a factor in interpretation of results.

Treatment: A positive skin test requires further assessment for tuberculosis, including a chest X-ray to rule out active disease. Children with negative chest X-rays and positive skin test are considered latently infected and should receive isoniazid prophylaxis for a minimum of nine months to prevent active disease in the future (Refer to Section 3 – Tables and Charts: #14). Treat a child/adolescent with active disease according to Maryland and national standards. Contact the **Maryland Division of TB Control at 410-767-6698** for further information. Administer medications via Directly Observed Therapy (DOT). Notify the local health department (Refer to Section 8 – Telephone Directories) of anyone with a positive TST and an abnormal chest x-ray, or a child with symptoms of tuberculosis.

Cholesterol/Heart Disease Risk Assessment (Annually at 2-20 years of age)

The Maryland Healthy Kids Program requires cholesterol/heart disease risk assessment by questionnaire starting at 2 years of age. Since family health history can change, the risk assessment is required annually. The *Preventive Screen Questionnaire* (Refer to Section 7 – Appendix II) is provided to assist providers in determining risk for heart disease. A “yes” response to any question indicates a “positive” risk. Be sure to date and sign off on the questionnaire after review. Document the result of the cholesterol/heart disease risk assessment, positive or negative, on the questionnaire form or on the visit sheet.

When a child has a positive cholesterol/heart disease risk assessment, the first fasting lipid profile test should be completed minimally at 2 years of age but no later than 10 years of age based on the guidelines of the American Academy of Pediatrics and the 2007 Expert Committee on the Assessment, Prevention, and Treatment of Child and Adolescent Overweight and Obesity⁴ (Refer to Section 3 – Addendum). Test children and adolescents:

- With a positive family history of dyslipidemia or premature cardiovascular disease beginning at ≤ 55 years of age for men and ≤65 year of age for women (this includes documented angioplasty, coronary artery bypass surgery, diagnosed coronary atherosclerosis, myocardial infarction, angina pectoris, peripheral vascular disease, or sudden cardiac death)
- Whose family history is unknown for CVD risks
- Whose parent or grandparent has been found to have hypercholesterolemia (≥200 mg/dL)
- Who are overweight and obese – above the 85th% on the BMI chart
- Who have any other risk factors such as hypertension (blood pressure ≥95th %), smoke cigarettes, or are diagnosed with diabetes mellitus
- Who have fasting lipid profile results in the normal range, but who continue to be at risk, every 3-5 years

⁴ “Lipid Screening and Cardiovascular Health in Childhood”, *Pediatrics* 2008; 122:198-208

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For management of hypercholesterolemia in children see the American Academy of Pediatrics recommendations (Refer to Section 3 – Tables and Charts: #10 and #11). Children with persistent elevated blood cholesterol levels should receive a referral to a nutritionist for further dietary intervention. Drug therapy should be considered in children 8 years of age and older with an:

- LDL concentration ≥ 190 mg/dL, or
- LDL of ≥ 160 mg/dL with positive family history or presence of ≥ 2 additional risk factors (obesity, smoking or hypertension), or
- LDL of ≥ 130 mg/dL if diabetes mellitus is present

STI/HIV Risk Assessment (12 years of age and older)

The Maryland Healthy Kids Program currently requires primary care providers to conduct risk assessments for *Sexually Transmitted Infections/Human Immunodeficiency Virus (STI/HIV)* at each Healthy Kids visit beginning at 12 years of age, and earlier if indicated by the child's history. The questions for the STI/HIV risk assessment are on the *Preventive Screen Questionnaire* (Refer to Section 7 – Appendix II). Document results of the assessment on the questionnaire form or on the visit sheet. Be sure to date and sign off on the questionnaire after review. A “yes” response to any of the questions indicates a positive risk and the need for further assessment and appropriate testing with results documented in the chart. CDC currently recommends opt-out HIV testing for all adults and adolescents 13 to 64 years of age in all healthcare settings found at www.cdc.gov/mmwr/preview/mmwr.

Diagnosis of a STI often requires multiple specific diagnostic tests and all sexually active adolescents should be counseled and tested for sexually transmitted infections, and educated about safe sex and contraception. Effective contraceptive management is important for the sexually active adolescent but if the primary care provider does not perform these services, an appropriate specialty referral is indicated to a gynecologist for female adolescents or adolescent medicine specialist for males and/or females.

The American Academy of Obstetricians and Gynecologist (ACOG) now recommends that pap smears be deferred until the female adolescent turns 21 years of age. This recommendation is based in part on the very low incidence of invasive cancer and the potential for adverse effects of the follow-up of abnormal cytology screening results.⁵

D. IMMUNIZATIONS

The Maryland Healthy Kids Program requires the primary care provider to review the child/adolescent's immunization status and to administer any vaccines needed to bring the immunization status up-to-date according to the current

⁵ “Clinical Management Guidelines for Obstetrician-Gynecologists,” *The American College of Obstetricians and Gynecologists*, Practice Bulletin, Number 109, December 2009 (Replaces Practice Bulletin Number 45, August 2003)

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Maryland Department of Health and Mental Hygiene Recommended Childhood Immunization Schedule (Refer to Section 7 – Appendix III). This immunization schedule provides the most current recommendations of the Public Health Service's Advisory Committee on Immunization Practices (ACIP) and the American Academy of Pediatrics (AAP) and is endorsed by the Medical and Chirurgical Faculty of Maryland (Med-Chi). Refer to the vaccine manufacturer's current guidelines and the latest ACIP and AAP recommendations for specific vaccine use. For additional information, contact the **Vaccines for Children Program** at **410-767- 6679** or the VFC web site (Refer to Section 3 – Addendum Websites and Section 4 Immunizations).

The immunization requirements for entry into school and child care may be slightly different. Infants may enter a child care center at 6 weeks if they have received their initial series of immunizations. If you have any questions about the immunization requirements for school or child care, please contact the **Center for Immunization** by calling **410-767- 6679** or go to their website at: <http://ideha.dhmh.maryland.gov/OIDEOR/IMMUN/SitePages/back-to-school-immunization-requirements.aspx> for the schedules.

Immunization Records

Immunizations should be summarized and recorded on one immunization record, such as the *Vaccine Administration Record (DHMH 4500)* (Refer to Section 7 – Appendix III) in a standard location that is prominent and easily available for reference in the child/teen's medical record. Federal law requires the following information:

- The vaccine manufacturer and lot number of the vaccine used
- The date of administration
- The name and title of the person administering the vaccine as well as the address of practice site
- The edition date of the Vaccine Information Statement
- The date these materials were provided

Baltimore City Ordinance Number 573, enacted in 1995, requires Baltimore City based pediatric, family and general providers to submit a record of immunizations administered to a preschool child (up to 5 years of age). For more information, call the **Baltimore Immunization Registry Program (BIRP)** at **410-545-3048**.

Review the immunization record at each visit. Instruct the parent or guardian to bring the immunization record with them on the initial visit. If the record is not available from the parent, the child's previous health care provider, school or childcare facility should be able to provide the child's immunization history. Obtain a signed medical release of information and document these efforts in the medical record.

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The following Maryland area immunization registries may assist the primary care provider in obtaining a child's immunization record:

- **ImmuNet – Maryland's Immunization Registry**
 - An internet based system that receives and stores childhood and adult immunization records
 - Call the Help Desk at **410-767-6606** to enroll
- **Baltimore Immunization Registry Program**
 - For a child/adolescent, who lived in the city or attends a Baltimore City Public School
 - Call **410-545-3048**
- **Washington DC Immunization Registry**
 - If a child/adolescent lived in or attended school in Washington DC
 - Call **202-576-9301**

In rare instances when records cannot be located, the DHMH Center for Immunization recommends beginning the immunizations again following the appropriate catch-up schedule, using minimum intervals between doses (Refer to Section 7 – Appendix III). Continue immunizing until the child is brought up to date or the record is located. Positive titers for measles, mumps, rubella, varicella and polio can substitute for vaccination.

If parents indicate that their religious beliefs conflict with the immunization requirement, a signed waiver or objection should be placed in the medical record.

Adverse Events

Specific adverse events should be reported to the **Vaccine Adverse Event Reporting System (VAERS)** following vaccination with any vaccine. Call **1-800-822-7967** to obtain reporting forms and other related information, or visit the VAERS web site (Refer to Section 3 – Addendum Websites). In Maryland, adverse pertussis vaccine events are also reportable to the local health department.

Vaccine Information Statements

Federal regulation under the National Childhood Vaccine Injury Act requires providers to supply, **prior to administration of each dose of vaccine**, a copy of the relevant, current edition of Vaccine Information Statements (VIS) produced by the Centers for Disease Control and Prevention (CDC) to the parent or legal representative of any child about to receive that vaccine. Camera-ready Vaccine Information Statements may be obtained in English, Spanish and a variety of other languages on the CDC web site (Refer to Section 3 – Addendum Websites) or by calling the **Vaccines for Children Program** at **410-767-6679**.

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The Vaccines for Children (VFC) Program

The Maryland Healthy Kids Program requires that providers enroll in the Maryland VFC Program, regardless of whether the provider is participating with a MCO or fee-for-service Medical Assistance. The VFC Program is a federal initiative begun in October 1, 1994 and provides vaccines to health care providers, at no cost, for children/adolescents under 19 years of age who are:

- Eligible for Medical Assistance
- Uninsured, without health insurance
- Under-insured, covered by private insurance that does not pay for immunizations
- Native American Indian or Alaskan Native

The Vaccines for Children Program requires providers to submit a practice profile every other year. Providers must also submit a *VFC Vaccine Inventory Form* (Refer to Section 7 – Appendix III) twice a year and may need to document the number of VFC eligible children in the practice in order to receive an adequate supply of vaccine. Complete the *VFC Patient Eligibility Screening Record* (Refer to Section 7 – Appendix III) for every child/adolescent who receives the free vaccines.

Providers must also maintain a privately purchased stock of vaccines to cover required immunizations not provided through the VFC Program for children and adolescents on Medical Assistance. Examples include hepatitis B, Td, varicella and meningococcal vaccines for young adults, 19 to 20 years of age. Synagis for at risk premature infants is also not available through VFC. However, it is available and covered when prior approval is obtained from infant's MCO. For infants on Medicaid FFS prior authorization forms are available at www.mmcp.dhmh.maryland.gov/pap/SitePages/Pharmacy%20Program%20Forms.aspx.

The VFC Program has a consultant assigned to each Maryland jurisdiction (Refer to Section 8 – Telephone Directories). The consultants are available to answer questions about vaccines, vaccine preventable diseases and the VFC Program; help current providers adjust their vaccine supply; and provide educational materials. New providers should contact the appropriate VFC consultant to enroll in the Program. The VFC consultants also visit each practice annually to review records for the federally required vaccine administration documentation and adequate vaccine storage.

Proper storage of vaccines involves maintaining refrigerator temperatures at 35 to 46 degrees Fahrenheit (2 to 8 degrees centigrade) and freezer temperatures at 5 degrees Fahrenheit or lower (-15 degrees centigrade or lower). Use the Vaccine Storage/Temperature Record (Refer to Section 7 – Appendix III) or a similar record to record the temperatures of the refrigerator and freezer twice daily. The freezer should be a separate storage area with a separate door from the refrigerator storage area. Remove expired vaccines from the refrigerator/freezer, complete a *Vaccine Return Form* (Refer to Section 7 – Appendix III) and notify the VFC Program. The Maryland Healthy Kids nurse consultants may also check for appropriate vaccine storage and monitor vaccine expiration dates when they

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conduct their on-site chart review. For more information visit the VFC web site (Refer to Section 3 – Addendum Websites) or call the **Vaccines for Children Program** at **410-767-6679**.

Direct any questions regarding immunization reimbursement to the **Healthy Kids Program Nurse Consultants** at **410-767-1903**. For answers to questions regarding vaccine administration, contact the **Vaccines for Children Program** at **410-767-6679**.

E. HEALTH EDUCATION/ANTICIPATORY GUIDANCE

Age-Specific Health Education

The preventive care visit is the opportune time to integrate health education and anticipatory guidance to both the parent and the child throughout the visit. Health education and anticipatory guidance should include information that will:

- Assist the family in understanding what to expect in terms of the child's development
- Provide information about the benefits of healthy lifestyles and practices
- Promote the prevention of diseases and injuries
- Age-specific information is included on each of the Healthy Kids visit sheets

Age specific Anticipatory Guidance topics are listed below. Address at least three general age specific topics below. Education materials are available to assist providers in providing information (Refer to Section 7 – Appendix IV).

Infant to Preschool

Developmental tasks	Behavior/Discipline
Parenting	Sleep
Injury Prevention	Child Care
Nutrition	Toilet training
Dental Care	Self-comforting behaviors
Family planning (mother)	School Readiness

School-Age Child

Increase the involvement of child in discussion and decision-making.

Developmental tasks	School Progress
Parenting	Dental Care
Behavior/Discipline	Health habits/Self care
Sex Education (counsel parents)	Social Interactions
Injury Prevention	Nutrition

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Adolescence

Focus on the adolescent's increasing responsibility in decision-making.

Developmental tasks	Sexual activity
Health habits/Self care	Contraception
Smoking/Alcohol/Drugs	STIs and AIDS prevention
Nutrition	Injury Prevention
Dental Care	Suicide Prevention
School Progress	Violence
Social Responsibilities	Social Interactions
Respect self/others	Peer Pressure/Bullying
Safe driving/riding in car	Future Career Plans/Ideas

In addition, document health education in the chart to address the following:

- Health problems identified by the provider, parent or child that includes needed treatments, counseling and/or referrals for additional specialty services
- Education about the scheduling of the next Healthy Kids visit following the Schedule of Preventive Health Care
- Education to seek annual dental care

Injury Prevention

According to the Safe Kids USA, unintentional injury is the number one killer of America's children. By taking simple precautions, it is estimated that almost 90 percent of these unintentional injuries can be avoided. Discuss injury prevention as part of anticipatory guidance and document topics covered (Refer to Section 7 – Appendix IV). Possible topics are noted below.

Bicycle Safety

A bicycle helmet should be appropriate for the size and age of the child and meet the safety standards of the American National Standards Institute (ANSI), the Snell Memorial Foundation or the American Society for Testing and Materials (ASTM). Have parents periodically review bicycle safety rules and traffic laws with their child. Laws that apply to motor vehicle operators also apply to cyclists. Maryland law requires helmets be worn through 16 years of age. Encourage parents to act as role models and purchase helmets to wear when they ride.

Car Passenger Safety

The use of child restraint systems including infant seats, convertible seats, forward facing child safety seats, booster seats and seat belts are effective in reducing injury. Effective October 1, 2012, Maryland law requires that children

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under eight years of age ride in a child safety seat, booster seat, or other federally approved safety device, unless the child is 4'9" or taller. (Refer to Section 7 – Appendix IV).

Maryland law also requires a passenger 8 years to 16 years of age be secured in a child restraint system or seat belt and prohibits passengers younger than 16 years of age from riding in the unenclosed bed of a pick-up truck. Child safety advocates recommend that children under 12 years of age ride secured in the back seat of a car (Refer to Section 7 – Appendix IV).

Families who are unable to purchase a child restraint can contact the **Maryland Kids in Safety Seat (KISS) Program at 1-800-370-SEAT** for assistance in obtaining a car seat.

Fire Prevention

Ask parents if there are working smoke alarms in the family home. Since the primary job of a smoke alarm is to awaken sleeping family members, the alarms should be located as close to each bedroom as possible. Because smoke rises, smoke alarms should be located on the ceiling or on the wall between 6 and 12 inches below the ceiling.

Families should also have a fire escape plan. Have primary and alternate routes marked and everyone practice them to escape the home. Choose a location outside the home as the meeting place. Contact the office of the **Maryland State Fire Marshal** on the web at: <http://mdsp.org/Organization/OfficeoftheStateFireMarshall.aspx> or for more information by phone at **410-653-8980 / 800-525-3124** Safe Kids USA also has fire prevention and safety information on their website at www.safekids.org (Refer to Section 7 – Appendix IV).

Gun Safety

All children are potentially at risk of unintentional firearm injury, whether a gun is present in the home or not. To help protect children in the state, Maryland enacted The Child Access Protection Law. This law states: "No person shall store or keep any loaded firearm on any premise under their control if it is known, or reasonably should be known, that a minor, age 15 and under, is likely to gain access to the firearm without permission, unless the firearm is properly stored." Maryland also mandates that, beginning January 1, 2003, all handguns sold in the state and manufactured after December 2002 have an integrated mechanical safety locking device.

Even with these laws in place in Maryland, not everyone is aware of these requirements or, if there are no children in the home, may think the laws do not apply to them. Parents and caregivers need to act to protect their children.

Gun owners should:

- Store them unloaded, locked up and out of children's reach
- Store ammunition in a separate, locked location

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- Use quality gun locks, lock boxes or gun safes for every firearm
- Keep gun storage keys and lock combinations hidden in a separate location
- Take a course in using, maintaining and storing guns safely

All parents and caregivers should:

- Talk to their children about the potential dangers of guns
- Teach children never to touch or play with a gun
- Teach children to tell an adult if they find a gun or call 911 if no adult is present
- Ask neighbors, friends, relatives and adults in any homes where their children visit, if firearms are present in the home and how they are stored
- Not allow their children to visit the home if the firearms are not properly stored

Poison Safety

Many common household products can poison children; including cleaning supplies, cosmetics, art supplies, alcohol, medicines and vitamins. Parents and caregivers can protect their families by using the Safe Kids USA Poison Safety handout to identify and eliminate potential hazards and prepare the home for children. (Refer to Section 7 – Appendix IV). In addition, parents and caregivers should:

- Never leave potentially poisonous household products unattended when in use
- Read labels and follow the exact directions – giving medications based on the child's weight and only with the dispenser packaged with that medication
- Know which plants in and around the home are poisonous; remove them or make them inaccessible to children
- Cover lead paint with a sealant or hire a professional to remove it in homes built before 1978
- Wash children's hands and faces, toys and pacifiers frequently to reduce the risk of ingesting lead-contaminated dust

Advise parents to post the **national toll-free poison hotline number** at every telephone: **1-800-222-1222**. This same number can be used anywhere in the United States to be connected to the closest poison center. For more information about educational resources and materials from the **Maryland Poison Center**, call **410-706-2151**. For educational resources and materials in Prince George's and Montgomery counties, call **202-362-3867**.

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Sun Safety

Exposure to the sun's ultraviolet (UV) rays appears to be the most important factor in the development of skin cancer, which is largely preventable with consistent sun protection. Parents and caregivers, to protect children from the sun, should assure that they:

- Stay out of the sun between 10 a.m. and 4 p.m.
- Play in the shade whenever possible – caution: reflective surfaces (such as water) can cause sunburns even in the shade
- Wear protective, tightly woven clothing
- Wear a hat with a 4" brim all around
- Avoid reflective surfaces – they can reflect up to 85% of the sun's rays
- Wear a broad-spectrum sunscreen with a Sun Protection Factor (SPF) of 15 or higher that protects against UVA and UVB rays – reapplied every 2 hours

For more information about ways to protect children from over exposure to the sun, contact the Center for a HealthyMaryland at MedChi, **410-539-0872, extension 3340**, or visit their website at <http://healthymaryland.org/public-health/> and click on skin cancer prevention.

Water Safety

Children can drown or nearly drown in seconds and should never be left alone near water, at the pool, beach or home. Drowning and near drowning typically occurs when a child is left unattended or during a brief lapse of supervision. Inside the home, water dangers include bathtubs, sinks, toilets and buckets. While outside the home, water dangers include natural bodies of water, pools, water features, hot tubs and wading pools.

Parents also need to be aware of the temperature of the water in the home. The National Safe Kids Campaign reports that it takes just 3 seconds for children to sustain 3rd degree burns from a water temperature of 140°F. The home hot water heater temperature should be set at 120°F.