Ohio Pregnancy Risk Assessment Monitoring System (PRAMS)
Sampling Variability and Reliability of Estimates

The Ohio Department of Health recommends that estimates from the Pregnancy Risk Assessment Monitoring System (PRAMS) be presented with indicators of statistical variability, such as standard errors or confidence intervals, and that differences between populations not be assumed without testing for statistical significance.

Specialized survey analysis software (such as SUDAAN) is needed to calculate standard errors or confidence intervals because PRAMS does not have a simple random design. The survey design includes stratification by race (black, non-black) and birth weight (low birth weight, normal birth weight) in years up through and including 2010; in 2011 and beyond, stratification is by geographic area (Cuyahoga, Franklin, Hamilton, all other combined counties).

Many common versions of standard spreadsheet and statistical software packages (such as Excel) should not be used to calculate variance because their formulas assume a simple random sample and do not allow users to input survey design statements.

Estimates derived from subsets of PRAMS may not be accurate due to high sampling variability. Using such estimates inappropriately can result in the presentation of misleading information or unwarranted comparisons between population groups. To correctly carry out subset (domain) analysis, appropriate syntax should be used in survey analysis software.