Appendix 1

RECOMMENDATIONS TO IMPLEMENT THE IOWA MEDICAID GUIDELINES FOR IDENTIFICATION OF YOUNG CHILDREN WITH DEVELOPMENTAL OR BEHAVIORAL PROBLEMS

LEVEL 1—SURVEILLANCE FOR ALL CHILDREN

Guideline: Every EPSDT well-child exam for a child 0-3 years will include surveillance of cognitive, motor, language, adaptive, and social-emotional development. Each well-child exam must elicit and address parental concerns about the child's growth and development, and review:

- Developmental milestones
- Social, emotional, and behavioral health, including early signs of autism
- Family risk factors, including parental stress and depression

Recommended protocols/tools:

Option 1 (Please note that this option meets the current AAP recommendation for surveillance at each well-child visit.)

Iowa Well-Child Progress Notes

The Notes are specific to each standard well-child visit for young children, up to and including the 5-year visit. They use a checklist format that can be easily completed in the office by health practitioner and nurse teams. In addition to gathering information about such topics as nutrition, medications, immunizations, and lead screening, the checklists make it simple to gather information about developmental milestones and provide anticipatory guidance. They contain the Iowa Development and Behavior Checklist described below. The notes are free and may be downloaded at the link above. They can easily be added to an electronic medical record.

or

Iowa Development and Behavior Checklist

These forms are age specific for each standard well-child visit for children up to age 5. They provide a quick checklist of developmental milestones that serve as 'red flags." A "red flag" means that approximately 90% of children can perform the milestone at the given age. If a "red flag" is checked, it signals the need for referral for further testing. The forms can easily be completed in the office by primary health care provider and nurse teams. Administration and interpretation takes 3-5 minutes. These forms are free and may be downloaded at the link above. They can easily be added to whatever practice-specific record forms or electronic data collection procedures are already in place.

Option 2 Health care providers who do not choose to perform routine surveillance with an approved tool as described above, should complete comprehensive surveillance in all three domains during the well-child exam. Suggested strategies to complete this surveillance include the following:

Domain: Development--A parent-completed developmental questionnaire can be completed by a paraprofessional with the parent or by the parent alone and then reviewed by the primary health care provider. Recommended tools include:

1. PEDS—0-8 years (Glascoe, 1998) http://www.pedstest.com/test/peds_intro.html
2. Ages and Stages—2 months-5 years (Bricker and Squires, 1999) http://www.pbrookes.com/

Appendix 1

3. Child Development Inventories—3 months-6 years (Ireton, 1994) http://www.childdevrev.com/index.html

All children with a speech delay should be referred for audiological evaluation.

Domain: Social-emotional and behavior, including autism--A screening questionnaire may be chosen to be administered at intervals determined by the health practitioner. Please note that the AAP also recommends specific screening for autism at 18 months. Recommended tools include:

1. Ages and Stages - Social-Emotional_ (Squires, Bricker, & Twombly, 2002) http://www.pbrookes.com/
2. Brief Infant-Toddler Social and Emotional Assessment (Carter, 2000)
3. Infant Development Inventory/Child Development Review (Ireton, 1994) http://www.childdevrev.com/index.html

Domain: Parenting Stress and Family Risk Factors—The practitioner should review for post-partum depression during the first few newborn visits and should periodically check for parenting stress, parental depression, and other family risk factors. The following tool schedule is recommended:

1. At the first visit—Complete the Pediatric Intake Form available from Bright Futures.
2. At subsequent visits—Complete the Pediatric Intake Form at least annually.

[In addition to routine surveillance as described above, the AAP recommends periodic screening using a standardized tool administered at 9, 18, and 24-30 months.]

Appendix 1
***LEVEL 2*—SCREENING FOR CHILDREN AT RISK**

Guideline: Every child 0-3 years old who is identified as at risk in any domain during the well-child exam, as well as children the health care provider feels need additional developmental, social, emotional, or behavioral screening, must receive *Level 2* screening. *Level 2* screening may be completed in the health provider's office or the health provider may refer the child to another provider. If indicated, the health provider may also refer a child directly for *Level 3* assessment to initiate diagnosis and treatment of an identified problem.

Recommended protocols/tools: Select the tool that is within the domain requiring additional screening. If one of the standardized tools recommended below was already used during surveillance, proceed to diagnostic-specific tools for further evaluation of the child.

Developmental Screening--This screening is to be provided by a health professional (although paraprofessionals may assist with administration of parent report scales). The AAP now recommends developmental screening for all children at 9, 18 and 24-30 months. Recommended tools screening include:

Tool	Accuracy	Age Range	Administration	Language	Time	Cost	Comments
Ages and Stages (ASQ) – Second Edition, http://www.brookespublishing.com/	Sensitivity 70-90%; Specificity 76-91%	0-60 months .	Parent completed	English, Spanish, French, Korean	10-15 min. (less if parent completes alone)	$12.41-16.68*; $4.60 if parent completes alone**	Single, pass/fail scoring. Reading level varies per question from 4th to 12th grade
Brigance Screens (Brigance and Glascoe, 2002), http://www.curriculumassociates.com	Sensitivity & Specificity 70-82% across ages	0-90 months	Infant/Toddler Screen--parent report; Early Preschool Screen --done directly	English, Spanish	10 minutes	$11.68 for materials & administration time**	Scoring software is helpful. Cutoffs indicate potential giftedness and psychosocial risk.
Bayley Infant Neurodevelopmental Screener (BINS) (Aylward, 1995), http://www.psychcorp.com	Sensitivity & Specificity 75-86% across ages	3-24 months	Direct elicitation	English	10-15 minutes	$22.22-$26*; $10.45 for materials & administration**	Cut scores for low, moderate, or high risk in domains. Training helpful for checking reflexes and tone.
Denver II (Frankenburg et al., 1992) http://www.denverii.com/DenverII.html	Sensitivity 56-83%; Sensitivity 3-80%	0-72 months	Direct elicitation	English, Spanish	15-20 minutes	Complete kit $90; test forms $25 for 100 forms.	Uses risk groups. Classifies children as normal, suspect or delayed.

* = Values based on the Resource-Based Relative Value Scale (RBRVS) which is used to calculate Medicare rates. As reported in Deborah Dobrez, PhD, et al. "Estimating the Cost of Developmental and Behavioral Screening of Preschool Children in General Pediatric Practice" *Pediatrics* 108:4 (October 2001)
** = http:/www.dbpeds.org

Appendix 1

Social-Emotional and Behavioral Screening--Screening is to be provided by a health professional (although paraprofessionals may assist with administration of parent report scales). Recommended tools include:

Tool	Accuracy	Age Range	Administration	Language	Time	Cost	Comments
Ages and Stages – Social-Emotional (ASQ-SE) (Squires, Bricker & Twombly, 2002) http://www.brookespublishing.com/	Sensitivity 71-85%; Specificity 90-98%	6-60 months	Parent completed	English, Spanish, French	10-15 minutes (less if parent completes alone)	$4.60 for materials & administration (if parent completes alone)**	See ASQ
Brief Infant and Toddler Social and Emotional Assessment (BITSEA), (Carter, 2000) https://harcourtassessment.com	Fair to Good	12-36 months	Parent completed	English,	60 items; time unknown	Purchase kit for $99; test forms are 25 for $35.	Normed on diverse population.
Infant Development Inventory (IDI)/Child Development Review (CDR) (Ireton, 1994), http://www.childdevrev.com/index.html	IDI = Good; CDR = Unknown	IDI 0-18 mos CDR 18-60 mos.	Parent completed	English, Spanish	IDI—1 page, 2 sides; CDR 6 questions & a 25 item checklist	$65 starter kit and $11 for replacement materials for each one.	

** = http:/www.dbpeds.org

PDD/Autism Screening--Screening is to be provided by a health professional although paraprofessionals may assist with administration of parent report scales. The AAP now recommends screening for autism for all children at 18 months. Recommended tools include:

Tool	Accuracy	Age Range	Administration	Language	Time	Cost	Comments
M-CHAT (Robins et al., 2001) www.firstsigns.org	Sensitivity 87%; Specificity 99%	16-48 months	Parent Completed	English, Spanish, Turkish, Chinese, Japanese	5-10 minutes	Materials in public domain at no cost. Administration cost unknown	Risk categorization scoring (pass/fail)

Please Note: If an autism screen is positive or if there is a high degree of suspicion, refer for diagnostic assessment. Refer children with speech delay for audiological evaluation.

Parenting Stress/Family Risk Factors--Screening is to be provided by a health professional. Recommended tools include:

1. Edinburgh Postnatal Depression Scale - EPDS (Cox, Holden, & Sagovsky, 1987) http://www.dbpeds.org/articles/detail.cfm?TextID=485
   5 questions; in the public domain; can be downloaded free of charge.
2. Parenting Stress Index Short Form (Abidin, 1995). http://www.parinc.com/product.cfm?ProductID=127

Appendix 1
***Level 3*-- For Children with Identified Developmental or Social-Emotional Concerns**

Guideline: Children birth through three who do not pass standardized screening or who, in the opinion of the practitioner, require further evaluation will be referred for a systematic, comprehensive assessment that includes standardized measures of the child and family's functioning. Such an assessment is performed for the purposes of diagnosis and the creation of a treatment plan.

Recommended protocols/tools: Recommended tests in all domains are determined by the professionals who provide the testing as authorized by their scope of practice.

Appendix 1

For the AAP policy on identification see:
Identifying Infants and Young Children with Developmental Disorders in the Medical Home: An Algorithm for Developmental Surveillance and Screening (Pediatrics. 2006;118:405-420) recommends developmental surveillance at every visit.

Further information about the recommended tools may be found at:

Abidin, R. (1995) *Parenting Stress Index Manual* (3rd ed.), Odessa, FL: Psychological Assessment Resources.

Aylward, G.P. (1995) Bayley Infant Neurodevelopmental Screener. San Antonio, TX: The Psychological Corporation.

Bergman, D. (2004) Screening for Behavioral Developmental Problems: *Issues, Obstacles, and Opportunities for Change.* Portland, ME: National Academy for State Health Policy http://www.nashp.org/Files/Screening_Tools_Paper_publication_draft.PDF

Bricker, D., and Squires, J. (1999) *Ages and Stages Questionnaires: A Parent-Completed, Child Monitoring System,* Second Edition. Baltimore, MD: Paul H. Brookes Publishing Co.

Brigance, A. and Glascoe, F. (2002) *Infant and Toddler Screen.* North Billerica, MA: Curriculum Associates, Inc.

Cox, J., Holden, J., & Sagovsky, R. (1987), *British Journal of Psychiatry*, 150, 782-786.

Frankenburg, W.K., Dodds, J., Archer, P., Shapiro, H., Bresnick, B., (1992) The Denver II: A Major Revision and Restandardization of the Denver Developmental Screening Test. *Pediatrics,* 89:91-91-97.

Glascoe, F. (1998) *Collaborating with Parents: Using Parents' Evaluation of Developmental Status to Detect and Address Developmental and Behavioral Problems.* Nashville, TN: Ellsworth & Vandermeer Press.

Ireton, H. (1994). *Child Development Review.* Behavior Science Systems, Inc.

Jellinek M., Patel BP, Froehle MC, eds. 2002. *Bright Futures in Practice: Mental Health* – Volume II. Took Kit. Arlington, VA: National Center for Education in Maternal and Child Health.

Robins, D., Fein, D., Barton, M., & Green, J. (2001). The Modified Checklist for Autism in Toddlers: An Initial study investigating the early detection of autism and pervasive developmental disorders. *Journal of Autism and Developmental Disorders,* 31(2), 131-144.

Siegel, B. (2004) Pervasive Developmental Disorders Screening Test II (PDDST-II): Early Childhood Screener for Autism Spectrum Disorders. San Antonio: The Psychological Corporation.

Squires, J., Bricker, D. and Twombly, E. (2002) *Ages & Stages Questionnaires: Social-Emotional—A Parent-Completed, Child-Monitoring System for Social-Emotional Behaviors.* Baltimore, M.D.: Paul H. Brookes Publishing Co.