# Tip Sheet on Data Types and Transformation

## Types of Data

* Quantitative: measured in quantities as numbers
  + Discrete or categorical, e.g.,
    - Gender
    - Eligibility reason
    - Exit reason
  + Continuous, e.g.,
    - Age at enrollment
    - Income
    - Hours of service
* Qualitative: not numerical in nature, e.g., from:
  + Interviews
  + Focus groups
  + Document review
  + Observation

## Data Transformation

* Convert continuous into discrete
  + Continuous (measured on a continuum or scale):
    - Age as 1,2,3,4,5,6,7,8,9,10,11,12,13,14, . . . . . . . . . . . . . . . . 36 months
  + Discrete:
    - Categories of age, e.g., 0-12 months, 13-24 months, 25-36 months
* Convert large number of categories into a smaller number
  + Collapse a larger number of race/ethnicity categories or exit reasons into the federal/618 categories
* Combine two or more variables to create another variable
  + Combine family income and family size to create a variable for Federal Poverty Level

It’s always helpful to examine the distribution of the data *first* to help make decisions on data transformations.