

Ensuring Local Data are Valid and Reliable

The Kansas Approach to gathering quality data

OSEP / WESTAT Overlapping Part B and Part C Data Meeting
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The Kansas System

- The data program utilized in Kansas includes four components:
 - ◆ Precise data entry at the local level
 - ◆ Accurate data collection at the state level
 - ◆ Relevant data analysis and reporting
 - ◆ Meaningful data utilization for improvement

Precise Data Entry

- Part C in Kansas contracts with a software provider for the management of the Infant-Toddler Database.
 - ◆ All 36 local programs input data into the infant-toddler database
 - ◆ Database is structured in a way that reduces the possibility for data entry errors.
 - ◆ State staff conduct trainings on data definitions, and provides an infant-toddler database operating manual.
 - ◆ The database contractor provides periodic training at regional meetings regarding input methods.

Data Collection

- The infant-toddler database is web-based, allowing state staff to access the most current data available.
- All local data reports are developed and filed through the data system, thus reducing the possibility for transcription errors that could occur at collection.
- State staff can download local data files that have been marked as ready on the database and compile the data into pertinent categories.
- Data collected at the state level is not imputed into the database—it is directly entered by the Program Analyst.
- Outside data sources include the Kansas State Dept. of Education, Vital Statistics, Social and Rehabilitative Services, and KITS (Assistive Technology).

Data Analysis and Reporting

- State staff analyze the compiled data and identify local trends and gauge performance by comparison to state averages and OSEP requirements.
- Data are prepared in reports that are sent back to local programs for review and planning purposes.
- State staff evaluate statewide data and searches for strengths, concerns, and overall trends.
- State staff evaluate local data and target improvement efforts on specific OSEP indicators.

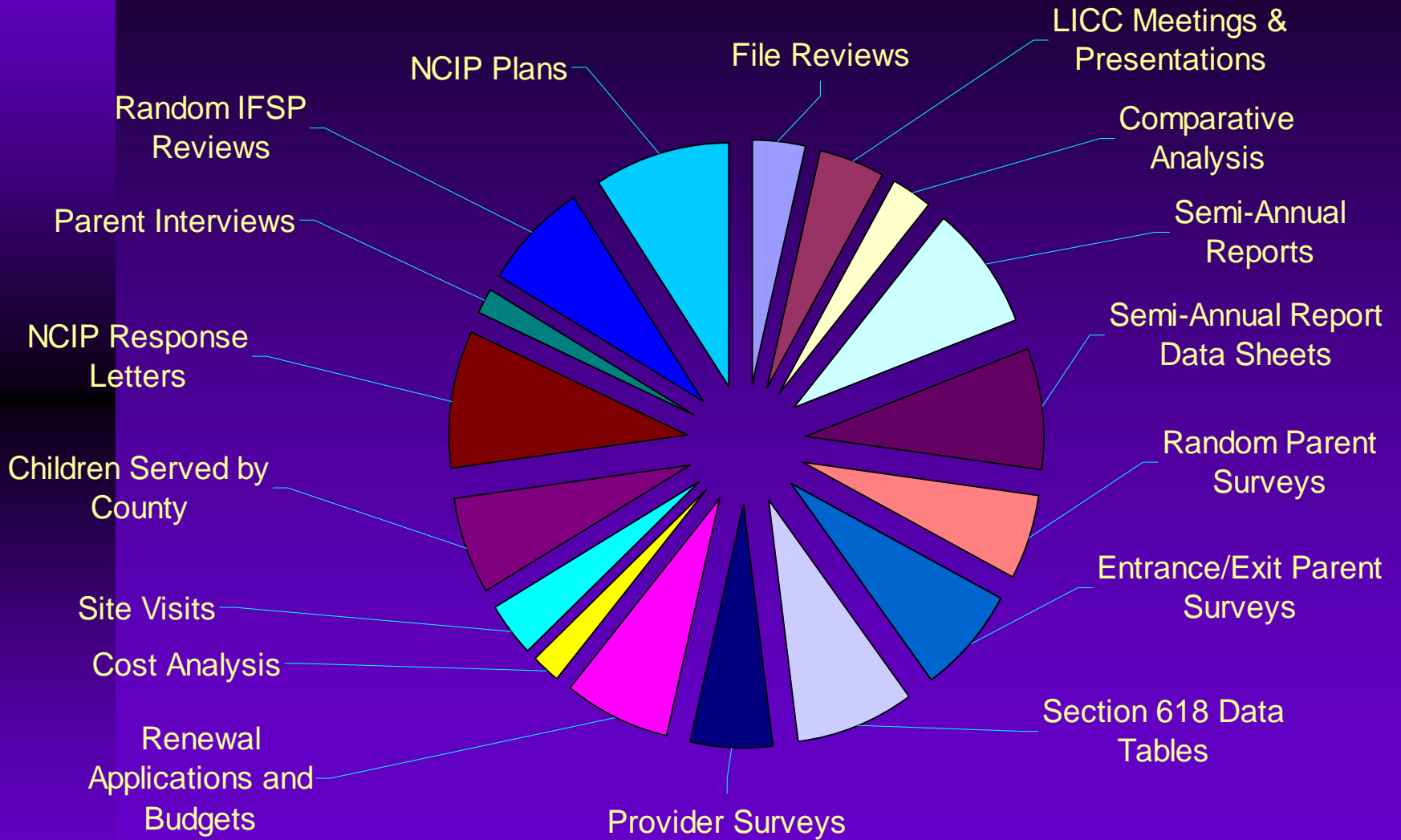
Data Utilization

- State staff provide data to local programs in a meaningful format that assists local stakeholders in making improvement-related decisions.
- Local networks use state data reports, in addition to other local data sources, in evaluating the current situation within their programs, setting objectives, explaining progress or regression, creating goals, and identifying activities to reach their goals.
- State staff evaluate local program performance by using a data-driven monitoring process. Trends, compliance with OSEP requirements, and comparative performance are assessed.
- State staff compile locally reported data and state-generated data to address OSEP indicators in the State Performance Plan and Annual Performance Reports.

Features of Kansas' Database:

- Web-based
- Real time
- Collects core data required by the state and OSEP, including child find, referrals, evaluation/eligibility, services, IFSP development, timelines, parent complaints, justifications (valid and noncompliant), cumulative counts, and 12/1 counts by network
- Can be individualized by local networks for additional purposes
- Accessible to state staff at any time
- Easy to query

Kansas Data Sources:



Validity and Reliability

Throughout the data collection process, how does the State ensure reliability *in the system*?

- Kansas' data collection system includes:
 - 1) a reliable database that accurately collects and computes data,
 - 2) reliable data input personnel,
 - 3) a reliable method of transmitting data, and
 - 4) reliable transcription at the state level.

Reliable Database

- Kansas contracts with a software provider/database manager to monitor and manage the infant-toddler database.
- Data system has not failed in five years of usage.
- Web-based system that is reliable to the extent that the internet exists.
- The contractor monitors the database on a daily basis, encourages feedback from local programs regarding its performance, and promptly adjusts fields that may have a glitch.
- Database can be administered from any location and is not dependent on physical headquarters

Reliable Data Input Personnel

- Personalized trainings are required for new data entry personnel (either in person or by phone) prior to local data being imputed into the system.
- A software user manual includes a tutorial of all universal data fields. Definitions are also included. NOTE: local programs can tailor the database to collect other local data. This is not included in the tutorial.
- The software developer conducts periodic trainings around the state for data entry personnel.
- A hotline has been established for data entry personnel to find answers to data entry questions.

Reliable Transmission of Data

- State staff access local program data through the software developer's secure website
- Local programs mark their data as “ready” on their database. State staff can access all local program databases, but those marked as “ready” have been completed and are considered an official submission.
- Data collected from the database has only been imputed one time—by the local data entry person.

Reliable Transcription

- Transcription of data from the infant-toddler database into other report formats is double-checked for accuracy by comparison to other reports that include the same data.
- Data collected from sources other than the infant-toddler database are double-checked by more than one staff person (e.g. renewal application math, semi-annual report data sheets, etc.)
- Survey data is transcribed automatically through formulas imputed into the database. Raw scores entered into the codebook are not double-checked.

Throughout the data collection process, how does the State ensure the reliability *of the data*?

- Reliable data produces the same results for a given case when the data measure is applied several different times.
- Reliability of data is primarily a concern for data that involves a random selection process. Most Kansas data sources are not random, but rather are universal.
- If the data system is reliable, then universal data collected at the state is also reliable.
- In cases where the entire universe of Part C children are not represented, Kansas uses two methods to determine reliability:

Test-Retest Method of Determining Reliability:

- State staff apply the same measure to the same sample set at more than one point in time.
- Reliable to the extent that results are stable over time.
- Time and knowledge can affect the results (entrance/exit parent surveys can track this—although they do not as of yet).
- Relevance to Data Entry: If a local data manager imputes an error into the database, subsequent views of the file (at a maximum of every six months) will identify the error.

Alternative Forms Method of Determining Reliability:

- Kansas applies different forms of data measures to a sample set of the universe.
- Example: Program Performance from a parent and provider perspective
 - ◆ Entrance/Exit parent survey disbursed to all parents at initial IFSP and transition
 - ◆ Random Survey (constructed with 99% confidence, +/-3% margin for error) measures all questions in entrance/exit survey, plus other functional questions.
 - ◆ Provider Survey asks providers the same questions as the random survey, but from a provider perspective
- Will function to eliminate test effect because they measure the same concepts three different ways.

Throughout the data collection process, how does the State ensure the validity of the data and consistency with OSEP data instructions?

- Measurement error can create reliable data that is not valid, because reliability does not guarantee validity.
- In contrast, data cannot be valid without being reliable. Therefore, ensuring validity requires first ensuring reliability.
- In order to be valid, data must measure that which we hope to measure. To do so, an agreed-upon measurement system must be in place.
- Kansas measures validity through three methods:

Pragmatic Data Validation

- State staff check the results obtained from the use of the database in imputing data against results of other indicators that are known to be valid measures of the data set.
 - ◆ Reviews of renewal contracts
 - ◆ Semi-Annual Report data sheets
 - ◆ Entrance/Exit Parent surveys

Predictive Data Validation

- State staff test the predictive validity of the infant-toddler database by predicting 618 results and cumulative count results in advance of their actual submission
 - ◆ State staff predict 12/1 counts and cumulative counts based on child find data and trends identified in semi-annual reports.
 - ◆ Done locally and statewide

Construct Data Validation

- State staff infer the validity of 618 data from evidence accumulated and compared to:
 - ◆ Six-Month cumulative count data
 - ◆ Annual cumulative count data
 - ◆ Screenings data
 - ◆ Evaluation data
- State staff are searching for levels of deviation in these indicators statewide, as well as in each local program.

Independent Tests for Reliability and Validity of Kansas' Database

Entrance/Exit Parent Surveys

- Distributed by local service providers to every parent after writing the initial IFSP (entrance) and at transition (exit).
- Surveys are accompanied by a postage-paid return envelope that is mailed directly to State staff.
- State staff compile the results, sort them by network, and compare them to state averages and OSEP requirements.
- State staff reports the results back to local programs
- Data is current at any point during the year.
- Tracking method: State staff have the ability to track surveys by network and by family (tracking by family is not currently being used).

Randomly-Selected Parent Surveys

- Dependent upon 36 updated local infant-toddler databases.
- Structured to produce data that allows for a 99% level of confidence that results are within +/-3% of the entire Part C population.
- Surveys are mailed directly to parents from state staff, and include a postage-paid return envelope back to the state.
- Results will be compiled by network and compared to the state averages and OSEP requirements.
- Results for some questions will be cross-referenced with those from entrance/exit surveys.
- Distributed in the fall of each year.

Provider Surveys

- Developed but not yet distributed.
- Will be distributed to service providers via local Part C coordinators.
- Completed surveys will be returned directly to state staff.
- Questions mirror those on the randomly-selected parent survey, but are asked from a service provider perspective.
- Results will be compared to parent results to determine if there is consistency in responses.
- Significant deviations in responses will be investigated.

If the local data are not reliable or valid, what methods are used to ensure correction of errors?

- State staff report back to locals on all local data submissions, through semi-annual report data sheets/comments or NCIP response letters.
- Semi-annual report data sheets and comments address significant changes from period to period, or trends identified by state staff. The database is designed to identify inconsistencies. Comments require corrections.
- NCIP responses address data imputed into the infant-toddler database, as well as from state sources. Reports back to locals would include instructions for correcting errors.

Ensuring that Programs NOT Selected for an On-Site Visit are in Compliance with IDEA

- Kansas' data collection, analysis, verification, and reporting process determines compliance.
- Kansas collects the same data from all 36 local programs. The same performance measures are applied to all programs.
- State staff use data from these performance measures to identify systemic issues within each local program.
- On-site visits are not as effective in identifying concerns as the state's data collection system, unless there is a targeted concern that monitors are reviewing within the local program.

Ensuring Security of the Data System

- State Level:
 - ◆ Data with personal identifiers is stored in locked cabinets.
 - ◆ All state-owned computers are password protected.
 - ◆ Individual child information is not identified on the state's access to the database.
- Local Programs:
 - ◆ Kansas provides training regarding HIPPA and FERPA.
 - ◆ Infant-Toddler Database is password protected.
 - ◆ Database website is https:// (secured)
 - ◆ ECO—Specific personnel from each program have been identified as the designated data entry clerk.
 - ◆ Submitted IFSP's include blacked-out identifiers

Activities that Improve the Collection, Accuracy, Analysis, and Reporting of Data.

- Kansas withholds funds from programs that do not report their data appropriately and on time.
- Semi-Annual Report Data sheets identify concerns, strengths, and five-year trends, including consistency in reporting techniques.
- NCIP plans and response letters demonstrate improvement from year 1 to year 2.
- Entrance/exit parent survey return rates have increased dramatically.
- Training and data definitions are revisited frequently at regional meetings to ensure accuracy.

Data Collection Concerns in Kansas

- Timeliness of submittal of 618 tables.
- Updated database required for random parent survey to be distributed and random IFSP's to be collected.

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