

Generic Sampling Specifications

The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 gives States the authority to use scientifically acceptable sampling methods to comply with the data collection and reporting requirements of Section 411 (a). Listed below are some suggested, generic sampling considerations that States may use during the period prior to final regulation. States are not bounded by these suggestions. If a State opts to use sampling procedures and sample sizes, it must use an acceptable sampling methodology and sufficient large samples to make estimates over various sub-populations, e.g., the two-parent participation rate and the overall participation rate.

1. Sample Methodology

The standard statistical methodologies for sample selection are methods that conform to principles of probability sampling, e.g., for TANF, each family in the population of interest has a known, non-zero probability of selection into the sample and computational methods of estimation lead to a unique estimate. Suggested methods of sample selection include stratified systematic random sampling and simple random sampling.

2. Sample frame

- a. the families receiving assistance under the state TANF Program (i.e., the active TANF sample) are:

The monthly TANF sample frame should consist of an unduplicated list of all families who receive assistance under the State TANF Program for the reporting month by the end of the reporting month.

- b. families no longer receiving assistance under the State TANF Program (i.e., the closed TANF sample) are:

For closed cases, the monthly TANF sample frame should consist of an unduplicated list of all families who assistance under the State TANF Program was terminated for the reporting month (do not include families whose assistance was temporarily suspended), but received assistance under the State's TANF Program in the prior month.

3. Sample Size Requirement

The sample size should be sufficiently large to obtain estimate with relative high precision. The data being collected will be used to calculate the monthly and annual work participation rates for all families and for two-parent families and a wide variety of demographic and financial characteristic statistic.

By algebraic rearrangement, it is possible to compute the minimum sample size needed to obtain a desired precision. For example, to obtain the sample size required for 95 percent confidence that a sample proportion " p " will be within plus or minus 2 percent of the true proportion " p " when " p " is assumed to be 50 percent, the computation is as follows:

$$e = 1.96 \sqrt{\frac{p(1-p)}{n}}$$

$$\text{or } n = \frac{(1.96)^2 p(1-p)}{e^2}$$

where "e" is the desired precision level (2 percent in this example).
Substituting:

$$n = \frac{(1.96)^2 (.50)(1-.50)}{(.02)^2}$$

$n = 2,401$ or approximately 2,400 cases¹

It should be noted that precision is primarily a function of sample size. Larger samples will generally yield more precise estimates. In many cases, the size of the population from which the sample is drawn is not important. As the population size increases, and the ratio $(N - n)/N$ approaches 1.00 (where "N" is the population size and "n" is the sample size), the effect of population size on precision diminishes and can usually be disregarded.

In considering what is the appropriate annual sample size, State should consider estimated made over sub-populations, e.g., the precision of the two-parent work participation rate is based on the number of two-parent families in the sample.

- a. for families receiving assistance under a State TANF Program are:
The suggested annual sample size for families receiving assistance is 3000 families, of which 600 families must be newly, approved applicants. Of the 2400 families that have received ongoing assistance approximately 25% (600 families) should be two-parent TANF families. These suggested sample sizes would provide reasonably precise estimates (e.g., a precision of about plus or minus 2 percentage points at a 95% confidence level) for such proportions as the work participation rates for all families and for two-parent families, as well as for demographic and case characteristics of newly, approved TANF families and all TANF families.
- b. for families no longer receiving assistance under a State TANF Program are:
The suggested annual sample size for the sample of families no longer receiving assistance (i.e., closed cases) is 800 families.
- c. The Statute requires State to collect data on a monthly basis and report data on a quarterly basis. Therefore, States should construct a sample frame for each month in the annual sample period and select approximately one-twelfth of the annual sample size from each monthly sample frame.
- d. If a State does not have enough newly, approved applicants or two-parent families to meet the required annual sample size of 600 families (i.e., the average monthly sample size of approximately 50 families), the State should select 100% of such families and

select from the other strata enough additional cases to meet the overall required annual sample size of 3000 families.

- e. Each State must submit the total number of families receiving assistance under the State TANF Program by stratum for each month in the annual sample period and the total number of families no longer receiving assistance under the State TANF Program (if stratified, by stratum) for each month in the annual sample period. This data is required for weighting the sample results in order to produce estimates for the entire caseload.

¹ The 2,400 figure is based on the assumption that the population rate is 50 percent and that the sample is a small fraction of the caseload so that the finite population factor can be ignored. If the same fraction is large, the finite population factor should be included; the sample size can be modified using the equation Where N is the population size.