Early Intervention Program Accountability: Assessing Developmental Outcomes at the Individual Child and Program Levels

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Disclaimer
The findings and conclusions in this presentation are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention (CDC).

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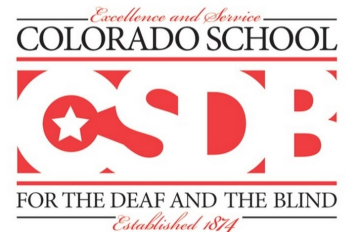
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Today's Topics

- Compare norm-referenced and criterion-referenced assessments

- Propose two Birth to 3 assessments

- Discuss family- and program-level benefits of these assessments

- Describe an opportunity to develop an accountability plan using these assessments in partnership with a CDC-supported center (ODDACE)

Goal 6 of 2013 Supplement to 2007 JCIH Position Statement

"All children who are D/HH should have their progress monitored every 6 months from birth to 36 months of age, through a protocol that includes the use of standardized, norm-referenced developmental evaluations…"

**Why are norm-referenced tests recommended?

Norm-Referenced Assessments

- During test development, normed-referenced assessments were given to hundreds/thousands of children
- Child's performance is compared to other children of the same age, on the same assessment

Norm-Referenced Assessments

- Provides standard scores and/or percentile ranks

- Objectively measures if child's skills are within the average range

- This objectivity is critical for program accountability

- Criterion for below average skills can be set liberally or conservatively (e.g., > 1 SD below the mean, below the 10th %ile, etc.)

Criterion-Referenced Assessments

- Criterion-referenced assessments provide age benchmarks for skills based on other tests or literature

- Typically a child's abilities are described in terms of an age range (e.g., at the 18 to 20 month level)

Issues with Criterion-Referenced Assessments

- There is a very wide range of typical language development in the Birth to 3 period

- It is not possible to determine whether a child is outside the average range if their age score is below their CA

Issues with Criterion-Referenced Assessments

- Children at very different levels can achieve the same age range – e.g.,
  - May have all skills up to and including unit "passed"
  - May have half of skills in all units up to and including unit passed
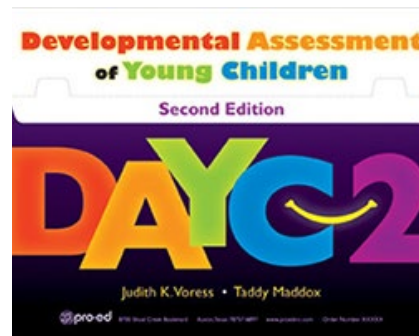 - May be anywhere between these two scenarios

Goal 6 of 2013 Supplement to 2007 JCIH Position Statement

"All children who are D/HH should have their progress monitored … for language,… social-emotional, cognitive, and fine and gross motor skills."
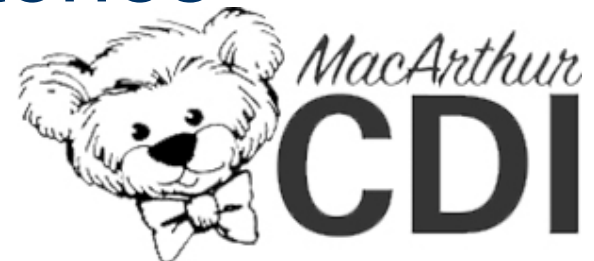
**What assessment tools meet both of the JCIH guidelines?

Assessments Birth to 3: Meeting JCIH Guidelines

- DAYC-2

- MacArthur-Bates Communicative Development Inventories

DAYC-2: Domains Assessed

- Cognitive
- Communication
  - Expressive language
  - Language comprehension
- Social Emotional
- Physical
  - Gross motor
  - Fine motor
- Adaptive Behavior
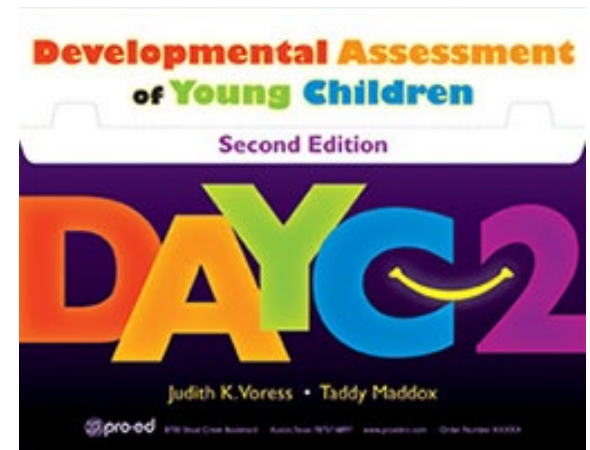
MacArthur-Bates Communicative Development Inventories

- Language assessment
- 3 levels – all measure expressive vocabulary
- Depending on level:
  - Vocabulary comprehension
  - Communicative gestures
  - Symbolic play
  - Early sentence formation
  - Cognitive-linguistics skills

Benefits of DAYC-2 and MacArthur-Bates CDI

- Meets JCIH guidelines
  - Standardized and norm-referenced
  - Measures skills across variety of domains
- Includes parent input in assessment process
- Identifies potential delays in a timely fashion
- Objectively monitors progress over time
- Provides data-driven approach to educational programming decisions

Partnering with ODDACE in Implementing the DAYC-2 and MacArthur

- ODDACE = Outcomes and Developmental Data Assistance Center for EHDI Programs
- CDC-supported center
- Supports programs in assessing outcomes using the DAYC-2 and MacArthur CDI:
  - Child level (progress monitoring)
  - Program level (program accountability and improvement)
- Motivation for the establishment of ODDACE

Outcomes and Developmental Data Assistance Center for EHDI (ODDACE)

Background

- Long interested in understanding language & developmental outcomes of children who are deaf or hard of hearing.
  - How are early identified children doing?
  - What do we mean by outcomes?
- Previous CDC-funded Research Projects

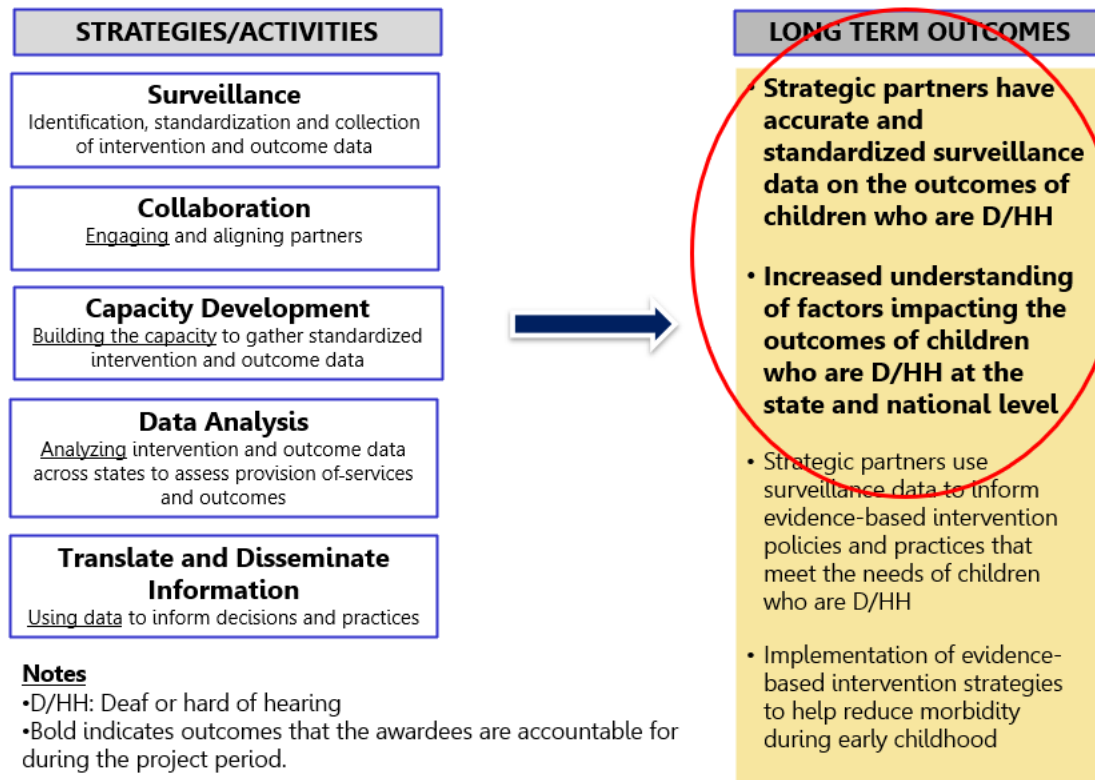## Outcomes and Developmental Data Assistance Center for EHDI (ODDACE) Programs

- Notice of Funding Opportunity released in Spring, 2020
  - NCBDDD Outcomes and Developmental Data Assistance Center for EHDI (ODDACE) Programs, CDC-RFA-DD20-2005
  - Four Focus Areas
    - Strengthen capacity
    - Assess relationship of intervention and outcomes
    - Promote best practices
    - Assist in implementation

Outcomes and Developmental Data Assistance Center for EHDI (ODDACE) Programs

ODDACE Logic Model

STRATEGIES/ACTIVITIES

Surveillance
Identification, standardization and collection of intervention and outcome data

Collaboration
Engaging and aligning partners

Capacity Development
Building the capacity to gather standardized intervention and outcome data

Data Analysis
Analyzing intervention and outcome data across states to assess provision of services and outcomes

Translate and Disseminate Information
Using data to inform decisions and practices

Notes
• D/HH: Deaf or hard of hearing
• Bold indicates outcomes that the awardees are accountable for during the project period.

LONG TERM OUTCOMES

• **Strategic partners have accurate and standardized surveillance data on the outcomes of children who are D/HH**

• **Increased understanding of factors impacting the outcomes of children who are D/HH at the state and national level**

• Strategic partners use surveillance data to inform evidence-based intervention policies and practices that meet the needs of children who are D/HH

• Implementation of evidence-based intervention strategies to help reduce morbidity during early childhood

Services Provided by ODDACE

- Assessments scored
- Written report of each child's results provided
- Graphic summary of developmental scores
- Program database created of demographic information and assessment results
- Annual accountability report characterizing program's performance and comparing this to the national averages
- Opportunity to pilot LENA for a year at no cost

Benefits for Programs

- Provides program-specific accountability data on an annual basis
- Allows programs to compare the results of their children to national averages
- Allows programs to examine outcomes across different subgroups of children
- Identifies program strengths and challenges (informing professional personnel preparation needs)

Commitment from Participating Programs

- Complete DAYC-2 and MacArthur
    - *Potential to do just one assessment on request*
- Fill out a demographic form
- Send hearing test results or a signed release of audiology information form
- Send completed assessments and forms to ODDACE

Flexibility: Program-Level Decisions

Intervention program determines:

- Age level (within the Birth to 5-year range)
- Frequency of the assessment
- Timing of when assessment is completed
- Electronic or paper forms
- How assessments are sent to ODDACE

Contribution to the Field

- In addition to benefits to individual programs…

- Contributing to a national database will:

  - Improve our understanding of language strengths and challenges of children who are deaf or hard of hearing

  - Identify factors that are predictive of more successful language outcomes