

Screening Overview

Purpose:

*“The purpose of screening is to reduce the severity and impact of developmental problems on children and families.” While **Screening** looks at the whole population to identify those at risk and to flag those who need further assessment, **Assessment** determines the existence of delay or disability, and generates decisions regarding intervention. **Surveillance** provides for periodic assessment of development in relation to the child as a whole.*

Considerations:

- ❖ **AAP Committee on Children with Disabilities** recommends the use of standardized screening tests at each well visit. (Note: In N.C., Medicaid children are eligible for well care only through the Health check program.)
- ❖ About **16%** of children have disabilities including speech and language delays, mental retardation, learning disabilities, and emotional/behavioral problems
- ❖ Only **30%** of children with disabilities are detected prior to school entrance
- ❖ Underdetection eliminates the possibility of **Early Intervention**
- ❖ No point in waiting to screen until the problem is observable
- ❖ Don't ignore screening results....there is no value to “wait and see”
- ❖ **Informal checklists** have no validated criteria for referral

Tool Options:

*Types of developmental screening tools include “Parent Questionnaire”, “History/ Interview”, “Direct Elicitation” and “Observation”. The following is an overview of seven screening tools available to physicians. **Note:** A complete list of tools, ordering information, and a discussion of the pitfalls of screening can be found at www.dbpeds.org.*

1. **Ages & Stages Questionnaire (ASQ)®**: A Parent-Completed, Child-Monitoring System
 - Original sample original work in 1981 (2008 children) to include medical Risk sample and environmental risk sample. Revised 1991, 1994
 - Validation Giselle, Bailey, Stanford-Binet, McCarthy, Bastille - overall agreement 83%.
 - Sensitivity 72%
 - Specificity 86%
 - Ages Tested 4-60 months
 - Format Each questionnaire has 30 questions *completed by the parent* Reviews 5 areas: Communication, gross motor, fine motor, problem solving, personal/social
 - Scoring Answers are “yes, sometimes, not yet. These are given a score, totaled and compared to cutoff points

2. Bayley Infant Neurodevelopmental Screener (BINS)

- Original Sample High-risk nursery follow-up clinical sample Non-clinical sample of 600
- Validation Bayley, Batelle, and Denver II
- Sensitivity Excellent
- Specificity Excellent
- Ages Tested 3, 6, 9, 12, 18, 24 months
- Format Requires non-distracting environment with parent present and Tester seated across from infant. Chair, table, and kit are needed. At greater than 16 months the infant is required to walk, run, and climb stairs
- Scoring Yields low, moderate, or high risk; high is to be referred for diagnostic testing; moderate may be referred, or at a minimum re-screened in 3 months

3. Parents' Evaluation of Developmental Status (PEDS)

<u>Original Sample</u>	Standardized on 2823 children across the US
<u>Validation</u>	Validated on 771 children
<u>Sensitivity</u>	74-80%
<u>Specificity</u>	74-80%
<u>Ages Tested</u>	0-8 years.
<u>Format</u>	Parent questionnaire, same 10 questions used at all ages.
<u>Scoring</u>	Responses are "no, yes, a little." "Yes" or "a little" is considered a positive response. Parents' concerns are categorized. Frequency and type of concern directs user to five evidence-based responses: refer, reassurance, promotes development, counsel, refer or do a secondary screen.

4. Infant Development Inventory (IDI)

<u>Original Sample & Validation</u>	Specific information is available on their website www.childdevrev.com
<u>Sensitivity</u>	Greater than 75% across studies in detecting children with difficulties
<u>Specificity</u>	70% in detecting normally developing children
<u>Ages Tested</u>	3-18 months
<u>Format</u>	Direct elicitation or interview using milestones-based questionnaire
<u>Scoring</u>	A single cutoff tied to 30% delay relative to chronological age.

5. Brigance

<u>Original Sample & Validation</u>	A national sample was used and was validated against a range of measures. For more specific information please refer to Diagnostique, Volume 24, n1-4, pages 41-52, 1998-1999 or their website http://www.curriculumassociates.com/
<u>Sensitivity</u>	70-82% across ages to giftedness and to developmental and academic problems
<u>Specificity</u>	70-82% across ages to giftedness and to developmental and academic problems
<u>Ages Tested</u>	0-90 months
<u>Format</u>	One form for each twelve month age range (total of 9 forms). Direct elicitation and observation. 0-2 year age range can be administered by interview. Domains include speech-language, motor, readiness and general knowledge for. Older ages include reading and math.

6. Pediatric Symptom Checklist (PSC)

<u>Original Sample & Validation</u>	"In a number of validity studies, PSC case classifications agreed with classifications of the Children's Behavior Checklist, Clinical Assessment Scale ratings of impairment, and the presence of psychiatric disorder in a variety of pediatric and subspecialty settings representing diverse socioeconomic backgrounds." Specific information on this citation and the studies, please see website psc.partners.org .
<u>Sensitivity</u>	80-95% (all studies but one showed this level of sensitivity)
<u>Specificity</u>	68-100% (scattered across studies)
<u>Ages Tested</u>	4-18 years
<u>Format</u>	35 short statements of problem behaviors to include externalizing and internalizing. Responses never = 0, sometimes = 1 and often = 2. Final scores to indicate need for referral and to identify attentional, internalizing and externalizing problems.

A Comparison of Available Screening Tools

	ASQ ®	BINS	PEDS	IDI	BRIGANCE	PSC
Type/ Ages	Parent Questionnaire 2 mos–5yrs.	Direct Elicitation 3 mos-24 mos	Parent Questionnaire 0-8 yrs.	Parent Questionnaire 3 mos-18 mos.	Direct Elicitation 21 mos -7.5 yrs.	Parent Questionnaire 6 -18 years
Staff Required	Para-professional	MA or Equivalent	Para-professional	Para-professional	Professional	Para-professional
Time (Score)	5 min.	10-15 min.	5 min.	10 min.	10-15 min.	7 min.
Cost (Per Kit)	\$199	\$195	\$30 (pad of 50)	\$ 11 (pad of 25)	\$249	Freely Download
Refills	OK to copy	Needed	\$30	\$11	Contact company	OK to copy
Language	English & Spanish French & Korean	English	English & Spanish Vietnamese Hmung, Somali	English & Spanish	English & Spanish	English
Reading Level	4 th -6 th Grade	NA	5 th Grade	Contact company	NA	Contact company

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