Thinking Through Improvement

Tools and Strategies to Guide Improvement Efforts

North Central Regional Resource Center

University of Minnesota

Development Process

- Responded to need identified by North Central Regional Resource Center (NCRRC) states
- Drafted content outlines and concept paper
- Convened multidisciplinary Reviewer's Group that consisted of NCRRC state and local partners
- Compiled extensive feedback and restructured the design of the materials
- Solicited ongoing feedback from pilot sites and OSEP staff

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Thinking About Data

Defining Data

Data Quality Issues

Finding Meaning in Data

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Important Ideas

- Participants will —
  - Understand that information gathered from data guides improvement efforts
  - Understand that quality data are essential for identifying system wide strengths and weaknesses
  - Acquire techniques needed to complete a thorough review of data to assist in determining areas for improvement

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Defining Data

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Important Ideas

- Information that guides improvement comes from data
- Under current law, states and local agencies are required to collect more data than they have in the past
- The team needs to identify relevant data to guide its improvement plan

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Defining Data

- Data can be defined as any information that, when taken together and analyzed, can be used to produce knowledge and inform decisions
- Data are used in everyday life
  - Stock market reports
  - Nutrition labels
  - Weather patterns

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Using Data for Improvement

- Provide insight and focus for determining areas for improvement
- Reveal strengths and weaknesses in the system
- Inform team of impact of improvement activities

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Types of Data

- Collect broad array of data
  - Achievement/outcomes data
  - Demographic data
  - Program data
- Utilize both quantitative and qualitative data

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Achievement/Outcomes Data

- Comes in forms other than standardized test data
  - Performance monitoring
  - Ongoing assessment

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Guiding Questions for Achievement/Outcomes Data

- What evidence do we have that shows the knowledge, skills, and understanding being achieved by the target population?
- What evidence shows which children are meeting or exceeding achievement expectations and which are not?

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Demographic Data

- Collect data over a multi-year period so that trends can be observed and predictions made
- Data should be collected that show the following –
  - Demographic information including gender, ethnicity, and socioeconomic status
  - Mobility patterns in and out of grades and agencies
  - Transportation needs
  - Rate of enrollment in specialized programs
  - Parent involvement
  - Behavior data

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Guiding Questions for Reviewing Demographic Data

- Who are the children being served?
- What trends do we see in the target population?
- What factors outside the local agency might help us understand the children and families better?

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Program Data

- Need to establish plan for collecting evaluation data on programs/improvement activities
- Collect data that profile enrollment, performance, and implementation of the program/improvement activities

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Guiding Questions for Reviewing Program Data

- How well was the improvement activity implemented?
- To what extent has the improvement activity done what it was designed to do?
- What was the impact of the improvement activity on the intended audience?

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Identifying Data for Improvement

- Need to determine –
  - Which data elements are currently being collected
  - How these various data elements are collected

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Data Sources

- Exist in various forms
- May be externally mandated
- Often routinely recorded
- Can include —
  - Results of file self-reviews
  - Survey results
  - Evaluation results
  - Test scores
  - State-reported data

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Data Sources

Use the Data Sources chart to discuss the various data sources available to your team.

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Gathering the Data

- Develop plan for gathering the data needed —
  - Who will be responsible
  - What data will be collected
  - Where data can be found
  - When data will be collected
  - How data will be collected, organized, and stored

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Last Impressions

- What are data?
- Why use data for improvement planning?
- What types of data should the team use for improvement planning?

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Addressing Data Quality

Important Ideas

- Quality data are essential for identifying system-wide strengths and weaknesses, trends, and patterns
- The team must consider the adequacy of its currently available data to address areas for improvement

Elements of Quality Data

- Reliability
  - Comparable or consistent over time
- Validity
  - Represent what was intended to be measured
- Accuracy
  - Clear, strict guidelines for data entry

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Elements of Quality Data

- Practicality
  - Collection affordable and as straightforward as possible
- Relevance
  - Appropriate for purposes for which they are needed

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Reviewing Data Quality

- Verification of data at various stages
- Scan for outliers
  - Can be mistakes such as data entry error
  - Can serve as important clues signaling a need for attention if true

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Improving Data Quality

- Review policies, practices, and procedures specific to data collection and analysis
- Develop process for addressing data issues —
  - Utilize team structure
  - Assess strengths and weaknesses of current system

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Do We Need More?

- Know where you are and where you want to go
- Avoid gathering duplicative data
- Demonstrate strong rationale for additional data
- Develop plan for collection —
  - Who will be responsible
  - What data will be considered
  - Where data can be found
  - When will the data be collected
  - How will the data be collected

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Last Impressions

- What are the elements of quality data?
- How do you know if you have quality data?
- How can you improve the quality of your data?

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Finding Meaning in Data

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Important Ideas

- Analyzing, interpreting, and using data is fundamental to successful and sustained improvement
- A thorough review of data will help the team determine areas for improvement
- Comparisons, disaggregation, and trend analyses give meaning to raw data
- It is important to ask the right questions of the data

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Keep It Simple

- Data analysis does not always have to involve complicated statistics
- Examine frequencies, percentages, and averages
- Look at data in various ways such as age, race, disability, or gender
- Organize data to articulate relationships or note patterns

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Analyzing Data Patterns

- Review data to uncover important patterns and relationships among the data
- Use variety of methods —
  - Scanning
  - Making comparisons
  - Disaggregating

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Scanning the Data

- Look for patterns and trends in summarized data sets from trusted source
- If using raw data, scan for possible outliers —
  - May be indicative of mistakes
  - May be accurate and need further analysis

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Making Comparisons

- Determine what types of comparisons make sense based on collective judgment and expertise
- Possible comparisons can include —
  - Comparing data to state SPP targets
  - Comparing to data from surrounding agencies or agencies of similar size
  - Comparing to data from previous years

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Disaggregating Data

- Form of drilldown that involves breaking down summary data into smaller groups and more usable information
- Supplements information obtained from making comparisons
- Helps to identify unique characteristics within data set
- Can focus search for appropriate improvement activities

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Data Detective

Working with a partner, answer the questions on the Data Detective Worksheet using the data set provided.

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Guiding Questions for Data Review

- What data do you have?
- What patterns do you see in the data? Trends?
- What possible outliers do you see? What do you think they mean?
- What additional data would be helpful?
- What are possible explanations for what the data say?
- What are your hypotheses about the areas for improvement to be addressed?

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Making the Transition

- Transition from data analysis to data interpretation
- Develop hypotheses to explain potential underlying causes of areas needing improvement
- Determined by review of data analysis patterns and team consensus

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Last Impressions

- What is involved in analyzing data?
- How should the team analyze data?
- How does the team make the transition from data analysis to data utilization?