The "Not So Well" Well Child Check

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I have no financial conflicts of interest to disclose

Objectives

- Review the components of a well child check
- Understand the importance of developmental surveillance and screening
- Recognize abnormal ASQ and MCHAT scores
- Become familiar with appropriate referrals and workup of abnormal developmental screens

Recommendations for Preventive Pediatric Health Care

Bright Futures/American Academy of Pediatrics

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

Bright Futures

Each child and family is unique; therefore, these Recommendations for Preventive Pediatric Health Care are designed for the care of children who are receiving competent parenting, have no manifestations of any important health problems, and are growing and developing in a satisfactory fashion. Developmental, psychosocial, and chronic disease issues for children and adolescents may require frequent counseling and treatment visits separate from preventive care visits. Additional visits also may become necessary if circumstances suggest variations from normal.

These recommendations represent a consensus by the American Academy of Pediatrics (AAP) and Bright Futures. The AAP continues to emphasize the great importance of continuity of care in comprehensive health supervision and the need to avoid fragmentation of care.

Refer to the specific guidance by age as listed in the *Bright Futures Guidelines* (Hagan JF, Shaw JS, Duncan PM, eds. *Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents*. 4th ed. American Academy of Pediatrics; 2017).

The recommendations in this statement 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.

The Bright Futures/American Academy of Pediatrics Recommendations for Preventive Pediatric Health Care are updated annually.

	INFANCY								EARLY CHILDHOOD							MIDDLE CHILDHOOD						ADOLESCENCE										
AGE[1]	Prenatal[2]	Newborn[3]	3-5 d[4]	By 1 mo	2 mo	4 mo	6 mo	9 mo	12 mo	15 mo	18 mo	24 mo	30 mo	3 y	4 y	5 y	6 y	7 y	8 y	9 y	10 y	11 y	12 y	13 y	14 y	15 y	16 y	17 y	18 y	19 y	20 y	21 y
HISTORY Initial/Interval	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
MEASUREMENTS																																	
Length/Height and Weight		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Head Circumference		●	●	●	●	●	●	●	●	●	●	●																					
Weight for Length		●	●	●	●	●	●	●	●	●	●																						
Body Mass Index[5]												●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Blood Pressure[6]		★	★	★	★	★	★	★	★	★	★	★	★	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SENSORY SCREENING																																	
Vision[7]		★	★	★	★	★	★	★	★	★	★	★	★	●	●	●	●	★	●	★	●	★	●	★	★	●	★	★	★	★	★	★	★
Hearing		●[8]	●[9]	◄	►	★	★	★	★	★	★	★	★	★	●	●	●	★	●	★	●	◄	►	●	►	◄	●	►	◄	►	●	►	●	►
DEVELOPMENTAL/BEHAVIORAL HEALTH																																	
Developmental Screening[11]								●			●		●																				
Autism Spectrum Disorder Screening[12]											●	●																					
Developmental Surveillance		●	●	●	●	●	●		●	●		●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Psychosocial/Behavioral Assessment[13]		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Tobacco, Alcohol, or Drug Use Assessment[14]																						★	★	★	★	★	★	★	★	★	★	★	★
Depression Screening[15]																							●	●	●	●	●	●	●	●	●	●	●
Maternal Depression Screening[16]				●	●	●	●																										
PHYSICAL EXAMINATION[17]		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
PROCEDURES[18]																																	
Newborn Blood		●[10]	●[10]	►																													
Newborn Bilirubin[21]		●																															
Critical Congenital Heart Defect[22]		●																															
Immunization[23]		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Anemia[24]						★			●	●	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★
Lead[25]							★	★	● or ★[26]		★	● or ★[26]		★	★	★	★																
Tuberculosis[27]				★			★		★			★		★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★
Dyslipidemia[28]												★			★		★		★	◄	●	►	★	★	★	★	★	◄			●	►
Sexually Transmitted Infections[29]																						★	★	★	★	★	★	★	★	★	★	★	★
HIV[30]																						★	★	★	★	◄		●	►	★	★	★	★
Hepatitis C Virus Infection[31]																													●			►	
Cervical Dyslpasia[32]																																●	
ORAL HEALTH[33]							●[34]	●[34]	★		★	★	★	★	★	★	★																
Fluoride Varnish[35]							◄				●					►																	
Fluoride Supplementation[36]							★	★	★		★	★	★	★	★		★	★	★	★	★	★	★	★	★	★	★						
ANTICIPATORY GUIDANCE	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

1. If a child comes under care for the first time at any point on the schedule, or if any items are not accomplished at the suggested age, the schedule should be brought up to date at the earliest possible time.
2. A prenatal visit is recommended for parents who are at high risk, for first-time parents, and for those who request a conference. The prenatal visit should include anticipatory guidance, pertinent medical history, and a discussion of benefits of breastfeeding and planned method of feeding, per "The Prenatal Visit" (http://pediatrics.aappublications.org/content/124/4/1227.full).
3. Newborns should have an evaluation after birth, and breastfeeding should be encouraged (and instruction and support should be offered).
4. Newborns should have an evaluation within 3 to 5 days of birth and within 48 to 72 hours after discharge from the hospital to include evaluation for feeding and jaundice. Breastfeeding newborns should receive formal breastfeeding evaluation, and their mothers should receive encouragement and instruction, as recommended in "Breastfeeding and the Use of Human Milk" (http://pediatrics.aappublications.org/content/129/3/e827.full). Newborns discharged less than 48 hours after delivery must be examined within 48 hours of discharge, per "Hospital Stay for Healthy Term Newborns" (http://pediatrics.aappublications.org/content/125/2/405.full).
5. Screen, per "Expert Committee Recommendations Regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity: Summary Report" (http://pediatrics.aappublications.org/content/120/Supplement_4/S164.full)
6. Screening should occur per "Clinical Practice Guideline for Screening and Management of High Blood Pressure in Children and Adolescents" (http://pediatrics.aappublications.org/content/140/3/e20171904). Blood pressure measurement in infants and children with specific risk conditions should be performed at visits before age 3 years.
7. A visual acuity screen is recommended at ages 4 and 5 years, as well as in cooperative 3-year-olds. Instrument-based screening may be used to assess risk at ages 12 and 24 months, in addition to the well visits at 3 through 5 years of age. See "Visual System Assessment in Infants, Children, and Young Adults by Pediatricians" (http://pediatrics.aappublications.org/content/137/1/e20153596) and "Procedures for the Evaluation of the Visual System by Pediatricians" (http://pediatrics.aappublications.org/content/137/1/e20153597).
8. Confirm initial screen was completed, verify results, and follow up, as appropriate. Newborns should be screened, per "Year 2007 Position Statement: Principles and Guidelines for Early Hearing Detection and Intervention Programs" (http://pediatrics.aappublications.org/content/120/4/898.full).
9. Verify results as soon as possible, and follow up, as appropriate.
10. Screen with audiometry including 6,000 and 8,000 Hz high frequencies once between 11 and 14 years, once between 15 and 17 years, and once between 18 and 21 years. See "The Sensitivity of Adolescent Hearing Screens Significantly Improves by Adding High Frequencies" (https://www.sciencedirect.com/science/article/abs/pii/S1054139X16000483).
11. Screening should occur per "Promoting Optimal Development: Identifying Infants and Young Children With Developmental Disorders Through Developmental Surveillance and Screening" (https://pediatrics.aappublications.org/content/145/1/e20193449).
12. Screening should occur per "Identification, Evaluation, and Management of Children With Autism Spectrum Disorder" (https://pediatrics.aappublications.org/content/145/1/e20193447).
13. This assessment should be family centered and may include an assessment of child social-emotional health, caregiver depression, and social determinants of health. See "Promoting Optimal Development: Screening for Behavioral and Emotional Problems" (http://pediatrics.aappublications.org/content/135/2/384) and "Poverty and Child Health in the United States" (http://pediatrics.aappublications.org/content/137/4/e20160339).
14. A recommended assessment tool is available at http://crafft.org.
15. Recommended screening using the Patient Health Questionnaire (PHQ)-2 or other tools available in the GLAD-PC toolkit and at https://downloads.aap.org/AAP/PDF/Mental_Health_Tools_for_Pediatrics.pdf.
16. Screening should occur per "Incorporating Recognition and Management of Perinatal Depression Into Pediatric Practice" (https://pediatrics.aappublications.org/content/143/1/e20183259).
17. At each visit, age-appropriate physical examination is essential, with infant totally unclothed and older children undressed and suitably draped. See "Use of Chaperones During the Physical Examination of the Pediatric Patient" (http://pediatrics.aappublications.org/content/127/5/991.full).
18. These may be modified, depending on entry point into schedule and individual need.
19. Confirm initial screen was accomplished, verify results, and follow up, as appropriate. The Recommended Uniform Screening Panel (https://www.hrsa.gov/advisory-committees/heritable-disorders/rusp/index.html), as determined by The Secretary's Advisory Committee on Heritable Disorders in Newborns and Children, and state newborn screening laws/regulations (https://www.babysfirsttest.org/newborn-screening/states) establish the criteria for and coverage of newborn screening procedures and programs.

(continued)

KEY: ● – to be performed ★ – risk assessment to be performed with appropriate action to follow, if positive ◄—●—► – range during which a service may be provided

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Goals of the Well Child Check

- To assess growth and development, provide preventative services such as vaccinations, and to provide anticipatory guidance regarding safety and future development
- To review chronic diseases, specialty care providers, therapeutic needs and medications for those children who have complex medical or developmental needs
- To assess social and environmental determinants of health

Components of the Well Child Check

- Vital Signs: for all ages obtain heart rate, respiratory rate, temperature; for ages 3 and up obtain a blood pressure; pulse ox as needed
- Growth: use growth charts to monitor weight gain, linear growth, head circumference for ages 2 and under, and BMI for ages 2 and up
- Developmental monitoring/Surveillance and Screening: tools such as ASQ, MCHAT, Pediatric Behavioral Health Screen
- History/Physical exam
- Anticipatory Guidance: safety, nutrition, behavior/development
- Immunizations
- Health Screening: H/H, lead, hearing, vision, cholesterol
- Disease Prevention: fluoride varnish
- Chronic Disease Management: cerebral palsy, autism, congenital heart disease

Growth

- Growth is most accurately assessed over time. Always compare to previous measurements. Repeat any measurements that look incorrect
- Weight: accuracy and use of proper equipment is important; infants should be weighed naked on the same scale every time
- Height: infants should be measured lying flat, children 2 and up should be measured using a stadiometer; shoes should be off for all ages

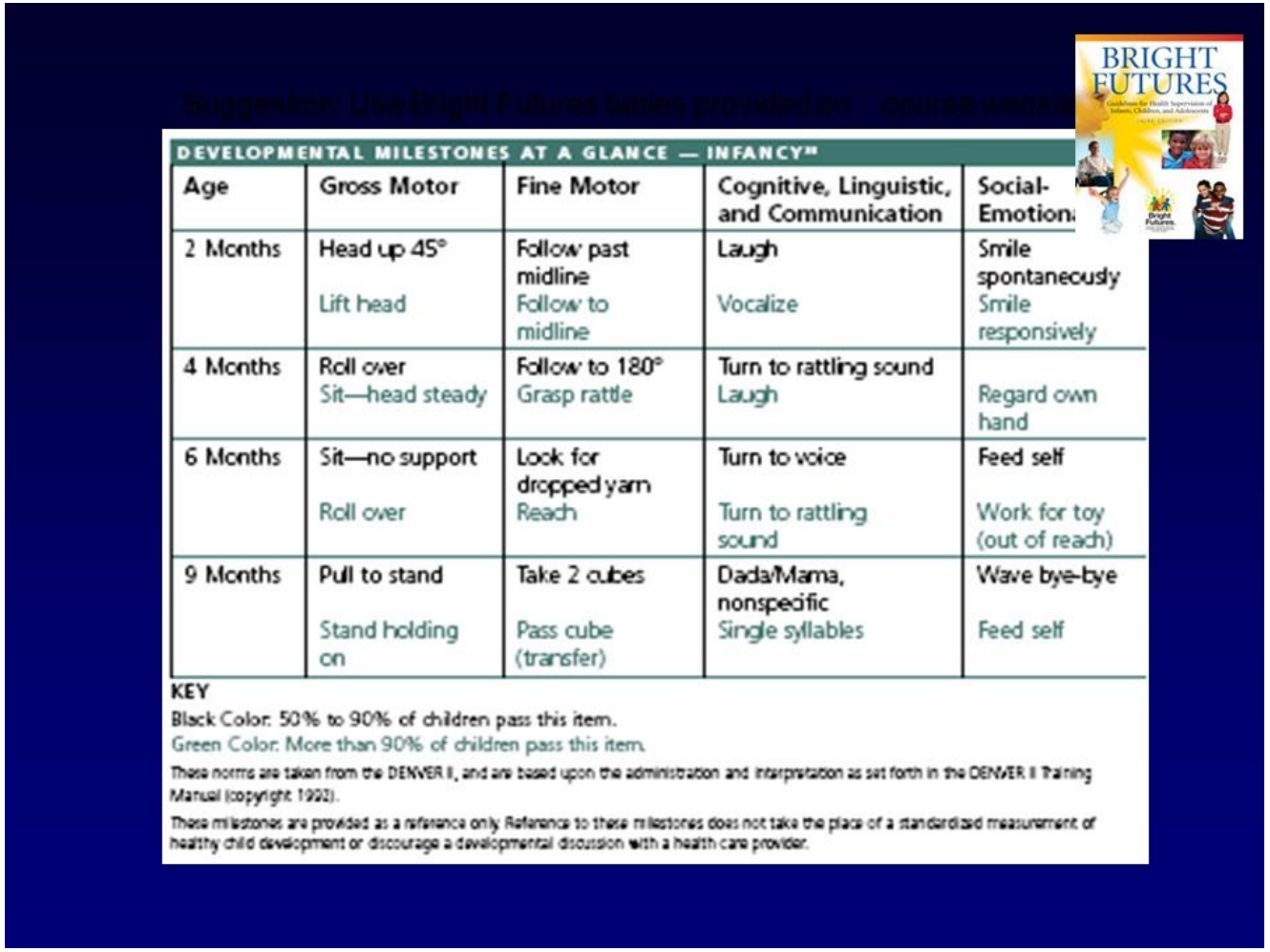
- Growth charts are very important
- WHO 0-24 months: The WHO standards establish growth of the breastfed infant as the norm for growth and provide a better description of physiological growth in infancy
- CDC 2 years – 18 years
- Special populations with their own growth charts: prematurity, Down Syndrome, Turner's Syndrome, Achondroplasia, and CP

Development

- Surveillance
- Occurs at each well child check, mostly subjective
- Process of recognizing children who may be at risk for developmental delays
- Includes developmental assessment and psychosocial risk assessment

- Screening
- Use of a validated tool to measure developmental progress against norms, more objective
- Used less often than surveillance but more accurate
- Examples include: ASQ (Ages & Stages Questionnaire), PEDS (Parent's Evaluation of Developmental Status), MCHAT (Modified Checklist for Autism in Toddlers

Example of Surveillance



DEVELOPMENTAL MILESTONES AT A GLANCE — INFANCY

Age	Gross Motor	Fine Motor	Cognitive, Linguistic, and Communication	Social-Emotional
2 Months	Head up 45° Lift head	Follow past midline Follow to midline	Laugh Vocalize	Smile spontaneously Smile responsively
4 Months	Roll over Sit—head steady	Follow to 180° Grasp rattle	Turn to rattling sound Laugh	Regard own hand
6 Months	Sit—no support Roll over	Look for dropped yarn Reach	Turn to voice Turn to rattling sound	Feed self Work for toy (out of reach)
9 Months	Pull to stand Stand holding on	Take 2 cubes Pass cube (transfer)	Dada/Mama, nonspecific Single syllables	Wave bye-bye Feed self

KEY

Black Color: 50% to 90% of children pass this item.

Green Color: More than 90% of children pass this item.

These norms are taken from the DENVER II, and are based upon the administration and interpretation as set forth in the DENVER II Training Manual (copyright 1992).

These milestones are provided as a reference only. Reference to these milestones does not take the place of a standardized measurement of healthy child development or discourage a developmental discussion with a health care provider.

Surveillance

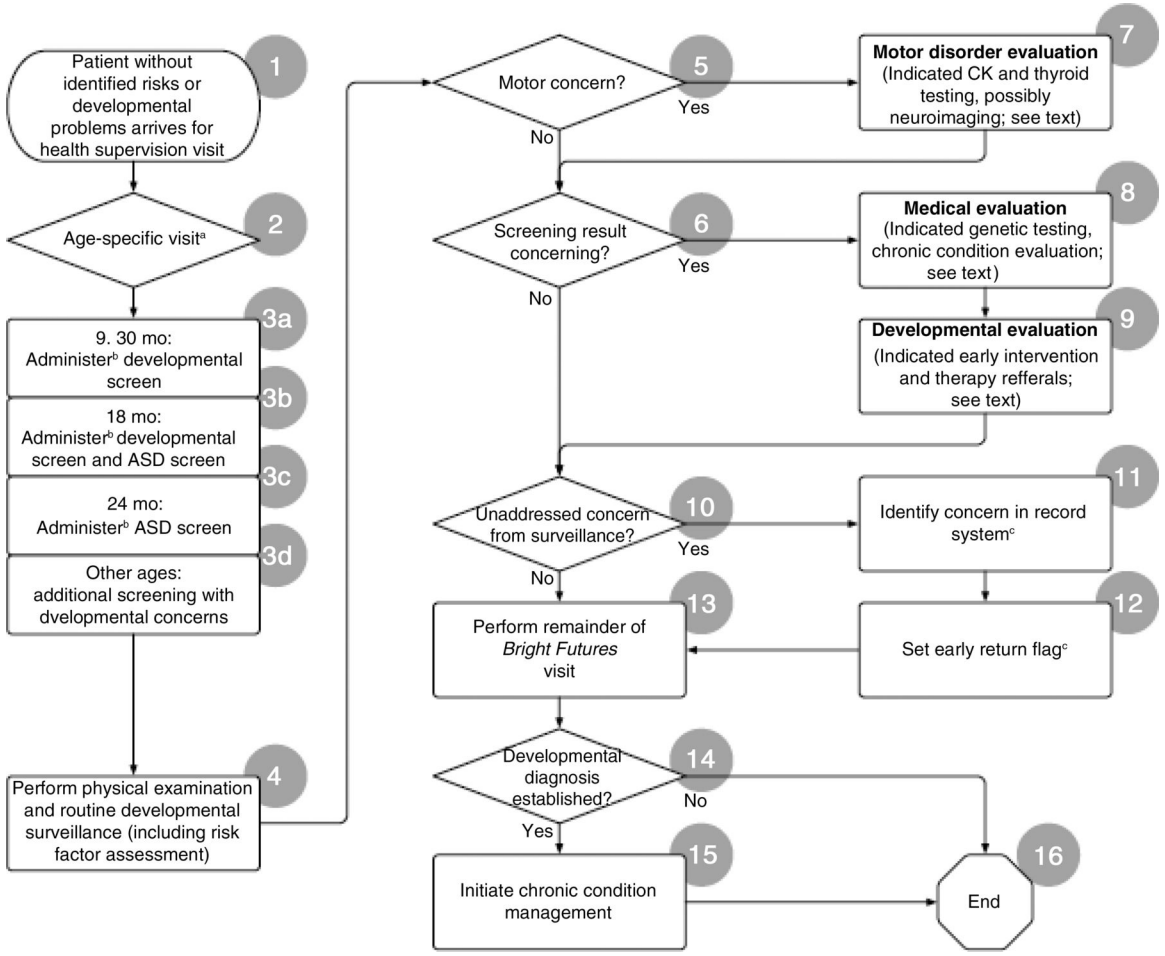
- Recognizes children who are at risk for delay
- Assesses: cognition, gross/fine motor, communication, and social-emotional development
- 6 components to include per the AAP:

1. Eliciting and attending to the parents' concerns about their child's development
2. Obtaining, documenting and maintaining a developmental history
3. Making accurate and informed observations of the child
4. Identifying risks and strengths and protective factors
5. Maintaining an accurate record of the process and findings
6. Sharing and obtaining opinions and findings with other professionals

Screening

- Any concerns discovered during surveillance should prompt a deeper developmental screening with a validated tool that measures developmental progress against the norm for that child's age
- More specific and sensitive than surveillance
- Examples ASQ and MCHAT
- ASQ is given at 9, 18, 30, and 36 months but can be given at anytime if suspect delay
- MCHAT specific for autism screening and done at 18 and 24 months
- Screening does not determine a diagnosis or treatment plan; usually leads to referrals for further testing or assessment

Screening Algorithm



ASQ

- We typically give at 9 month, 18 month, 30 month, and 36 month visits
- Evaluates how child is doing in 5 fields: communication, gross motor skills, fine motor skills, problem solving, and personal-social
- The scores range from 0-60 in each category
- If the score is above the predetermined cutoff, then development is on track.
- If the score is close to the predetermined cutoff, then provider should give learning activities and monitor
- If the score is below the predetermined cutoff, then further assessment with a professional may be needed

4 Month ASQ-3 Information Summary

3 months 0 days through 4 months 30 days

Baby's name: _____ Date ASQ completed: _____

Baby's ID #: _____ Date of birth: _____

Administering program/provider: _____ Was age adjusted for prematurity when selecting questionnaire? ◯ Yes ◯ No

1. SCORE AND TRANSFER TOTALS TO CHART BELOW: See *ASQ-3 User's Guide* for details, including how to adjust scores if item responses are missing. Score each item (YES = 10, SOMETIMES = 5, NOT YET = 0). Add item scores, and record each area total. In the chart below, transfer the total scores, and fill in the circles corresponding with the total scores.

Area	Cutoff	Total Score	0	5	10	15	20	25	30	35	40	45	50	55	60
Communication	34.60		●	●	●	●	●	●	●	○	○	○	○	○	○
Gross Motor	38.41		●	●	●	●	●	●	●	●	○	○	○	○	○
Fine Motor	29.62		●	●	●	●	●	●	○	○	○	○	○	○	○
Problem Solving	34.98		●	●	●	●	●	●	●	○	○	○	○	○	○
Personal-Social	33.16		●	●	●	●	●	●	●	○	○	○	○	○	○

2. TRANSFER OVERALL RESPONSES: Bolded uppercase responses require follow-up. See *ASQ-3 User's Guide*, Chapter 6.

1. Uses both hands and both legs equally well? Yes **NO**
   Comments:
2. Feet are flat on the surface most of the time? Yes **NO**
   Comments:
3. Concerns about not making sounds? **YES** No
   Comments:
4. Family history of hearing impairment? **YES** No
   Comments:
5. Concerns about vision? **YES** No
   Comments:
6. Any medical problems? **YES** No
   Comments:
7. Concerns about behavior? **YES** No
   Comments:
8. Other concerns? **YES** No
   Comments:

3. ASQ SCORE INTERPRETATION AND RECOMMENDATION FOR FOLLOW-UP: You must consider total area scores, overall responses, and other considerations, such as opportunities to practice skills, to determine appropriate follow-up.

If the baby's total score is in the ▭ area, it is above the cutoff, and the baby's development appears to be on schedule.
If the baby's total score is in the ▨ area, it is close to the cutoff. Provide learning activities and monitor.
If the baby's total score is in the ■ area, it is below the cutoff. Further assessment with a professional may be needed.

4. FOLLOW-UP ACTION TAKEN: Check all that apply.

_____ Provide activities and rescreen in _____ months.

_____ Share results with primary health care provider.

_____ Refer for (circle all that apply) hearing, vision, and/or behavioral screening.

_____ Refer to primary health care provider or other community agency (specify reason): _____.

_____ Refer to early intervention/early childhood special education.

_____ No further action taken at this time

_____ Other (specify): _____

5. OPTIONAL: Transfer item responses (Y = YES, S = SOMETIMES, N = NOT YET, X = response missing).

	1	2	3	4	5	6
Communication						
Gross Motor						
Fine Motor						
Problem Solving						
Personal-Social						

COMMUNICATION

	YES	SOMETIMES	NOT YET	
1. Does your baby make sounds like "da," "ga," "ka," and "ba"?	●	○	○	___
2. If you copy the sounds your baby makes, does your baby repeat the same sounds back to you?	○	●	○	___
3. Does your baby make two similar sounds like "ba-ba," "da-da," or "ga-ga"? *(The sounds do not need to mean anything.)*	○	●	○	___
4. If you ask your baby to, does he play at least one nursery game even if you don't show her the activity yourself (such as "bye-bye," "Peek-a-boo," "clap your hands," "So Big")?	●	○	○	___
5. Does your baby follow one simple command, such as "Come here," "Give it to me," or "Put it back," without your using gestures?	●	○	○	___
6. Does your baby say three words, such as "Mama," "Dada," and "Baba"? *(A "word" is a sound or sounds your baby says consistently to mean someone or something.)*	○	●	○	___
			COMMUNICATION TOTAL	___

MCHAT

- Given at 18 month and 24 month well visits
- Research shows that early identification of children with autism spectrum disorder (ASD) as well as intensive, early intervention during the toddler and preschool years improves outcomes
- Has a sensitivity of only 33% and a positive predictive value of only 18% for the diagnosis of autism spectrum disorder

M-CHAT-R™

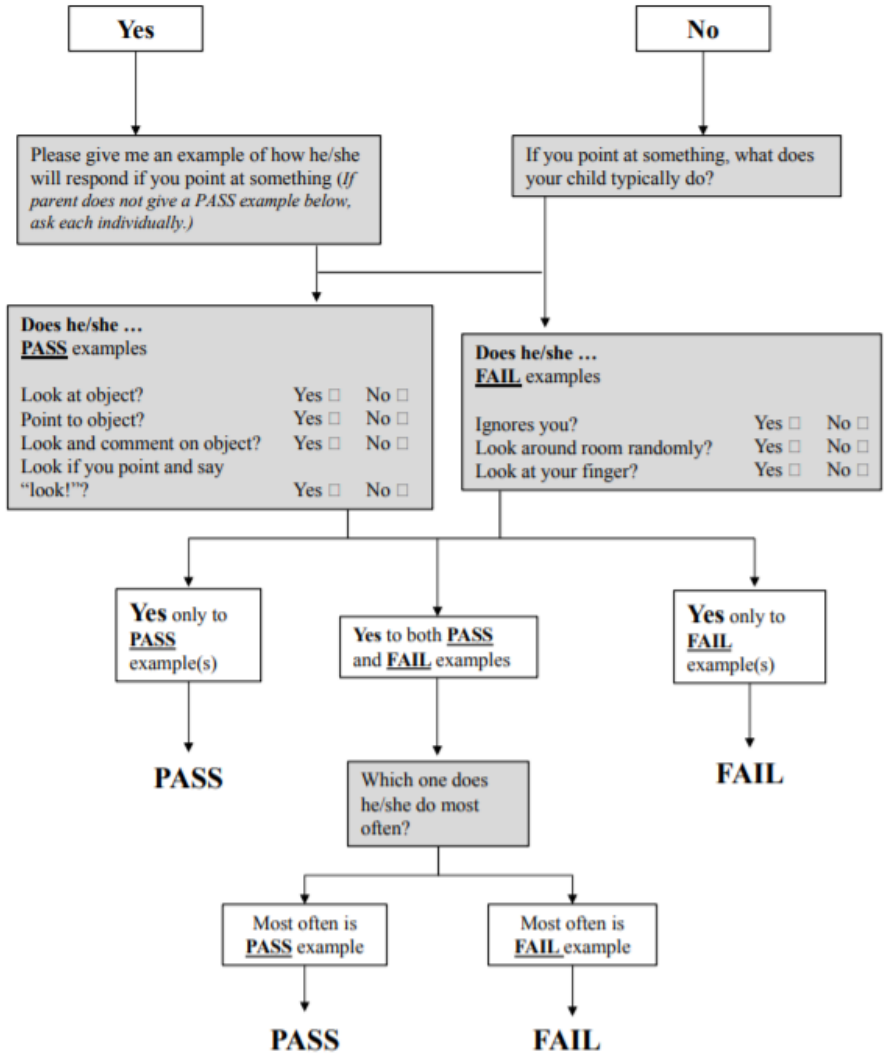
Please answer these questions about your child. Keep in mind how your child usually behaves. If you have seen your child do the behavior a few times, but he or she does not usually do it, then please answer **no**. Please circle **yes** or **no** for every question. Thank you very much.

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

MCHAT scoring

- Score of 0-2 is normal
- Score of 3-7 is medium risk and should ask further questions; MCHAT has more questions based on which questions were failed
- Score of 8-20 is high risk and warrants a referral

1. If you point at something across the room, does _____ look at it?



Screening is abnormal. What now?

- Developmental screening doesn't result in a diagnosis but rather identifies areas in which a child's development differs from same-aged norms.

ASQ: Communication

- If Communication falls into the black zone, then needs referral for speech therapy
- It is also recommended to refer to audiology and make sure hearing is within normal limits

ASQ: Gross Motor Skills

- If Gross motor skills fall into black zone, then should refer to physical therapy
- Any child with motor concerns also needs a comprehensive neurologic exam
- If tone is increased, brain imaging should be considered
- If tone is normal or decreased, should have laboratory testing of creatine kinase and TSH

ASQ: Fine Motor

If Fine motor skills fall into black zone, then should refer to occupational therapy

ASQ: Problem Solving

- Majority of time these are just activities that parents haven't tried yet with their kids
- If falls into black zone and seems really delayed, start with occupational therapy

ASQ: Personal-Social

- If screening falls into black, need to be concerned for autism
- If over the age of 12 months, then can add on a MCHAT

Gray Zones?

Rescreen sooner than you normally would: bring back in 2 to 3 months

Provide the family with activities they can do at home: give them certain skills to work on

Work on skills at school if child is doing any sort of early learning program; communicate with teachers and therapists

Multiple Black Zones

- Child would be suspected of having global developmental delay or intellectual disability
- Further workup to include laboratory testing: chromosomal microarray, fragile X testing, consider metabolic testing
- Brain imaging should be considered in presence of abnormal neurologic exam, microcephaly, or macrocephaly

Failed MCHAT

- These kids should be referred simultaneously for a comprehensive ASD evaluation, an audiology evaluation, and early intervention services
- Evidence based treatments for ASD, including early intensive behavioral interventions, are most beneficial in improving language and educational placement when initiated at preschool age and continued for 2 to 3 years

Comprehensive Neuropsychological Testing

- Evaluates all the cognitive domains:

1. Attention and Concentration
2. Verbal and Visual Memory
3. Visual Spatial Functioning
4. Language and Reading Skills
5. Sensory Development and Sensory Integration
6. Gross and Fine Motor Development
7. Social Skill Development
8. Executive Functioning
9. Emotional and Personality Development
10. Behavioral Functioning

Neuropsychological Testing

- Evaluates neurodevelopmental conditions such as ADHD, Autism, Learning Disorders
- Helpful for obtaining and developing accurate IEPs
- Testing usually takes place over several days

Applied Behavior Analysis

- Therapy based on the science of learning and behavior
- Applies our understanding of how behavior works to real situations.
- Goal is to increase behaviors that are useful and decrease behaviors that are harmful or affect learning

ABA Therapy

- A flexible treatment that can be adapted to meet the needs of each unique person
- Teaches skills that are useful in everyday life
- Positive reinforcement is one of the main strategies in order to encourage positive behavior changes
- Follows the ABCs: Antecedent, Behavior, Consequence

Case Study

- Bobby is a 30-month-old male that you are seeing in your office for the first time today. Mom reports that he was born full term with no complications at birth.
- Newborn metabolic screen and newborn hearing test are normal as far as mom knows.
- At 18 months, he had bilateral PE tube placement due to multiple episodes of otitis media. Mom reports he wasn't speaking any words at the time.
- At 2 year well child check, Bobby still not talking, so he was referred to early intervention services. 3 months ago, he started to attend a specialized preschool where he receives speech, physical, and occupational therapies.

Case Study continued

- Mom reports that this is the 3rd preschool, he has attended. He was kicked out of the prior 2 preschools due to his behavior. His current teacher suggested mom bring him to the doctor to discuss the following behavior concerns: hyperactivity, does not follow directions, and ignores the other children in his class.
- PMH: overall good health, all his milestones were delayed, and she never noticed a regression
- Since starting EI services, he is saying more words such as cookie and juice. Mom reports he does throw frequent tantrums and will only calm down when she puts on his favorite cartoon. During the tantrums, he will frequently bang his head against things or bite himself

Case Study continued

- Your observation of the child in the exam room:
- At first, he clings to his mom but as you continue talking, he gets down and runs around the room touching everything
- There are some books in the room that he picks up and smells and then throws down on the floor
- You call his name several times and he never looks at you or makes eye contact
- When you have mom pick him up so you can exam him, he begins screaming and flapping his hands

What's Next Step?

Administer 30-month ASQ and based upon the history, I would go ahead and give a MCHAT as well

ASQ in black zone for Communication, Problem-Solving, and Personal-Social

MCHAT is a score of 10

Plan for Bobby?

Discuss	Refer	Continue	Follow up
Discuss with mom that your observation of Bobby plus his abnormal developmental screening, makes you suspicious for a diagnosis of autism	Refer to audiology and neuropsychological testing	Continue all his therapies and will refer for ABA therapy if testing confirms a diagnosis of autism spectrum disorder	Follow up in 2 to 3 months to make sure evaluations and therapies are proceeding as recommended

Conclusion

- Early identification and intervention for developmental disorders are critical to the well-being of children.
- Developmental surveillance should be a component of every health supervision visit and developmental screening should take place at every 9 month, 18 month, and 30 month WCC
- Listen to parent's concerns and refer as early as possible
- Be aware of medical conditions that increase a child's risk for developmental delay such as: prematurity, intrauterine drug/alcohol exposure, congenital brain anomalies, epilepsy, complex congenital heart disease, and certain genetic conditions

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