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Weighting and Non-Response Analysis for the Australian Health Survey

In 2011-12, the Australian Bureau of Statistics conducted an ambitious Health Survey suite, measuring self-reported Health indicators and risk factors, Nutrition intake and Physical Activity, and direct blood and urine collection for the general population. A two-phase sample design was used, with field interviewers using a CAPI short-form Health questionnaire being accompanied by either a long-form Health questionnaire or a 24-hour recall Nutrition and Physical Activity questionnaire. A voluntary blood and urine collection option at a local clinic was offered to all respondents within specified age ranges. The survey was designed to maximise the accuracy of a variety of descriptive statistics for Health characteristics, as well as to enable analysis between Health and Nutrition domains, including comparing self-reported characteristics against biomedically measured characteristics. The first release of National Health Survey data was published in late 2012, and a second release is expected in 2013.

Household Survey Methodology conducted a suite of weighting and estimation analyses in 2012 to determine the coverage and demographic balance of each survey component, detecting the possible presence of non-response bias through chi-square and ANOVA testing, and performing sensitivity analyses on a range of post-stratification and calibration estimators to find the most accurate estimator for each sample. I will present a close look at the methods and decision trees employed in these analyses, and report specific highlights of interest in providing a coherent array of statistics about the Health characteristics of Australian citizens.