

## Data Calculation—Indicator B7: Preschool Outcomes



October 2024

### Indicator and Measurement

Percent of preschool children aged 3 through 5 with IEPs who demonstrate improved:

1. Positive social-emotional skills (including social relationships);
2. Acquisition and use of knowledge and skills (including early language/communication and early literacy); and
3. Use of appropriate behaviors to meet their needs.

Progress categories for A, B and C:

- a. Number of preschool children who did not improve functioning
- b. Number of preschool children who improved functioning but not sufficient to move nearer to functioning comparable to same-aged peers
- c. Number of preschool children who improved functioning to a level nearer to same-aged peers but did not reach it
- d. Number of preschool children who improved functioning to reach a level comparable to same-aged peers
- e. Number of preschool children who maintained functioning at a level comparable to same-aged peers

Summary statements for each of the three outcomes:

**Summary Statement 1:** Of those preschool children who entered early childhood special education below age expectations in each outcome, the percent who substantially increased their rate of growth by the time they turned 6 years of age or exited the program.

**Measurement for Summary Statement 1:** Percent =  $[(\# \text{ of preschool children reported in Progress Category (c) plus } \# \text{ of preschool children reported in Progress Category (d)) divided by } (\# \text{ of preschool children reported in Progress Category (a) plus } \# \text{ of preschool children reported in Progress Category (b) plus } \# \text{ of preschool children reported in Progress Category (c) plus } \# \text{ of preschool children reported in Progress Category (d))]$  multiplied by 100.

**Summary Statement 2:** The percent of preschool children who were functioning within age expectations in each outcome by the time they turned 6 years of age or exited the program.

**Measurement for Summary Statement 2:** Percent =  $[(\# \text{ of preschool children reported in Progress Category (d) plus } \# \text{ of preschool children reported in Progress Category (e)) divided by the (total } \# \text{ of preschool children reported in Progress Categories (a) + (b) + (c) + (d) + (e))]$  multiplied by 100.

### General Considerations

- Calculations for Indicator B7 involve five progress categories and two summary statements for each of the three child outcomes (Outcome A, Outcome B, Outcome C).
- The two summary statements are calculated for each of the three child outcomes using the progress category numbers. The data are aggregated in this way so that states have an overall

view (i.e., summary) of the progress made by all children in their state who received early childhood special education.

- States select the approach they will use to measure child outcomes, which in turn determines the method for comparing exit data with entry data to assign children to one of the five progress categories.

## Numerator and Denominator Guidance for Summary Statement 1

- The numerator for Summary Statement 1 includes only Progress Categories (c) and (d)
  - In sum, children in the numerator substantially increased their rate of growth by the time they turned 6 years of age or exited the program.
  - NOT included: children who did NOT increase their rate of growth (reported in Progress Categories (a), (b), and (e)).
- The denominator for Summary Statement 1 includes only Progress Categories (a), (b), (c), and (d)
  - In sum, children in the denominator entered early childhood special education below age expectations, demonstrating the need for growth.
  - NOT included in the denominator are children who entered early childhood special education at or above age expectations, demonstrating no need for growth. These are children reported in Progress Category (e).

### *Summary Statement 1*

The **numerator** includes:

- Number of preschool children reported in Progress Categories (c) + (d)

The **denominator** includes:

- Number of preschool children reported in Progress Categories (a) + (b) + (c) + (d)

## Numerator and Denominator Guidance for Summary Statement 2

- Children in the numerator for Summary Statement 2 are those reported in Progress Categories (d) and (e)
  - In sum, the children in the numerator were functioning within age expectations by the time they turned 6 years of age or exited the program.
  - Not included: children who were NOT functioning within age expectations by the time they turned 6 years of age or exited the program (reported in Progress Categories (a), (b), and (c)).
- Generally, the denominator for Summary Statement 2 should be equal to the total number of preschool children who exited, minus those who exited before six months, during that FFY.
  - A state should provide “additional information” in the indicator if the total number assessed is not equal to the total who exited as described here.
- The denominator should be the same for Summary Statement 2 for all three outcomes (A, B, C) because all children should be assessed in all three outcome areas.
  - A state should provide “additional information” in the indicator if the denominators differ across the three outcomes.

## Summary Statement 2

The **numerator** includes:

- Number of preschool children reported in Progress Categories (d) + (e)

The **denominator** includes:

- All children reported (the number of preschool children reported in Progress Categories (a) + (b) + (c) + (d) + (e))

## Data Source

- State database
- Sampling of preschool children with IEPs is allowed. When sampling is used, the state must submit a description of the sampling methodology outlining how the design will yield valid and reliable estimates.

## Data Points Needed for Calculation

- Outcomes data collected (e.g., through assessments or team-based consensus ratings) near the time of a child's (1) entry to and (2) exit from the early childhood special education program
- Dates of program entry (as defined by the state) and exit to determine length of time in the early childhood special education program

## Example Calculations

### Summary Statement 1

270 exiting preschool children, with at least six months of service, whose functioning moved nearer to, but did not reach, the level of same-aged peers during the time they were in early childhood special education [Progress Category (c)] +

300 exiting preschool children, with at least six months of service, who improved functioning to reach a level comparable to same-aged peers during the time they were in early childhood special education [Progress Category (d)]

40 exiting preschool children, with at least six months of service, who did not improve functioning during the time they were in early childhood special education [Progress Category (a)] +

150 exiting preschool children, with at least six months of service, who improved functioning, but not sufficient to move nearer to functioning comparable to same-aged peers, during the time they were in early childhood special education [Progress Category (b)] +

270 exiting preschool children, with at least six months of service, whose functioning moved nearer to, but did not reach, the level of same-aged peers during the time they were in early childhood special education [Progress Category (c)] +

300 exiting preschool children, with at least six months of service, who improved functioning to reach a level comparable to same-aged peers during the time they were in early childhood special education [Progress Category (d)]

OR

$(270 + 300) / (40 + 150 + 270 + 300) = 0.75 \times 100 = 75\%$  of children showed significant growth in a particular outcome

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## Summary Statement 2

300 exiting preschool children, with at least six months of service, who improved functioning to reach a level comparable to same-aged peers during the time they were in early childhood special education [Progress Category (d)] +

240 exiting preschool children, with at least six months of service, who maintained functioning at a level comparable to same-aged peers during the time they were in early childhood special education [Progress Category (e)]

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1,000 children across all progress categories

OR

$(300 + 240) / 1,000 = 0.54 \times 100 = 54\%$  of children improved or maintained functioning at a level comparable to same-aged peers

## Resources

- [ECTA Center: Child Outcomes Calculators and Graphing Templates](#): See this link for calculators to determine progress categories and templates for generating graphs.
- [Outcomes FAQs](#): This resource summarizes many questions frequently asked about the child and family outcomes measurement process and provides brief answers.

This data calculation document is one in a series of documents available at: <https://dasycenter.org/spp-apr-checklists-and-tips/>

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## About Us

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