Section 3 – ADDENDUM

Developmental Screening Tools *Updated 2014*

Additional Evaluation and Intervention for Developmental Disorders *Updated 2014*

Modified Checklist for Autism in Toddlers-Revised, with Follow up (MCHAT-R/F) *Updated 2015*

Maryland Newborn Hearing Screen & Intervention Guide *Updated 2015*

JAEB Visual Acuity Screener *New 2016*

Maryland WIC Program Medical Documentation Form *Updated 2014*

Expert Committee Recommendations on the Assessment, Prevention, and Treatment of Child and Adolescent Overweight and Obesity – 2007

Developmental Screening Tools

Tools Recommended for General Developmental Screening

The following standardized, validated developmental screening tools are *recommended* for use in the Healthy Kids Program for general developmental screening of children through age 5 years:

- *Ages and Stages Questionnaire* (ASQ)
- *Parents' Evaluation of Developmental Status* (PEDS)

Tools Approved for General Developmental Screening

The complete list of standardized, validated developmental screening tools approved for use in the Healthy Kids Program for general developmental screening of children through age 5 years is as follows:

- **Ages and Stages Questionnaire (ASQ)**; for more information refer to *http://agesandstages.com/*
- **Parents' Evaluation of Developmental Status;** for more information refer to *http://www.pedstest.com/default.aspx*
- **Battelle Developmental Inventory Screening Tool, 2nd ed.;** for more information refer to *http://www.riversidepublishing.com/products/bdi2/*
- **Brigance Screens-II;** for more information follow the link *http://www.curriculumassociates.com/products/BRIGANCEoverview.aspx*
- **Early Screening Inventory – Revised;** for more information follow the link *http://www.pearsonclinical.com/education/products/100000382/early-screening-inventory-revised-2008-edition-esi-r.html*
- **FirstSTEP Preschool Screening Tool**; for more information follow the link *http://www.pearsonclinical.com/childhood/products/100000471/firststep-screening-test-for-evaluating-preschoolers-firststep.html*

Screening Tool Comparison

Instrument	Description	Cost	Admin Time	Psychometric	Literacy/ Language Issues
Ages & Stages Questionnaires	Parent-completed questionnaire; use- 4-60 months; 19 age-based forms; 30 items	$275 per language; unlimited copies	10-15 min	Sens: .70-.90 (mod-high) Spec: .76-.91 (mod-high)	5th grade level English, Spanish, French and Korean
Parents' Evaluation of Developmental Status	Parent-completed interview; use- 0-8 years; single response form for all ages; 10 items	$36 per 50 survey forms and 50 score sheets $79.95 manual	2-10 min	Sens: .74-.79 (moderate) Spec: .70-.80 (moderate)	5th grade level English, Spanish, French, Chinese, Arabic, Somali, etc.
Battelle Developmental Inventory Screening Tool, 2nd edition	Directly administered; use: birth to 95 months; results in pass/fai score; age equivalent; 100 items	$390.08 per language	10-15 min (<3y old) 20-30 min (>/= 3y old)	Sen.: .72-.93 (mod-high) Spec.: .79-.88 (moderate)	5th grade level; English and Spanish
Brigance Screens-II	Directly administered; use: birth-90 months; series of 9 forms; 8-10 items	$59 per 50 survey forms; $59 manual	10-15 min	Sen.: .73-100 (mod-high) Spec.: .72- .77 (moderate)	5th grade level; English and Spanish
Early Screening Inventory-Revised	Directly administered; use: 3.5 to 5.11 years; 25 items	$149.45 survey forms including the manual	15-20 min	Sen.: .92-.93 (high) Spec.: .80 (moderate)	5th grade level; English and Spanish
FirstSTEP Preschool Screening Tool	Directly administered; Use: 2.9 to 6.2 years;	$297.85 including the manual	15-20 min	Sen: .72-.85 (moderate) Spec.: .76-.83 (moderate)	5th grade level; English

Additional Evaluation and Intervention for Developmental Disorders

The American Academy of Pediatrics in a 2006 policy statement recommends that all children identified as being at high risk of a developmental disorder through developmental surveillance or screening should undergo the following:

- Referral to Early Intervention/Child Find or other early childhood therapeutic services;
- Diagnostic developmental evaluation; and
- Diagnostic medical evaluation. [1]

Early Intervention (Maryland Infants and Toddlers Program)

Maryland Infants and Toddlers Program[2] provides services designed to meet the developmental needs of children 0-4 with developmental delay or at risk for a substantial delay. Services can include identification and evaluation, therapeutic intervention (PT, OT, speech/language, special instruction), service coordination, and family support.

A Maryland child aged 0-3 may be eligible for the Infants and Toddlers Program if he/she:

- Has a delay of 25% or more in development;
- Is developing in a way that is considered "atypical" for most children his/her age; or
- Has a diagnosed condition (ex. Down syndrome, hearing impairment) that is likely to affect development.

Referrals can be made to the Maryland Infants and Toddlers Program by faxing a completed *Maryland Infants and Toddlers Program Referral and Feedback Form* (Refer to Section 5, Addendum) to the *Local Infants and Toddler Programs*. Referrals can also be made by phone (Refer to Section 8).

Child Find/Preschool Special Education Services Program

The Preschool Special Education Services Program [3] provides special education services for children with disabilities ages 3 through 5 in each local school system. Starting with the local school system *Child Find Office*, children can receive screening services to identify any areas of concern for further assessment by a multidisciplinary team. A child determined to be eligible by one of the established disability eligibility categories can receive special education and related services necessary to support the child's development and educational program. Referrals can be made to the local school system *Child Find Program* (Refer to Section 8).

Note: Evaluations through the Maryland Infants and Toddlers and Child Find Programs may not establish a developmental diagnosis or address medical risk. Further developmental and medical evaluation will often be necessary for children with established delays (see below).

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[1] Identifying Infants and Young Children with Developmental Disorders in the Medical Home: an Algorithm for Developmental Surveillance and Screening. (2006). *Pediatrics*, 118(1), 405 -420. Retrieved from *http://pediatrics.aappublications.org/content/118/1/405.full*

[2] See *http://www.msde.maryland.gov/MSDE/divisions/earlyinterv/infant_toddlers/about/message.htm*

[3] See *http://www.msde.maryland.gov/MSDE/divisions/earlyinterv/infant_toddlers/about/preschool_services.htm*

Diagnostic Developmental Evaluation

This evaluation is aimed at identifying the specific developmental disorder(s) affecting the child. If the pediatric primary care provider lacks the training and skills to perform this evaluation, a referral should be made through the child's Managed Care Organization (MCO) to an appropriate pediatric subspecialist or other early childhood professional

Diagnostic Medical Evaluation

This evaluation is aimed at identifying an underlying etiology. In many cases, it may be performed by a trained and skilled pediatric primary care provider. Contact the child's MCO to refer to an appropriate pediatric sub-specialist if needed.

Other Resources

There are a variety of state and local resources for children with developmental delays or disorders. Providers and families can contact *The Resource Finder*[4]**,** a program of the Kennedy Krieger Institute, supported by the Maryland Department of Health and Mental Hygiene by calling **1-800-390-3372** or e-mailing ***ResourceFinder@kennedykrieger@org***. Other resources can be found by contacting the *Local Health Department* (Refer to Section 8)

[4] See *http://resourcefinder.kennedykrieger.org/*

M-CHAT-R™

Permissions for Use of the M-CHAT-R

The Modified Checklist for Autism in Toddlers, Revised (M-CHAT-R; Robins, Fein, & Barton, 2009) is a parent-report questionnaire to assess risk for Autism Spectrum Disorder (ASD). The M-CHAT-R will be available for free download for clinical, research, and educational purposes once the validation paper is accepted for publication. Download of the M-CHAT-R and related material will be authorized from www.mchatscreen.com.

The M-CHAT-R is a copyrighted instrument, and use of the M-CHAT-R must follow these guidelines:

(1) Reprints/reproductions of the M-CHAT-R must include the copyright at the bottom (© 2009 Robins, Fein, & Barton). No modifications can be made to items, instructions, or item order without permission from the authors.

(2) The M-CHAT-R must be used in its entirety. Evidence indicates that subsets of items do not demonstrate adequate psychometric properties.

(3) Parties interested in reproducing the M-CHAT-R in print (e.g., a book or journal article) or electronically for use by others (e.g., as part of digital medical record or other software packages) must contact Diana Robins, Ph.D. to request permission (drobins@gsu.edu).

(4) If you are part of a medical practice, and you want to incorporate the M-CHAT-R into your own practice's electronic medical record (EMR), you are welcome to do so. However, if you ever want to distribute your EMR page outside of your practice, please contact Dr. Robins to request a licensing agreement.

Instructions for Use

The M-CHAT-R can be administered and scored as part of a well-child care visit, and also can be used by specialists or other professionals to assess risk for ASD. The primary goal of the M-CHAT-R is to maximize sensitivity, meaning to detect as many cases of ASD as possible. Therefore, there is a high false positive rate, meaning that not all children who score at risk will be diagnosed with ASD. To address this, we have developed a 2-stage screening tool, the M-CHAT-R with Follow-up (M-CHAT-R/F). Users should be aware that even with the Follow-up, a significant number of the children who screen positive on the M-CHAT-R will not be diagnosed with ASD; however, these children are at high risk for other developmental disorders or delays, and therefore, evaluation is warranted for any child who screens positive. The M-CHAT-R can be scored in less than two minutes. Scoring instructions can be downloaded from http://www.mchatscreen.com. Associated documents will be available for download as well.

Scoring Algorithm

For all items except 2, 5, and 12, the response "NO" indicates ASD risk; for items 2, 5, and 12, "YES" indicates ASD risk. The following algorithm maximizes psychometric properties of the M-CHAT-R:

LOW-RISK: **Total Score is 0-2**; if child is younger than 24 months, screen again after second birthday. No further action required unless surveillance indicates risk for ASD.

MEDIUM-RISK: **Total Score is 3-7**; Administer the Follow-up (second stage of M-CHAT-R/F) to get additional information about at-risk responses. If M-CHAT-R/F score remains at 2 or higher, the child has screened positive. Action required: refer child for diagnostic evaluation and eligibility evaluation for early intervention. If score on Follow-up is 0-1, child has screened negative. No further action required unless surveillance indicates risk for ASD. Child should be rescreened at future well-child visits.

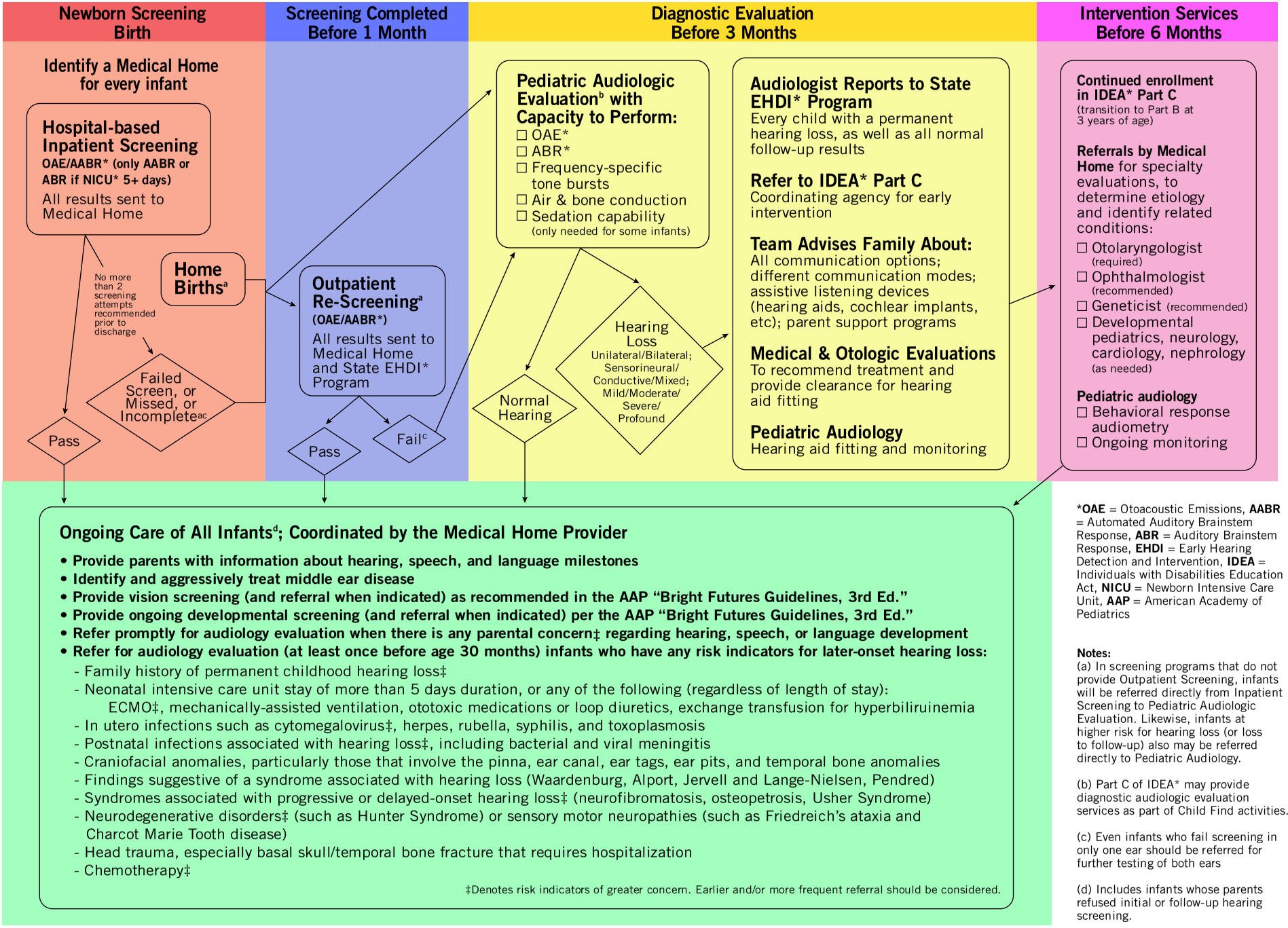
HIGH-RISK: **Total Score is 8-20**; It is acceptable to bypass the Follow-up and refer immediately for diagnostic evaluation and eligibility evaluation for early intervention.

M-CHAT-R™

Please answer these questions about your child. Keep in mind how your child usually behaves. If you have seen your child do the behavior a few times, but he or she does not usually do it, then please answer **no**. Please circle **yes** or **no** for every question. Thank you very much.

1. If you point at something across the room, does your child look at it? (**FOR EXAMPLE**, if you point at a toy or an animal, does your child look at the toy or animal?)	Yes	No
2. Have you ever wondered if your child might be deaf?	Yes	No
3. Does your child play pretend or make-believe? (**FOR EXAMPLE**, pretend to drink from an empty cup, pretend to talk on a phone, or pretend to feed a doll or stuffed animal?)	Yes	No
4. Does your child like climbing on things? (**FOR EXAMPLE**, furniture, playground equipment, or stairs)	Yes	No
5. Does your child make unusual finger movements near his or her eyes? (**FOR EXAMPLE**, does your child wiggle his or her fingers close to his or her eyes?)	Yes	No
6. Does your child point with one finger to ask for something or to get help? (**FOR EXAMPLE**, pointing to a snack or toy that is out of reach)	Yes	No
7. Does your child point with one finger to show you something interesting? (**FOR EXAMPLE**, pointing to an airplane in the sky or a big truck in the road)	Yes	No
8. Is your child interested in other children? (**FOR EXAMPLE**, does your child watch other children, smile at them, or go to them?)	Yes	No
9. Does your child show you things by bringing them to you or holding them up for you to see – not to get help, but just to share? (**FOR EXAMPLE**, showing you a flower, a stuffed animal, or a toy truck)	Yes	No
10. Does your child respond when you call his or her name? (**FOR EXAMPLE**, does he or she look up, talk or babble, or stop what he or she is doing when you call his or her name?)	Yes	No
11. When you smile at your child, does he or she smile back at you?	Yes	No
12. Does your child get upset by everyday noises? (**FOR EXAMPLE**, does your child scream or cry to noise such as a vacuum cleaner or loud music?)	Yes	No
13. Does your child walk?	Yes	No
14. Does your child look you in the eye when you are talking to him or her, playing with him or her, or dressing him or her?	Yes	No
15. Does your child try to copy what you do? (**FOR EXAMPLE**, wave bye-bye, clap, or make a funny noise when you do)	Yes	No
16. If you turn your head to look at something, does your child look around to see what you are looking at?	Yes	No
17. Does your child try to get you to watch him or her? (**FOR EXAMPLE**, does your child look at you for praise, or say “look” or “watch me”?)	Yes	No
18. Does your child understand when you tell him or her to do something? (**FOR EXAMPLE**, if you don’t point, can your child understand “put the book on the chair” or “bring me the blanket”?)	Yes	No
19. If something new happens, does your child look at your face to see how you feel about it? (**FOR EXAMPLE**, if he or she hears a strange or funny noise, or sees a new toy, will he or she look at your face?)	Yes	No
20. Does your child like movement activities? (**FOR EXAMPLE**, being swung or bounced on your knee)	Yes	No

Early Hearing Detection and Intervention (EHDI) Guidelines for Pediatric Medical Home Providers



***OAE** = Otoacoustic Emissions, **AABR** = Automated Auditory Brainstem Response, **ABR** = Auditory Brainstem Response, **EHDI** = Early Hearing Detection and Intervention, **IDEA** = Individuals with Disabilities Education Act, **NICU** = Newborn Intensive Care Unit, **AAP** = American Academy of Pediatrics

Notes:

(a) In screening programs that do not provide Outpatient Screening, infants will be referred directly from Inpatient Screening to Pediatric Audiologic Evaluation. Likewise, infants at higher risk for hearing loss (or loss to follow-up) also may be referred directly to Pediatric Audiology.

(b) Part C of IDEA* may provide diagnostic audiologic evaluation services as part of Child Find activities.

(c) Even infants who fail screening in only one ear should be referred for further testing of both ears

(d) Includes infants whose parents refused initial or follow-up hearing screening.

February 2010 - American Academy of Pediatrics Task Force for Improving Newborn Hearing Screening, Diagnosis and Intervention (www.medicalhomeinfo.org)

Appropriate Referrals

1. Audiologist knowledgeable in pediatric screening and amplification

Name:
Telephone number:
Fax:
Date of referral:

2. Otolaryngologist knowledgeable in pediatric hearing loss

Name:
Telephone number:
Fax:
Date of referral:

3. Local early intervention service coordinator

Name:
Telephone number:
Fax:
Date of referral:

4. Family support resources, financial resources

Name:
Telephone number:
Fax:
Date of referral:

5. Speech/language therapist and/or aural rehabilitation therapist knowledgeable in pediatric hearing loss

Name:
Telephone number:
Fax:
Date of referral:

6. Sign language classes if parents choose manual approach

Name:
Telephone number:
Fax:
Date of referral:

7. Ophthalmologist knowledgeable in co-morbid conditions in children with hearing loss

Name:
Telephone number:
Fax:
Date of referral:

8. Clinical geneticist knowledgeable in hearing loss

Name:
Telephone number:
Fax:
Date of referral:

9. Equipment vendor(s)

Name:
Telephone number:
Fax:
Date of referral:

10. State EHDI Coordinator
http://www.infanthearing.org/status/cnhs.html

Name:
Telephone number:
Fax:
Date of referral:

11. AAP Chapter Champion
www.medicalhomeinfo.org/screening/hearing.html

Name:
Telephone number:
Fax:
Date of referral:

12. Family physician(s)

Name:
Telephone number:
Fax:
Date of referral:

National Resources

Alexander Graham Bell Association for the Deaf and Hard of Hearing (AG Bell)
202/337-5220
www.agbell.org

American Academy of Audiology (AAA)
800/AAA-2336
www.audiology.org

American Academy of Pediatrics
847/434-4000
www.aap.org

American Society for Deaf Children
717/703-0073
www.deafchildren.org

American Speech-Language- Hearing Association (ASHA)
800/498-2071
www.asha.org

Boys Town Center for Childhood Deafness
www.babyhearing.org

Centers for Disease Control and Prevention
www.cdc.gov/ncbddd/ehdi

Families for Hands and Voices
217/357-3647
www.handsandvoices.org

Laurent Clerc National Deaf Education Center and Clearing-house at Gallaudet University
clerccenter.gallaudet.edu/InfoToGo

National Association of the Deaf (NAD)
301/587-1788
www.nad.org

National Center on Hearing Assessment and Management (NCHAM)
435/797-3584
www.infanthearing.org

National Institute on Deafness and Other Communication Disorders (NIDCD)
800/241-1044
www.nidcd.nih.gov

Oberkotter Foundation
www.oraldeafed.org

The recommendations in this document do not indicate an exclusive course of treatment or serve as a standard of medical care. Variations, taking into account individual circumstances, may be appropriate.

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American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

NCHAM National Center for Hearing Assessment and Management Utah State University™

PEDIG - Public Web Site

Pediatric Eye Disease Investigator Group (PEDIG)

Jaeb Visual Acuity Screener©

The JVAS© (Jaeb Visual Acuity Screener) is a pediatric visual acuity screener meant for non-ophthalmic health care professionals. It uses gold-standard thresholds from accepted studies to determine if a child needs to be referred for ophthalmic evaluation.

This is Version 1.2, released September 2013.

To download the JVAS, please enter your name, email address, and company or institution below and click the "Download" button. Your email address will not be shared with anyone. We will use your email address to notify you if critical issues are discovered that could affect screening results. If you would also like to be notified when a new version is available for download, check the "Email me when a new version becomes available." box below.

Name*:

Email Address*:

Company/Institution:

Installation Instructions:

1. Enter your name, email address, and institution then click the "Download" button.
2. Save the downloaded "JVAS.zip" file to your computer.
3. Open JVAS.zip and extract all files.
4. Navigate to the folder with the extracted files.
5. Open and print file named "HOTV Matching Card"
6. Open and print file named "Instructions"
7. Double-click the file named "JVAS.exe" to start the program.

* - Required Field

☐ Email me when a new version becomes available.

Download

NOTE: The minimum system requirements for the JVAS are a desktop or laptop PC running Windows XP

SP2 with .NET Framework 2.5 or newer.

Resources
For further information about JVAS, email pedig@jaeb.org

HOTV Matching Card.pdf
An HOTV Matching Card is included in the program download. You can download the matching card directly by clicking the link above.

JVAS Tutorial - Coming Soon!
A short video showing how to use the application.

Maryland WIC

Medical Documentation Form

This form is federally required to ensure your patient has a medical diagnosis that requires an exempt infant formula/WIC-eligible nutritional or change to the WIC food package.

All requests are subject to WIC approval.

(1)

Patient name: _____ Patient DOB: _____

Parent/Guardian: _____

(2) Exempt Infant Formula/WIC-Eligible Nutritional Request

Medical diagnosis (required): _____

Non-specific symptoms such as fussiness, colic, spitting up, gas and constipation will NOT be considered indications for an exempt infant formula or WIC-eligible nutritional.

WIC product requested (required): _____

A request for formula for an infant will be considered only when Similac Advance and/or Enfamil Prosobee are inappropriate due to a medical diagnosis. WIC does not provide milk- or soy- based standard infant formulas such as Enfamil Newborn, Enfamil Infant, Similac Isomil Soy, Similac Sensitive, Similac Total Comfort, Enfamil Gentlease for Fussiness and Gas, Good Start Gentle or Good Start Soothe. Specialized formulas may be provided, when appropriate, regardless of manufacturer.

Amount prescribed per day: _____

Requested duration (required): *(Reauthorization may be required for duration beyond 6 months.)*

☐ 1 month ☐ 2 months ☐ 3 months ☐ 6 months ☐ Other _____

(3) WIC Food Restrictions/Requests (Check all that apply. This section must be completed.)

☐ Request WIC professional to determine appropriate supplemental foods and their amounts.
☐ No food restrictions.
☐ Request reduced-fat milk (2%) for a one-year-old child.
☐ Request whole milk for woman or child (≥ 2 years of age).
☐ Request soy beverage and/or tofu to replace milk and/or cheese for child (≥ 1 year of age).
☐ Issue formula or WIC-eligible nutritional only. Do not issue other WIC foods.
☐ Do not issue the WIC foods below:

*DO **NOT** GIVE*	Infant WIC Foods (6-12 mo)
☐	Infant cereal
☐	Infant vegetables/fruit

*DO **NOT** GIVE*	Woman or Child WIC Foods
☐	Milk
☐	Cheese
☐	Eggs
☐	Beans
☐	Peanut butter (≥ age 2)
☐	Cereal
☐	Whole grain bread, rice, tortillas
☐	Vegetables and fruit
☐	Fruit juice
☐	Canned fish

Provider name: _____

Provider phone: _____

Provider signature: _____

MD/DO/CNM/CNP/PA with prescriptive authority (signature required)

Today's date: _____

WIC use only:

Date received: _____

☐ Approved ☐ Not Approved

CPA signature: _____

Signature date: _____

For additional information go to phpa.dhmh.maryland.gov/wic and click Health Care Providers.

10/01/2014

WIC Foods List	Participants may be issued these WIC foods each month:			
WIC Foods	**Pregnant & Mostly Breastfeeding Women**	**Exclusively Breastfeeding Women ***	**Minimally Breastfeeding (1-2 times/day) or Non-Breastfeeding Women**	**Children, 1 through 4 years**
Milk (1% or fat free ≥ 2 yrs)	4.75 gallons	5.25 gallons	3.25 gallons	3.25 gallons
Cheese	1 lb	2 lbs	1 lb	1 lb
Eggs	1 dozen	2 dozen	1 dozen	1 dozen
Beans/peanut butter (No peanut butter before age 2)	1 lb beans AND 18 oz peanut butter	1 lb beans AND 18 oz peanut butter	1 lb beans OR 18 oz peanut butter	1 lb beans OR 18 oz peanut butter
Cereal	36 oz	36 oz	36 oz	36 oz
Whole wheat bread or brown rice or tortillas (corn or whole wheat)	1 lb	1 lb	NA	2 lbs
Vegetables & fruit	$10.00 benefit	$10.00 benefit	$10.00 benefit	$8.00 benefit
Fruit juice	144 fl oz	144 fl oz	96 fl oz	128 fl oz
Canned light tuna, pink salmon, sardines	NA	30 oz	NA	NA
Soy beverage and/or tofu may be substituted for milk and/or cheese for women and children. Appropriate medical documentation is required when requesting soy beverage or tofu for a child ≥ 1 year of age.				
Participants with qualifying medical conditions may receive WIC foods AND medical food up to these amounts:				
Medical food	Up to 910 fl oz	Up to 910 fl oz	Up to 910 fl oz	Up to 910 fl oz

* Also allowed for women pregnant with multiple fetuses and mothers mostly breastfeeding multiple infants.

Infant Formula and Foods, Monthly Allotments:			
Infant Formula	**Exclusively Breastfed:**	**Mostly Breastfed:**	**Minimally or Not Breastfed:**
Birth to 4 months	NA	Up to 384 fl oz** (12 oz/day)	806 fl oz*** (26 oz/day)
4 to 6 months	NA	Up to 442 fl oz** (14 oz/day)	884 fl oz*** (29 oz/day)
6 to 12 months	NA	Up to 312 fl oz** (10 oz/day)	624 fl oz*** (20 oz/day)
Infant foods, 6 to 12 months of age: (If solids are contraindicated, infants receive up to 884 fl oz formula* per month)**			
Cereal	24 oz	24 oz	24 oz
Vegetables/fruit	64 4-oz jars	32 4-oz jars	32 4-oz jars
Meat	31 2.5 oz jars	NA	NA

** As reconstituted from powder. For the first month, no formula is given unless medically required.
*** As reconstituted from concentrate.

For more information contact your local WIC agency

Allegany County	(301) 759-5020
Anne Arundel County	(410) 222-6797
Baltimore City (Health Department)	(410) 396-9427
Baltimore City (Johns Hopkins)	(410) 614-4848
Baltimore County	(410) 887-6000
Calvert County	1-877-631-6182
Caroline County	(410) 479-8060
Carroll County	(410) 876-4898
Cecil County	(410) 996-5255
Charles County	(301) 609-6857
Dorchester County	(410) 479-8060
Frederick County	(301) 600-2507
Garrett County	(301) 334-7710
Harford County	(410) 273-5656
Howard County	(410) 313-7510
Kent County	(410) 810-0125
Montgomery County (CCI)	(301) 762-9426
Prince George's County (Health Dept)	(301) 856-9600
Prince George's County (Greenbelt Area)	(301) 762-9426
Prince George's County (Greater Baden)	(301) 324-1873
Queen Anne's County	(443) 262-4423
Somerset County	(410) 749-2488
St. Mary's County	1-877-631-6182
Talbot County	(410) 479-8060
Washington County	(240) 313-3335
Wicomico County	(410) 749-2488
Worcester County	(410) 749-2488
State WIC Office	1-800-242-4WIC 1-800-242-4942

Expert Committee Recommendations on the Assessment, Prevention and Treatment of Child and Adolescent Overweight and Obesity - 2007

- An Implementation Guide from the Childhood Obesity Action Network -

Overview:

In 2005, the AMA, HRSA and CDC convened an Expert Committee to revise the 1997 childhood obesity recommendations. Representatives from 15 healthcare organizations submitted nominations for the experts who would compose the three writing groups (assessment, prevention, treatment). The initial recommendations were released on June 6, 2007 in a document titled "Appendix: Expert Committee Recommendations on the Assessment, Prevention and Treatment of Child and Adolescent Overweight and Obesity" (www.ama-assn.org/ama/pub/category/11759.html)

In 2006, the National Initiative for Children's Healthcare Quality (NICHQ) launched the Childhood Obesity Action Network (COAN). With more than 40 healthcare organizations and 600 health professionals, the network is aimed at rapidly sharing knowledge, successful practices and innovation. This Implementation Guide is the first of a series of products designed for healthcare professionals by COAN to accelerate improvement in the prevention and treatment of childhood obesity.

The Implementation Guide combines key aspects of the Expert Committee Recommendations summary released on June 6, 2007 and practice tools identified in 2006 by NICHQ from primary care groups that have successfully developed obesity care strategies (www.NICHQ.org). These tools were developed before the 2007 Expert Recommendations and there may be some inconsistencies such as the term *overweight* instead of *obesity* for BMI ≥ 95%ile. The tools are intended as a source of ideas and to facilitate implementation. As tools are updated or new tools developed based on the Expert Recommendations, the Implementation Guide will be updated. The Implementation Guide defines 3 key steps to the implementation of the 2007 Expert Committee Recommendations:

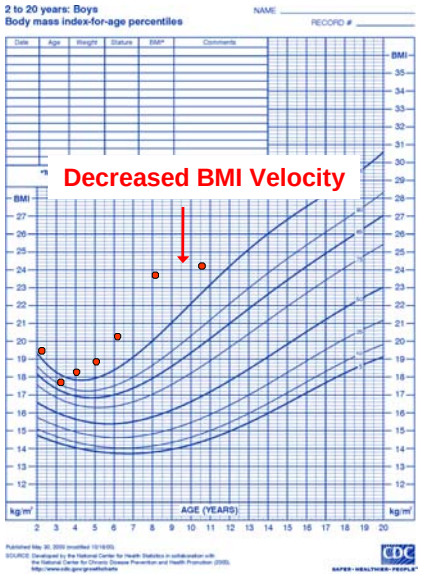
- **Step 1 – Obesity Prevention at Well Care Visits** (Assessment & Prevention)
- **Step 2 – Prevention Plus Visits** (Treatment)
- **Step 3 – Going Beyond Your Practice** (Prevention & Treatment)

Step 1 – Obesity Prevention at Well Care Visits (Assessment & Prevention)

Action Steps	Expert Recommendations	Action Network Tips and Tools
Assess all children for obesity at all well care visits 2-18 years	Physicians and allied health professional should perform, at a minimum, a yearly assessment.	A **presentation** for your staff and colleagues can help implement obesity prevention in your practice.
Use Body Mass Index (BMI) to screen for obesity	▪ **Accurately measure height and weight** ▪ **Calculate BMI** BMI (English):[weight (lb) ÷ height (in) ÷ height (in)] x 703 BMI (metric):[weight (kg) ÷ height (cm) ÷ height (cm)] x 10,000 ▪ **Plot BMI on BMI growth chart** ▪ Not recommended: skinfold thickness, waist circumference	BMI is very sensitive to measurement errors, particularly height. Having a standard measurement protocol as well as training can improve accuracy. **BMI calculation** tools are also helpful. Use the CDC BMI %ile-for-age **growth charts**.
Make a weight category diagnosis using BMI percentile	▪ < 5%ile Underweight ▪ 5-84%ile Healthy Weight ▪ 85-94%ile Overweight ▪ 95-98%ile Obesity ▪ ≥ 99%ile	Until the BMI 99%ile is added to the growth charts, **Table 1** can be used to determine the 99%ile cut-points. **Physicians should exercise judgement when choosing how to inform the family. Using more neutral terms such as *weight, excess weight, body mass index, BMI, or risk for diabetes and heart disease* can reduce the risk of stigmatization or harm to self-esteem.**
Measure blood pressure	▪ Use a cuff large enough to cover 80% of the upper arm ▪ Measure pulse in the standard manner	Diagnose hypertension using **NHLBI tables**. An abbreviated table is shown below (**Table 2**).
Take a focused family history	▪ Obesity ▪ Type 2 diabetes ▪ Cardiovascular disease (hypertension, cholesterol) ▪ Early deaths from heart disease or stroke	A child with one obese parent has a 3 fold increased risk of becoming obese. This risk increases to 13 fold with 2 obese parents. Using a **clinical documentation** tool can be helpful.

Take a focused review of systems	Take a focused review of systems	See **Table 3**. Using a **clinical documentation** tool can be helpful.
Assess behaviors and attitudes	**Diet Behaviors** ▪ Sweetened-beverage consumption ▪ Fruit and vegetable consumption ▪ Frequency of eating out and family meals ▪ Consumption of excessive portion sizes ▪ Daily breakfast consumption **Physical Activity Behaviors** ▪ Amount of moderate physical activity ▪ Level of screen time and other sedentary activities **Attitudes** ▪ Self-perception or concern about weight ▪ Readiness to change ▪ Successes, barriers and challenges	Using **behavioral risk assessment** tools can facilitate history taking and save clinician time.
Perform a thorough physical examination	Perform a thorough physical examination	See **Table 3**. Using a **clinical documentation** tool can be helpful.
Order the appropriate laboratory tests	**BMI 85-94%ile Without Risk Factors** ▪ Fasting Lipid Profile **BMI 85-94%ile Age 10 Years & Older With Risk Factors** ▪ Fasting Lipid Profile ▪ ALT and AST ▪ Fasting Glucose **BMI ≥ 95%ile Age 10 Years & Older** ▪ Fasting Lipid Profile ▪ ALT and AST ▪ Fasting Glucose ▪ Other tests as indicated by health risks	Consider ordering ALT, AST and glucose tests beginning at 10 years of age and then periodically (every 2 years). Provider **decision support** tools can be helpful when choosing assessment and treatment options. Delivering lab results can be one way to open the conversation about weight and health with a family.
Give consistent evidence-based messages for all children regardless of weight	▪ Limit sugar-sweetened beverages ▪ Eat at least 5 servings of fruits and vegetables ▪ 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 ▪ Eat breakfast every day ▪ Limit eating out, especially at fast food ▪ Have regular family meals ▪ Limit portion sizes	An example from the Maine Collaborative: ▪ **5** fruits and vegetables ▪ **2** hours or less of TV per day ▪ **1** hour or more physical activity ▪ **0** servings of sweetened beverages Exam and waiting room **posters** and family **education materials** can help deliver these messages and facilitate dialogue. Encourage an authoritative parenting style in support of increased physical activity and reduced TV viewing. Discourage a restrictive parenting style regarding child eating. Encourage parents to be good role models and address as a family issue rather than the child's problem.
Use Empathize/Elicit - Provide - Elicit to improve the effectiveness of your counseling	Assess self-efficacy and readiness to change. Use Empathize/Elicit - Provide - Elicit to improve the effectiveness of your counseling. **Empathize/Elicit** ▪ Reflect ▪ What is your understanding? ▪ What do you want to know? ▪ How ready are you to make a change (1-10 scale)? **Provide** ▪ Advice or information ▪ Choices or options **Elicit** ▪ What do you make of that? ▪ Where does that leave you?	A possible dialogue: **Empathize/Elicit** "Yours child's height and weight may put him/her at increased risk for developing diabetes and heart disease at a very early age." "What do make of this?" "Would you be interested in talking more about ways to reduce your child's risk?" **Provide** "Some different ways to reduce your child's risk are…" "Do any of these seem like something your family could work on or do you have other ideas?" **Elicit** "Where does that leave you?" "What might you need to be successful?" **Communication guidelines** can helpful when developing communication skills.

Step 2 – Prevention Plus Visits (Treatment)

Action Steps	Expert Recommendations	Action Network Tips and Tools
Develop an office based approach for follow up of overweight and obese children	A staged approach to treatment is recommended for ages 2-19 whose BMI is 85-94%ile with risk factors and all whose BMI is ≥ 95%ile. In general, treatment begins with Stage 1 Prevention Plus (**Table 4**) and progresses to the next stage if there has been no improvement in weight/BMI or velocity after 3-6 months and the family is willing/ready. The recommended weight loss targets are shown in **Table 5**. **Stage 1 - Prevention Plus** ▪ Family visits with physician or health professional who has had some training in pediatric weight management/behavioral counseling. ▪ Can be individual or group visits. ▪ Frequency - individualized to family needs and risk factors, consider monthly. ▪ **Behavioral Goals** – - Decrease screen time to 2 hr/day or fewer - No sugar-sweetened beverages - Consume at least 5 servings of fruits and vegetables daily - Be physically active 1 hour or more daily - Prepare more meals at home as a family (the goal is 5-6 times a week) - Limit meals outside the home - Eat a healthy breakfast daily - Involve the whole family in lifestyle changes - More focused attention to lifestyle changes and more frequent follow-up distinguishes Prevention Plus from Prevention Counseling ▪ **Weight Goal** – weight maintenance or a decrease in BMI velocity. The long term BMI goal is <85%ile although some children can be healthy with a BMI 85-94%ile. ▪ Advance to Stage 2 (Structured Weight Management) if no improvement in weight/BMI or velocity in 3-6 months and family willing/ready to make changes.	Prevention Plus visits may include: ▪ Health **education materials** ▪ **Behavioral risk assessment and self-monitoring** tools ▪ **Action planning and goal setting** tools ▪ **Clinical documentation** tools ▪ **Counseling protocols** ▪ Other health professionals such as dietitians, psychologists and health educators Besides behavioral and weight goals, improving self-esteem and self efficacy (confidence) are important outcomes. Although weight maintenance is a good goal, more commonly, a slower weight gain reflected in a decreased BMI velocity is the outcome seen in lower intensity behavioral interventions such as Prevention Plus. Measuring and plotting BMI after 3-6 months is an important step to determine the effectiveness of obesity treatment. 
Use motivational interviewing at Prevention Plus visits for ambivalent families and to improve the success of action planning	Use patient-centered counseling – motivational interviewing	Research suggests that motivational interviewing may be an effective approach to address childhood obesity prevention and treatment. Motivational interviewing is particularly effective for ambivalent families but can also be used for action planning. Instead of telling patients what changes to make, you elicit "change talk" from them, taking their ideas, strengths, and barriers into account. **Communication guidelines** and **communication training** can be helpful with skill development.
Develop a reimbursement strategy for Prevention Plus visits		**Coding strategies** can help with reimbursement for Prevention Plus visits. Advocacy through professional organizations to address reimbursement policies is another strategy.

Step 3 – Going Beyond Your Practice (Prevention & Treatment)

Action Steps	Expert Recommendations	Action Network Tips and Tools
Advocate for improved access to fresh fruits and vegetables and safe physical activity in your community and schools	The Expert Committee recommends that physicians, allied healthcare professionals, and professional organizations advocate for: ▪ The federal government to increase physical activity at school through intervention programs as early as grade 1 through the end of high school and college, and through creating school environments that support physical activity in general. ▪ Supporting efforts to preserve and enhance parks as areas for physical activity, informing local development initiatives regarding the inclusion of walking and bicycle paths, and promoting families' use of local physical activity options by making information and suggestions about physical activity alternatives available in doctors' offices.	Physicians and health professionals can play a key role in advocating for policy and built environment changes to support healthy eating and physical activity in communities, child care settings, and schools (including after-school programs). **Advocacy tools and resources** can be helpful in advocacy efforts. Partnering with others and using evidence-based strategies are also critical to the success of **multi-faceted community interventions**.
Identify and promote community services which encourage healthy eating and physical activity	Promote physical activity at school and in child care settings (including after school programs), by asking children and parents about activity in these settings during routine office visits.	Public Health Departments and Parks and Recreation are good places to start looking for community programs and resources. You can work on developing your own partnerships with community organizations (Physical Activity Directory template and/or referral forms).
Identify or develop more intensive weight management interventions for your families who do not respond to Prevention Plus	The Expert Committee recommends the following staged approach for children between the ages of 2 and 19 years whose BMI is 85-94%ile with risk factors and all whose BMI is ≥ 95%ile: ▪ **Stage 2 - Structured Weight Management** (Family visits with physician or health professional specifically trained in weight management. Monthly visits can be individual or group.) ▪ **Stage 3 - Comprehensive, Multidisciplinary Intervention** (Multidisciplinary team with experience in childhood obesity. Frequency is often weekly for 8-12 weeks with follow up.) ▪ **Stage 4 - Tertiary Care Intervention** (Medications - sibutramine, orlistat, Very-low-calorie diets, weight control surgery - gastric bypass or banding.) Recommended for select patients only when provided by experienced programs with established clinical or research protocols. Gastric banding is in clinical trials and not currently FDA approved.	Stage 2 could be done without a tertiary care center if community professionals from different disciplines collaborated. For example, if a physician provided the medical assessment, a dietitian provided classes, and the local YMCA provided an exercise program. Partnering with your community tertiary care center can be an effective strategy to develop or link to more intensive weight management interventions (Stages 3 and 4) as well as referral protocols to care for families who do not respond to Prevention Plus visits. Provider **decision support** tools can be helpful when choosing appropriate treatment and referral options. **Weight management protocols and curriculum** can also be helpful when getting started.
Join the Childhood Obesity Action Network to learn from your colleagues and accelerate progress		The Childhood Obesity Action Network has launched "The Healthcare Campaign to Stop the Epidemic." **Join the network** (www.NICHQ.org) to learn from our national obesity experts, share what you have learned and access the tools in this guide. ***Together we can make a difference!***

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Table 1 – BMI 99%ile Cut-Points (kg/m^2)

Age (Years)	Boys	Girls
5	20.1	21.5
6	21.6	23.0
7	23.6	24.6
8	25.6	26.4
9	27.6	28.2
10	29.3	29.9
11	30.7	31.5
12	31.8	33.1
13	32.6	34.6
14	33.2	36.0
15	33.6	37.5
16	33.9	39.1
17	34.4	40.8

Table 2 – Abbreviated NHLBI Blood Pressure Table

Blood Pressure 95% by Age, Sex and Height %

AGE	BOYS HEIGHT %		GIRLS HEIGHT %	
	50%	**90%**	**50%**	**90%**
2 Yr	106/61	109/63	105/63	108/65
5 Yr	112/72	115/74	110/72	112/73
8 Yr	116/78	119/79	115/76	118/78
11 Yr	121/80	124/82	121/79	123/81
14 Yr	128/82	132/84	126/82	129/84
17 Yr	136/87	139/88	129/84	131/85

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Table 3 – Symptoms and Signs of Conditions Associated with Obesity

Symptoms	Signs
➢ **Anxiety, school avoidance, social isolation** (Depression)	➢ **Poor linear growth** (Hypothyroidism, Cushing's, Prader-Willi syndrome)
➢ **Polyuria, polydipsia, weight loss** (Type 2 diabetes mellitus)	➢ **Dysmorphic features** (Genetic disorders, including Prader–Willi syndrome)
➢ **Headaches** (Pseudotumor cerebri)	➢ **Acanthosis nigricans** (NIDDM, insulin resistance)
➢ **Night breathing difficulties** (Sleep apnea, hypoventilation syndrome, asthma)	➢ **Hirsutism and Excessive Acne** (Polycystic ovary syndrome)
➢ **Daytime sleepiness** (Sleep apnea, hypoventilation syndrome, depression)	➢ **Violaceous striae** (Cushing's syndrome)
➢ **Abdominal pain** (Gastroesophageal reflux, Gall bladder disease, Constipation)	➢ **Papilledema, cranial nerve VI paralysis** (Pseudotumor cerebri)
➢ **Hip or knee pain** (Slipped capital femoral epiphysis)	➢ **Tonsillar hypertrophy** (Sleep apnea)
➢ **Oligomenorrhea or amenorrhea** (Polycystic ovary syndrome)	➢ **Abdominal tenderness** (Gall bladder disease, GERD, NAFLD)
	➢ **Hepatomegaly** (Nonalcoholic fatty liver disease (NAFLD))
	➢ **Undescended testicle** (Prader-Willi syndrome)
	➢ **Limited hip range of motion** (Slipped capital femoral epiphysis)
	➢ **Lower leg bowing** (Blount's disease)

Table 4 – A Staged Approach to Obesity Treatment

	BMI 85-94%ile No Risks	BMI 85-94%ile With Risks	BMI 95-98%ile	BMI >= 99%ile
Age 2-5 Years	Prevention Counseling	**Initial:** Stage 1 **Highest:** Stage 2	**Initial:** Stage 1 **Highest:** Stage 3	**Initial:** Stage 1 **Highest:** Stage 3
Age 6-11 Years	Prevention Counseling	**Initial:** Stage 1 **Highest:** Stage 2	**Initial:** Stage 1 **Highest:** Stage 3	**Initial:** Stage 1-3 **Highest:** Stage 3
Age 12-18 Years	Prevention Counseling	**Initial:** Stage 1 **Highest:** Stage 3	**Initial:** Stage 1 **Highest:** Stage 4	**Initial:** Stage 1-3 **Highest:** Stage 4

Stage 1	**Prevention Plus**	Primary Care Office
Stage 2	**Structured Weight Management**	Primary Care Office with Support
Stage 3	**Comprehensive, Multidisciplinary Intervention**	Pediatric Weight Management Center
Stage 4	**Tertiary Care Intervention**	Tertiary Care Center

Table 5 – Weight Loss Targets

	BMI 85-94%ile No Risks	BMI 85-94%ile With Risks	BMI 95-98%ile	BMI >= 99%ile
Age 2-5 Years	Maintain weight velocity	Decrease weight velocity or weight maintenance	Weight maintenance	Gradual weight loss of up to 1 pound a month if BMI is very high (>21 or 22 kg/m2)
Age 6-11 Years	Maintain weight velocity	Decrease weight velocity or weight maintenance	Weight maintenance or gradual loss (1 lb per month)	Weight loss (average is 2 pounds per week)*
Age 12-18 Years	Maintain weight velocity. After linear growth is complete, maintain weight	Decrease weight velocity or weight maintenance	Weight loss (average is 2 pounds per week)*	Weight loss (average is 2 pounds per week)*

* Excessive weight loss should be evaluated for high risk behaviors