

**Appendix 3: Steps to take in estimating the sample size for descriptive and experimental survey designs\***

Descriptive survey	Experimental or analytical survey
1. Identify major study variables	1. Identify major study hypotheses
2. Determine the types of estimates of study variables (means, proportions)	2. Determine the statistical tests for the study hypotheses (t-test, F test, chi-squared test)
3. Select the population or subgroups based on objectives and design	3. Select the population or subgroups based on study hypotheses and design
4. Indicate expected population value	4. Indicate expected hypothesized difference ( $\Delta$ )
5. Estimate the standard deviation of the estimate	5. Estimate the standard deviation of the difference ( $\sigma$ )
6. Decide on a desired level of confidence in the estimate	6. Compute the effect size ( $\Delta/\sigma$ )
7. Decide on an acceptable level of error in the estimate (precision)	7. Decide on a tolerable level of error in rejecting the null hypothesis when true ( $\alpha$ )
8. Compute sample size using formula	8. Decide on a desired level of power for rejecting the null hypothesis when false ( $1 - \beta = \text{power}$ )
	9. Compute sample size

\*Adapted, with permission, from Aday LA, Cornelius LJ. Advantages and disadvantages of different probability sample designs. In: *Designing and conducting health surveys. A comprehensive guide*. San Francisco (CA): Jossey-Bass; 2006. p. 158.