Committee Goals

- Develop and recommend a list of “approved” tools for use in the Maryland Healthy Kids program (EPSDT) for general developmental screening
  - Develop and recommend a smaller list of “recommended” tools for use in the Maryland Healthy Kids program for general developmental screening
Why?

- There are many tools available with variable psychometric characteristics and variable utility in a primary care setting
  - Some insurers in Maryland have expressed desire to have clear guidelines for providers regarding acceptable tools for use in developmental screening and billing 96110
  - Primary care providers have expressed need for guidance in terms of tool selection
  - Maryland children should be screened with the best available tools
Tonight’s Goals

- Develop a list of tool selection criteria
- Develop a list of general developmental screening tools to review
Selection Criteria

- AAP
- Meisels
- Glascoe
- First Signs, Inc.
- Other states (Minnesota)
Proposed Selection Criteria

- Availability
- Instrument Purpose
- Developmental Domains
- Age Span
- Psychometrics
  - Standardization
  - Reliability
  - Validity
  - Sensitivity
  - Specificity
Proposed Selection Criteria

- Utility
  - Administration and scoring time
  - Training required
  - Reading level (Parent-report tools)
  - Cost
  - Availability in other languages
Availability

- Criteria: Instrument must be currently published and nationally distributed
Instrument Purpose

- Criteria: The instrument must be designed specifically for developmental screening, rather than for diagnostic evaluation/assessment or some other purpose.
Developmental Domains

- Criteria: For general developmental screening, the instrument must include fine and gross motor, language, problem-solving/adaptive behavior, and personal-social domains.
Age Span

- Criteria: The instrument must target children within the birth – 5 year age range (instrument does not need to target this entire age span)
Standardization

- Criteria: The instrument should have been administered to a large, nationally representative sample to determine the instrument’s norms
Reliability

- Criteria: The instrument should have reliability scores of approximately .70 or above
  - The instrument will be evaluated on the actual reliability scores (ex. inter-rater, test-retest, internal reliability) and the methods used to obtain them
Reliability - Definitions

- Reliability: A statistical indicator of how consistently or how often identical test results can be obtained with the same screening instrument
  - Inter-rater reliability: Consistency of test results between two different examiners
  - Test-retest reliability: Consistency of test results obtained at two different time points
  - Internal reliability: Degree of similarity of an instrument’s items
Validity

- Criteria: The instrument should have validity scores of approximately .70 or above
  - Each instrument will be evaluated on the actual validity scores (ex. concurrent validity, predictive validity) and the methods used to obtain them
Validity - Definitions

- **Validity**: A statistical indicator of the accuracy of the inferences that can be drawn from a test
  - Concurrent validity: a comparison of screening results with outcomes derived from a reliable and valid diagnostic assessment
  - Predictive validity: a comparison of screening results with measures of children’s performance obtained several months later
Sensitivity and Specificity

- Criteria: The instrument should have sensitivity and specificity scores of .70 or above
Sensitivity and Specificity - Definitions

- **Sensitivity**: The proportion of children at risk for developmental delay who are correctly identified by the screening test.
- **Specificity**: The proportion of children not at risk for developmental delay who are correctly labeled not at risk, i.e. correctly excluded from further diagnostic assessment.
Utility

Criteria: Considers length of administration and scoring, amount of training required, readability, cost, and availability in other languages

- Length of administration and scoring: less than 30 minutes
- Amount of training required: minimal training for professionals or paraprofessionals
- Readability: no greater than 4th – 6th grade reading level for parent-report tools
- Cost: tool should require minimal expense in order to be used successfully and continuously
- Availability in other languages: instrument is available in languages other than English with appropriate psychometrics
Utility - Definition

- Utility: Usefulness of screening tool in varied practice settings with diverse patient populations
Tools to Review

- AAP
- Other states
  - Minnesota
  - Illinois
  - Utah
  - Iowa
- First Signs, Inc.
- Other?
General Developmental Screening Tools (AAP 2006)

- Ages and Stages Questionnaire (ASQ)
- Battelle Developmental Inventory Screening Tool (BDI-ST)
- Bayley Infant Neurodevelopmental Screen (BINS)
- Brigance Screens-II
- Child Development Inventory
- Child Development Review – Parent Questionnaire (CDR-PQ)
- Denver-II Developmental Screening Test
- Infant Development Inventory
- Parents’ Evaluation of Developmental Status (PEDS)
General Developmental Screening Tools Recommended/Approved - Minnesota

- Ages and Stages Questionnaire
- Brigance Screens
- Child Development Review – Parent Questionnaire
- Developmental Indicators for Assessment of Learning – 3rd Edition (DIAL-3)
- Early Screening Inventory – Revised (ESI-R)
- Early Screening Profiles
- FirstSTEP Preschool Screening Tool
- Infant Developmental Inventory
- Minneapolis Preschool Screening Instrument – Revised (MPSI-R)
- Parents’ Evaluation of Developmental Status
General Developmental Screening Tools Approved - Illinois

- Ages and Stages Questionnaire
- Battelle Developmental Inventory Screening Tool
- Bayley Infant Neurodevelopmental Screen
- Brigance Early Preschool Screen
- Chicago Early Developmental Screening Inventory
- Denver Developmental Screening Test/Denver II
- Developmental Profile-II
- Developmental Indicators for Assessment of Learning – 3rd Edition
- Early Screening Inventory
- Early Screening Profiles
- Minneapolis Preschool Screening Instrument
- Parents’ Evaluation of Developmental Status
- Project Memphis DST
- Revised Developmental Screening Inventory
- Revised Parent Development Questionnaire
General Developmental Screening Tools Recommended - Utah

- Ages and Stages Questionnaire
- Child Development Review
- Infant Developmental Inventory
- Parents’ Evaluation of Developmental Status
General Developmental Screening Tools Recommended/Approved - Iowa

- Ages and Stages Questionnaire
- Brigance Infants and Toddler Screen
- Bayley Infant Neurodevelopmental Screener
- Child Development Review
- Denver Developmental Screening Test
- Parents’ Evaluation of Developmental Status
General Developmental Screening Tools Recommended – First Signs

- Child Development Inventory
- Parents’ Evaluation of Developmental Status
Other?

- Revised Denver Prescreening Questionnaire
Next Steps

- List of general developmental screening tools will be reviewed based upon criteria selected
- Findings will be presented at next meeting, and final lists of “approved” and “recommended” tools will be developed
  - Criteria for future additions to the lists will be developed
References


References


