

### 2020 Weighting and Analytic Options (September 2021)

Analytic Goal	Example	Weight	Variance Estimation
Produce official estimates for 2020	Proportion of people in 2020 who had ever been told by a doctor that they had diabetes in their lifetime	2020 WTFA_A and WTFA_C	Use standard variance estimation variables in the full 2020 annual adult and child files
Compare estimates between 2019 and 2020	Proportion of people who had ever been told by a doctor that they had diabetes, 2019 vs. 2020	Use WTFA_A and WTFA_C for both 2019 and 2020 No changes need to be made to 2020 annual data file or weights.	Use standard variance estimation variables in the full 2019 and 2020 annual adult and child files
Produce estimates of COVID-specific questions (July-Dec 2020)	Proportion of people who delayed getting medical care because of pandemic	2020 WTFA_A and WTFA_C* Note that the population totals in the output will be half of what they should be. Analysts would need to multiply these output totals by two to get accurate population totals. This is not needed for point estimates that are proportions or percentages.	Use standard variance estimation variables in the <i>full</i> 2020 annual file. The 2020 annual file should not be subset to quarters 3 and 4 only.
Evaluate <i>individual-level</i> changes before and after the start of COVID (comparing 2019 values to values from August-December 2020 for reinterview cases)	Proportion of adults who self-reported worsened health status in 2020 than in 2019	2020 WTSA_L	Use the standard variance estimation variables associated with the reinterview cases from the 2019 file.**
Evaluate <i>aggregate</i> changes between 2020 Quarter 1 (Q1) and rest of the 2020 year (e.g., Quarters 2-4, Q2-4)	Comparison of the frequency of moderate-intensity leisure time physical activities among adults, Q1 vs. Q2-4	2020 WTFA_A The Q1 weight would need to be multiplied by 4 and the combined Q2-Q4 weights would need to be multiplied by 1.33 such that the sum of weights for Q1 and for Q2-4 would each sum to the populations of inference.	Use standard variance estimation variables in the full 2020 annual file
Analyzing pooled 2019 and 2020 data***	Proportion of adults who had ever been told by a doctor that they had diabetes, by sexual orientation	2019 WTFA_A and 2020 WTSA_P Both weights would need to be divided by 2 to produce correct population totals in the pooled analysis	Use standard variance estimation variables in the full 2019 file and 2020 records with a positive WTSA_P weight.

\* For SUDAAN, including a SUBPOPN statement restricting the sample to quarters 3 and 4 will help remind the analyst that they are looking at estimates based only on the last half of the year, and that any estimate of population totals should be multiplied by two.

\*\* In SUDAAN, if a record does not have a positive weight, then that case is dropped not only for point estimates, but also for variance estimation. Therefore, keeping the entire 2019 file will not increase the total available degrees of freedom. 2019 cases that were not reinterviewed may therefore be deleted from the file before analysis.

\*\*\* For an analysis involving children, the 2020 and 2019 weights for sample children (WTFA\_C) would need to be divided by two to produce correct population totals; there are no 2019 followback cases for children.