Presenters

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Agenda

- Importance of high-quality data
- Defining high-quality data
- Strategies for improving data quality
- High-quality data and business rules relationship
- Importance of business rules

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The Growing Importance of High-Quality Data

- Shift from monitoring to Results Driven Accountability
- Support increasing data use and building data culture
- Critical for informed decisionmaking
- Organizational asset

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High-Quality Data Definition

- Timely
  - Current, submitted on time, and still relevant
- Accurate
  - Reliable and consistent across time, locations, and methods
- Complete
  - Entire population represented; no missing records

Data Quality Quick Fix

The weed killer approach

- Cleansing the data at the SEA level after the LEA submissions are finalized

- No feedback loop back to those submitting the data

- The same types of errors happen year after year

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Addressing Data Quality at the Roots

Getting to the root of the problem by preventing errors before they happen through

- Data system edit checks

- LEA data validation and review

- Training of LEAs on data requirements and data quality review

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Risks of Poor Quality Data

- Undermine credibility and breed organizational mistrust
- Make it harder to identify areas for focused effort for improvement
- Inhibit good data-driven decisionmaking

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Strategies for Improving Data Quality

- **Prevent**
  - At time of data entry
  - Restrict values

- **Detect**
  - During the data quality review process

- **Repair**
  - Discovered after data are used
  - Find source of error and implement strategies to prevent in the future

High-Quality Data and Business Rules

Relationship between high-quality data and business rules

- Business rules, or edit checks, prevent errors at the point of data entry

- Using edit checks is not a foolproof way to obtain high-quality data, but edit checks are part of a data cleaning process

- Program staff and those responsible for the data system edit checks must work together

Examples of Business Rules

- Ensure values are within a given range or set of permitted values

- Ensure mandatory data elements are provided

- Determine if data are in the correct format

- Check that values are consistent across data elements

- Perform year-to-year comparisons

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Detect Missing Data or Null Values

Ensure mandatory fields are provided such as
- Disability status
- Birthdate or age
- Grade level
- Race/ethnicity
- Gender
- Enrollment date

Prevent Invalid Formats

Enforce proper formatting of data such as

- Date format: *mm/dd/yyyy*
- Decimals such as *#.##*

Weed Out Invalid Combinations

- Verify educational environment is valid based on student's age

- Verify the age is between the state-defined range for students coded with a disability category of Developmental Delay

Enforce Proper Procedures

Rules can help LEAs and schools follow proper procedures, such as ensuring that a student cannot have a basis of exit of "return to regular education" if there is not an end date on the child's individualized education program (IEP) record.

Importance of Business Rules Documentation

- Communication tool for stakeholders, data submitters, and data users

- Support to develop common understanding

- Essential step in the process

- Reference for new and existing staff

Sharing Business Rules Documentation

Sharing documentation by

- Posting on public website
- Providing with data requests
- Posting on internal shared drives

Sharing documentation will inform data users about

- The number and types of validity checks
- The rigor of data quality checks

This will result in the data users having more confidence in the data.

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Questions

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