

Tool 4.1 – Analyzing Data: Research Questions and Methods

For every research question, there are choices about which method will be most effective at answering it.

The discussion to define your research question and the analytic approach can contribute to a shared understanding of the primary goals of the data analytics project. Table 4.1.1 offers examples of questions and approaches that can answer them.

Table 4.1.1 Sample Questions and Approaches That Can Answer Them

IF YOU WANT TO:	YOU NEED A QUESTION AND ANALYTIC APPROACH TO ADDRESS:	TANF PROGRAM EXAMPLE
Understand typical experience/outcome	Central tendency	What percentage of TANF program participants who leave the program return within [X] months? For TANF customers who return after leaving, how many months, on average, are customers off TANF before returning to cash assistance?
Describe or quantify range in experience/outcome or identify outliers	Dispersion/variation	How do churn probabilities vary across counties/regions? Across customers w/different characteristics? ^a
Describe change over time or predict change in the future	Trends, changes	How do churn probabilities vary across time/year?
Understand relationships between two or more measures, or cause and effect	Association, causes	Is participation in particular services associated with lower churn rates?
Consider differences within and between units (for example, customers within case managers, case managers within counties/regions)	Multilevel analysis	How do churn rates vary among customers served by the same case managers? How do churn rates vary across case managers?

Note: ^a “Churn” refers to when benefits recipients cycle unnecessarily or unproductively out of and back into a public benefits program. See Rosenbaum, Dottie. 2015. “Lessons Churned: Measuring the Impact of Churn in Health and Human Services Programs on Participants and State and Local Agencies.” Website: <https://www.cbpp.org/research/lessons-churned-measuring-the-impact-of-churn-in-health-and-human-services-programs-on>.