Steps for Ensuring Data Quality

Data quality is more than accuracy and reliability. High levels of data quality are achieved when information is valid for the use to which it is applied and when decisionmakers have confidence in and rely upon the data. Implement these steps organization-wide to increase and maintain data quality.

START

6 Are data appropriately analyzed and reported?

- ☑ Disclose all conditions affecting interpretation of the data.
- ☑ Present conclusions fairly within a context for interpretation.
- ☑ Review data with those who have a stake in the results.
- ☑ Ensure analysis techniques meet the requirements for proper use.
- ☑ Protect FERPA confidentiality rights.
- ☑ Publish technical reports or make available files with detailed data for verification.

This student group needs...

5 Are data verified and compared?

- ☑ Run audit reports for review by experts with knowledge of reasonableness.
- ☑ Compare data to past runs, standards, or similar groups.
- ☑ Check data exchanges, crosswalks, and translations for integrity.
- ☑ Verify all calculations and conditional rules.

4 Is process well implemented?

- ☑ Use checklists and signoffs for key steps.
- ☑ Run sample data and verify.
- ☑ Conduct on-site reviews during the process.
- ☑ Ensure problems are reported, documented, corrected, and communicated back to the source of the problem or report.

3 Is process well documented and communicated?

- ☑ Ensure all requirements are available (e.g., computer hardware, software, network, etc.).
- ☑ Provide documentation for data providers and data processors.
- ☑ Provide a data dictionary and format specifications.
- ☑ Provide training and certification for data providers and all new staff.
- ☑ Provide immediate help for data providers.

Data

2 Is process well designed?

- ☑ Review design by peers, agencies, and staff.
- ☑ Preprint all available data. Limit times data are entered.
- ☑ Ensure target dates are reasonable and clear.
- ☑ Use most automated/validated level of data entry possible (e.g., codes in an automated application vs. paper forms).
- ☑ Automate entry verification at the earliest levels (e.g., upon key stroke vs. from printed audit report).
- ☑ Use random checks during production.
- ☑ Run maintenance before all production. Verify off-hour maintenance and staff availability.

1 Are requirements known?

- ☑ Compare policy, regulation, and procedures with instructions given to data providers, collection forms, and code in computer programs.
- ☑ Ensure all personnel are knowledgeable, certified, and trained for their assigned tasks.
- ☑ Include data providers and data processors in decisions to establish what is feasible.
- ☑ Follow an established change-management process.
- ☑ Comply with professional standards for data collection, analysis, and reporting.

The Hierarchy of Data Quality

Data-driven decisions made with confidence

Comparable data; interpretable beyond local context

5 Quality
- Valid data consistent with construct being described
- Reliable data independent of collector
- Accurate data consistent with definitions

4 Valid
- Accuracy achieved for decision making
- Designation of official data for decision making
- Periodicity established for collection and reporting

3 Official
- Data combined, aggregated, analyzed, summarized
- Data collected by some at some times

2 Available
- Inconsistent forms of measurement
- Data unavailable

1 Data Defined
- Bad data

-1 Invalid

As stages are completed, data quality and usability increase. How do your data measure up?