Developmental Surveillance and Screening in Practice: An Interactive Forum for Providers

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Sponsored:
Iowa Medicaid Enterprise
1st Five Healthy Mental Development Initiative
The Iowa Department of Public Health
Child Health Specialty Clinics

Conflict of Interest:
Drs. Wolfe and Cheryl Jones 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-3), and child social-emotional development (ASQ:SE-2) screening tools
**Surveillance vs Screening**

**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-3
- ASQ-SE-2

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**The Science Behind Policy**

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**Summary of Surveillance and Screening Recommendations**

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Why Use A Surveillance or Screening Tool?

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>237/232</td>
<td>95%</td>
<td>246/248</td>
<td>98%</td>
</tr>
<tr>
<td>Social-emotional</td>
<td>151/232</td>
<td>65%</td>
<td>237/249</td>
<td>95%</td>
</tr>
<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>132/249</td>
<td>63%</td>
</tr>
</tbody>
</table>

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>132/151</td>
<td>88%</td>
</tr>
<tr>
<td>Social-emotional</td>
<td>60/168</td>
<td>36%</td>
<td>132/151</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>76%</td>
</tr>
</tbody>
</table>

Myth

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


Level 1 Surveillance

- Use a standardized tool – Bright Futures or Iowa Child Health and Development Record
## 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-3 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

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ASD -- Screening

Targeted screening using a standardized tool:
ASD: M-CHAT-R/F 18 months and 24 months
General Developmental Screen: ASQ – 3
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-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 - screen negative.
- Child a 3 initially or a 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

ASD Case 1

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.

8. Is ______ interested in other children?
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.

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US Preventive Services Task Force, JAMA. 2016;315(7):691-696

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Embrace the
The US Preventive Services Task Force Recommendation
Screening for Autism Spectrum Disorder in Young Children

IT demonstrated it to be a rigorous, up-to-date evidence-based recommendation that enhances the knowledge base around universal ASD screening. The USPSTF embraced this issue in all its complexity.

Recommended General Developmental Screening Tools

- Ages and Stages – 3 (ASQ-3)
- Ages and Stages:SE-2 (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
ASQ – 3
Domains

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

ASQ-3 30 Month Questionnaire

Communication

1. Asking your child what he or she is doing, playing, etc., and ask your child “What is this?” Does your child correctly name all objects?
   a) “This is the doll.”
   b) “This is a chair.”
   c) “This is a cup.”
   d) “This is my toy.”
   e) “This is my food.”

2. Do you need to show your child where to find things?
   a) “Give me the toy.”
   b) “Give me the ball.”
   c) “Give me the spoon.”

3. Does your child respond appropriately when you change the tone of voice?
   a) “Sit down!”
   b) “Do it!”

4. Does your child follow two-step instructions?
   a) “Put the toy away.”
   b) “Put the toy in the box.”

5. Does your child cross the midline when reaching for objects?
   a) “Put the ball away.”
   b) “Put the stick in the box.”

6. Does your child make eye contact?
   a) “Look at me.”
   b) “Look at the toy.”

7. Does your child point?
   a) “Point to the toy.”
   b) “Point to the chair.”

8. Does your child use gestures?
   a) “Point to the chair.”
   b) “Point to the ball.”

9. Does your child make sounds?
   a) “Make a noise.”
   b) “Say something.”

10. Does your child use facial expressions?
    a) “Smile at me.”
    b) “Say something.”

11. Does your child use gestures?
    a) “Point to the chair.”
    b) “Point to the ball.”

12. Does your child use words?
    a) “Say something.”
    b) “Say something.”

13. Does your child use words?
    a) “Say something.”
    b) “Say something.”

14. Does your child use words?
    a) “Say something.”
    b) “Say something.”

15. Does your child use words?
    a) “Say something.”
    b) “Say something.”

Communication Total: 15
**ASQ-3 30 Month Questionnaire**

**PERSONAL SOCIAL**

1. Point your child to the following picture, then your child copy where you point.
   - YES: 5
   - SOMETIMES: 3
   - NOT YET: 0
2. Do your child pull away from you if you pick them up?
   - YES: 0
   - SOMETIMES: 5
   - NOT YET: 10
3. Do your child have a separation anxiety?
   - YES: 0
   - SOMETIMES: 5
   - NOT YET: 10
4. Do your child pay attention to your voice?
   - YES: 0
   - SOMETIMES: 5
   - NOT YET: 10
5. Do your child run when you talk to them?
   - YES: 0
   - SOMETIMES: 5
   - NOT YET: 10
6. Do your child look at a picture and then show you?
   - YES: 0
   - SOMETIMES: 5
   - NOT YET: 10

PERSONAL SOCIAL TOTAL: 45

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**Scoring**

1. SCORE AND TRANSFER TOTALS TO CHART BELOW. See ASQ-3 User’s Guide for details, including how to adjust scores if items were scored unclear.

<table>
<thead>
<tr>
<th>Area</th>
<th>Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>55.50</td>
</tr>
<tr>
<td>Self-Make</td>
<td>56.14</td>
</tr>
<tr>
<td>Fine-Make</td>
<td>19.26</td>
</tr>
<tr>
<td>Problem-Solving</td>
<td>27.00</td>
</tr>
<tr>
<td>Personal-Social</td>
<td>22.01</td>
</tr>
</tbody>
</table>

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**ASQ – SE - 2**

- Supplement to ASQ – 3
- 9 questionnaires age 2-60 months screening ages 1-66 months
- Completed by caregiver with 15-20 hours per week of contact with a child
- Questions are not arranged by constructs/domains
ASQ – SE - 2

- 16-36 items/questions; 3 open-ended questions per screening tool
- One single score only, cutoff score above which a child requires further evaluation.
- Scored: Often or Always, Sometimes, Rarely or Never
- Intermediate score which requires either monitoring, further evaluation, or referral.

Areas of the ASQ:SE - 2

- 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 screen & score
- Includes MCHAT R/F, ASQ-3
  - 96110 or G0451
  - Medicaid pays $61.51
  - Wellmark HMO pays $16
  - Wellmark PPO/Indemnity pays $19
  - For MDs/DOs, $16 for NP/PAs
  - Medicare: $7.20

Brief Emotional/Behavioral Assessment—includes ASQ:SE2
- 96127
  - Medicaid pays $61.51 for MDs/DOs/PAs, $52.28 for NPs
  - Wellmark HMO, PPO, Indemnity all pay between $8.50-10.50 for MDs/DOs, PAs/NPs

医保: “25” modifier to preventive service or E&M code
  - Example: 96110/25

Attach “59” modifier if using more than one screen
  - Example: developmental screen and autism screen

Check with your payer
**Things To Do Before Referral**

- **M-CHAT-R/F, ASQ-3, ASQ-SE-2**
- **Vision & Hearing** evaluation
- Review Newborn screening results & Growth chart
- Review PMH, family history, social, environmental factors
- Metabolic testing & Lead levels

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**Implementation of Screening Process in Primary Care office**

- Approach as QI 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 provider (Doctor/Nurse Practitioner/Physician Assistant)
- 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:** [www.earlyaccessiowa.org](http://www.earlyaccessiowa.org)
- **1st Five:** [www.idph-iowa.gov/1stfive](http://www.idph-iowa.gov/1stfive)
- **Child Health Specialty Clinics:** [www.chcsiowa.org](http://www.chcsiowa.org)
- **UI Center for Disabilities and Development:** [www.uichildrens.org/cdd/](http://www.uichildrens.org/cdd/)
- **University of Iowa Children’s Hospital:** [www.uichildrens.org](http://www.uichildrens.org)
- **Blank Children’s Hospital:** [www.unitypoint.org/blankchildrens/default.aspx](http://www.unitypoint.org/blankchildrens/default.aspx)
- **ChildServe:** [www.childserve.org/services](http://www.childserve.org/services)

References

- **Bright Futures:** [http://brightfutures](http://brightfutures)
- **Iowa Early And Periodic Screening Diagnosis And Treatment:** [http://www.iowaepsdt.org](http://www.iowaepsdt.org)
- **Child Health And Development Interactive System:** [http://www.chadis.com](http://www.chadis.com)
- **Modified Checklist for Autism in Toddlers, Revised with Follow-up (M-CHAT-R/F):** [http://www.michatscreen.com](http://www.michatscreen.com)
References


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

Thank You

Questions and Comments
**1st Five Healthy Mental Development**

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**Objectives**

- Overview of 1st Five model
- Site coordination and care coordination
- History and Expansion of 1st Five in 2016
- Medical Consultation Services

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**What is Iowa’s 1st Five Healthy Mental Initiative?**

1st Five is a public-private partnership bridging primary care and public health services in Iowa. The 1st Five model supports health providers in the earlier detection of social, emotional and developmental delays and family risk-related factors in children birth to 5 and coordinates referrals, interventions and follow-up.
Site Coordinators develop relationships with primary care providers in their region

- Identify, within each medical practice:
  - Primary care provider (PCP) champion
  - Office champion
- Distribute and explain the practice intake form
- Maintain referral process for care coordination
- Report back to providers about referral result
- Provide focused technical assistance
- Provide on-going training opportunities (i.e. implementation of screening tools, events, etc)

Site coordinators also develop relationships with the community resources who will serve the families:

- Early Intervention/Evaluation
- Developmental Delay
- Speech Therapy
- Occupational Therapy
- Physical Therapy
- Financial Stress
- Family and Relationship Stress
- Domestic Abuse
- Child Care
- Head Start and Preschool
- Family Support Services

Regardless of Public or Private Insurance Coverage

Reasons to Refer to 1st Five

- Housing Resources
- Maternal/ Caregiver Depression
- Mental Health Issues
- Behavioral Issues
- Parent Education Programs
- Food Assistance
- Family Planning
- Medicaid/Dental/Heath Insurance Needs
- Substance Abuse
- Transportation Concerns

Referrals and Resources

1st Five bridges health-provider referrals and community resources
History of 1st Five

- Established in 2006 through state legislation
- Currently, administered through 10 PPUs and 14 local Title V Child Health agencies
65 Counties Covered by 1st Five

**Implementation Sites**
1. Black Hawk County Health Department – Waterloo
2. Keokuk Area Community Action Program – Cedar Rapids
3. NICAMS Family Health Services – Davenport
4. Lee County Health Department – Fort Madison
5. Mid-Iowa Community Action, Inc. – Ames
6. New Opportunities, Inc. – Carroll
7. Taylor County Public Health – Bedford
8. Trinity Muscatine Public Health – Muscatine
9. Visiting Nurses Association of Dubuque County – Dubuque
10. Visiting Nurses Services of Iowa – West Des Moines
11. Warren County Health Services – Indianola

**Second Planning Sites**
11. FAMILY, Inc. – Council Bluffs
12. Marion County Public Health – Knoxville
13. Webster County Public Health – Fort Dodge

Current Statistics

• Nationally, 72% of pediatricians use only observation of development to screen children; however, this method identifies only 30% of young children with developmental disabilities.

• Only 1 in 6 children with a developmental concern are identified before starting school.

• In Iowa, only 50% of children birth-12 months enrolled on Medicaid receive adequate developmental screening, and less than 30% for children 1-2 years.

Medical Consultant Services
Child Health Specialty Clinics is contracted with IDPH and works in partnership with 1st Five sites to assist practices in the implementation of screening tools

Autism Screening: MCHAT-A/F
Development: ASQ-3
Social Emotional Development: ASQ-SE 2

Thank You

Questions and Comments