Well Child Surveillance And Screening: Emphasizing the Identification of General Developmental and Autism Spectrum Disorders

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Sponsored:
Iowa Medicaid Enterprise
1st Five And The Iowa Department of Public Health
Center for Disease and Disability University of Iowa

Conflict of Interest:
Drs. Quigley and Wolfe are consultants for
1st Five and The Iowa Medicaid Enterprise
Learning Objectives

* Utilize the pediatric periodicity schedule to optimize well child care.

* Review well child health care surveillance recommendation and implementation tools.

* Discuss autism (M-CHAT-R/F), child development (ASQ), and child social-emotional development (ASQ:SE) screening tools
Surveillance: continuous, longitudinal, cumulative process designed to optimize children’s health outcome.

- Periodicity table
- Bright futures

Screening: periodic, intermittent focused assessment of a child’s health.

- M-CHAT-R/F
- ASQ
- ASQ-SE
The Science Behind Policy

Bright Futures Tool and Resource Kit

This new tool and resource kit provides materials for health supervision care from infancy through adolescence. It is designed to accompany and support Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents, Third Edition. The tools contained in the kit were developed, reviewed, and piloted by multidisciplinary teams of pediatric health professionals. The tool and resource kit includes forms to streamline health supervision visits, documentation forms to reflect the richness of a Bright Futures visit and document work done, practice management tools, and additional tools designed to aid in screening and developing community linkages. Patient and parent handouts are also included to help the practitioner reinforce important topics discussed during the visit and deliver additional information.

The following Bright Futures Tool and Resource Kit materials are available for download for review and reference purposes. To incorporate forms into an Electronic Medical Record System or to make multiple copies of specific items, please contact aapsales@aap.org.

Downloadable Materials:
- Acknowledgments (PDF)
- Kit Contents and Development (PDF)
- Letter from AAP Executive Director (PDF)
Summary of Surveillance and Screening Recommendations

Recommenedations for Preventive Pediatric Health Care

Bright Futures/American Academy of Pediatrics

These guidelines 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 recommendations as published in previous Bright Futures guidelines (Hogan JF, Show JS, Donner PM, eds. Bright Futures: Guidelines for Health Supervision of Infants, Children and Adolescents; 3rd ed. El Grange Village, IL: American Academy of Pediatrics; 2009).

The recommendations in this statement do not indicate an exclusive course of treatment or standard of medical care. Variations, taking into account individual circumstances, may be appropriate. Copyright © 2014 by the American Academy of Pediatrics. No part of this statement may be reproduced in any form or by any means without prior written permission from the American Academy of Pediatrics except for one copy for personal use.

INTFANCY

<table>
<thead>
<tr>
<th>AGE</th>
<th>TEST</th>
<th>HISTORICAL/INTERNAL</th>
<th>MEASUREMENTS</th>
<th>LIFESTYLE</th>
<th>HEALTH STATUS</th>
<th>DEVELOPMENTAL/BEHAVIORAL</th>
<th>IMMUNIZATION</th>
<th>ALCOHOL &amp; DRUG USE</th>
<th>DEPRESSION SCREENING</th>
<th>PHYSICAL EXAMINATION</th>
</tr>
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<tbody>
<tr>
<td>0-1 mo</td>
<td>Smoking exposure should be reduced. The infant should be fed on demand. An appropriate amount of water should be given.</td>
<td>5</td>
<td>Length &amp; Height</td>
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<td>11-12 mo</td>
<td>Smoking exposure should be reduced. The infant should be fed on demand. An appropriate amount of water should be given.</td>
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<td>Head Circumference</td>
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EACH CHILDHOOD

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<td>Smoking exposure should be reduced. The infant should be fed on demand. An appropriate amount of water should be given.</td>
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<td>Head Circumference</td>
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MIDDLE CHILDHOOD

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<th>ALCOHOL &amp; DRUG USE</th>
<th>DEPRESSION SCREENING</th>
<th>PHYSICAL EXAMINATION</th>
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<td>Smoking exposure should be reduced. The infant should be fed on demand. An appropriate amount of water should be given.</td>
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<td>Head Circumference</td>
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<td>Head Circumference</td>
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<td>Smoking exposure should be reduced. The infant should be fed on demand. An appropriate amount of water should be given.</td>
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<td>Head Circumference</td>
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<td>34 mo</td>
<td>Smoking exposure should be reduced. The infant should be fed on demand. An appropriate amount of water should be given.</td>
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ADOLESCENCE

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<th>PHYSICAL EXAMINATION</th>
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<td>45 mo</td>
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<td>Head Circumference</td>
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<td>48 mo</td>
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<td>Head Circumference</td>
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<tr>
<td>51 mo</td>
<td>Smoking exposure should be reduced. The infant should be fed on demand. An appropriate amount of water should be given.</td>
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<td>Length &amp; Height</td>
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<td>Head Circumference</td>
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ANTICIPATORY GUIDANCE

2. Anticipatory guidance should be discussed at routine health supervision visits, ideally as early as the first pre-school visit.
3. At each visit, aggressive physical examination is usual, with mild daily observation and other children observed and actively discussed.
5. There may be mothers, especially in rural parts of the state, that need more education and training.
6. If the patient has been seen before, the AAP recommends a more detailed examination.
7. The Reimbursement for Pediatricians should be seen for the AAP's recommendations on reimbursement for pediatricians under the <https://www.aap.org/en-us/practice-resources/nursing-tools/nursing-education-and-resources/nursing-tools-toolbox.cfm>
9. Blood pressure measurement in children and adolescents with specific risk factors should be performed at visits before age 1 year.
10. In the patient's examination, recite within a month, the 2017 AAP recommends child-focused evaluation in children, and writing by medical professionals within a month.

## Iowa EPSDT Care for Kids Health Management

### Developmental and Behavioral Assessment

<table>
<thead>
<tr>
<th>Age</th>
<th>Infancy</th>
<th>Early Childhood</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-36 mo</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>18-24 mo</td>
<td>*</td>
<td>*</td>
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<tr>
<td>36-60 mo</td>
<td>*</td>
<td>*</td>
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<tr>
<td>60-96 mo</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>96-120 mo</td>
<td>*</td>
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</tbody>
</table>

- Caregiver Depression Screening
- Developmental surveillance
- Developmental screening: 9, 18, 24 or 30 mo
- Autism screening: 18 & 24 mo
- Psychosocial/behavioral assessment
- Alcohol and drug use assessment
- Adolescent Depression Screening

### Oral Health

- Assessment at every visit. Referral to dental home within 6 mo. of eruption of first tooth or by 12 mo. Ask about dental home status at every visit.

### Sensory Screening

- Vision:
  - Newborn: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
  - 15 mo: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
  - 18 mo: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
  - 24 mo: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
  - 30 mo: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
  - 36 mo: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
- Hearing:
  - Newborn: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
  - 15 mo: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
  - 18 mo: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
  - 24 mo: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
  - 30 mo: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
  - 36 mo: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

### Immunization

- Perform an immunization review at each visit; administer immunizations at recommended ages, or as needed.

### Anticipatory Guidance

- Provided at every visit.

### Procedures

- Lipid screening
- Hemoglobin/hematocrit
- Lead Testing
- Newborn screening
- Blood, hearing, critical congenital heart disease
- Sexually transmitted infections/HIV screening
- Cervical Dysplasia Screening
- Tuberculosis testing

*Medicaid recommends a 30-month visit and annual visits for older children and adolescents, but does not require them.*
### Why Use A Surveillance or Screening Tool?

#### PERCENTAGE OF ADEQUATE SCREENS

#### Table 1. Urban Pediatric Practice

<table>
<thead>
<tr>
<th>DOMAIN</th>
<th>BASELINE Cases</th>
<th>Percentage</th>
<th>POST-INTERVENTION Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development</td>
<td>207/232</td>
<td>89%</td>
<td>245/249</td>
<td>98%</td>
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<tr>
<td>Social-emotional</td>
<td>151/232</td>
<td>65%</td>
<td>237/249</td>
<td>95%</td>
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<tr>
<td>Family stress</td>
<td>0/232</td>
<td>0%</td>
<td>201/249</td>
<td>81%</td>
</tr>
<tr>
<td>Parent depression</td>
<td>0/232</td>
<td>0%</td>
<td>133/249</td>
<td>53%</td>
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#### Table 2. Rural Family Medicine Practice

<table>
<thead>
<tr>
<th>DOMAIN</th>
<th>BASELINE Cases</th>
<th>Percentage</th>
<th>POST-INTERVENTION Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development</td>
<td>118/168</td>
<td>70%</td>
<td>133/151</td>
<td>88%</td>
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<tr>
<td>Social-emotional</td>
<td>60/168</td>
<td>36%</td>
<td>133/151</td>
<td>88%</td>
</tr>
<tr>
<td>Family stress</td>
<td>0/168</td>
<td>0%</td>
<td>121/151</td>
<td>80%</td>
</tr>
<tr>
<td>Parent depression</td>
<td>0/168</td>
<td>0%</td>
<td>114/151</td>
<td>75%</td>
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</tbody>
</table>
Myth

- Informal strategies don’t work
  - 60-80% of pediatricians fail
  - Insensitive in detection
  - No help in decision making
  - Lack of feedback


Sand N, Silverstein M, Glascoe FP, Tonniges T, Gupta B, O'Connor K. Pediatricians' reported practices regarding developmental screening: are guidelines used? Do they help? Presented at: annual meeting of the Pediatric Academic Societies; May 1–4, 2004; San Francisco, CA
Level 1 Surveillance

* Use a standardized tool – Bright Futures or Iowa Child Health and Development Record
| Iowa Child Health and Development Record | 9 month Well Exam |

**Date** | **Patient #** |
**Name** | **Date of Birth** |
**Address** |  |
**Lives with:** | 1 parent | 2 parents | Other caregiver |
**Others (including siblings):** |  |
**May release information to:** | (parent, guardian, other family) — (list) |
**Parental concerns:** | Changes in child's health since last visit: |

**FAMILY HISTORY:**
- Reviewed and updated

**SOCIAL HISTORY:**
- Childcare:  

**FAMILY RISK FACTORS:**
- Changes in family since last visit:  
- Stress: How much stress are you and your family under now?  
  - None  
  - Slight  
  - Moderate  
  - Severe  
- What kind of stress?  
  - Relationships  
  - Drugs  
  - Alcohol  
  - Violence/Abuse  
  - Lack of help  
  - Financial  
  - Health Insurance  
  - Child care  
  - Other  
- How stressful is caring for your child?  
  - None  
  - Slight  
  - Moderate  
  - Severe  

**MATERNAL/CAREGIVER DEPRESSION:**
- In the past month, have you or your partner felt down, depressed or hopeless?  
  - No  
  - Sometimes  
  - Often  
- In the past month have you or your partner felt little interest or pleasure in doing things?  
  - No  
  - Sometimes  
  - Often  

**GENERAL HEALTH:**
- Nutrition:  
  - Breast: times/day  
  - Bottle: oz/day  
  - YES NO  
  - Drinking from cup?  
  - Table/finger foods?  
  - Solids: Cereals, Fruits, Vegetables, Meats  
  - Juice: oz/day  
- Daily oral health care?  
  - Yes  
  - No  
  - No teeth  
  - Dental visit?  
- Elimination:  
  - Stooling: soft, easy to pass BMs  
  - Sleep: hours through the night  
  - YES NO  
  - Problems? Night feedings?  
  - YES NO  
  - Bottle to bed?  

**DEVELOPMENT:** Screen or refer if concerns or "No" response on milestones in bold type  
- YES NO  
  - Interacts with family by smiling and vocalizing  
  - Expresses emotions  
  - Waves "bye-bye" or plays "patt-a-cake"  
  - Babbles, repeats syllables like ba-ba, na-na  
  - Imitates sounds  
  - Transfers objects to other hand  
  - Feeds self cracker  
  - May pick up Cheerio  
  - Sits well without support  
  - Stands holding onto to stable object  

**MEDICAL HISTORY:**
- Allergies:  
  - Meds:  
- Major medical illnesses/special health care needs:  
- Hospitalizations:  
- Surgeries:  

**PHYSICAL EXAMINATION**
- Vital signs:  
  - P:  
  - R:  
  - T:  
  - Weight: % (  
- Length: % (  
- Head circumference: % (  
- N Abn: Comment on abnormal findings  
- General appearance:  
- Behavior/interaction with family:  
- Skin:  
- Head/neck:  
- Ears:  
- Eyes:  
- Nose:  
- Mouth/Throat:  
- Teeth:  
- Neck:  
- Back/Chest:  
- Lungs:  
- Heart:  
- Abdomen:  
- Genitalia:  
- Musculoskeletal:  
- Neurologic:  
- Developmental Screening (ASQ, other):  
  - Results reviewed: (outside info, lab, etc.)  
  - Impression:  

**PLAN OF CARE** (see Anticipatory Guidance)
- Immunizations:  
  - Vaccine Information Statements offered to parent  
  - Past adverse reactions to immunizations:  
  - NO  
  - YES  
  - See current guidelines:  
  - www.immunize.org/aap  

**LAB:** (if indicated)  

**Developmental Follow-up:**  

**Referral:** (if indicated)  

**Central referral numbers:**  
- For assistance with care coordination, transportation, or health information for children birth through age 21:  
  - Healthy Families Line 1-800-360-2225  
- For referral of children birth to age 3 with developmental delay to local Early Access providers:  
  - Early Access Line 1-888-425-4371  

**Handouts:**  

**Return appointment:**  

**Signature:**  

**Date:**  

For additional information go to Iowa EPSDT Provider website: iowaeqpdtd.org  
Revised 11-2009
### Iowa Child Health and Development Record

**Date:** [Please fill in the date]

**Patient #**

**Name:** [Please fill in the name]

**Date of Birth:**

**Address:**

**Lives with:**
- [ ] 1 parent
- [ ] 2 parents
- [ ] Other caregiver
- [ ] Others (including siblings), ___________

**Parental concerns:**

**Changes in child's health since last visit:**

### General Health:

**Nutrition/Dental:**

- [ ] Yes
- [ ] No

- [ ] Bottle or pacifier? __________ times/day
- [ ] Cow's milk: __________
- [ ] Juice: __________
- [ ] Daily eat a variety of food groups, incl. fruits & veggies?
- [ ] Daily oral health care
- [ ] Has had dental visit

**Elimination:**
- [ ] stooling: soft, easy to pass BMs

**Sleep:**
- [ ] hours through the night

**Behavior:**

- [ ] Yes
- [ ] No

- [ ] Problems? Night feedings?
- [ ] Bottle to bed

### Development:

**Screen or refer if concerns or “No” response on milestones in **bold type**: Recommend autism screening; Recommend developmental screening if no 30-mo. visit.

**YES**
- [ ] Plays along side other children
- [ ] Pretend play such as feeding a doll*
- [ ] Says 50 words or more*
- [ ] Puts 2 words together, such as “more juice” (not just repeating)*
- [ ] Knows some body parts
- [ ] Knows body parts *(autism risk)*
- [ ] Stacks 4-6 blocks
- [ ] Walks up stairs one step at a time, runs, kicks ball

**NO**
- [ ] Family concerns about behavior, speech, learning, social, or motor skills:

### Medical History:

**Medications:**

**Allergies:**

**Major medical illnesses:**

**Hospitalizations:**

**Surgeries:**

**Overhead garage:**

**Review car seat:**

**Cleaning products:**

**Is home:**

**Childproofing:**

**Water safety near tubs, toilets, buckets:**

**Smoking in home:**

*discuss quitting, limiting exposure*
General Developmental Surveillance and Screening

**Surveillance at each visit:**
- Age Appropriate
- Fine and Gross Motor Assessment
- Intellectual and Language Development
- Social, Emotional, and Behavioral Development

**Screening:**
- General Developmental Screen
- ASQ at 9, 18, 24, and 30 months
ASD Surveillance

Surveillance should occur at every well child visit.

ASD red flags include parent concern about social skills, language skills or behavior at any age. Concerns of frequent tantrums or intolerance to change.

- Delayed language and social communication
- No babbling 9 months
- No pointing or gestures – 12 months
- Failure to orient to name – 12 months
- No single word – 16 months
- Lack of pretend or symbolic play – 18 months.
- No spontaneous, meaningful (not repetitive or echolalic) 2 word phrases – 24 months
- Any loss of language or social skills at any time
- Children with a sibling with ASD
Targeted screening using a standardized tool:

**ASD: M-CHAT-R/F** 18 months and 24 months

**General Developmental Screen: ASQ –**

Ages and Stages at 9, 18, and 24 or 30 months

**REMEMBER:**

PARENT CONCERNS TRUMPS ALL.

THESE ARE SCREENING NOT DIAGNOSTIC TOOLS!!!
ASD – Screening

M-CHAT replaced by M-CHAT-R/F

* Removed 3 questions: peek-a-boo, playing with toys, wondering without purpose
* Reorganized items to reduce agreement bias
* Reorganized highest yield items in top 10
* Gave more examples to provide developmental context
* Simplified language to improve comprehension
* Simplified scoring
* Stratified scoring into 3 risk areas to guide follow-up

For more information, please see www.mchatscreen.com
©2009 Diana Robins, Deborah Fein, & Marianne Barton
ASD Screening

M-CHAT-R/F initial screening

<table>
<thead>
<tr>
<th>Risk Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Risk 0-2:</td>
<td>93%</td>
</tr>
<tr>
<td>Medium Risk 3-7:</td>
<td>6%</td>
</tr>
<tr>
<td>High Risk 8-20:</td>
<td>1%</td>
</tr>
</tbody>
</table>

27% of screen positive kids will have a developmental delay or concern.

100% of high risk group had delays or concerns which justified immediate referral.

Valid tool for screening for autism in children 16-30 months of age.
Medium risk group (3-7) require use of M-CHAT-R follow-up.

* Select follow-up items based on items failed in M-CHAT-R.
* Follow formal flowchart until arrived at Pass or Fail for each question repeated.
* If parent responds with “maybe”, ask if behavior is most often yes or no (may still need to use your judgment).
* Screen positive if fails any 2 items – referral required. Score 0-1 screen negative.
* Child ≥ 3 initially or ≥ 2 offer M-CHAT-F have a 47.5% risk of being diagnosed with autism.

M-CHAT-R/F can both be completed by appropriate trained staff.

M-CHAT-F can be done either in person or by phone. Do **NOT** do same day as visit.

Provider should verify all positive screens and decide on plan of care.

**DO NOT WATCH AND WAIT**

Reference: Validation of the Modified Checklist for Autism in Toddlers, Revised, with Follow-up (M-CHAT-R/F)™, Diana L. Robins, et al., *Pediatrics* 2014;133;37.
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
M-CHAT Revised with Follow Up

M-CHAT-R Follow-Up™ Scoring Sheet

Please note: Yes/No has been replaced with Pass/Fail

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?)  
   Pass  Fail

2. Have you ever wondered if your child might be deaf?  
   Pass  Fail

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)  
   Pass  Fail

4. Does your child like climbing on things?  
   (For example, furniture, playground equipment, or stairs)  
   Pass  Fail

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?)  
   Pass  Fail

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)  
   Pass  Fail

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)  
   Pass  Fail

8. Is your child interested in other children?  
   (For example, does your child watch other children, smile at them, or go to them?)  
   Pass  Fail

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)  
   Pass  Fail

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?)  
    Pass  Fail

11. When you smile at your child, does he or she smile back at you?  
    Pass  Fail

12. Does your child get upset by everyday noises?  
    (For example, a vacuum cleaner or loud music)  
    Pass  Fail

13. Does your child walk?  
    Pass  Fail

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?  
    Pass  Fail

15. Does your child try to copy what you do?  
    (For example, wave bye-bye, clap, or make a funny noise when you do)  
    Pass  Fail

16. If you turn your head to look at something, does your child look around to see what you are looking at?  
    Pass  Fail

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”)  
    Pass  Fail

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”)  
    Pass  Fail

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?)  
    Pass  Fail

20. Does your child like movement activities?  
    (For example, being swung or bounced on your knee)  
    Pass  Fail

Total Score: ________
Bill is a 24 month old male being evaluated for surveillance and screening. Parents voice concerns about the child’s development since his last 18 month exam. He was born one month premature and developed neonatal jaundice which required photo therapy. An older sibling has developed normally. Physical exam is normal. Responds negatively to being examined.

M-CHAT-R:
Parents respond Yes to question 2.
Parents respond No to questions 4, 8, 20.
**Score 4** moderate autism risk 3-7.

Recommended follow-up?
**Administer M-CHAT-F questions 2, 4, 8, 20.**
2. You reported that you have wondered if your child is deaf. What led you to wonder that?
4. Does ________ like climbing on things?

Does he/she enjoy climbing on...

- Stairs?
- Chairs?
- Furniture?
- Playground equipment?

Does ________ like climbing on things?

Yes to any of the above

PASS

No to all

FAIL
8. Is ________ interested in other children?
20. Does _________ like movement activities?

Yes

Does he/she enjoy being bounced or swung?

Yes

PASS

No

When you swing or bounce him/her, how does he/she react?
(If parent does not give an example below, ask each individually.)

Yes

PASS

No

Does your child...

Laugh or smile? Yes □ No □
Talk or babble? Yes □ No □
Request more by holding out his/her arms? Yes □ No □
Other (describe): Yes □ No □

Yes to any specific examples (or if “other” is a positive response)

PASS

No to all

FAIL
ASD Case 1 Continued

M-CHAT-F
Question 2 – PASS
Question 4 – PASS
Question 8 – PASS
Question 20 – FAIL

Score 1 – negative screen

Schedule 30 month surveillance visit and assess development unless parent’s concerns require earlier visit.

A missed item may need clinical evaluation even if the child is screen negative on the M-CHAT-R/F.
Policy Statement

Identifying Infants and Young Children With Developmental Disorders in the Medical Home: An Algorithm for Developmental Surveillance and Screening

Organizational Principles to Guide and Define the Child Health Care System and/or Improve the Health of All Children
Recommended General Developmental Screening Tools

* Ages and Stages – 3 (ASQ-3)
* Ages and Stages: SE (Social and Emotional)
* Written 4th to 6th grade level
* Parent completed: 15-20 minutes
* Scored by trained personnel: 5 minutes
ASQ - 3

- Screen children ages 1-66 months
- 21 questionnaires ages 2-60 months
- 5 domains with about 6 questions per domain and an overall section which elicits parent’s concern
- Scored: Yes, Sometimes, No for each question
- 85% sensitivity and specificity
1) Communication: babbling, vocalizations, listening, and understanding
2) Gross motor: arms, body, legs
3) Fine motor: hands, fingers
4) Personal – Social: solitary social play and playing with toys and others
5) Problem-solving: learning and use of toys
6) Parental concerns
Developmental Screening

ASQ3 Ages & Stages Questionnaires®
30 Month Questionnaire

28 months 16 days through 31 months 15 days

Please provide the following information. Use black or blue ink only and print legibly when completing this form.

Date ASQ completed: ____________________________

Child’s information

Child’s first name: ____________________________  Middle initial: __________  Child’s last name: ____________________________

Child’s date of birth: ____________________________

Child’s gender: ____________________________

☐ Male  ☐ Female

Person filling out questionnaire

First name: ____________________________  Middle initial: __________  Last name: ____________________________

Relationship to child: ____________________________

☐ Parent  ☐ Guardian
☐ Grandparent or other relative  ☐ Foster parent
☐ Teacher  ☐ Other: ____________________________

Street address: ____________________________

City: ____________________________  State/Province: __________  ZIP/Postal code: ____________________________

Country: ____________________________

Home telephone number: ____________________________  Other telephone number: ____________________________

E-mail address: ____________________________

Names of people assisting in questionnaire completion:

____________________________  ____________________________

____________________________  ____________________________
### COMMUNICATION

1. If you point to a picture of a ball (kitty, cup, hat, etc.) and ask your child, “What is this?” does your child correctly name at least one picture?
   - YES: 0
   - SOMETIMES: 1
   - NOT YET: 0
   - TOTAL: 10

2. Without your giving him clues by pointing or using gestures, can your child carry out at least three of these kinds of directions?
   - a. “Put the toy on the table.”
   - b. “Close the door.”
   - c. “Bring me a towel.”
   - d. “Find your coat.”
   - e. “Take my hand.”
   - f. “Get your book.”
   - TOTAL: 0

3. When you ask your child to point to her nose, eyes, hair, feet, ears, and so forth, does she correctly point to at least seven body parts? (She can point to parts of herself, you, or a doll. Mark “sometimes” if she correctly points to at least three different body parts.)
   - TOTAL: 0

4. Does your child make sentences that are three or four words long? Please give an example:

   ![Example](image)

5. Without giving your child help by pointing or using gestures, ask him to “put the book on the table” and “put the shoe under the chair.” Does your child carry out both of these directions correctly?
   - TOTAL: 0

6. When looking at a picture book, does your child tell you what is happening or what action is taking place in the picture (for example, “barking,” “running,” “eating,” or “crying”)? You may ask, “What is the dog (or boy) doing?”
   - TOTAL: 0

**COMMUNICATION TOTAL**: 15
### ASQ-3 30 Month Questionnaire

#### GROSS MOTOR

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>Sometimes</th>
<th>Not Yet</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Does your child run fairly well, stopping herself without bumping into things or falling?</td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>2. Does your child walk either up or down at least two steps by himself? He may hold onto the railing or wall. (You can look for this at a store, on a playground, or at home.)</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Without holding onto anything for support, does your child kick a ball by swinging his leg forward?</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Does your child jump with both feet leaving the floor at the same time?</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Does your child walk up stairs, using only one foot on each stair? (The left foot is on one step, and the right foot is on the next.) She may hold onto the railing or wall.</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Does your child stand on one foot for about 1 second without holding onto anything?</td>
<td>0</td>
<td></td>
<td>25</td>
</tr>
</tbody>
</table>

**GROSS MOTOR TOTAL**

*If Gross Motor Item 5 is marked "yes" or "sometimes," mark Gross Motor Item 2 "yes."
**ASQ-3**

**30 Month Questionnaire**

### FINE MOTOR

1. Does your child use a turning motion with her hand while trying to turn doorknobs, wind up toys, twist tops, or screw lids on and off jars?

   - **YES**
   - **SOMETIMES**
   - **NOT YET**

   5

2. After your child watches you draw a line from the top of the paper to the bottom with a pencil, crayon, or pen, ask him to make a line like yours. Do not let your child trace your line. Does your child copy you by drawing a single line in a vertical direction?

   - **YES**
   - **SOMETIMES**
   - **NOT YET**

   0

3. Can your child string small items such as beads, macaroni, or pasta "wagon wheels" onto a string or shoelace?

   - **YES**
   - **SOMETIMES**
   - **NOT YET**

   0

4. After your child watches you draw a line from one side of the paper to the other side, ask her to make a line like yours. Do not let your child trace your line. Does your child copy you by drawing a single line in a horizontal direction?

   - **YES**
   - **SOMETIMES**
   - **NOT YET**

   0

5. After your child watches you draw a single circle, ask him to make a circle like yours. Do not let him trace your circle. Does your child copy you by drawing a circle?

   - **YES**
   - **SOMETIMES**
   - **NOT YET**

   0

6. Does your child turn pages in a book, one page at a time?

   - **YES**
   - **SOMETIMES**
   - **NOT YET**

   5

**FINE MOTOR TOTAL**

10
### PROBLEM SOLVING

1. When looking in the mirror, ask, “Where is _____?” (Use your child’s name.) Does your child point to her image in the mirror?

   - **Yes**
   - **Sometimes**
   - **Not Yet**
   - **Total**

2. If your child wants something he cannot reach, does he find a chair or box to stand on to reach it (for example, to get a toy on a counter or to “help” you in the kitchen)?

   - **Yes**
   - **Sometimes**
   - **Not Yet**
   - **Total**

3. While your child watches, line up four objects like blocks or cars in a row. Does your child copy or imitate you and line up four objects in a row? (You can also use spools of thread, small boxes, or other toys.)

   - **Yes**
   - **Sometimes**
   - **Not Yet**
   - **Total**

4. When you point to the figure and ask your child, “What is this?” does your child say a word that means a person or something similar? (Mark “yes” for responses like “snowman,” “boy,” “man,” “girl,” “Daddy,” “spaceman,” and “monkey.”) Please write your child’s response here:

5. When you say, “Say ‘seven three,’” does your child repeat just the two numbers in the same order? Do not repeat the numbers. If necessary, try another pair of numbers and say, “Say ‘eight two.’” Your child must repeat just one series of two numbers for you to answer “yes” to this question.

   - **Yes**
   - **Sometimes**
   - **Not Yet**
   - **Total**

6. After your child draws a “picture,” even a simple scribble, does she tell you what she drew? (You may say, “Tell me about your picture,” or ask, “What is this?” to prompt her.)

   - **Yes**
   - **Sometimes**
   - **Not Yet**
   - **Total**
# ASQ-3

## 30 Month Questionnaire

### PERSONAL-SOCIAL

1. If you do any of the following gestures, does your child copy at least one of them?
   - [ ] a. Open and close your mouth.
   - [ ] b. Blink your eyes.
   - [ ] c. Pull on your earlobe.
   - [ ] d. Pat your cheek.

   **Total: 10**

2. Does your child use a spoon to feed himself with little spilling?

   **Total: 5**

3. Does your child push a little wagon, stroller, or other toy on wheels, steering it around objects and backing out of corners if she cannot turn?

   **Total: 10**

4. Does your child put on a coat, jacket, or shirt by himself?

   **Total: 5**

5. After you put on loose-fitting pants around her feet, does your child pull them completely up to her waist?

   **Total: 5**

6. When your child is looking in a mirror and you ask, “Who is in the mirror?” does he say either “me” or his own name?

   **Total: 10**

**PERSONAL-SOCIAL TOTAL: 45**
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.

<table>
<thead>
<tr>
<th>Area</th>
<th>Cutoff</th>
<th>Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>33.30</td>
<td></td>
</tr>
<tr>
<td>Gross Motor</td>
<td>36.14</td>
<td></td>
</tr>
<tr>
<td>Fine Motor</td>
<td>19.25</td>
<td></td>
</tr>
<tr>
<td>Problem Solving</td>
<td>27.08</td>
<td></td>
</tr>
<tr>
<td>Personal-Social</td>
<td>32.01</td>
<td></td>
</tr>
</tbody>
</table>

[Chart showing the scoring table with red circles indicating the total scores.]
ASQ – SE

* Supplement to ASQ – 3
* 8 questionnaires age 6-60 months screening ages 3-66 months
* Completed by caregiver with 15-20 hours per week of contact with a child
* Questions are not arranged by constructs/domains
* One single score only
* Scored: Most of the time, Some of the time, Rarely or Never
Areas of the ASQ:SE

* Self-regulation: child’s ability or willingness to calm or settle down, or adjust to physiological or environmental conditions/stimulation
* Compliance: child’s ability or willingness to conform to the direction of others and follow rules
* Communication: child’s ability or willingness to respond to or initiate verbal or nonverbal signals to indicate feelings, affective, or internal states
* Adaptive functioning: child’s success or ability to cope with physiological needs (e.g., sleeping, eating, elimination, safety)
* Autonomy: child’s ability or willingness to self-initiate or respond without guidance (i.e., moving to independence)
* Affect: child’s ability or willingness to demonstrate his or her own feelings and empathy for others
* Interaction with people: child’s ability or willingness to respond to or initiate social responses to parents, other adults, and peers
* Parental concern
Billing for Developmental Screening

Developmental testing and interpretation report

- 96110 or G0451
- Medicaid pays $61.52
- Wellmark allows $16.00 - indemnity product; $13.00 – WHPI product
- Medicare: $7.20

G0444 Depression Screening Annual
- Medicaid pays $15.29
- Wellmark pays $13.50
- Medicare pays $8.86

G0442 Alcohol and Substance Misuse Screening

- Medicaid pays $15.29
- Wellmark pays $26.00; $14.00

Medicaid: “25” modifier to preventive service or E&M code
Attach “59” modifier if using more than one screen (i.e., developmental screen and autism screen)
Check with your payer
Things To Do Before Referral

* M-CHAT-R/F, ASQ, ASQ-SE
* Vision & Hearing evaluation
* Review Newborn screening results & Growth chart
* Review PMH, family history, social, environmental factors
* Metabolic testing & Lead levels
The tool is not the challenge in implementing the screening process in the office. It is changing the workflow.
Implementation of Screening Process in Primary Care office

* Approach as Q/I project
* Present as a revenue generating process - BUSINESS CASE
* **Champion** and **Implementor** of change
* Decide best method for your office
  - paper with EHR documentation summary
  - fully integrated into EHR
  - online autism screening – Autism Speaks
  - pay third party: Child Health and Development Interactive System (CHADIS)
* Screening tool to begin to implement: start with one patient and one doctor
* Design and define workflow and roles and responsibilities
* The tool is not the challenge in implementing the screening process in the office.
Office Implementation (Continued)

Design and Define workflow and roles/responsibilities (Tasks)

* **Pre-visit:** Registry and patient notification

* **Visit:** Receptionist/Scheduler
  Nursing
  Clinician
  Billing

* **Post Visit:** NEXT STEPS
  * additional/repeat testing
  * Referral
  * care coordination
Referral Options

* Early Access
  ◦ http://www.earlyaccessiowa.org

* 1st Five
  ◦ http://www.idph.state.ia.us/1stfive/

* Child Health Specialty Clinics
  ◦ http://www.chsciowa.org

* UI Center for Disabilities and Development
  ◦ http://www.uichildrens.org/cdd/

* University of Iowa Children’s Hospital
  ◦ http://www.uichildrens.org

* Blank Children’s Hospital
  ◦ http://www.unitypoint.org/blankchildrens/default.aspx
References

* Bright Futures:  http://brightfutures.aap.org

* Iowa Early And Periodic Screening Diagnosis And Treatment:  http://www.iowaepsdt.org

* Child Health And Development Interactive System:  http://www.chadis.com

* Modified Checklist for Autism in Toddlers, Revised with Follow-up (M-CHAT-R/F):  http://www.mchatscreen.com


References

* The Adverse Childhood Experiences Study: www.acestudy.org
* ACEs 360 Iowa: www.iowaaces360.org
* Center of the Developing Child at Harvard University: http://developingchild.harvard.edu
* Nadine J. Burke et al. The impact of adverse childhood experiences on an urban pediatric population. Child Abuse and Neglect 35(2011)408-413
Thank You

Questions and Comments