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SSIP Family Outcomes Broad Data Analysis Template

The ECTA Center

The DaSy Center

2014



As part of the State Systemic Improvement Plan (SSIP), a broad data analysis of family outcomes data may be a useful first step in understanding your state’s performance. Before diving into the broad data analysis it will be important to look at the quality of the family outcomes data in your state. [[1]](#footnote-1)

Data quality issues will be an important consideration as you move into the interpretation of your data analysis and will likely determine what questions you can reliably ask of your data. For more information about examining the quality of your state data go to the data quality section of the ECTA website: <http://ectacenter.org/eco/pages/quality_assurance.asp>.

The purpose of broad data analysis is to look at how programs in the state are helping families relative to national data, across years, within the state and by comparisons across programs within the state. This template has been developed to assist states in conducting an initial analysis of their family outcomes data. This document uses APR family indicator data to illustrate analyses, but states may also want to perform similar analyses on other family-level outcomes or results data beyond those reported in the APR.

**Step 1: Comparison to National Data**

The first step of the broad family outcomes data analysis is to compare state and national data. See Figure 1 for a comparison between state and national data in the percent of families who report that early intervention helped them to (A) know their rights, (B) effectively communicate their child’s needs, and (C) help their child develop and learn. Looking at Figure 1, you can see that all three family sub-indicators for this state are lower than the national percentages. The largest difference between the state and national percentages is in sub-indicator 4C: Effectively communicate their child’s needs. The state percentage is nine points below the national data for all families reporting whether early intervention helped them effectively communicate children’s needs.

Some caution is advised when interpreting state-level family data in comparison to national data; the national data represent varying approaches and scoring methods which can have big impacts on state percentages. For some states and approaches, it may be best to compare to states that use a similar data collection or analysis technique. For other states (e.g. states that developed their own survey), comparing to national data may be the best comparison.

This state uses the NCSEAM survey to collect their family indicator data and uses the recommended Rasch scoring method. Figure 2 illustrates a comparison of this state’s data only with other states using the same survey (NCSEAM) and cut points (Rasch analysis). This state is more comparable to the subgroup of NCSEAM Rasch states in their family sub-indicator percentages. When compared to the national percentages seen in Figure 1, the state’s percentage for sub-indicator 4B was lower compared to all states (nine points below), while this same state scored higher than the subgroup of states sharing the same survey approach. For this state, the only sub-indicator which was below the NCSEAM Rasch average state percentages was 4C: Early intervention has helped the family help their child develop and learn.

Conclusion: Compared to the national data, families in this state are less likely to report that the program helped them effectively communicate their child’s needs (Sub-indicator 4B). However, when compared to data from other NCSEAM Rasch states, families in this state were actually better than average. Families in this state were less likely to report that the early intervention program helped them help their child develop and learn. The reason for these differences cannot be determined from this limited comparison to national data. Further analysis is needed to identify the root cause.

To create graphs comparing your state data to the national data or states who use similar approaches click on the following link: <http://ectacenter.org/eco/pages/usingdata.asp#ResourcesandTools>. The instruction page in the excel calculator has additional guidance about which comparison(s) to use.

Figure 1

Figure 2

**Step 2: Analysis of Trends in State Performance**

The next step in the broad data analysis is to look at trends in the family outcomes across time within the state. In this state example, the trends look relatively stable across the years, but the trend for sub-indicator 4C: Help their child develop and learn declined from about 90% in 2008-09 to 85% in 2011-12.

Conclusion: This analysis does not provide enough evidence for us to make inferences or interpretations about the downward trend in the percent of families who report that the program helped them help their child develop and learn, but it does provide a direction in which to do more in-depth/root cause analysis.

To create these graphs for your state, download the Excel longitudinal graphing template here: http://ectacenter.org/eco/pages/summary.asp#longitudinalsummarygraph

Figure 3

**Step 3: Comparison across Local Programs**

The final step in the broad data analysis compares your local programs to each other and to the state. The purpose of this analysis is to identify programs that are more or less helpful to families. In general, program improvement activities focus on low- performing programs. However, when you see programs that are performing much higher than other programs in the state, you will want to confirm that the programs do not have data quality issues (e.g. low or disproportionate response rates). If they do not have data quality issues, you may also want to look at program practices they are doing especially well that are contributing to their higher percentages.

An important consideration in analyses comparing local programs is the number of families included in the family outcomes data for each program. If there are fewer than 35 families included per program, you may have large variation from year to year in the outcome percentages (five percentage points or more). This means that a program’s status relative to other programs may not be stable from year to year, nor be a reliable way to understand the program’s overall performance (e.g. they could be low one year and average the next without any changes to their programs or services). When making comparisons among local data, one option to make the interpretation more reliable is to include only programs that have 35 or more families. Another option is to combine local programs into larger groupings such as counties or regions. When graphing local data, you may want to include the number of families in each program or grouping (see labels in Figure 4). This will allow you to consider the stability of the family outcomes data as you interpret the data across programs. For additional guidance on comparing differences between the state and local programs, please refer to the meaningful differences calculator here: <http://ectacenter.org/eco/pages/summary.asp#meaningfuldiffcalc>.

In the example seen in Figure 4, we are only showing data for family sub-indicator 4C: Early intervention helped the family help their child develop and learn. In your state, you may need to do the analysis by local programs for all sub-indicators, or you may be able to limit your analysis based on the earlier results or other considerations. Some examples of cases where a state would reduce the set of outcomes analyzed include:

* The previous analyses lead to a more specific question.
* Stakeholders chose to focus on a reduced set of outcome(s).
* You are focusing on a particular outcome area related to an initiative in the state For example, a state may have already developed an improvement focus area around increasing awareness of rights and responsibilities of parents in early intervention.

In the current state example, the analysis of local data was limited to sub-indicator 4C: Families help their child develop and learn, because this sub-indicator was lower than national performance and lower than comparisons with other states using the same survey and scoring (NCSEAM with Rasch). Percentages for this sub-indicator had also declined across recent years. Looking at Figure 4, we see that there is a cluster of three low-performing programs and two exceptionally high-performing programs.

Conclusions: The current analysis does not provide enough information for us to make inferences about why the cluster of three low-performing programs are not helping families help their child develop and learn at the same level as other programs. To make these inferences we would need to look further into the characteristics of the services, families or children in those three programs and how these characteristics compare to other programs in the state.

To create these graphs for your state, download an Excel local program graphing template here: <http://ectacenter.org/eco/pages/summary.asp#graphingtemplates>

Figure 4

After you review and present the data from your broad data analysis it will be important to add some interpretation and decide on the next steps for more in-depth analysis and determination of root causes related to the performance. Involving stakeholders is recommended to broaden the perspective as the analyses continue. The table below includes some questions that you could ask to help guide interpretation and next steps.

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| --- | --- |
| **Question** | **Notes** |
| * Does our state’s family outcomes data look different than the national data? Does it look different than other states using a similar survey approach (if applicable)
 |  |
| * Is our state performing differently in some outcomes than others?
 |  |
| * Are our state family outcomes trends stable over time? Trending upwards? Trending downwards?
 |  |
| * Are the family outcomes similar across programs? Are some programs doing much better or worse than others?
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Some possible next steps in conducting a more in depth analysis could include questions like:

* Does our state’s family outcomes data vary by different subgroups (e.g. race/ethnicity, disability, family income, primary language, etc.)?
* For a given family outcome of interest, how does the family’s report of helpfulness relate to the child’s outcomes? How does this relation inform our interpretation and possible next steps?

**Additional Resources**

For more information on family data subgroup analyses, see the SSIP Family Outcomes Subgroup Analysis on the Using Data page: <http://ectacenter.org/eco/pages/usingdata.asp#ResourcesandTools>

For more information on possible questions for more in depth quantitative analysis, see the Analyzing Child Outcomes Guidance Table: <http://ectacenter.org/~pdfs/eco/AnalyzingChildOutcomesData-GuidanceTable.pdf>

For more information on more in depth qualitative analysis, see the Local Contributing Factor Tool: <http://ectacenter.org/~docs/eco/ECO-C3-B7-LCFT.docx>

For more general resources on family outcomes measurement, see: <http://ectacenter.org/eco/pages/tools.asp>

For all child and family outcomes calculators and graphing templates, see: http://ectacenter.org/eco/pages/summary.asp

1. This document is based on the final SPP/APR package disseminated by the Office of Special Education Programs, U.S. Department of Education in 2014. [↑](#footnote-ref-1)