

# DEVELOPMENTAL SCREENING FOR INFANTS and YOUNG CHILDREN

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# Definition and Rationale

- A brief assessment designed to identify children who should be followed up with further assessment, and/or ongoing surveillance.
- Helps to identify who needs service and type of service.
- Aimed at prevention of more severe delays in the future, and providing support to parents.
- \$\$\$\$ benefits!!

# Who should be screened?

- NOT children who have already been diagnosed with a condition which affects development
- Defined groups - age-related
  - - biological risk factors
  - - enviromental risk factors
  - -parental concerns
- Universal screening

# Difference between Screening and Assessment

- Screening indicates that a child might have a problem needing further investigation; assessment identifies the problem more definitively, or may refute its existence.
- Screening is brief and wide-ranging, assessment takes longer, is often targeted to certain areas of development.
- Screening can be done by a single individual, assessment is often multidisciplinary.

# How to compare screening tools

- Reliability –test-re-test and interobserver.
- Validity – does the test tell us what we want to know? Concurrent and predictive validity.
- Sensitivity – test identifies a high proportion of those who are delayed- few false negatives
- Specificity – test does not falsely identify those who are not delayed.- few false positives.

# Selecting a Screening Tool

- Ease of administration
- Samples development in a range of domains
- Appropriate for repeated screenings
- Family participation
- Reliability and validity, sensitivity and specificity information available
- Do not rely on casual observation!!!!!!

# Ages and Stages Questionnaire-ASQ-3

- Nineteen questionnaires, age range from 4 months to 60 months- across 5 domains- Communication, Gross motor, Fine Motor, Problem Solving, Personal-Social.
- Can be administered by parents
- Test-retest and inter-rater reliability both .94
- Validity – 86% overall agreement with other standardized tests such as Bayley Scales.
- Sensitivity -.86 median across all age groups
- Specificity -.85 median across all age groups

# Nipissing

- Thirteen questionnaires, age range from 4 months to 6 years (only every 6 months after 12 months, annually after age 3).
- Can be administered by parents. Includes parent education handout on each sheet.
- Inter-rater reliability was .73 (one flag) and .93(two flags).
- Validity – compared favourably with results using Bayley.
- Sensitivity – 83% on 12 month test
- Specificity – 95% on 12 month test



# Denver II

- 120 items, age range from 2 weeks to 6 years.
- Administered by professionals, has parent report items.
- Test-retest reliability is 90%, and inter-rater reliability is 99%.
- Validity information not available
- Sensitivity and specificity information inadequate.

# Batelle Developmental Inventory Screening Test

- 96 items taken from Batelle Developmental Inventory, age range from birth to age 8 years.
- Can be administered by parents
- Validity and reliability data are both derived from the BDI.
- Sensitivity -.72 median across all age groups
- Specificity -.37 median across all age groups

# Brigance Screens

- Three screening Instruments, age range 0-35 months, 3-5 years, K&1.
- Only the first, age 0- 35 months, can be administered by parents
- Test-retest reliability .84-.99; inter-rater reliability .90-.99
- Validity – compares favourably with other standardized tests.
- Sensitivity -.84 median across all age groups
- Specificity -.82 median across all age groups

# Alberta Infant Motor Scales

- Gross motor screening assessment, birth to 18 months.
- Divided into four positions (subscales), pictures are used.
- Usually administered by physical or occupational therapists.
- Reliability – test-retest .99, inter-rater- 99
- Validity – compared favourably with results using Bayley, and with pediatrician observations.
- Sensitivity – 86.4% at 8 months
- Specificity – 93% at 8 months

# Other Motor Screening Tools

- Movement Assessment of Infants (MAI) 0-12 months (used in BCCH Neonatal Follow-Up Clinic)
- Test of Infant Motor Performance (TIMP) – 36 weeks GA to 4 months.
- Assessment of General Movements (Prechtl)
- Harris Infant - 2.5-12.5 months

# Follow-Up

- Repeated screenings/monitoring
- Full assessment and/or intervention where indicated.

# Developmental Assessment

- Comprehensive developmental assessment more thoroughly explores the child's strengths and weaknesses.
- It identifies the program of services required by the child.
- It helps with goal setting.
- It allows for monitoring of the child's progress, and the effectiveness of the program which has been implemented.

# Assessment Tools

- Assessment, Evaluation and Programming System for Young Children (AEPS) -birth to three years and three to six years.
- Developmental Assessment of Young Children(DAYC) – birth to six years.
- Peabody Developmental Motor Scales
- Bayley Scales of Infant Development