

Attachment 16: Report on Recommendations for Changes in the Core/Rotating Core of the Behavioral Risk Factor Surveillance System (BRFSS)



Report on Recommendations for Changes in the Core/Rotating Core
of the Behavioral Risk Factor Surveillance System (BRFSS)

June 10, 2020

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Executive Summary

Proposed Changes to the Behavioral Risk Factor Surveillance System Questionnaire

Questionnaire Redesign Process

- Prompted by the increasing cost of administering the BRFSS questionnaire, decline in response rates for all population surveys, and increasing demand for questionnaire topics, the program seeks to improve the efficiency and effectiveness of the administration of the BRFSS.
- The program also seeks to enhance the scientific rigor of question development and inclusion to comply with OMB requirements and reduce respondent burden. This is the first step in a planned multi-year redesign.

Criteria for BRFSS Core Question Removal

The list below summarizes the criteria used to recommend removal of questions/ sections from the core.

1. Items that produce data found in other data sources may be subject to removal or reduction in frequency of administration.
2. No question should be included on the BRFSS which is focused on a condition/behavior which is not applicable to 3% of the adult population.
3. Questions which produce data that is not useful for state-level public health prevalence estimates will be removed.
4. Questions which are difficult to administer are subject to removal.
5. Questions which produce the same estimates from year-to-year are subject to changes in periodicity.
6. Questions on the impact of a condition or behavior should be included as module items.
7. No question should appear on the core when the sole purpose for the inclusion is to determine whether module questions should be asked of the respondents.

Stakeholder Engagement

- Solicited input from state health departments, CDC programs and other federal agencies who have sponsored questions in the past, and primary users of BRFSS data.
- The BRFSS Working Group presented their recommendations, which were informed by feedback from the individual state coordinators at the April 2018 BRFSS meeting.
- CDC presented initial feedback and redesign updates at the meeting of the CDC program question sponsors in July 2019. CDC programs were previously asked to comment on the public health necessity and utility of retaining current questions and the potential impact of removing or modifying questions.
- States largely suggested removing questions or moving core sections to modules, while sponsoring programs focused on the retention of questions without changes to the periodicity of data collection.

Overarching Recommended Changes

- Many of the proposed changes are minor, including moving some text from the prologue of the section to interviewer notes, or slight changes in question wording or removal of some minor text.

- Other recommendations include moving some core sections to modules, and/or reducing the frequency of data collection for some topics.
- One topic (use of e-cigarettes), which is currently a module, was recommended for addition to the core.

Summary Table of Recommendations for Core Sections

Note: This table does not reflect proposed changes in question wording, coding, or programming.

Table ES1. Summary of BRFSS Core Sections as Recommended	
Periodicity of Data Collection	Content / Core Section
Annual	<ul style="list-style-type: none"> • General Health • Healthy Days¹ • Healthcare Access¹ • Chronic Disease¹ • Tobacco Use¹ • Alcohol Consumption • Physical Activity¹ • Immunization • HIV¹
Even- Year Rotating Core	<ul style="list-style-type: none"> • HIV/AIDS^{1,2} • Oral Health • Breast / Cervical Cancer • Prostate Cancer Screening¹ • Colorectal Cancer Screening¹
Odd-Year Rotating Core	<ul style="list-style-type: none"> • Hypertension Awareness • Cholesterol Awareness¹
Three-Year Core	<ul style="list-style-type: none"> • Seat Belt Use/Drinking and Driving² • Immunization • Sleep² • Falls²
4-year core	<ul style="list-style-type: none"> • Fruits and Vegetables • Physical Activity^{1,2}
Remove From Core	<ul style="list-style-type: none"> • Arthritis Burden
¹ Changes recommended in question wording/format or response set.	
² Changes recommended in frequency of administration.	

Anticipated Impact

Implementing the recommendations above will reduce the length of the core and minimize respondent burden. Although it is difficult to determine without implementation, the core questionnaire would likely be reduced by 6 minutes. Currently the respondent selection process and the core questionnaire take just under 22 minutes on average with the household selection/screening and approximately 14-17 minutes without household section/ screening. The tables below illustrate the number of questions in each of the temporal sections of the core questionnaire beginning in 2021 (Table ES2) and the sections/number of questions for each core questionnaire 2021-2026 (Table ES3).

Table ES2. Number of questions in each type of core section		
Overview		
Type of Survey	Current # of Questions	# Questions post-rec. changes
Annual Core	60	60
Even- Year Rotating Core	25	19
Odd-Year Rotating Core	25	7
Three-Year Core	3	8
4-Year Core	0	13
Total	0	0

Table ES3. Annual Core Sections by Year 2021-2026												
	2021	#Q	2022	# Q	2023	#Q	2024	# Q	2025	# Q	2026	# Q
Health Status	√	1	√	1	√	1	√	1	√	1	√	1
Healthy Days	√	3	√	3	√	3	√	3	√	3	√	3
Health Care Access	√	4	√	4	√	4	√	4	√	4	√	4
Exercise	√	1	√	1	√	1	√	1	√	1	√	1
Hypertension Awareness	√	2			√	2			√	2		
Cholesterol Awareness	√	3			√	3			√	3		
Chronic Health Conditions	√	13	√ (addition of arthritis question)	14	√	14	√	14	√	14	√	14
Arthritis	√	6										
Demographics	√	19	√ (removal of phone questions)	17	√	17	√	17	√	17	√	17
Disability	√	6	√	6	√	6	√	6	√	6	√	6
Tobacco Use	√	4	√	4	√	4	√	4	√	4	√	4
Alcohol Consumption	√	4	√	4	√	4	√	4	√	4	√	4
Immunization	√	4	√	4	√	4	√	4	√	4	√	4

	(place flu shot)		(TDAP)		(shingles)		(place flu shot)		(TDAP)		(shingles)	
H.I.V./AIDS	√	2	√	3	√	2	√	3	√	2	√	3
			(with risk Q)				(with risk Q)				(with risk Q)	
Falls					√	2					√	2
Physical Activity					√	7						
Breast and Cervical Cancer			√	7			√	7			√	7
Prostate Cancer			√	6			√	6			√	6
Colorectal Cancer			√	10			√	10			√	10
Drinking Driving/ Seat Belt Use					√	2					√	2
Inadequate Sleep			√	1					√	1		
Oral Health			√	2			√	2			√	2
Fruits and Vegetables	√	6							√	6		
Total Core Q		72		85		76		84		66		88

Introduction

The Behavioral Risk Factor Surveillance System (BRFSS) is the nation's premier system of health-related telephone surveys that collect state data about U.S. residents regarding their health-related risk behaviors, chronic health conditions, and use of preventive services. Established in 1984 with 15 states, BRFSS now collects data in all 50 states as well as the District of Columbia and three U.S. territories. BRFSS completes more than 400,000 adult interviews each year, making it the largest continuously conducted health survey system in the world. By collecting behavioral health risk data at the state and local level, BRFSS has become a powerful tool for targeting and building health promotion activities.

As a result, BRFSS users have increasingly demanded more data and asked for more questions on the survey. Currently, there is a wide sponsorship of the BRFSS survey, including most divisions in the CDC National Center for Chronic Disease Prevention and Health Promotion; other CDC centers; and other federal agencies.

The BRFSS relies on independent samples of each state and participating US territory. The states use a standardized core questionnaire—where some core questions are asked every year (fixed core) and others are asked every other year (rotating core)—optional modules—that states can choose to use according to need—and state-added questions. BRFSS also has included space for as many as four emerging core questions for high-priority topics such as vaccine shortage, and influenza-like illness.

In recent years, the overall response rates of all population surveys have declined. In addition, costs for data collection have increased. Although a large number of agencies and programs have been included in the core component of the BRFSS, budgetary and response burden parameters necessitate a review of the required questions on the core and rotating core components of the questionnaire.

Beginning in 2017, the staff of the Population Health Surveillance Branch (PHSB) of the Division of Population Health (DPH) began to collect information on the validity, reliability, data uses and administrative efficiencies of all questions which were included in the core components. The purpose of this effort was to redesign the questionnaire. During 2018, feedback was solicited from the state health departments, CDC programs, federal agencies which sponsored questions in the past and stakeholders, who are the primary users of the BRFSS data. Criteria for retention of questions in the core were also developed.

This report presents the recommendations for each of the questions which currently appear on the annual, even-numbered year and odd-numbered year core questionnaires. In many instances, recommendations are to retain annual core questions. In other cases, recommendations are made to move questions from the core to optional modules, and/or to decrease the periodicity of the administration of questions or core sections. Minor question format and interviewer note changes are also recommended.

This report does not address a number of other efforts currently underway to review the BRFSS protocols. Concurrent with the changes in the questionnaire, which are anticipated in 2022, sampling and mode changes may also be made. However, these changes are not discussed within the

context of the questionnaire, itself. The sole purpose of this report is to examine the questions which will be included on the core sections or the BRFSS questionnaire.

This report is not the final outcome of the questionnaire redesign effort by the PHSB and DPH. In October of 2020, a panel of survey methodologists will also review these recommendations. In addition pilots on methods are currently underway and/or planned for 202-2022. Methods to maximize response and provide efficient, valid protocols for data collection will continue to be explored and adopted.

The BRFSS

The BRFSS is a partnership between state/territorial health departments, the sponsoring programs and agencies of the federal government and the Centers for Disease Control and Prevention (CDC). Each of the partners has a unique set of responsibilities (See Figure 1). The survey is administered by the Population Health Surveillance Branch (PHSB) of the Division of Population Health (DPH) of the Centers for Disease Control and Prevention. The CDC roles include promulgate standards of data collection, provide cognitive testing and validation of questions, provide technical assistance and training, maintain reference sets of questions, provide jurisdiction-level data for comparison purposes, provide coordination and facilitate communication between partners, and provide funding for portions of BRFSS operations at the state level. The state health departments are responsible for the administration of data collection, sample design, adoption of annual optional modules, submission of data to the CDC for post-data collection weighting, adherence to recommended methodologies, participating in BRFSS partnership sponsored training and meetings. CDC and other agency programs have the responsibility for the proposal of new questions or sections (including research on past use), funding to support questions, collaboration with cognitive testing, participation in CDC sponsored training and meetings as needed, and providing guidance on data analysis and use.

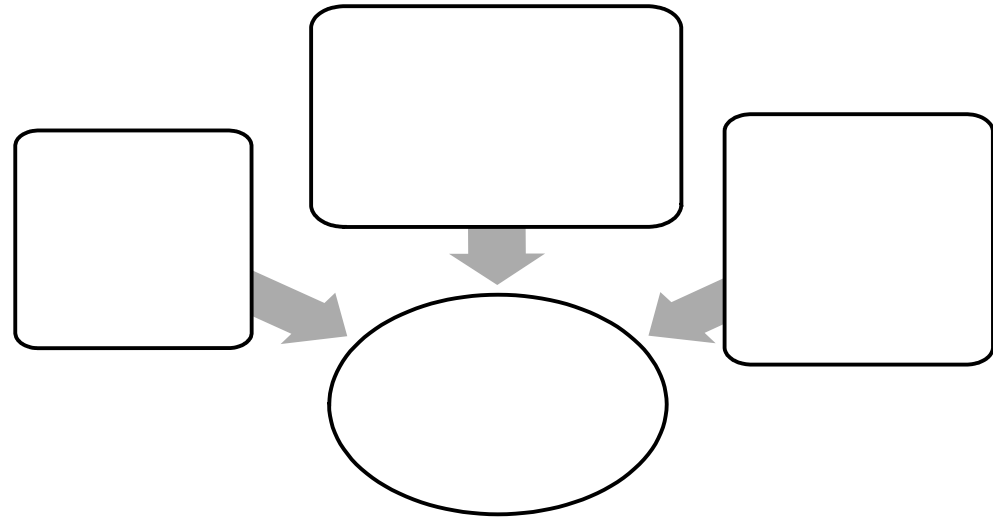


Figure 1: The BRFSS Partnership

The partnership is essential to the success and significance of the BRFSS. Since the purpose of the BRFSS, as noted above, is to collect state-specific data, the central role of the state health department is of paramount importance. State health departments determine specific content in a state-added question section and determine which of the optional modules will be included in the state questionnaire. All BRFSS partners take part in a shared decision-making process for question proposal and adoption, data collection protocols, training, and data use at an annual meeting (generally in the spring).

The Process for BRFSS Question Adoption and Modification

The process by which BRFSS questions are adopted or modified is outlined in Figure 2 below. The timeline for the adoption of questions, from the time that programs propose them, is approximately 18 months. Since 2018, due to the requirement for OMB approval of new questions, the PHSB has prohibited the introduction of new questions during years when only OMB Change Requests are submitted. Since the current OMB review is valid until March 31, 2022, new questions may be proposed for the 2022-2025 questionnaires. All questions which have been previously reviewed and approved by OMB (whether as modules or core sections) may be used on the questionnaire. A list of OMB approved questions/modules/sections can be obtained from PHSB staff if programs need such information to determine their upcoming questionnaire submissions.

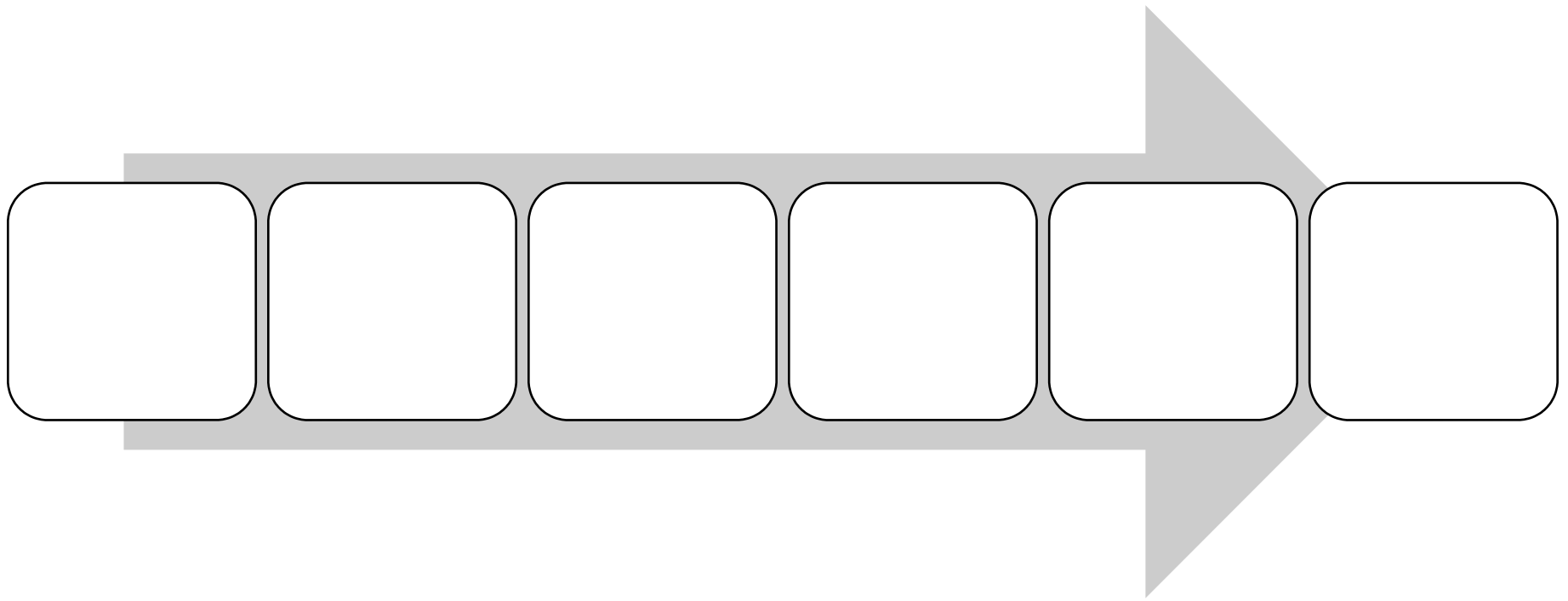


Figure 2: The BRFSS Question Proposal Process

All new, modified or underperforming questions must be cognitively tested. The sponsoring program is required to support the cost of cognitive tests. Beginning in 2020, questions will undergo more robust cognitive tests than in the past. Approximately 30-40 tests will be conducted for each question proposed. Programs should refer to the annual form to propose new questions to anticipate costs for these tests. Programs are highly encouraged to harmonize questions with other federal surveys, when appropriate. Programs should especially take note of the format and wording of similar questions on the National Health Interview Survey (NHIS). The PHSB staff will be available to assist program as they develop question for adoption. The PHSB may be used to administer the cognitive tests, or programs may use the cognitive testing facilities at other federal agencies or private vendors. The cognitive testing reports from sources other than the PHSB must be submitted with the question proposals (see Appendix A). A detailed list of the steps in the process for the changes to the BRFSS questionnaire is provided below. All questions and modules require the vote and approval of state coordinators during the BRFSS questionnaire meeting in 2020. Note that for 2021, the margin of the vote is 70% for modules and 80% for core question updates. The CDC submits new OMB packages for the BRFSS every three years. New questions may be proposed only during years when OMB packages are submitted. In other years, editorial changes to questions will be reviewed by the Advisory Council. Renewal of funding for existing modules or minor question changes will not go through the Advisory Council but may require cognitive and field testing as well as state coordinator votes. The forms provided in this document are needed to begin the process (step 1). Note that in 2020, due in part to the change in the NOFO and in part to the

interruption in travel and in-office work due to the COVID response the meeting will be held in October, rather than during the usual schedule of April/May. The steps in the process include:

1. **CDC and other federal programs submit the Questionnaire Proposal:** The first step in the approval process to add or modify questions on the BRFSS is initiated by CDC programs, other federal agencies or entities through a Questionnaire Proposal and Funding Information Form. This proposal includes the source of the question(s), performance (if known—e.g., evidence of validity, reliability, cognitive testing), public health importance, and analytic plan. The two-part forms for submission are provided herein.
2. **Review by BRFSS Technical Assistance Team:** The completed application is then submitted to the BRFSS Technical Assistance (TA) Team. This team is responsible for progressing questions through the questionnaire development process. It will act as a liaison between stakeholders and the BRFSS Advisory Council for process adherence. The TA Team reviews applications and if necessary, recommend any preliminary changes.
3. **Review by BRFSS Working Group:** The TA team will then forward the proposals that request substantive (non-editorial) modification of questions and/or propose new questions or modules to the BRFSS Working Group for review. The Working Group and other CDC internal reviewers comprise an Advisory Council, which may convene or review items via email to determine whether new question applications adhere to BRFSS's purpose and, if necessary, makes recommendations for changes to the questions. It also reviews any available cognitive testing results provided by the applicant and addresses any issues. Finally, the council recommends (or denies) the application's advancement to the next step in the process through a preliminary vote.
4. **Cognitive Testing:** Next, the council's preliminary approved questions are forwarded for cognitive testing. The cognitive testing usually includes a private focus group during a first round and a small sample of telephone respondents in a second round. The purpose of cognitive testing is to identify question delivery issues that may come up during an actual interview. Based upon the results of cognitive testing, changes may be recommended to the applicant. The applicant is then asked to revise and resubmit.
5. **BRFSS Coordinator Vote:** Approved questions are sent to states for review. The questions for the 2021 questionnaire are then presented by the sponsor at the BRFSS Questionnaire Meeting in 2020. BRFSS state coordinators or their designees vote to include or exclude questions from the BRFSS questionnaire. A minimum approval rate of 70% for module questions and 80% for core questions must be achieved for inclusion on the questionnaire.
6. **Field Testing:** Once questions have achieved the required vote of approval from state coordinators, they are field tested by a host state. This field test is conducted on a sample size of 300 telephone respondents in order to identify any remaining issues with the delivery of new questions. The questions included in the field test require annual OMB approval. The BRFSS TA Team conducts briefings with BRFSS interviewers before and after their shifts inquiring about issues that may have arisen during the interviews. The interviews are also monitored by the BRFSS TA Team for quality assurance. The compiled data is then sent back to the TA Team and analyzed for any issues. Any remaining issues are again communicated to the applicant and necessary revisions are made to the questions. The questions are also sent for Spanish translation.
7. **CDC Clearance:** The survey containing the new and existing questions is sent through CDC clearance and requires annual OMB review and approval.

8. OMB Approval: The questionnaire requires annual OMB review and approval.
9. Implementation: Upon OMB approval, the final BRFSS questionnaire is sent to the coordinators for implementation.
10. CATI Programming: The Survey Operations Team at CDC PHSB then completes the CATI programming.
11. State Administration: The survey is then administered at the state-level.

The 2021/2022 BRFSS Questionnaire Redesign

Due to the increased costs of the administration of the BRFSS over time, and the general decline in CDC budget to fund the states for data collection, many states have taken a more prominent role in funding BRFSS activities. Although states are free to adopt their own modules and state added questions, the length of the core component, and the usefulness of some questions which have remained on the core over time has come into question. Efforts to reduce the length of the core questionnaire have been made in the past. CDC programs often are reluctant to make changes in the questionnaire in order to maintain trend analyses. However, given the budgetary environment at both the state and federal level to support the BRFSS, it is clear that some concessions must be made to reduce the amount of interviewer time to complete interviews, allow the states, which bear a more substantial burden of cost to determine their questions and to remove questions which inhibit the efficient administration of the questionnaire. In addition, the oversight of the OMB, which was first undertaken in 2015, has resulted in the need to tighten statistical rigor. The redesign process will allow the BRFSS to comply with requirements of the OMB oversight, notably increased efforts to ensure that respondent burden is minimized and that questions undergo rigorous testing and piloting. In 2018 a list of criteria for all questions to be included in the BRSFSS was created. These criteria are based on industry standards for survey design, past performance of questions, information from BRFSS data collectors and cognitive, pilot and field test results. The criteria are listed below:

Criteria for BRFSS Core Question Removal or Modification

1. Items that produce data found in other data sources may be subject to removal or reduction of the periodicity of data collection. Most questions which appear on the BRFSS are also found in the NHIS.
2. No question should be included on the BRFSS which is focused on a condition/behavior which is not applicable to 3% of the adult population. The purpose for this standard is to ensure that enough data will be collected to conduct analyses.
3. Questions which produce data that is not useful for state-level public health prevalence estimates will be removed. Programs which submit or propose questions must have an analysis plan, complete with programming and justification for the inclusion of the questions. The use of

aggregated state responses does not indicate that the data are used by state and therefore researchers could use national data sources rather than the BRFSS to conduct analyses.

4. Questions which are difficult to administer are subject to removal. Difficulty in administration is measured by:
 - a. Long prologues, to explain the section/questions to the respondent
 - b. Extensive interviewer notes to account for varying interpretation of the questions
 - c. Long response times (as measured by seconds per question or section)
 - d. Lengthy response options (especially when there is no evidence of analysis by the specific items in the list of responses)
 - e. Large proportion of respondents who indicate that they do not know or refuse to offer a response
 - f. Sections/questions which result in respondent break off at specific points in the questionnaire
 - g. Sections/questions which are redundant or result in respondent commenting that the topic has already been covered
 - h. Questions (including response sets and interviewer notes) which do not sit onto a single screen and which require interviewers to move across several screens in order to ask question stems or code responses
 - i. Questions which include complex or difficult to pronounce technical or medical terms
 - j. Questions which require interviewers to extensively probe for responses
5. Questions which include more than one set of responses (such as a response which indicates a second question will be asked as part of the same numbered item). These questions will be cut into separate items.
6. Questions which ask respondents about the health status or condition of others (proxy questions) except for childhood asthma.
7. Questions which produce the same estimates from year-to-year are subject to changes in periodicity.
8. Questions on the core should be restricted to information on a health status or behavior. Questions on the impact of a condition or behavior should be included as module items. This has been the standard in the past and application of this standard will only affect a few questions.
9. No question should appear on the core when the sole purpose for the inclusion is to determine whether module questions should be asked of the respondents. Such questions will be moved to the modules to which they apply.
10. Questions which have not been cognitively tested using OMB approved methods are subject to removal until such time as the sponsoring program conducts tests which indicate the question is reliable and valid.

The BRFSS Core Questionnaire Redesign Process

Beginning in 2018 the staff of the PHSB began to move toward a core questionnaire redesign. The questionnaire redesign was undertaken in tandem with changes in protocol, a proposal to move to cellphone only sampling and other adjustments. It should be noted that the PHSB has continually undertaken pilots to determine the feasibility of changes in other aspects of the BRFSS including changes in mode, moves to an address-based sample (ABS; rather than the currently used Random Digit Dialing (RDD) sample). Appendix B outlines the pilots undertaken in the past. Such pilots will continue to be implemented to determine the most efficient operation of other aspects of the BRFSS.

A number of steps were undertaken to solicit input from states, programs which sponsor questions and other stakeholders. Presentations on the redesign were made to the attendees at the 2019 BRFSS conference. A meeting of the CDC program sponsors was held in July 2019, at which initial findings and redesign updates were presented to question sponsors. Feedback from individual state health departments was obtained by the use of a large template of current core and rotating core questions. States provided comments for each question. Following a compilation of these comments, the BRFSS Working Group members (elected by region from among the state health department representatives), made further recommendations and refined the comments and suggestions by the larger group. These recommendations were presented back to the states at the April 2019 BRFSS conference. CDC programs were asked to participate in the process by providing information on the necessity of retaining questions, the current use of questions and the impact or removal of the question. This information was collected by providing a series of questions online. Persons who had proposed questions for the BRFSS or who were designated at points-of-contact by their program were invited to comment. Several meetings with stakeholders was also held by leadership of the DPH and the PHSB to obtain feedback on the utility of the data and to collect suggestions for change.

While some input focused on improvements in administrative ease, input from other stakeholders focused on the retention of the questions without decrease in the periodicity of data collection. Many of the suggestions for change are minor (including moving some text from the prologue of the section to interviewer notes, minor changes in question wording or removal of some minor text). Other suggestions for change included moving some core sections to modules, and/or reducing the frequency of data collection for some topics. One topic (the use of e-cigarettes), which currently is included as a module, was recommended for addition to the core. It should be noted that programs which have sections moved from the core to modules will be required to provide funding for the inclusion of those modules. Currently the questions /sections which appear on the core do not incur costs to the programs. The table below provides an overview of the recommended sections which would appear in future BRFSS core questionnaires by year. All other topics would be offered in optional modules for adoption by individual states for state-specific questionnaires.

Table 1. Summary of BRFSS Core Sections as Recommended	
Periodicity of Data Collection	Content / Core Section
Annual	<ul style="list-style-type: none"> • General Health • Healthy Days¹ • Healthcare Access¹ • Chronic Disease¹ • Tobacco Use^{1,2} • Alcohol Consumption • Physical Activity¹ • Immunization • HIV¹
Even- Year Rotating Core	<ul style="list-style-type: none"> • HIV/AIDS^{1,2} • Oral Health • Breast / Cervical Cancer • Prostate Cancer Screening¹ • Colorectal Cancer Screening¹
Odd-Year Rotating Core	<ul style="list-style-type: none"> • Hypertension Awareness • Cholesterol Awareness¹
Three-Year Core	<ul style="list-style-type: none"> • Seat Belt Use/Drinking and Driving² • Immunization • Sleep² • Falls²
Four-Year Core	<ul style="list-style-type: none"> • Fruits and Vegetables • Physical Activity¹
Remove From Core	<ul style="list-style-type: none"> • Arthritis Burden
¹ Changes recommended in question wording/format or response set. ² Changes recommended in frequency of administration.	

Question-by-Question Recommendations for Core Sections

The table below provides item-by-item recommendations for core changes. Justification numbers in the right column correspond to the criteria list in the previous section.

Table 2. Recommended Changes by Core Question				
Core Section	Question text	Periodicity	Changes recommended in questions/ coding/ programming	Justification for Change
General Health	Would you say that in general your health is—Excellent/Very good/Good/Fair/Poor?	Annual	None	
Healthy Days	Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?	Annual	Allow interviewer to code 88 when respondent indicates that this never happens. This would prevent the requirement of having a number for a response.	Improved efficiency in administration (criteria #4)
	Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?			
	During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?			
Healthcare Access	What is the primary source of	Annual	Previous question on whether	The change will produce the

Table 2. Recommended Changes by Core Question

Core Section	Question text	Periodicity	Changes recommended in questions/ coding/ programming	Justification for Change
	your health care coverage?		<p>the respondent had insurance to be replaced by question on type of insurance with option to respond that there was no insurance.</p> <p>Replace wording with “What is the primary source of your health insurance”?</p>	<p>same data with only one, rather than two questions. Moreover, the phrase “health care coverage” is not clear to respondents, who often have to be told that the question refers to insurance. (Criteria #4)</p>
	Do you have one person you think of as your personal doctor or health care provider?		<p>There is a recommendation that the program revise this question to include professional practices rather than single doctors, which the respondent thinks of as their personal healthcare providers. New wording would be “Do you have one person or a group of doctors that you think of as your personal health care provider?”</p>	<p>States and data collectors report that respondents are confused as to whether to include groups of doctors are personal health care providers. (Criteria #4)</p>
	Was there a time in the past 12 months when you needed to see a doctor but could not because of cost?		<p>There is a recommendation that the wording of the question be changed, as respondents seem to have difficulty in hearing the last part of the question. The word “cost” is especially difficult for respondents to understand at the end of the sentence. New</p>	<p>Improved efficiency in administration. (Criteria #4)</p>

Table 2. Recommended Changes by Core Question

Core Section	Question text	Periodicity	Changes recommended in questions/ coding/ programming	Justification for Change
			wording would be “Was there a time in the past 12 months when you needed to see a doctor but could not because you could not afford it?”	
	About how long has it been since you last visited a doctor for a routine checkup?		None	
Hypertension Awareness	Have you ever been told by a doctor, nurse or other health professional that you have high blood pressure?	Odd-year rotation	None	
	Are you currently taking medicine for your high blood pressure?		None	
Cholesterol Awareness	Blood cholesterol is a fatty substance found in the blood. About how long has it been since you last had your blood cholesterol checked?	Odd-year rotation	Recommendation to remove the word “blood” as most respondents understand “cholesterol” but are confused by “blood cholesterol.” New wording will be “Cholesterol is a fatty substance found in the blood. About how long has it been since you last had your cholesterol checked?”	Improved efficiency in administration. (Criteria #4)
	Have you ever been told by a doctor, nurse or other health professional that your blood cholesterol is high?		Recommendation to remove word “blood” from question.	Improved efficiency in administration. (Criteria #4)
	Are you currently taking		Recommendation to remove	Improved efficiency in

Table 2. Recommended Changes by Core Question

Core Section	Question text	Periodicity	Changes recommended in questions/ coding/ programming	Justification for Change
	medicine prescribed by a doctor or other health professional for your blood cholesterol?		word “blood” from question.	administration, (Criteria #4)
Chronic Disease	(Ever told) you that you had a heart attack also called a myocardial infarction?	Annual	None	
	(Ever told) (you had) angina or coronary heart disease?		None	
	(Ever told) you had a stroke?		None	
	(Ever told) (you had) asthma?		None	
	Do you still have asthma?		None	
	(Ever told) (you had) skin cancer?		None	
	(Ever told) you had any other types of cancer?		None	
	(Ever told) (you had) (chronic obstructive pulmonary disease) COPD, emphysema or chronic bronchitis?		Minor change: interviewer will just say COPD with option of not saying “chronic obstructive pulmonary disease.”	Improved efficiency in administration. (Criteria #4)
	(Ever told) (you had) some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia?		None	
	(Ever told) (you had) a depressive disorder (including depression, major depression, dysthymia, or minor depression)?		None	
(Ever told) (you had) some form of arthritis, rheumatoid		Moved back into Chronic Disease Section from Arthritis	This change is as a result of the recommendation to remove the	

Table 2. Recommended Changes by Core Question

Core Section	Question text	Periodicity	Changes recommended in questions/ coding/ programming	Justification for Change
	arthritis, gout, lupus, or fibromyalgia?		Section.	burden of arthritis section back to a module. See note below. (Criteria #9)
	Not including kidney stones, bladder infection or incontinence, were you ever told you have kidney disease?		None	
	(Ever told) (you had) diabetes?		None	
	If “Yes” and respondent is female, ask: “Was this only when you were pregnant?”		None	
	How old were you when you were told you had diabetes?		None	
Arthritis	Has a doctor or other health professional ever suggested physical activity or exercise to help your arthritis or joint symptoms?	Remove from core and create module.	Move to Arthritis Burden Module.	This is the only set of questions on disease burden in the core. All other programs have such questions in their modules. (Criteria #8)
	Have you ever taken an educational course or class to teach you how to manage problems related to your arthritis or joint symptoms?			
	Are you now limited in any way in any of your usual activities because of arthritis or joint symptoms?			
	In the next question, we are referring to work for pay. Do arthritis or joint symptoms now			

Table 2. Recommended Changes by Core Question

Core Section	Question text	Periodicity	Changes recommended in questions/ coding/ programming	Justification for Change
	affect whether you work, the type of work you do or the amount of work you do? Please think about the past 30 days, keeping in mind all of your joint pain or aching and whether or not you have taken medication. During the past 30 days, how bad was your joint pain on average on a scale of 0 to 10 where 0 is no pain and 10 is pain or aching as bad as it can be.			
Tobacco Use	Have you smoked at least 100 cigarettes in your entire life?	Annual	Minor	Program recommendation to include new interviewer note excluding e-cigarettes
	Do you now smoke cigarettes every day, some days, or not at all?	Annual	None	
	During the past 12 months, have you stopped smoking for one day or longer because you were trying to quit smoking?	Remove from core	Remove	Move to module
	How long has it been since you last smoked a cigarette, even one or two puffs?	Remove from core	Remove	Move to module
	Do you currently use chewing tobacco, snuff, or snus every day, some days, or not at all?	Annual	None	
	Do you now use e-cigarettes or	Annual	Moved from module to core;	Since the prevalence of e-

Table 2. Recommended Changes by Core Question

Core Section	Question text	Periodicity	Changes recommended in questions/ coding/ programming	Justification for Change
	other electronic vaping products every day, some days or not at all?		minor changes in interviewer notes proposed as well.	cigarette use is dynamic, it is recommended that this question appear in the core.
Alcohol Consumption	During the past 30 days, how many days per week or per month did you have at least one drink of any alcoholic beverage such as beer, wine, a malt beverage or liquor?	Annual	None	
	One drink is equivalent to a 12-ounce beer, a 5-ounce glass of wine, or a drink with one shot of liquor. During the past 30 days, on the days when you drank, about how many drinks did you drink on the average?		None	
	Considering all types of alcoholic beverages, how many times during the past 30 days did you have X [CATI X = 5 for men, X = 4 for women] or more drinks on an occasion?		None	
	During the past 30 days, what is the largest number of drinks you had on any occasion?		None	
Fruits and Vegetables	Not including juices, how often did you eat fruit?	Change to 4-year rotation		There are several criteria for the changes in periodicity: 1) High drop of rate 2) High number of DNK
	Not including fruit-flavored drinks or fruit juices with added			

Table 2. Recommended Changes by Core Question

Core Section	Question text	Periodicity	Changes recommended in questions/ coding/ programming	Justification for Change
	<p>sugar, how often did you drink 100% fruit juice such as apple or orange juice?</p> <p>How often did you eat a green leafy or lettuce salad, with or without other vegetables?</p> <p>How often did you eat any kind of fried potatoes, including French fries, home fries, or hash browns?</p> <p>How often did you eat any other kind of potatoes, or sweet potatoes, such as baked, boiled, mashed potatoes, or potato salad?</p> <p>Not including lettuce salads and potatoes, how often did you eat other vegetables?</p> <p>Not counting what you just told me about, during the past month, about how many times per day, week, or month did you eat OTHER vegetables? Examples of other vegetables include tomatoes, tomato juice or V-8 juice, corn, eggplant, peas, lettuce, cabbage, and white potatoes that are not fried such as baked or mashed potatoes.</p>			<p>and refused</p> <p>3) Disproportionate time to administer the questions</p> <p>4) Evidence of lack of reliability of responses</p> <p>5) Long interviewer notes</p> <p>6) Lack of statistical analysis plan provided to the states by the program.</p> <p>(Criteria #4; #3)</p>

Table 2. Recommended Changes by Core Question

Core Section	Question text	Periodicity	Changes recommended in questions/ coding/ programming	Justification for Change
Physical Activity	During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?	Annual		
	What type of physical activity or exercise did you spend the most time doing during the past month?	Change to 4-year rotation	Decrease the number of responses in the response sets to allow question to fit onto CATI screen.	
	How many times per week or per month did you take part in this activity during the past month?			
	And when you took part in this activity, for how many minutes or hours did you usually keep at it?			
	What other type of physical activity gave you the next most exercise during the past month?			
	How many times per week or per month did you take part in this activity during the past month?			
	And when you took part in this activity, for how many minutes or hours did you usually keep at it?			
	<p>There are several criteria for the change in periodicity:</p> <ol style="list-style-type: none"> 1) High drop of rate 2) High number of DNK and refused 3) Disproportionate time to administer the questions 4) Evidence of lack of reliability of responses 5) Long interviewer notes 6) long list of activities which 			

Table 2. Recommended Changes by Core Question

Core Section	Question text	Periodicity	Changes recommended in questions/ coding/ programming	Justification for Change
	During the past month, how many times per week or per month did you do physical activities or exercises to strengthen your muscles? Do not count aerobic activities like walking, running, or bicycling. Count activities using your own body weight like yoga, sit-ups or push-ups and those using weight machines, free weights, or elastic bands.		Reword this question and change order of questions to reduce interviewer confusion.	require interviewers to retain paper copies from which to code 6) Lack of statistical analysis plan to indicate that long lists are used. (Criteria #4; #3) Changes should be made to make the questions efficient even as module.
Drinking and Driving and Seat Belt Use	How often do you use seat belts when you drive or ride in a car? Would you say	Three-year rotation	Offer as module in off years.	Data are static and do not need to be collected as frequently. (Criteria #7)
	During the past 30 days, how many times have you driven when you've had perhaps too much to drink?			
Immunization	During the past 12 months, have you had either flu vaccine that was sprayed in your nose or flu shot injected into your arm?	Annual	None	
	During what month and year did you receive your most recent flu vaccine that was sprayed in your nose or flu shot injected into your arm?			
	At what kind of place did you	Three-year	None	This is not a change- this

Table 2. Recommended Changes by Core Question

Core Section	Question text	Periodicity	Changes recommended in questions/ coding/ programming	Justification for Change
	get your last flu shot or vaccine?	rotation (current)		question is currently in a three-year rotation.
	A pneumonia shot or pneumococcal vaccine is usually given only once or twice in a person's lifetime and is different from the flu shot. Have you ever had a pneumonia shot also known as a pneumococcal vaccine?	Annual	None	
	Have you ever had the shingles or zoster vaccine?	Three-year rotation (current)	None	This is not a change- this question is currently in a three-year rotation.
	Have you received a tetanus shot in the past 10 years?	Three-year rotation (current)	None	This is not a change- this question is currently in a three-year rotation.
HIV/AIDS	Have you ever been tested for HIV? Do not count tests you may have had as part of a blood donation. Include testing fluid from your mouth.	Annual	None	
	Not including blood donations, in what month and year was your last HIV test?	Annual	None	
	I am going to read you a list. When I am done, please tell me if any of the situations apply to you. You have injected any drug other than those prescribed for you in the past year. You have	Even-year rotation	None	This question is long and data are static, making it appropriate to move to less frequent administration. (criteria #7; #4)

Table 2. Recommended Changes by Core Question

Core Section	Question text	Periodicity	Changes recommended in questions/ coding/ programming	Justification for Change
	been treated for a sexually transmitted disease or STD in the past year. You have given or received money or drugs in exchange for sex in the past year. You had anal sex without a condom in the past year. You had four or more sex partners in the past year. Do any of these situations apply to you?			
Sleep	On average, how many hours of sleep do you get in a 24-hour period?	Three-year rotation	Offer as module in off years.	(Criteria #7)
Oral Health	Including all types of dentists, such as orthodontists, oral surgeons, and all other dental specialists, as well as dental hygienists, how long has it been since you last visited a dentist or a dental clinic for any reason?	Even-year rotation	None	
	Not including teeth lost for injury or orthodontics, how many of your permanent teeth have been removed because of tooth decay or gum disease?		None	
Falls	In the past 12 months, how many times have you fallen?	Three-year rotation	Offer as module in off years.	(Criteria #7)
	How many of these falls caused an injury that limited your		None	

Table 2. Recommended Changes by Core Question

Core Section	Question text	Periodicity	Changes recommended in questions/ coding/ programming	Justification for Change
	regular activities for at least a day or caused you to go to see a doctor?			
Breast/Cervical Cancer	The next questions are about breast and cervical cancer. Have you ever had a mammogram?	Even-year rotation	None	
	How long has it been since you had your last mammogram?		None	
	Have you ever had a Pap test?		None	
	How long has it been since you had your last Pap test?		None	
	An H.P.V. test is sometimes given with the Pap test for cervical cancer screening. Have you ever had an H.P.V. test?		None	
	How long has it been since you had your last H.P.V. test?		None	
	Have you had a hysterectomy?		None	
Prostate Cancer Screening	Has a doctor, nurse, or other health professional ever talked with you about the advantages of the Prostate-Specific Antigen or P.S.A. test?	Even-year rotation	Separate questions on advantages and disadvantages are too redundant. Respondents often respond that they just answered the question. Recommendation to have a single question. New wording will be “When you met with a doctor, nurse, or other health professional did they talk about the advantages, the	Respondents become irritated at the same question (in their view) being asked three times. (Criteria #4)
	Has a doctor, nurse, or other health professional ever talked with you about the disadvantages of the P.S.A. test?			

Table 2. Recommended Changes by Core Question

Core Section	Question text	Periodicity	Changes recommended in questions/ coding/ programming	Justification for Change
			disadvantages or both advantages and disadvantages of the Prostate-Specific Antigen or P.S.A. test?	
	Has a doctor, nurse, or other health professional ever recommended that you have a P.S.A. test?		None	
	Have you ever had a P.S.A. test?		None	
	How long has it been since you had your last P.S.A. test?		None	
	What was the main reason you had this P.S.A. test – was it ...?		None	
Colorectal Cancer Screening	A colonoscopy checks the entire colon. You are usually given medication through a needle in your arm to make you sleepy and told to have someone else drive you home after the test. Have you ever had a colonoscopy?	Even-year rotation	The program has recently been working to change questions in this section to meet the requirements of changes in testing and types of tests available. Currently the section is long, but it is not likely that any single respondent will answer more than three questions.	
	How long has it been since you had this test?			
	A sigmoidoscopy checks part of the colon and you are fully awake. Have you ever had a sigmoidoscopy?		CATI skip patterns will be developed to ensure that the minimum required number of questions is asked of each	
	How long has it been since you			

Table 2. Recommended Changes by Core Question

Core Section	Question text	Periodicity	Changes recommended in questions/ coding/ programming	Justification for Change
	<p>had this test?</p> <p>Another test uses a special kit to obtain a small amount of stool at home to determine whether the stool contains blood and returns the kit to the doctor or the lab. Have you ever had this test using a home kit?</p> <p>How long has it been since you had this test?</p> <p>Another test uses a special kit to obtain a small amount of stool at home to determine whether the stool contains blood and returns the kit to the doctor or the lab. Have you ever had this test using a home kit?</p> <p>How long has it been since you had this test?</p> <p>How long has it been since you had this test?</p> <p>Another test uses a special kit to obtain an entire bowel movement at home and returns the kit to a lab. Have you ever had this test?</p>		respondent.	
	How long has it been since you had this test?			
	For a virtual colonoscopy, your colon is filled with air and you			

Core Section	Question text	Periodicity	Changes recommended in questions/ coding/ programming	Justification for Change
	are moved through a donut shaped X-ray machine as you lie on your back and then on your stomach. Have you ever had a virtual colonoscopy?			
	How long has it been since you had this test?			

Recommendations for changes to the core presented above will reduce the length of the core questionnaire. Moreover, it is anticipated that a change to a cellphone sample will eliminate three questions on phone use which are currently necessary to calculate design weights. The elimination of landline interviews will also remove sections on selection of respondents within households, thereby further shortening respondent burden. Although it is difficult to assess the total impact of the reduction in the core questionnaire, the table below illustrates the timing of core sections for 9 states in 2015. Shaded sections would have reduction in time or would be removed from the core. Note that this table uses current odd-numbered year core sections. If recommended changes were made, the core would be reduced by about 6 minutes.

	Question#	# of Qs in section	section time in minutes
Total		90	21.89
Introduction			1.46
Section 1	Health Status	1	0.20
Section 2	Healthy Days - HRQOL	3	0.76
Section 3	Health Care Access	4	0.89
Section 4	Inadequate Sleep	1	0.26
Section 5	Hypertension Awareness	2	0.26
Section 6	Cholesterol Awareness	3	0.45
Section 7	Chronic Health Conditions	12	1.44

Section 8	Demographics/ Disability	29	5.55
Section 9	Tobacco Use	5	0.40
Section 10	Alcohol Consumption	4	1.11
Section 11	Fruits & Vegetables	6	2.96
Section 12	Exercise (Physical Activity)	8	1.90
Section 13	Arthritis Burden	4	0.54
Section 14	Seatbelt Use/ Drinking and Driving	1	0.38
Section 15	Immunization	4	0.97
Section 16	HIV/AIDS	3	0.66
¹ Shaded sections would likely have reduced interview time.			

Next Steps in the BRFSS Core Redesign

In October 2020, the PHSB is planning to convene an Expert Panel to discuss the questionnaire, modes of data collection, sampling and other issues related to the BRFSS redesign. The 2020 BRFSS conference (planned for early October) will also include discussions with state health representatives. Within the next few months, sample questionnaire sections for annual, odd- and even-numbered years, three-year and four-year rotations will be distributed. Core questionnaire sections will be finalized for submission to the OMB by early 2021 in order to be included in the 2022-2025 questionnaires.