



## Checking Outcome Data for Quality: Looking for Patterns

Predicted Pattern	Rationale	Analyses
<ul style="list-style-type: none"><li>1. Children will differ from one another in reasonable ways.<ul style="list-style-type: none"><li>1a. At entry and exit there will be a few children with very high or very low numbers relative to same-age peers.</li><li>1b. Few children will have entry numbers at or above age expectations on all three outcomes. Most children will be below age expectations on at least one outcome.</li><li>1c. Distributions at entry will be centered on a lower number than exit.</li><li>1d. Children will differ from one another in their OSEP progress categories in reasonable ways.</li></ul></li></ul>	<p>Available evidence suggests EI and ECSE serve children with a variety of functional levels, although generally serving more mildly than severely impaired children. Children with significant challenges tend to have impaired functioning in two or three areas whereas children with milder delays have a mild delay in one or two areas and may show functioning typical of their chronological age in other areas.</p>	<ul style="list-style-type: none"><li>1. Distribution of age –referenced numbers at entry and exit</li><li>2. Distribution of progress categories.</li><li>3. Percentage of children who scored at or above age expectations on all three outcomes at entry.</li></ul>
<ul style="list-style-type: none"><li>2. Functioning in one outcome area will be related to functioning in the other outcome areas.<ul style="list-style-type: none"><li>2a. Functioning at entry in one outcome is related to functioning at entry in the other outcomes</li><li>2b. Functioning at exit in one outcome is related to functioning at exit in the other outcomes</li><li>2c. Progress between entry and exit in one outcome is related to progress in the other outcomes.</li></ul></li></ul>	<p>Most children gain skills over their time in Early Childhood programs. Development tends to progress in predictable stages across outcomes. As abilities in one outcome increase, abilities in the other outcomes tend to increase. Progress in functioning in the three outcomes proceeds together.</p>	<p>Look at the relationship of entry, exit, and progress category numbers across the 3 outcomes.</p> <ul style="list-style-type: none"><li>1. Crosstabulations (Outcome 1 by Outcome 2, etc), best for <b>COS ratings and progress categories</b>. We would expect most cases to be on the diagonal and the others to be clustered on either side of the diagonal.</li><li>2. Correlation coefficients (Correlation between Outcome 1 and Outcome 2, etc), best for <b>scores</b>. We would expect correlations to be moderate to strong (<math>r = .6 - .8</math>)</li></ul>



Predicted Pattern	Rationale	Analyses
<p>3. Functioning at entry in one outcome area will be related to functioning at exit in the same outcome area (e.g. comparing Outcome 1 entry and Outcome 1 exit).</p> <p>3a. Most children maintain or improve their status relative to same age peers during their participation in EI and ECSE.</p> <p>3b. Large changes in status relative to same age peers between entry and exit from the program are possible but rare.</p>	<p>Most children served in EI and ECSE will maintain or improve their rate of growth in the three child outcomes areas over time given participation in intervention activities that promote skill development.</p>	<ol style="list-style-type: none"><li>1. Crosstabs between entry and exit ratings for each outcome, best for <b>COS ratings</b>. We would expect most cases to be on the diagonal or small positive changes.</li><li>2. Exit minus Entry numbers. For <b>COS ratings</b> we would expect most cases to increase by no more than 3 points. For <b>standard scores</b> we would expect most cases to increase by no more than 14 points.</li></ol>
<p>4. States and programs should have similar results across years.</p> <p>4a. Distributions of OSEP progress categories and OSEP summary statements should be similar from year to year (assuming the same kinds of children are being served).</p> <p>4b. In states that have undertaken effective program improvement activities, summary statements will increase across years.</p>	<p>If child, family and program factors do not change significantly, we would expect to see similar levels of child progress between entry and exit from year to year.</p>	<ol style="list-style-type: none"><li>1. Frequency distributions of OSEP progress Categories across time (2007, 2008, 2009 etc.).</li><li>2. Frequency distribution of OSEP summary statements across time.</li></ol>



Predicted Pattern	Rationale	Analyses
<p>5. Similar programs should have similar results</p> <p>5a. If programs are serving similar kinds of children, distributions of age-referenced entry scores should be similar</p> <p>5b. If programs are serving similar kinds of children and are similarly effective, distributions of age-referenced exit scores should be similar</p> <p>5b. If programs are equally effective, progress category and summary statement distributions should be similar.</p>	Local areas serving similar kinds of children, should have similar distributions of child ability at entry to the program. If programs are equally effective, scores at exit and the OSEP percentages should be similar	<ol style="list-style-type: none"><li>1. Average age-referenced entry scores by program, best for <b>scores</b></li><li>2. Median age-referenced entry ratings by program, best for <b>COS ratings</b></li><li>3. Progress category distributions by program</li><li>4. Summary statement 1 and 2 by program</li></ol> <p>NOTE: Analysis should only be done on programs reporting numbers on 30 or more children.</p>
<p>6. Numbers should be related to the nature of the child's disability.</p> <p>6a. Groups of children with more severe disabilities should have lower entry numbers than groups of children with less severe disabilities.</p> <p>6b. Groups of children with more severe disabilities will have distributions with a larger percent in categories a – c; groups of children with less severe disabilities will have distributions with a larger percent in categories d and e.</p> <p>6c. Groups of children with more severe disabilities will have lower percentages on summary statement 1 and 2 than groups of children with less severe disabilities</p>	Children with less severe disabilities have more functional skills across the three outcomes than children with more severe disabilities. These true differences in functional abilities should be reflected in children ratings/scores on the three OSEP outcome areas.	<ol style="list-style-type: none"><li>1. Average age-referenced entry scores by disability type, best for <b>scores</b></li><li>2. Median entry ratings by disability type, best for <b>COS ratings</b></li><li>2. Progress category distribution by disability type</li><li>3. Summary statement 1 and 2 percentages by disability type</li></ol>

Note: If there is a reason to believe a predicted pattern would not hold in your state, then you would not expect to see that pattern in your data.

Note: This version of the pattern table was revised July 2012. Work is currently underway to expand the document including information about how to use the table and example visual displays of patterns.