Behavioral Risk Factor

Surveillance System

Use of 2010 Multiple Version Questionnaire Data

(Version #2 - Revised: 04/12/2011)

The Behavioral Risk Factor Surveillance Branch will provide limited support for the landline survey data collection of multiple (three) questionnaire versions within the guidelines outlined below in 2010. The 2010 core instrument must be asked without any changes in all versions of the questionnaire. The optional modules can be included on all versions or exclusively on a single version, but must be asked during all twelve months of data collection. BRFSB provides an additional weighting variable for use with data collected from questions asked on one version of the questionnaire.

The guidelines below were provided by BRFSFB to assist states in making decisions regarding the implementation of a multiple questionnaires in 2010.

To reduce confusion about which weight to use with which variable, three additional data sets are available for 2010. These data sets contain the data from the states which conducted multiple version questionnaires and used optional modules in 2010. The list below shows the optional modules included in the data sets by state. There are four sub-headings to identify how a module was used by the state. "Common" indicates the module was used on all versions, "Survey 1" indicates modules used only on version 1, "Survey 2" indicates modules used only on version 2, "Survey 3" indicates modules used only on version 3.

2010 Multi Questionnaire states and modules:

California	**Common:** Random Child Selection, Childhood Immunization, High Risk/Health Care Worker **Survey 1:** Diabetes, Childhood Asthma Prevalence, Pre-Diabetes, Inadequate Sleep, Cancer Survivorship, Tetanus Diphtheria (Adults), Shingles (Zostavax or ZOS) **Survey 2:** Arthritis Burden, Anxiety and Depression
Colorado	**Survey 1:** Cancer Survivorship, Shingles (Zostavax or ZOS) **Survey 2:** Pre-Diabetes
Iowa	**Common:** Diabetes, Visual Impairment and Access to Eye Care, Random Child Selection, Childhood Asthma Prevalence, Pre-Diabetes, Childhood Immunization **Survey 2:** Cancer Survivorship
Kansas	**Common:** Random Child Selection, Childhood Asthma Prevalence **Survey 1:** Diabetes, Pre-Diabetes **Survey 2:** Arthritis Burden, Anxiety and Depression, Inadequate Sleep
Maine	**Survey 1:** Diabetes, Random Child Selection, Childhood Asthma Prevalence, Anxiety and Depression, Pre-Diabetes, Childhood Immunization **Survey 2:** Adverse Childhood Experience
Maryland	**Common:** Random Child Selection, Childhood Asthma Prevalence, Childhood Immunization **Survey 1:** Diabetes, Tetanus Diphtheria (Adults) **Survey 2:** Inadequate Sleep, Child Human Papilloma Virus (HPV)
Massachusetts	**Common:** Diabetes, Pre-Diabetes, Cancer Survivorship, Tetanus Diphtheria (Adults), Adult Human Popilloma Virus (HPV), Shingles (Zostavax or ZOS) **Survey 1:** Random Child Selection, Childhood Asthma Prevalence **Survey 2:** Anxiety and Depression **Survey 3:** Family Planning

Michigan	**Common:** Random Child Selection, Childhood Asthma Prevalence, Childhood Immunization, High Risk/Health Care Worker **Survey 1:** Diabetes, Arthritis Burden, Anxiety and Depression, Pre-Diabetes, Inadequate Sleep **Survey 2:** Arthritis Burden, Anxiety and Depression, Inadequate Sleep **Survey 3:** Cancer Survivorship
Nebraska	**Common:** Social Context, Random Child Selection, Childhood Asthma Prevalence, Veteran's Health **Survey 1:** Diabetes, Anxiety and Depression, Pre-Diabetes **Survey 3:** Inadequate Sleep, Adverse Childhood Experience
New Jersey	**Common:** Random Child Selection, Childhood Asthma Prevalence **Survey 1:** Diabetes, Anxiety and Depression, Cancer Survivorship, Caregiver, Excess Sun Exposure, Veteran's Health
New York	**Survey 1:** Diabetes, Random Child Selection, Childhood Asthma Prevalence, Pre-Diabetes, Childhood Immunization **Survey 2:** Visual Impairment and Access to Eye Care, Healthy Days (Symptoms), Caregiver **Survey 3:** Random Child Selection
Ohio	**Common:** Diabetes, Pre-Diabetes, Cancer Survivorship **Survey 1:** Visual Impairment and Access to Eye Care, Random Child Selection, Childhood Asthma Prevalence, Anxiety and Depression, Childhood Immunization **Survey 2:** Random Child Selection, Childhood Asthma Prevalence, Anxiety and Depression, Adverse Childhood Experience, Childhood Immunization
Oklahoma	**Common:** Random Child Selection, Childhood Asthma Prevalence **Survey 1:** Diabetes, Adult Asthma History, Pre-Diabetes, Cancer Survivorship, Excess Sun Exposure
Oregon	**Common:** Diabetes, Random Child Selection, Childhood Asthma Prevalence, Inadequate Sleep, Childhood Immunization, High Risk/Health Care Worker **Survey 2:** Family Planning, Pre-Diabetes
Pennsylvania	**Common:** Diabetes, Adult Asthma History, Random Child Selection, Childhood Asthma Prevalence, Pre-Diabetes, Child Human Papilloma Virus (HPV), Childhood Immunization **Survey 1:** Adverse Childhood Experience **Survey 2:** General Preparedness
Tennessee	**Common:** Diabetes, Adult Asthma History, Pre-Diabetes, Veteran's Health **Survey 1:** Caregiver, Cognitive Impairment **Survey 2:** Arthritis Burden, Random Child Selection, Childhood Asthma Prevalence, Tetanus Diphtheria (Adults), Child Human Papilloma Virus (HPV), Childhood Immunization, Shingles (Zostavax or ZOS)
Texas	**Common:** Random Child Selection, Childhood Asthma Prevalence, Child Human Papilloma Virus (HPV), Childhood Immunization **Survey 1:** Diabetes, Pre-Diabetes, Tetanus Diphtheria (Adults), Adult Human Popilloma Virus (HPV), Shingles (Zostavax or ZOS) **Survey 2:** Cancer Survivorship

Utah	**Common:** Diabetes, Random Child Selection, Childhood Asthma Prevalence, Childhood Immunization **Survey 2:** Pre-Diabetes, Cancer Survivorship **Survey 3:** Pre-Diabetes, Adverse Childhood Experience
Washington	**Common:** Random Child Selection, Childhood Asthma Prevalence **Survey 1:** Adverse Childhood Experience

The analysis of the multiple questionnaire data requires some careful consideration of which records to use with the appropriate weight. For the core questions and optional modules asked on the "Common" questionnaire the _FINALWT variable should be used to produce estimates. For optional modules used only on "Survey 1" the _FINALQ1 variable should be used to produce estimates for records with variable QSTVER = 11. For optional modules used only on "Survey 2" the _FINALQ2 variable should be used to produce estimates for records with variable QSTVER = 12. For optional modules used only on "Survey 3" the _FINALQ3 variable should be used to produce estimates for records with variable QSTVER = 13.

Minimum sample size: American Statistical Association Working Group has recommended that states using multiple versions of the questionnaire have an effective sample size of at least 2,500 for producing a statewide estimate for each version of the questionnaire. This implies a total sample greater than or equal to 2,500 multiplied by the number of questionnaire versions used in 2010. For example, to conduct three versions in 2010 would require a minimum sample size of at least 7,500 resulting in an effective sample size of 2500 for each version.

Number of regions for weighting the data (REGION):aware that geographically stratifying for weighting the data by more than one _REGION will reduce the weighting categories such that more collapsing across the weighting cells will be required. The implication of more collapsing is the weights provided for one version may not be as well distributed across the post-stratification cells if the number of completes available in a region is too small. New York, Ohio, and Texas had _REGION collapsed in split 1, split 2, and split 3; Utah had _REGION collapsed in split 2, and split 3; and Nebraska had _REGION collapsed in split 3.

Use of Optional Modules: The list will determine the modules expected by the editing programs and reports. If any module questions are altered, deleted, or not asked of each eligible respondent the entire year, the revised module must be treated as state-added questions and should not be included in the list of optional modules. Regardless of asking optional modules on one or both versions of questionnaire, module data will be stored in the same locations. Modules should be asked throughout all twelve months of the survey.

Sample:exported from CATI will need to have a field called QSTVER to identify the questionnaire version. This can be created by CATI programming or in the sample file prior to importing into CATI. The field is set in column 180 (PATH) in the sample file from Genesys. The default value is '10' to indicate only one questionnaire version. To assign sample to a specific version this field can be modified when loading the sample.

The first approach requires some preparation before loading the sample, but simplifies the data collection. Before importing the sample, replicates can be randomly assigned to each of the questionnaires. The questionnaire value (11 for Questionnaire 1, and1 2 for questionnaire 2, 13 for 3) can added to the end of the sample file using SAS, SPSS or another software that has randomization functions. A user-defined field called QSTVER is created to read questionnaire versions. The import layout of the sample file will need to include the user defined QSTVER field. The CATI uses the information from this field to determine which questionnaire to present. This method would also allow calculation of response rates for each questionnaire version. This approach requires a whole number multiple, of the number of questionnaire versions, of replicates for each geographic stratum.

The second approach is to use the CATI programming to control the assignment of the questionnaire. This allows different versions of the questionnaire to be assigned within the same replicate. The QSTVER can also be assigned within the CATI programming. For the first version set the QSTVER to a "11", the second version should have QSTVER set to "12", and so on. If the CATI programming approach is used, you may want to consider using quotas each month to limit the number of completes/partial completes for each version of the questionnaire. With this approach, sample management may be an issue particularly if the sample is geographically stratified. Calculation of a Response Rate for each version is not possible.

Weights:will produce an individual weight for each version of the questionnaire. The _FINALWT should be used with the core questions and any modules asked on all versions. The version 1 weight (_FINALQ1) should be used with analysis of variables specific to questionnaire version 1. Additional weights will be produced for corresponding versions of the questionnaire. These additional weights will be included in the state data file.
A separate aggregate data file for each questionnaire version will be produced to assist with analysis of module data for the public use web site and programs within CDC. The questionnaire version data file will contain the module data associated with the version and the corresponding weight.