

# 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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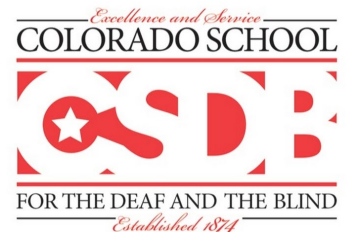
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# Today's Topics

- 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 10<sup>th</sup> %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

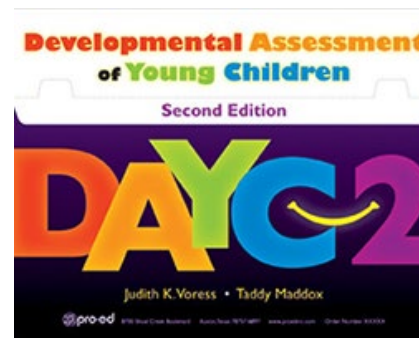
# Goal 6 of 2013 Supplement to 2007 JCIH Position Statement

“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

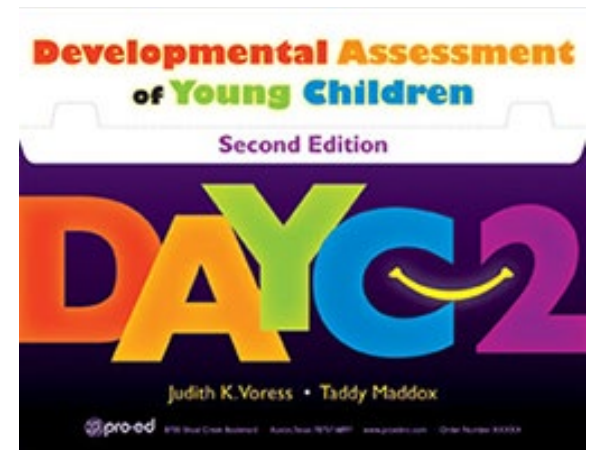


- MacArthur-Bates Communicative Development Inventories



# 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



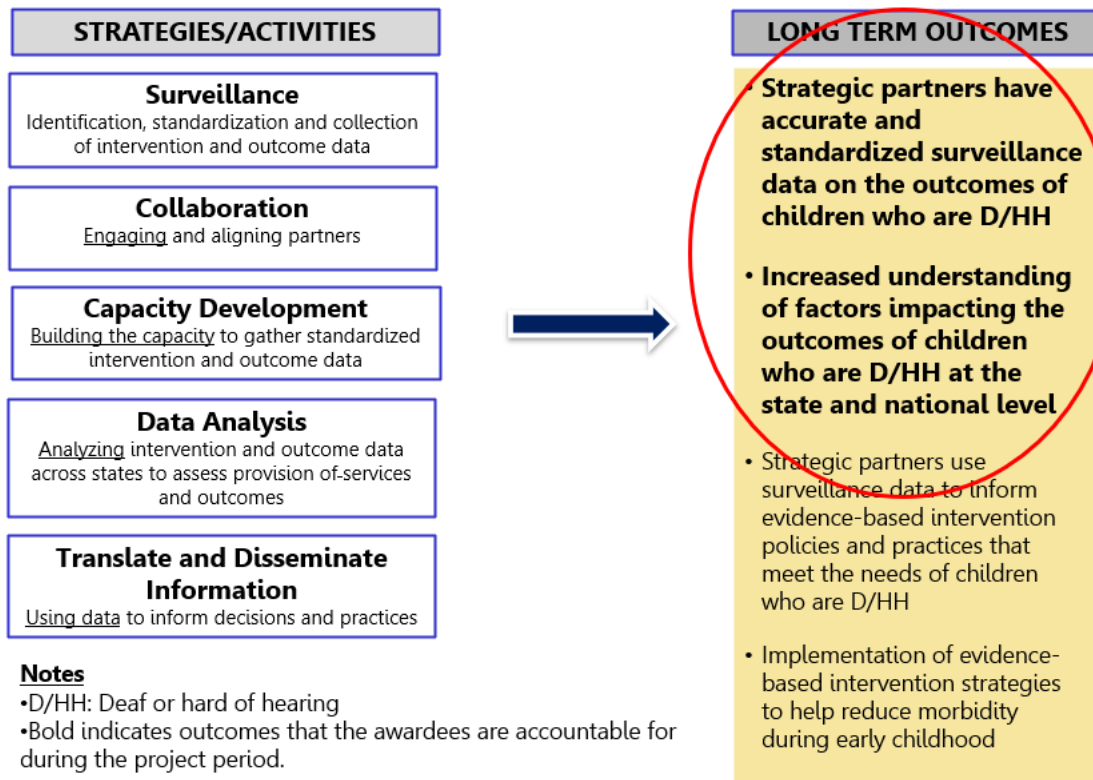
## Outcomes and Developmental Data Assistance Center for EHDI (ODDACE) Programs

- 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



# 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