

**Teen and Parent Surveys of Health (TAPS)**

**Supporting Statement – Section B**

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## Table of Contents

<b>SECTION B – DATA COLLECTION PROCEDURES</b> .....	4
<b>B.1. Respondent Universe and Sampling Methods</b> .....	4
<b>B.2. Procedures for the Collection of Information</b> .....	7
<b>B.3. Methods to Maximize Response Rates and Deal with Nonresponse</b> .....	11
<b>B.4. Test of Procedures or Methods to be Undertaken</b> .....	12
<b>B.5. Individuals Consulted on Statistical Aspects and Individuals Collecting and/or Analyzing Data</b> .	12

## **LIST OF ATTACHMENTS**

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1. Public Health Service Act (PHSA) 42 U.S.C
2. 60-Day Federal Register Notice
- 2a. 60-Day Federal Register Notice Comments
3. Teen Survey Screenshots
4. Parent/Caregiver Survey Screenshots
5. Privacy Impact Assessment (PIA)
6. Consent language parent
7. Consent language teen
8. NORC IRB Approval Letter
9. NORC IRB Amendment Approval Letter
10. Adolescent Survey
11. Parent/Caregiver Survey
12. Technical Overview of the AmeriSpeak Panel NORC's Probability-Based Research Panel
13. Phone Script
14. Sample SMS Prompts
15. Teen Survey Recruitment Email
16. Parent Survey Recruitment Email
17. Teen Survey Invitation Letter
18. Teen Survey Reminder Letter
19. Teen Survey Final Reminder Letter
20. Parent Survey Invitation Letter
21. Parent Survey Reminder Letter

## SECTION B – DATA COLLECTION PROCEDURES

### B.1. Respondent Universe and Sampling Methods

NORC will recruit both the teens and young adults age 15-19 sample and the parents/caregivers of surveyed teens age 15-17 sample for the *Teen and Parent Surveys of Health (TAPS)* from NORC's AmeriSpeak® Panel and an address based sample (ABS) of U.S. households. AmeriSpeak is a probability-based representative panel sample of the U.S. population recruited from NORC's 2010 National Sample Frame. The 2010 National Sample Frame is an area probability sample constructed using a two-stage probability sample design to select a sample which is nationally representative of the United States.<sup>1</sup> The National Sample Frame contains almost 3 million households, including over 80,000 rural households not available from the US Postal Service Delivery Sequence File (USPS DSF) but identified by direct listing by field staff. The sample includes households in all 50 states and the District of Columbia. The AmeriSpeak sample panel is recruited from the 2010 National Sample Frame of addresses using probability based sampling in conjunction with mail, telephone, email, and in-person contacts using face-to-face recruitment for non-response follow-up (NRFU). For all recruitment years, the cumulative weighted household response rate is 24.1%; for recruitment years with NRFU, and the cumulative weighted household response rate is 34.2%. To ensure the target number of interviews are completed, NORC will select an additional sample of addresses from the AmeriSpeak National Sample Frame for recruitment into the AmeriSpeak panel, with their first survey being TAPS.

Once households are recruited, rigorous methods are employed to maximize survey response rates and maintain cooperation of participants. In addition, address-based sample from the USPS delivery sequence file is used in four states where the NORC National Frame has inadequate sample coverage. Importantly, basic demographic information such as age, gender, race and ethnicity are collected for all AmeriSpeak panel members which allows use of oversampling for targeted populations in specific studies.

The target population for the *Teen and Parent Surveys of Health* is teens age 15 to 19 and parents of teens age 15 to 17. After OMB approval, NORC will select a probability based subsample of parents of teens age 15 to 17 and their teens age 15 to 17 from the 40,000-household AmeriSpeak Panel and a fresh ABS sample to reach 900 paired teen-parent dyad survey interviews. Following the same methods NORC will also select a probability based sample of teens age 18 to 19 to reach 600 interviews, discussed in greater detail below.

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<sup>1</sup> <http://www.norc.org/Research/Projects/Pages/2010-national-sample-frame.aspx>

*Dyadic Sample.* To maximize the dyadic interview pairs, NORC will first reach out to the parents of teens age 15 to 17 via the panel members’ mode preference (email or phone call) so the parents can consent and nominate an eligible teen to participate. Due to the sensitive topic nature of the study, NORC must get parent/legal guardian consent before reaching out to the teen. If the household has more than one eligible teen in the household, NORC will randomly select one teen. All consent and assent, including parental consent for their minor is included as **Attachments 6 and 7**. Households in the ABS sample will be contacted initially by letter.

Once parental consent is obtained and a teen is nominated, for the ABS sample, NORC will send a letter to the teen nominated by the parent. For AmeriSpeak teen panel members age 15 to 17 NORC will contact the teen via their panel members’ mode preference (email or phone call) to invite them to complete the teen portion of the interview. The adolescent survey can be found in **Attachment 10** and the parent survey is in **Attachment 11**.

The parent portion of the dyad interview orients the parent to answer questions referencing their teen, therefore NORC will continue immediately into the parent portion of the survey *after* the parents nominate their teen panelist age 15 to 17 to participate in the study. As legal adults, NORC will reach out to the teens age 18 and 19 directly. Again, all consent and assent language, including minor adolescent assent, can be seen in Attachments 6 and 7.

See Table 1 for the estimated teen and parent survey completes. As data collection for TAPS is not planned until late fall 2021, this table represents numbers including AmeriSpeak Teen panel members expected to be enrolled through that time. The table below shows the breakdown of cases by respondent type. The current AmeriSpeak sample has been screened for a 15-17 year old living in the household. After re-confirming eligibility at the beginning of the interview, we expect 98% of households to be eligible for a parent and teen interview, and 82% of the eligible households to complete the parent survey. For the added ABS sample, we expect 6% of the addresses to be an eligible household and 65% of eligible households to complete the parent survey.

Table 1. Estimated Teen and Parent Survey Completes

	<b>Current AmeriSpeak Sample</b>	<b>New ABS Sample</b>	<b>Total Completes</b>
<b>15-17 year olds / Dyads</b>			
Initial postcard to AmeriSpeak/ Initial Letter to ABS	3,597	59,797	
Reminder letter w/\$2 incentive	1,439	53,817	

Screen for 15-17 year old in the household	1,417	3,588	
Complete Parent Interview w/\$20 incentive	1,163	1,471	2,634
Consent to interview teen	698	956	
Teen invitation letter w/\$2 incentive		956	
Teen reminder letter w/\$2 incentive/Reminder Calls	628	860	
Teen complete w/\$20 incentive	422	478	900
<b>18-19 year olds</b>	<b>Current AmeriSpeak Sample</b>	<b>New ABS Sample</b>	<b>Total Completes</b>
Initial postcard to AmeriSpeak/ Initial Letter to ABS	368	66,000	
Screen for 18-19 year old	NA	2,640	
18-19 reminder letter w/\$2 incentive/Reminder Calls	298	2,376	
18-19 complete w/\$20 incentive	72	528	600

To expand the number of teen age 15 to 17 interviews possible from the probability-based AmeriSpeak households, NORC will also go to panel members who are parents of teens age 15 to 17 where the teen living in the household is *not yet* an active AmeriSpeak teen panel member. The AmeriSpeak parent panel members can consent and nominate an eligible teen panelist to participate in this particular study. If an AmeriSpeak parent panel member has more than one eligible teen in the household, NORC will randomly select one teen.

NORC will follow the same procedures to then reach out to those parents of teens age 15 to 17 who are *not yet* active panel members to complete the dyadic interview.

To expand the number of teen age 18 and 19 interviews possible from the probability-based AmeriSpeak households, NORC will also go to adult panel members who have teens age 18 and 19 living in the household who are *not yet* an active AmeriSpeak adult panel member. Since the teens age 18 and 19 have reached age of majority, NORC does not need to obtain legal consent; however, the adult panel members still go through the same process to nominate the teens age 18 and 19 to this singular study. Once nominated, NORC will reach out to the teens age 18 and 19 who are not yet active panel members to complete their interview.

Additional information on the sampling and recruitment of the AmeriSpeak Panel can be found in **Attachment 12**.

## **B.2. Procedures for the Collection of Information**

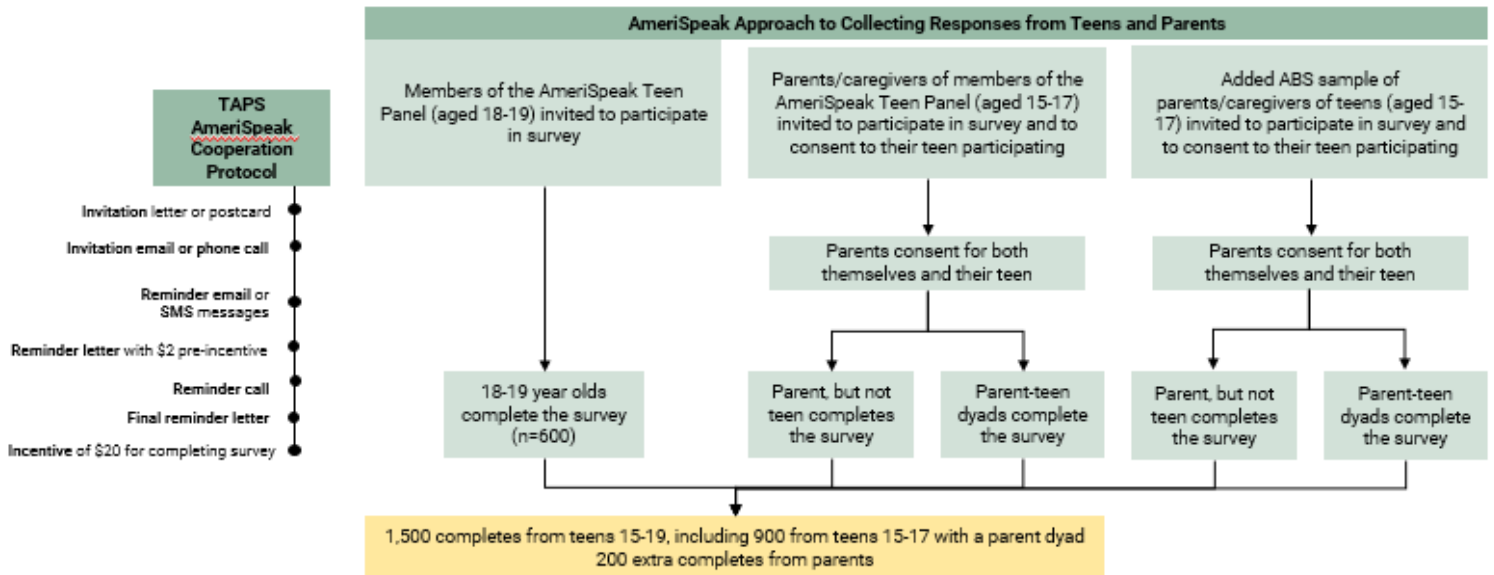
The ABS sample will be invited to participate via a letter sent to the household. Adult panel members age 18 to 19 and panel members who are parents of teens age 15-17 will be invited to participate in their respective surveys via email or phone call, based on the panel members' contact mode preference. Online mode adult panelists will also be able to access the survey via the AmeriSpeak panel web portal. Respondents will complete the survey interview via self-administered web mode, or with an NORC telephone interviewer on the phone.

Interviews with teens age 15-17 will be conducted in a two-stage process. NORC will first contact a parent of the teen to provide general information about the study and attempt to obtain informed parental/legal guardian consent, providing permission to NORC to contact the teen for possible study participation. NORC will sample one teen per household if there are multiple teens that are eligible. After the parent provides consent, NORC will contact the teen via email or phone call, based on the contact mode preference of the teen panelist when available. NORC will attempt to obtain the informed assent of the teen. The assented teen will be invited to complete the survey interview via self-administered web mode, or with an NORC telephone interviewer on the phone.

### **B.2.1 Data Collection Procedures**

In Exhibit 3, we describe AmeriSpeak's protocol for data collection, including the proposed cooperation protocol. To interview panel members between the ages of 15 to 17, NORC will first contact the parent of a child in this age range to collect consent. To maximize data collection from parent-teen dyads, NORC will also invite all parents of teens from 15-17 to participate in the parent survey. Once a parent provides consent for their child to take the survey, AmeriSpeak will contact the child. Simultaneously, panel members between the ages of 18 to 19 will be directly invited to participate in the survey.

## Exhibit 1: AmeriSpeak Data Collection Protocol for TAPS



NORC will mail a postcard to AmeriSpeak panelists and an invitation letter to the ABS sample. Follow up contacts to the AmeriSpeak sample will be through the panelist's preferred method of contact – email or phone. All panelists will also be mailed a postcard notifying them of a new survey available to them. For AmeriSpeak households where the sampled adolescent is age 15-17, the postcard will be addressed to the parent, as their participation and consent is required before the minor adolescent can participate. For households where the sampled adolescent is age 18-19, the postcard will be addressed to the adolescent, as there is no parent component for teens who have reached the age of majority. Households selected in the ABS sample will be first contacted by letter which will explain the study and contain instructions on how to access the web survey.

In order to increase response rates NORC will send reminder letters with a \$2 pre-incentive to parent and teen non respondents. NORC will call non-respondents where phone numbers are available.

In addition to these strategies, we may also prompt participation via reminder SMS (text messages) sent to AmeriSpeak panel members. These respondents will be likely to complete on mobile devices given the mode of prompting. Outreach and contacting materials are included as **Attachments 13-21**.



**Adolescent Survey.** The adolescent survey will collect important data relevant to adolescent risk prevention and health, with a focus on sexual and reproductive and mental health. Respondents will be asked to report on protective factors including parental monitoring, communication with their parent, individual assets, school-level protective factors, and their neighborhood. Teens are also asked about their experiences with racism, at school and elsewhere. Respondents will be asked to report on their experience with health education at school and finding information online. Respondents will report on their experience with obtaining health services, especially their experience with confidential care and time alone with healthcare providers. Finally, respondents are asked about health outcomes, such as sexual and reproductive health, mental health, violence, and substance use. Demographic information that AmeriSpeak members provide as part of their profile survey will be utilized as well, including age, gender, race, and geographic area. Screen shots of the adolescent survey are included as **Attachment 3**.

**Parent Survey.** The parent/caregiver survey will collect complementary data to the adolescent dyad survey. The parent/caregiver survey asks about family- and school-level protective factors including parental monitoring, parent/adolescent communication, and relationship satisfaction. It also includes items on the adolescent's health education, sexual and reproductive health, substance use, adverse childhood experiences, and mental health. The parent is also asked about their adolescent's experiences with health services, including parental perspectives on confidentiality and adolescent time alone with a provider. Items are included to parallel the adolescent survey to assess concordance/discordance with the adolescent response, to assess the perspectives of parents, and, in some cases, because parental reports are more valid. Demographic information that AmeriSpeak members provide as part of their profile survey will be utilized as well, including age, gender, race, and geographic area. Screen shots of the Parent survey are included as **Attachment 4**.

### **B.2.2 Estimation Procedures**

#### *The Design Effect and Margin of Error*

Design effect (DEFF) is a measure of change in a survey estimate's variance due to complex sample design. For AmeriSpeak surveys, the median of design effects are calculated for a set of key variables. The margin of error (MOE) is a measure of sampling error in a survey estimate. Since MOE can vary depending on the proportion found, AmeriSpeak surveys typically report the MOE where the true proportion is 50% in each category, and based on the median DEFF assuming significance level of 0.05. This MOE is the largest MOE for such indicator variables. Table 2 below reports the estimated MOEs for differing sample sizes and DEFF. The DEFFs listed here are the range expected for a teen survey using the AmeriSpeak Panel.



Table 2. DEFF & MOE Scenarios

Population	Sample size	Estimated DEFF	Estimated MOE for P = 50%, alpha = 0.05
Age 18-19	600	2.0	5.70%
Age 15-17	900	2.0	4.60%
Age 15-19	1500	2.0	3.58%
Parents	1100	2.0	4.20%
Age 18-19	600	2.3	6.10%
Age 15-17	900	2.3	5.00%
Age 15-19	1500	2.3	3.84%
Parents	1100	2.3	4.50%
Age 18-19	600	2.5	6.30%
Age 15-17	900	2.5	5.20%
Age 15-19	1500	2.5	4.00%
Parents	1100	2.5	4.70%

*Power Analysis*

Power analysis is used to determine the probability of detecting an effect of a given size with a given level of confidence, under sample size constraints. In Table 3 below, the null (true) proportion is assumed to be 50% for the purpose of power analyses for the given populations. In this scenario, if we find 40% in the survey, then we have 93% chance of detecting the difference between 40% and 50% with significance level  $\leq 0.05$ . The closer the difference between null finding and actual findings and the smaller the sample size, the less likely one will be able to find statistical significance in from the results.

Table 3. Generic Power Analysis for Different Sample Sizes

*One sample proportion*

Population	Sample size	Null %	Actual %	Power
Age 18-19	300	50%	40%	0.929
Age 15-17	600	50%	40%	0.998
Age 15-19	900	50%	40%	>.999
Parents	1100	50%	40%	>.999
Age 18-19	300	50%	45%	0.387
Age 15-17	600	50%	45%	0.675
Age 15-19	900	50%	45%	0.850
Parents	1100	50%	45%	0.914
Age 18-19	300	50%	49%	0.056
Age 15-17	600	50%	49%	0.072
Age 15-19	900	50%	49%	0.091
Parents	1100	50%	49%	0.102

### **B.3. Methods to Maximize Response Rates and Deal with Nonresponse**

In order to reach the interview goal for the study and maximize the survey response rate, NORC will implement a cooperation protocol that will include incentives and multiple contact points as part of an adaptive design to target respondents with the most efficient refusal conversion process:

- **Incentive for completing the survey.** We will provide an incentive of \$20 for adolescents and parents who complete the survey. To increase coverage, this incentive is higher than a regular AmeriSpeak survey, where adults usually receive \$5 and teens \$10 to \$15.
- **Email/SMS reminders.** We will use email reminders for panel members who complete their surveys through the web. Participants who do not respond to the initial survey invitation will receive a reminder email emphasizing the importance of their participation.
- **Telephone outreach.** NORC will contact panel members who indicated a preference for phone communications and administer the survey at a time that is convenient to them. A telephone option improves the coverage of the sample, especially for people who would not or cannot respond online. We will also make reminder calls for web-mode panel members in cases where NORC has a valid telephone number on file.

- **Mailed reminders.** Since NORC has the mailing address for panel members, we will also use mailed reminders. Following best practices, we have proposed three reminder mailings: an initial postcard, a reminder letter with a non-contingent cash incentive of \$2, and a final reminder letter.<sup>2</sup>

Participants will be given the toll-free telephone number and email address of the AmeriSpeak Support Team as well as the NORC IRB to answer questions pertaining to the study or their rights as a research volunteer.

#### **B.4. Test of Procedures or Methods to be Undertaken**

Whenever possible, TAPS relied on measures that have been previously developed and tested, with their validity and reliability demonstrated in teens and parents. The study team previously conducted usability testing and cognitive interviews with nine survey eligible adolescent participants via phone. The study team provided an overview of the study and explained the rationale, followed by a review of the informed consent and screener questions with each individual participant. The participants then completed the survey using a tablet, smartphone, or laptop, while a survey methodologist probed the individual's understanding of, interpretation of, and comfort with each item. The youth provided feedback on their comprehension of the informed consent, the acceptability of the subject matter, and questionnaire content. Revisions were made to the questionnaire based on this feedback. The group did not find the informed consent or questionnaire process burdensome.

Pilot test data for 9 adult parents/caregivers and 9 teens were reviewed for inconsistent responses that might signal problems of comprehension, recall, or reporting in the survey questions. These findings were used to identify potential improvements to the survey prior to beginning of the actual data collection.

#### **B.5. Individuals Consulted on Statistical Aspects and Individuals Collecting and/or Analyzing Data**

Nicole Liddon, PhD, of the Division of Adolescent and School Health, is the Principal Investigator and Technical Monitor for the study, and has overall responsibility for overseeing the design, conduct, and analysis of the study. Dr. Liddon will approve and receive all contract deliverables (telephone: 404-718-8174).

The survey instrument and sampling and data collection procedures were designed in collaboration with researchers at NORC at the University of Chicago. NORC will oversee recruitment and data collection.

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<sup>2</sup> Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). *Internet, phone, mail, and mixed-mode surveys: the tailored design method*. John Wiley & Sons.

Stuart Michaels, PhD, [773-256-6236] has overall technical and financial responsibility for the study at NORC and led the NORC effort to design this protocol. He will direct the overall data collection effort.

Other personnel from CDC and NORC involved in design of the protocol, data collection instruments, and analysis plans are:

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Riley Steiner, PhD

**NORC**

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Mark Watts, PhD

Stephanie Jwo, MA

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