Supplemental Handout #1
Key Terms

Adaptive and Technical Challenges
These types of challenges can only be addressed through new learning. Solving adaptive problems requires aligning values with practice, fundamental change, and a deeper exploration of the source of and solution to the problem. In contrast, technical challenges are problems that can be addressed with adjustments to the current practice. (Heifetz et al., 2009)

Case Mix
This refers to the types of cases and the characteristics of children, youth, and families receiving services. Case mix can vary over time and have an impact on performance measurement. For example, the proportion of children in congregate care settings may be higher in jurisdictions with larger proportions of older youth with juvenile justice involvement in care. (Wulczyn et al., 2009)

Causality
This occurs when a change in one variable causes a change in another variable. Inferring causality is the process of establishing the link between the perceived cause or causes and the perceived effect or effects. (Palinkas, 2014) A correlation between two variables does not necessarily imply causality.

Confidence Interval
This term is used in sampling and refers to the range of values within which your actual percentage may lie. When you have a sample, the findings of a measure may differ somewhat from the findings. The confidence interval or the margin of error is the amount of error we are willing to tolerate.

Confidence Level
This term is used in sampling and refers to the confidence we feel that our findings are similar to the findings we would obtain if we did not sample but used the whole population. For example, if your sample meets the requirements for a confidence level of 95 percent, then it means that if you drew a sample over and over again from the same population, you would get the same findings 95 percent of the time.

Correlation Coefficient
This is a statistic that reflects the extent of the relationship between two variables. A positive correlation coefficient means that a change in direction of one variable coincides with a change in the same direction of another variable. A negative correlation coefficient means that a change in direction of one variable coincides with a change in the opposite direction of another variable.

Data Dictionary
A data dictionary is a set of information describing what type of data is collected within a database, its format, structure, and how the data are used. A version of a data dictionary may be used in conversations between IT and program staff in order to ensure that the fields in the MIS use terminology that aligns with practice and that the options available in a field represent all possible scenarios.

Denominator and Numerator
A denominator is the part of a fraction that is under the line. It represents the "group" from which the numerator is derived. The numerator represents a segment of that group. Every instance in the numerator must also be in the denominator. (Example: Of all children entering foster care in 2012 (denominator), how many were reunified within 12 months or less (numerator)?) This fraction yields a percentage.

Entry Cohort Measure (child welfare example)
These are performance measures based on an assessment of a group of children who enter foster care in a given time frame. The entire group is followed over time to measure likelihood of exits by type over time. This is considered *longitudinal analysis.* (Example: an assessment of the percentage of children who entered foster care in 2012 who were reunified in 12 months or less from the time of entry.) The measure is incomplete until every child has been in care at least 12 months.

Exit Cohort Measure (child welfare example)
These are performance measures based on an assessment of a group of children who exited foster care in a given time frame (such as an assessment of the percentage of children who exited foster care in 2012 to reunification who were in care for 12 months or less). Using an exit cohort measure to monitor performance change over time in the area of permanency is generally discouraged in the academic literature. (Chapin Hall, 2012)

Inter-Rater Reliability
This is the degree to which the agency's case reviewers agree with each other in their assessments and ratings of the review instrument items. (Child and Family Services Reviews Information Portal)

Longitudinal Analysis
This is a type of analysis often used to monitor change in system performance over time in areas such as safety and permanency. It involves following children over time to determine what outcomes occur. Example: Of all the children who experience substantiated maltreatment during the year, how many have a second finding within six months?

Margin of Error
The margin of error tries to measure the size of our uncertainty in a measurement. To be meaningful, the margin of error should be qualified by a probability statement (often expressed in the form of a confidence level). For example, if you have a very small sample but still want a high confidence level, you may have a wider margin of error. The higher the margin of error, the more difficult it is for your findings to be generalized to the full population.

Mean (Average)
This is a number that represents the average of a group of numbers. The mean is calculated by summing the values of the group and then dividing by the number of observations.

Measure
As related to indicator, a measure refers to the way a particular performance indicator is calculated (such as the specification of the denominator and numerator).

Median
This is a number that represents the midpoint of a group of numbers ranked in order from least to greatest, so that 50 percent of the numbers are lower than this number and 50 percent are higher.

Outcome Measures
Outcome measures are intended to reflect the results of services and interventions provided. For example, of all children who enter foster care in a 12-month period, what percentage are discharged to permanency within 12 months of entering foster care?

Parameter
A numerical measurement describing some aspect of a population. A parameter applies to a population, while a statistic applies to a sample. (Child Care & Early Education Research Connections, n.d.)

Point-in-time Measure (child welfare example)
These are measures that capture the experiences of a group of children at any given time (such as the average age of children in care on the last day of the Federal fiscal year). While potentially useful as a descriptive measure, there is general agreement in the literature that point-in-time measures are not appropriate for monitoring change in performance over time. (Chapin Hall, 2012)

Process Measures
These are measures that reflect events that have occurred or services received. Process measures are linked to outcomes through a logic model. A common process measure in child welfare reflects whether caseworker visits with children occurred according to policy requirements. Reporting the number of visits may miss important differences in the quality of visits. Also, the importance of visits as they relate to safety, permanency, and well-being should be clearly communicated.

Qualitative Data
This is information that is not in numerical form. Information from written documents, interviews, focus groups, and participant observation are common forms of qualitative data. Qualitative data are usually analyzed through some sort of content analysis to understand key themes.

Quantitative Data
This is information expressed in numerical form. Quantitative data can be put into categories and in rank order or described in precise units of measurement.

Random Sampling Process
This is the process of selecting a subset of individuals from a population in such a manner that each individual has an equal probability of being selected.

Reliability (of a data collection instrument)
This term refers to the degree to which the data collection instrument produces stable and consistent results over time and across administrators.

Representative Sample
A sample may be representative when it meets the criteria necessary to generalize findings from the sample to the population from which it was drawn. For example, the Fourth National Incidence Study (NIS-4) used a representative sample of Child Protection agencies to collect data on the incidence of child abuse and neglect with the intent of generalizing across a larger population. (Sedlak et al., 2010)

Root Cause Analysis
An iterative approach to understanding the underlying reasons for a particular problem. It is a rigorous, structured approach for identifying why a problem occurred in the first place and how it might be prevented from occurring again. RCA is logical and fact-based, avoids speculation, and dives deeply into the chains of events that cause errors. (Quinn, 2016)

Statistic
This is a numerical representation of a piece of information. A statistic typically applies to a sample, as opposed to a parameter, which typically applies to a population.

Statistically Significant
something is statistically significant when differences or associations found between or among variables are not likely to have occurred by chance, with the precise likelihood specified. Note that it does not speak to the strength of the relationship between variables. Significance testing is intended to indicate whether what was observed in a sample can be applied to the larger population. For example: The difference between boys and girls with regard to time in foster care was found to be significantly different at the $p \leq .05$ level. This means the probability of this difference happening is less than .05. Although a probability level of .05 is a generally accepted level of significance, it is possible for a researcher to set statistical significance at a higher or lower probability level.

Stratified Random Sampling Process
This is a process of grouping a population into subgroups based on known characteristics and then randomly selecting members from each subgroup to be included in the population sample.

Theory of Change
A visual representation and description of the process, steps, and stages by which an organization will accomplish a long-term goal. (Center for Theory of Change, n.d.)

Validity (of a measurement instrument)
This refers to whether the instrument actually measures what it is intended to measure.

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