

## Validity of the Data From the Child Outcomes Summary Process: Findings From the ENHANCE Project

Lauren Barton, Cornelia Taylor, Donna Spiker, and Kathleen Hebbeler

The purpose of the ENHANCE project was to examine the validity of ratings produced through the Child Outcomes Summary (COS) process. In the COS process, a team summarizes information related to a child's progress in each of three outcome areas (see sidebar) on a 7-point scale. The process was used by 43 Part C and 42 Part B preschool states or territories to collect data on child outcomes during 2013–14. The ENHANCE research answered the question of whether the COS process produces valid ratings for measuring the child outcomes achieved through early intervention (EI) and early childhood special education (ECSE) programs.



### Key Findings

On the basis of evidence collected across four studies, we concluded that when implemented as intended, the COS process produces ratings that are valid for accountability and program improvement purposes. The following are key findings supporting this conclusion:

1. Providers understood the types of behaviors included in each of the three child outcomes.
2. Providers could accurately apply their knowledge of child development and the COS rating criteria.
3. The COS process could be incorporated into existing practice without negative consequences.
4. With a few exceptions, children who were rated higher on the COS also scored higher on assessment tools.
5. COS ratings were related to the child's functional abilities and type of disability.
6. Children who entered EI and ECSE with higher COS ratings tended to exit the programs with higher COS ratings.
7. Most states had stable percentages of children making greater than expected growth or exiting at age expectations over time as measured by the COS.

Another key finding was that some of the programs studied did not always implement the COS process as intended.

Details on each of these findings are presented later in this brief.

### What is the Child Outcomes Summary (COS) Process?

- The COS provides a structure and rubric for local teams to synthesize multiple sources of information about a child's functioning across settings and situations for each of three outcomes:
  - Children have positive social relationships.
  - Children acquire and use knowledge and skills.
  - Children take appropriate action to meet their needs.
- Teams apply criteria to determine how a child's functioning compares with age-expected functioning using a 7-point metric.
- Ratings can be compared across time points to provide information about a child's progress.

Find more information about the COS process at <http://www.ectacenter.org/eco/pages/outcomes.asp>

## Implications for States

- The results of this research project support the validity of ratings determined through the COS process. States can use these results to support their selection of the COS process as their child outcomes data collection method.
- Multiple statewide and program-level analyses were defined and used to examine the validity of the COS ratings in this project. These analyses could be replicated by individual states. Analysis of statewide data is a relatively inexpensive way to assess data quality and identify areas in need of follow-up.
- The project team used a survey of providers and reviewed videos of team meetings to measure the degree to which the COS process was being implemented as intended. These techniques revealed some strengths and implementation issues. State agencies may want to adapt the procedures used in this study to measure the quality of implementation of the COS process in their state.

## The Four Studies

### 1. Provider Survey

- Conducted an online survey in 2012;  $N = 856$  (EI providers  $n = 472$ ; ECSE providers  $n = 302$ ; providers serving both EI and ECSE  $n = 82$ ).
- Examined providers' perceptions of the COS content, the process, available training and support, impact of the COS on practice, knowledge about the COS, information COS decisions were based on, experiences implementing the COS process, and any difficulties with team decisions.
- A copy of the survey is available at [http://ectacenter.org/eco/pages/quality\\_assurance.asp#Surveys](http://ectacenter.org/eco/pages/quality_assurance.asp#Surveys)

### 2. Child Assessments Study

- Longitudinal study
- Child assessment data were collected at entry and exit from EI or ECSE programs.
- Children from seven states: at entry  $N = 153$ ; at exit  $N = 70$ .
- Examined relationships between COS ratings and domain scores on two assessments: Battelle Developmental Inventory (BDI-2) and Vineland Scales of Adaptive Behavior (Vineland-II).

### 3. Team Decision-Making Study

- Teams made videos of themselves meeting to decide the COS rating.
- Videos of 113 teams (EI  $n = 63$ ; ECSE  $n = 50$ ).
- Examined the fidelity of COS implementation, structural and process features of implementation, and accuracy of ratings.
- Coded videos for team member knowledge and application of content of the three child outcomes, rating criteria, developmental sequences, and age expectations during the COS process.

### 4. Extant State Data Study

- Analyzed extant statewide data from 9 state EI and 9 state ECSE programs ( $N = 18$ ) as well as existing national data.
- Examined whether patterns in statewide data were consistent with those expected from valid data.

## Details on the Key Findings

### 1. Providers understood the types of behaviors included in each of the three child outcomes.

- Most providers (85%) indicated that they understood how children's skills and behaviors map onto the three child outcomes.
- Nearly all teams (94%) were able to assign skills to the three outcome areas without major errors.
- Most providers (83%) reported being comfortable discussing the child's functioning in the three outcome areas with others who knew the child.



### 2. Providers could accurately apply their knowledge of child development and the COS rating criteria.

- Nearly all providers indicated they had a strong understanding of key COS concepts. They understood
  - Age-expected functioning (89%)
  - The degree to which different skills and behaviors are age appropriate (97%)
  - How to identify how the child uses functional skills (90%)
  - The definition of the 7 COS rating points (94%)
  - How to apply the criteria for each of the 7 rating points (79%).
- Despite limited training among providers, most teams demonstrated effective implementation of key COS skills.
  - Ratings were within 1 point of an expert's rating for each of the three outcomes (89% positive social relationships, 94% knowledge and skills, and 94% action to meet needs).
  - 91% of those who age-anchored skills during team discussion had no major errors in age-anchoring.
- Most teams applied the rating criteria correctly for each of the three outcomes (77% positive social relationships, 88% knowledge and skills, and 86% action to meet needs). Most providers (88%) reported that it was not at all true that ratings were selected to make the program look good. Selecting ratings to make the program look good was observed in only 5% of videos (one outcome on one video).

### 3. The COS process could be incorporated into existing practice without negative consequences.

- Most providers indicated that the COS process overall did not have a negative or very negative impact on their work with children and families (93%). It also was "not at all true" that it
  - Took time away from other important activities (88%)
  - Negatively impacted the assessment process (75%)
  - Negatively impacted relationships with families (87%)
  - Led to poorer quality IFSP or IEP outcomes (90%).

### 4. With a few exceptions, children who were rated higher on the COS also scored higher on assessment tools.

- Mean assessment tool scores increased in a stairstep pattern between levels of COS ratings (grouped as 1–3, 4–5, 6–7).
- Correlations between COS ratings and assessment tool domain scores varied across tools.
  - 80% of the domain scores from the BDI-2 showed a moderate to strong correlation with the COS ratings.
  - 25% of domain scores from the Vineland-II showed a moderate to strong correlation with the COS ratings.

### 5. COS ratings were related to the child's functional abilities and type of disability.

- Correlations were moderate to strong between the COS ratings and the total score from the ABILITIES Index, a commonly used measure of functional abilities. Children with higher COS ratings had ABILITIES Index scores showing higher functional abilities.
- Children with speech-language impairments were rated statistically significantly higher on the COS than children with other disabilities for each of the three child outcomes.
- Children with autism were rated statistically significantly lower on the COS than children with other disabilities in positive social relationships.

## 6. Children who entered EI and ECSE programs with higher COS ratings tended to exit the programs with higher COS ratings.

- Entry ratings were moderately correlated with exit ratings for both EI and ECSE programs (Ranges: EI .36–.54, ECSE .50–.66).
- Nearly all entry COS ratings were lower than or the same level as exit COS ratings. Rating increases were within a reasonable range. Nearly all entry COS ratings were within 4 points of exit ratings.

## 7. Most states had stable percentages of children making greater than expected growth or exiting at age expectations over time as measured by the COS.

Four-year trends in the percentages of children showing greater than expected growth (Summary Statement 1) or exiting at age expectations (Summary Statement 2) were examined for states using the COS process and meeting the criteria for minimal data quality. Most states showed either stability or incremental growth over time for each of the three outcomes for both EI and ECSE programs.

### Additional Finding: There were some problems with COS implementation.

- The amount of training providers implementing the COS process had received on the process varied considerably. Most providers (90%) had received some training. Of those with any training, 72% received 4 hours or less; this was far less than the recommended amount of 8–12 hours of training.
- A number of team discussions were very brief, an average of 10 minutes, with over half being 9 minutes or less. Although no specific guidance is available about the length of the conversation, dialogue between team members about the child's functioning and ratings was expected to take longer than what was observed.
- Some teams did not discuss the child's functioning in the outcome area in sufficient breadth or depth. Most team discussions were of sufficient depth (69%) or breadth (65%) for at least one outcome.
- Providers tended to rate their colleagues' understanding of the outcomes and key COS concepts somewhat lower than their own understanding (50–75% rated almost all their colleagues as having a strong understanding across various COS-related topics).

## Considerations and Limitations

- Data for these four studies were collected in 2010 through 2013. These data were collected fairly early in the implementation of the COS process.
- Data were drawn from a limited number of districts and states and were not representative of all places implementing the COS process.
- The programs participating in the study had variable implementation of the COS process. Better implementation, however, most likely would have produced even stronger evidence of validity of the data from the COS process.

For additional information about the ENHANCE study, see <http://ectacenter.org/eco/pages/enhance.asp>. To arrange for TA support with using ENHANCE project tools or sharing the results in your state, contact [Katrina.Martin@sri.com](mailto:Katrina.Martin@sri.com).

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