CHIS 2019-2020 Methodology Report Series

Report 2

Data Collection Methods

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CALIFORNIA HEALTH INTERVIEW SURVEY

CHIS 2019-2020 METHODOLOGY SERIES

REPORT 2

DATA COLLECTION METHODS

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This report describes the data collection methods used in CHIS 2019-2020. It was a mixed-mode web and telephone survey using an address-based sampling (ABS) frame. All data were collected using a computer-assisted telephone or web interviewing (CATI or CAWI) system. Activities included under "data collection" for purposes of this report include SSRS involvement in developing and programming the survey instruments, recruiting and training interviewers to administer the survey in six languages, planning and implementing a strategy for release of the sample, contacting respondents and conducting interviews, and implementing quality assurance procedures.

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PREFACE

Data Collection Methods is the second in a series of methodological reports describing the 2019-2020 California Health Interview Survey (CHIS 2019-2020). The other reports are listed below.

CHIS is a collaborative project of the University of California, Los Angeles (UCLA) Center for Health Policy Research with multiple funding sources from public, private, and non-profit organizations. SSRS was responsible for data collection and the preparation of five methodological reports from the 2019-2020 survey. The survey examines public health and health care access issues in California. The survey is the largest state health survey ever undertaken in the United States.

Methodological Report Series for CHIS 2019-2020

The methodological reports for CHIS 2019-2020 are as follows:

- Report 1: Sample Design;
- Report 2: Data Collection Methods;
- Report 3: Data Processing Procedures;
- Report 4: Response Rates; and
- Report 5: Weighting and Variance Estimation.

The reports are interrelated and contain many references to each other. For ease of presentation, the references are simply labeled by the report numbers given above. After the Preface, each report includes an "Overview" (Chapter 1) that is nearly identical across reports, followed by detailed technical documentation on the specific topic of the report.

Report 2: Data Collection Methods (this report) describes the protocols followed to contact sampled addresses and how data were collected for CHIS 2019-2020. The CHIS 2019-2020 survey implemented an address-based sample (ABS) design, where up to four initial contacts were made by mail with follow-up where possible by phone. Household data was collected using a computer-assisted telephone or web interviewing (CATI or CAWI) system. Procedures to complete the child and adolescent extended interview are also described. This report also provides outcomes of sampled addresses and quality control measures.

For further methodological details not covered in this report, refer to the other methodological reports in the series at http://healthpolicy.ucla.edu/chis/design/Pages/methodology.aspx. General

information on CHIS data can be found on the California Health Interview Survey Web site at http://www.chis.ucla.edu or by contacting CHIS at CHIS@ucla.edu.

Table of Contents

List of Tables and Figures

1. CHIS 2019-2020 SAMPLE DESIGN AND METHODOLOGY SUMMARY

1.1 Overview

A series of five methodology reports are available with more detail about the methods used in CHIS 2019-2020.

- Report 1 – Sample Design;
- Report 2 – Data Collection Methods;
- Report 3 – Data Processing Procedures;
- Report 4 – Response Rates; and
- Report 5 – Weighting and Variance Estimation.

For further information on CHIS data and the methods used in the survey, visit the California Health Interview Survey Web site at http://www.chis.ucla.edu or contact CHIS at CHIS@ucla.edu. For methodology reports from previous CHIS cycles, go to http://www.chis.ucla.edu/chis/design/Pages/ methodology.aspx

The CHIS is a population-based multimode (web and telephone) survey of California's residential, noninstitutionalized population conducted every other year since 2001 and continually beginning in 2011. CHIS is the nation's largest state-level health survey and one of the largest health surveys in the nation. The UCLA Center for Health Policy Research (UCLA-CHPR) conducts CHIS in collaboration with multiple funding sources from public, private, and non-profit organizations. CHIS collects extensive information for all age groups on health status, health conditions, health-related behaviors, health insurance coverage, access to health care services, and other health and health-related issues.

The sample is designed and optimized to meet two objectives:

1) Provide estimates for large- and medium-sized counties in the state, and for groups of the smallest counties (based on population size), and

2) Provide statewide estimates for California's overall population, its major racial and ethnic groups, as well as several racial and ethnic subgroups.

The CHIS sample is representative of California's non-institutionalized population living in households. CHIS data and results are used extensively by federal and State agencies, local public health agencies and organizations, advocacy and community organizations, other local agencies, hospitals, community clinics, health plans, foundations, and researchers. These data are used for analyses and

publications to assess public health and health care needs, to develop and advocate policies to meet those needs, and to plan and budget health care coverage and services. Many researchers throughout California and the nation use CHIS data files to further their understanding of a wide range of health related issues (visit UCLA-CHPR's publication page at http://healthpolicy.ucla.edu/publications/Pages/default.aspx for examples of CHIS studies).

1.2 Switch in Sampling and Data Collection Methodology

Starting in 2019-2020, the CHIS transitioned from a dual-frame landline/cellphone random digit dial (RDD) methodology to an address-based sample (ABS) methodology with multimode data collection that takes place on the web or by telephone. The CHIS research team deemed this change necessary due to decreasing response to telephone surveys, the improved geographical precision available for stratification when using the US Postal Service Delivery Sequence file of addresses as a sampling frame, and the lower cost of a study where the majority of interviews are completed online.

Prior to launching data collection in 2019, CHIS conducted two experiments in 2018 to test the effectiveness of an ABS mail push-to-web design with a telephone nonresponse follow-up. The first experiment was limited to three counties (Los Angeles, Santa Clara, and Tulare) to achieve a preliminary assessment of the efficacy of the proposed design (see Wells et al., 2018). Following the initial positive results from that test, a statewide pilot test was conducted in the late 2018 implementing a number of additional experiments and improvements based on the previous lessons learned (see Wells et al., 2019). Given that these additional improvements resulted in higher response and reductions in cost compared to maintaining the 2017-2018 design, CHIS committed to transitioning to the new design for the 2019-2020 cycle.

For CHIS 2019-2020, respondents are invited to either complete the survey online or call in to be interviewed by a member of the SSRS interviewing staff. Respondents receive an initial invitation letter with a $2.00 pre-incentive. This is followed by a reminder postcard and, in 2019, a final certified mail letter for all nonresponders[1]. In 2020, the certified mail letter was replaced with a standard letter and final postcard. Where addresses can be matched to a listed telephone number, the nonresponding households are also called six times to attempt to complete an interview before the sampled household is considered to be a resolved nonresponse.

See more about what's new in the 2019-2020 CHIS sampling and data collection here:

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[1] For the last 2019 mailing, the certified letter was replaced with a standard letter.

In order to provide CHIS data users with more complete and up-to-date information to facilitate analyses of CHIS data, additional information on how to use the CHIS sampling weights, including sample statistical code, is available at http://www.chis.ucla.edu/chis/analyze/Pages/sample-code.aspx.

Additional documentation on constructing the CHIS sampling weights is available in the *CHIS 2019-2020 Methodology Series: Report 5—Weighting and Variance Estimation* posted at http://www.chis.ucla.edu/chis/design/Pages/methodology.aspx. Other helpful information for understanding the CHIS sample design and data collection processing can be found in the four other methodology reports for each CHIS cycle and year.

1.3 Sample Design Objectives

The CHIS 2019-2020 sample was designed to meet the two sampling objectives discussed above: (1) provide estimates for adults in most counties and in groups of counties with small populations; and (2) provide estimates for California's overall population, major racial and ethnic groups, and for several smaller racial and ethnic subgroups.

To achieve these objectives, CHIS employed an address-based sample design. For the ABS sample, the 58 counties in the state were grouped into 44 geographic sampling strata, and 14 sub-strata were created within the two most populous counties in the state (Los Angeles and San Diego). The same geographic stratification of the state has been used since CHIS 2005. The Los Angeles County stratum included eight sub-strata for Service Planning Areas, and the San Diego County stratum included six sub-strata for Health Service Districts. Most of the strata (39 of 44) consisted of a single county with no sub-strata (see counties 3-41 in Table 1-1). Three multi-county strata comprised the 17 remaining counties (see counties 42-44 in Table 1-1). A sufficient number of adult interviews were allocated to each stratum and sub-stratum to support the first sample design objective for the two-year cycle—to provide health estimates for adults at the local level.

In addition, for CHIS 2019-2020, statistical modeling was used to determine the likelihood that specific targeted groups of interest for oversampling resided at addresses in the sample, and a hierarchy was established to determine the degree of over or undersampling among these strata. CHIS 2017-2018 data were used to build the models. All available auxiliary data from voter registration databases, consumer databases, Marketing Systems Group database information (specifically, all ranges of surnames), and Census Planning Database data were appended to the CHIS 2017-2018 data. All these

appended data served as the independent variables (features) in random forest models, while self-reported attributes (demographics, etc.) served as the dependent variables.

Models for CHIS 2019-2020 were specifically designed to predict the following household attributes:

1. Korean
2. Vietnamese
3. Other Asian
4. Hispanic or Spanish-Speaker
5. Low Educational Attainment or not a US Citizen
6. Have children (under 19)

Since these six models are run independently, households can be predicted to include more than one of the six target groups. For this reason, models were applied to the sample hierarchically with preference to the higher listed model (for example, a household predicted to be Korean was scored as Korean no matter what else they might have been predicted to be).

Utilizing these models results in two additional sample groups, or strata: 1) sample records for which none of the models predicted any attribute ("Residual" sample) and 2) sample for which no auxiliary data were found ("No Match" sample). The final step in utilizing the models was to develop relative sampling fractions by which households were selected within the modeled strata.

Within each geographic and modeled stratum combination, residential addresses were selected, and within each household, one adult (age 18 and over) respondent was randomly selected. In those households with adolescents (ages 12-17) and/or children (under age 12), one adolescent and one child of the randomly selected parent/guardian were randomly selected. The adolescent was interviewed directly via CATI or Web. Most frequently the child interview was completed by the randomly selected respondent who was the parent or guardian. Less frequently and only within the CATI program, an adult sufficiently knowledgeable about the child's health could complete the child interview.

Table 1-1. California county and county group strata used in the CHIS 2019-2020 sample design

1. Los Angeles	7. Alameda	27. Shasta
1.1 Antelope Valley	8. Sacramento	28. Yolo
1.2 San Fernando Valley	9. Contra Costa	29. El Dorado
1.3 San Gabriel Valley	10. Fresno	30. Imperial
1.4 Metro	11. San Francisco	31. Napa
1.5 West	12. Ventura	32. Kings
1.6 South	13. San Mateo	33. Madera
1.7 East	14. Kern	34. Monterey
1.8 South Bay	15. San Joaquin	35. Humboldt
2. San Diego	16. Sonoma	36. Nevada
2.1 N. Coastal	17. Stanislaus	37. Mendocino
2.2 N. Central	18. Santa Barbara	38. Sutter
2.3 Central	19. Solano	39. Yuba
2.4 South	20. Tulare	40. Lake
2.5 East	21. Santa Cruz	41. San Benito
2.6 N. Inland	22. Marin	42. Colusa, Glenn, Tehama
3. Orange	23. San Luis Obispo	43. Del Norte, Lassen, Modoc,
4. Santa Clara	24. Placer	Plumas, Sierra, Siskiyou, Trinity
5. San Bernardino	25. Merced	44. Amador, Alpine, Calaveras, Inyo,
6. Riverside	26. Butte	Mariposa, Mono, Tuolumne

Source: UCLA Center for Health Policy Research, 2019-2020 California Health Interview Survey.

The CHIS two-year ABS sample is of sufficient size to accomplish the second objective as well, to produce statistically stable estimates for small population groups such as racial/ethnic subgroups, children, adolescents, etc.

1.4 Data Collection

To capture the rich diversity of the California population, interviews were conducted in six languages: English, Spanish, Chinese (Mandarin and Cantonese dialect), Vietnamese, Korean, and Tagalog. Tagalog was administered by phone only. These languages were chosen based on analysis of 2010 Census data to identify the languages that would cover the largest number of Californians in the CHIS sample that either did not speak English or did not speak English well enough to otherwise participate.

SSRS collaborated with UCLA on the methodology and collected data for CHIS 2019-2020, under contract with the UCLA Center for Health Policy Research. SSRS is an independent research firm that specializes in innovative methodologies, optimized sample designs, and reaching low-incidence populations. For all sampled households, one randomly selected adult in each sampled household either completed an on-line survey or was interviewed by telephone by an SSRS interviewer. In addition, the study sampled one adolescent and one child if they were present in the household and the sampled adult was their parent or legal guardian. Thus, up to three interviews could have been completed in each household. The child interview was moved in 2019-2020 to take place immediately after Section A of the adult survey and the rostering of the household. The adolescent survey took place either immediately after the adult with phone interviews or in a separate session online.

If the screener respondent was someone other than the sampled adult, children and adolescents could be sampled as part of the screening interview, and the extended child (and adolescent) interviews could be completed before the adult interview if the interview was completed by phone. This "child-first" procedure was first used in CHIS 2005 and has been continued in subsequent CHIS cycles because it substantially increases the yield of child interviews. Table 1-2 shows the number of completed adult, child, and adolescent interviews in CHIS 2019-2020 by mode of interview. Note that these figures were accurate as of data collection completion for 2019-2020 and may differ slightly from numbers in the data files due to data cleaning and edits. Sample sizes to compare against data files you are using are found online at http://www.chis.ucla.edu/chis/design/Pages/sample.aspx.

Table 1-2. Number of completed CHIS 2019-2020 interviews by mode of interview and instrument

Type of sample[1]	Adult	Child	Adolescent
Total ABS	44,109[1]	6,557	2,212
Completes by Web	40,072	6,295	2,000
Completes by phone	4,037	262	212

Source: UCLA Center for Health Policy Research, 2019-2020 California Health Interview Survey.

[1] Includes interviews meeting the criteria as partially complete.

Interviews in all languages were administered using SSRS's computer-assisted web interviewing and computer-assisted telephone interviewing (CAWI/CATI) system. As expected, the CATI interviews were longer in duration. The duration of the CATI interviews averaged almost 48 minutes, 26 minutes, and 23minutes for the adult, child, and adolescent interviews, respectively; the duration of the CAWI interviews averaged around 35 minutes, 13 minutes, and 17 minutes for the adult, child, and adolescent interviews, respectively. Interviews in non-English languages typically took longer to complete across

both modes: the non-English CATI interviews had an average length of about 64 minutes, 31 minutes, and 29 minutes for the adult, child, and adolescent interviews respectively; the non-English CAWI interviews had an average length of about 47 minutes, 18 minutes, and 20 minutes for the adult, child, and adolescent interviews, respectively. Just over four and half percent of the adult interviews were completed in a language other than English, as were about nine percent of all child (parent proxy) interviews and one percent of all adolescent interviews.

Table 1-3 shows the major topic areas for each of the three survey instruments (adult, child, and adolescent). If questions were asked in only one year of survey implementation, the specific year is indicated in the table.

Table 1-3. CHIS 2019-2020 survey topic areas by instrument

Health status	Adult	Adolescent	Child
General health status	✓	✓	✓
Days missed from work or school due to health problems	✓	✓	✓
Health conditions	**Adult**	**Adolescent**	**Child**
Asthma	✓	✓	✓
Diabetes, pre-diabetes/borderline diabetes	✓		
Heart disease, high blood pressure	✓		
Physical disability	✓		
Physical, behavioral, and/or mental conditions			✓
Developmental assessment, referral to a specialist by a doctor			✓
Covid-19	**Adult**	**Adolescent**	**Child**
Covid testing history and effects of pandemic	✓		
Mental health	**Adult**	**Adolescent**	**Child**
Mental health status	✓	✓	
Perceived need, access and utilization of mental health services	✓	✓	
Functional impairment, stigma, three-item loneliness scale	✓		
Suicide ideation and attempts	✓	✓	
Mental health and technology	✓	✓	
Health behaviors	**Adult**	**Adolescent**	**Child**
Dietary and nutritional intake, breastfeeding (younger than 3 years)	✓	✓	✓
Physical activity and exercise, sedentary time		✓	✓
Commute from school to home		✓	✓
Alcohol use/abuse		✓	
Cigarette and E-cigarette use	✓	✓	
Marijuana use	✓	✓	
Opioid use	✓		
Chewing tobacco, tobacco flavors	✓		
Exposure to second-hand smoke	✓		
Sexual behaviors	✓	✓	
HIV testing, HIV prevention medication (PrEP/Truvada)	✓	✓	
Contraceptive use, birth control	✓	✓	
Sexual violence	**Adult**	**Adolescent**	**Child**
Past unwanted sexual encounter	✓		

Table 1-3. CHIS 2019-2020 survey topic areas by instrument (continued)

Women's health	Adult	Adolescent	Child
Pregnancy status/plans and birth control	✓	✓	

Dental health	Adult	Adolescent	Child
Last dental visit, main reason haven't visited dentist	✓	✓	✓
Delays in getting care			✓
Current dental insurance coverage	✓		✓
Condition of teeth	✓	✓	

Neighborhood and housing	Adult	Adolescent	Child
Safety, social cohesion	✓	✓	✓
Homeownership	✓		
Park use, park and neighborhood safety		✓	✓
Civic engagement, community involvement	✓	✓	

Access to and use of health care	Adult	Adolescent	Child
Usual source of care, visits to medical doctor	✓	✓	✓
Emergency room visits	✓	✓	✓
Delays in getting care (prescriptions and medical care)	✓	✓	✓
Communication problems with doctor	✓		✓
Timely appointment	✓	✓	✓
Access to specialist and general doctors	✓		
Tele-medical care	✓		
Care coordination	✓	✓	✓

Voter engagement	Adult	Adolescent	Child
Voter engagement	✓		

Food environment	Adult	Adolescent	Child
Access to-affordable foods	✓		
Availability of food in household over past 12 months	✓		
Hunger	✓		

Health insurance	Adult	Adolescent	Child
Current insurance coverage, spouse's coverage, who pays for coverage	✓	✓	✓
Health plan enrollment, characteristics and assessment of plan	✓	✓	✓
Whether employer offers coverage, respondent/spouse eligibility	✓		
Coverage over past 12 months, reasons for lack of insurance	✓	✓	✓
High deductible health plans	✓	✓	✓
Medical debt, hospitalizations	✓		

(continued)

Table 1-3. CHIS 2019-2020 survey topic areas by instrument (continued)

Public program eligibility	Adult	Adolescent	Child
Program participation (CalWORKs, Food Stamps, SSI, SSDI, WIC, TANF)	✓	✓	✓
Assets, child support, Social security/pension, worker's compensation	✓		
Medi-Cal renewal	✓		
Reason for Medi-Cal non-participation	✓	✓	✓
Parental involvement/adult supervision	**Adult**	**Adolescent**	**Child**
Parental involvement			✓
Child care and school	**Adult**	**Adolescent**	**Child**
Current child care arrangements			✓
Paid child care	✓		
First 5 California: Talk, Read, Sing Program / Kit for New Parents			✓
Preschool/school attendance, school name		✓	✓
Caregiving	**Adult**	**Adolescent**	**Child**
Caregiving	✓		
Employment	**Adult**	**Adolescent**	**Child**
Employment status, spouse's employment status	✓		
Hours worked at all jobs	✓		
Industry and occupation, firm size	✓		
Income	**Adult**	**Adolescent**	**Child**
Respondent's and spouse's earnings last month before taxes	✓		
Household income, number of persons supported by household income	✓		
Respondent characteristics	**Adult**	**Adolescent**	**Child**
Race and ethnicity, age, gender, height, weight	✓	✓	✓
Veteran status	✓		
Marital status, registered domestic partner status (same-sex couples)	✓		
Sexual orientation	✓		
Gender identity	✓	✓	
Gender expression		✓	
Living with parents	✓		
Education, English language proficiency	✓		
Citizenship, immigration status, country of birth, length of time in U.S., languages spoken at home	✓	✓	✓

Source: UCLA Center for Health Policy Research, 2019-2020 California Health Interview Survey.

1.5 Response Rates

       The overall response rates for CHIS 2019-2020 are composites of the screener completion rate (i.e., success in introducing the survey to a household and randomly selecting an adult to be interviewed) and the extended interview completion rate (i.e., success in getting one or more selected persons to complete the extended interview). For CHIS 2019-2020, the overall household response rate was 12.2 percent (the product of the screener response rate of 16.2 percent and the extended interview response rate at the household level of 75.2 percent). CHIS uses the RR4 type response rate described in the AAPOR (The American Association for Public Opinion Research), 2016 guidelines (see more detailed in *CHIS 2019-2020 Methodology Series: Report 4 – Response Rates*).

       The extended interview response rate for the ABS sample varied across the adult (72.0 percent), child (85.7 percent) and adolescent (33.2 percent) interviews. The adolescent rate includes the process of obtaining permission from a parent or guardian.

       Multiplying these rates by the screener response rates used in the household rates above gives an overall response rate for each type of interview for 2019-2020 (see Table 1-4b).

Table 1-4a. CHIS response rates - Conditional

Type of Sample	Screener	Household (given screened)	Adult (given screened)	Child (given screened & eligibility)	Adolescent (given screened & permission)
Overall	16.2%	75.2%	72.0%	85.7%	33.2%

Source: UCLA Center for Health Policy Research, 2019-2020 California Health Interview Survey.

Table 1-4b. CHIS response rates - Unconditional

Type of Sample	Screener	Household (given screened)	Adult (given screened)	Child (given screened & eligibility)	Adolescent (given screened & permission)
Overall	16.2%	12.2%	11.6%	13.9%	5.4%

Source: UCLA Center for Health Policy Research, 2019-2020 California Health Interview Survey.

After all follow-up attempts to complete the full questionnaire were exhausted, adults who completed at least approximately 80 percent of the questionnaire (i.e., through Section K which covers employment, income, poverty status, and food security), were counted as "complete." At least some responses in the employment and income series, or public program eligibility and food insecurity series were missing from those cases that did not complete the entire interview. They were imputed to enhance the analytic utility of the data.

Proxy interviews were conducted for any adult who was unable to complete the extended adult interview for themselves, in order to avoid biases for health estimates of chronically ill or handicapped people. Eligible selected persons were re-contacted and offered a proxy option. In CHIS 2019-2020, either a spouse/partner or adult child completed a proxy interview for eight adults. A reduced questionnaire, with questions identified as appropriate for a proxy respondent, was administered.

Further information about CHIS data quality and nonresponse bias is available at http://www.chis.ucla.edu/chis/design/Pages/data-quality.aspx.

1.6 Weighting the Sample

To produce population estimates from CHIS data, weights were applied to the sample data to compensate for the probability of selection and a variety of other factors, some directly resulting from the design and administration of the survey. The sample was weighted to represent the noninstitutionalized population for each sampling stratum and statewide. The weighting procedures used for CHIS 2019-2020 accomplish the following objectives:

- Compensate for differential probabilities of selection for addresses (households) and persons within household;
- Reduce biases occurring because non-respondents may have different characteristics than respondents;
- Adjust, to the extent possible, for undercoverage in the sampling frame and in the conduct of the survey; and
- Reduce the variance of the estimates by using auxiliary information

As part of the weighting process, a household weight was created for all households that completed the screener interview. This household weight is the product of the "base weight" (the inverse of the probability of selection of the address) and several adjustment factors. The household weight was used to compute a person-level weight, which includes adjustments for the within-household sampling of

persons and for nonresponse. The final step was to adjust the person-level weight using weight calibration, a procedure that forced the CHIS weights to sum to estimated population control totals simultaneously from an independent data source (see below).

Population control totals of the number of persons by age, race, and sex at the stratum level for CHIS 2019-2020 were created primarily from the California Department of Finance's (DOF) 2019 and 2020 Population Estimates, and associated population projections. The procedure used several dimensions, which are combinations of demographic variables (age, sex, race, and ethnicity), geographic variables (county, Service Planning Area) in Los Angeles County, and Health and Human Services Agency (HHSA) region in San Diego County), and education. One limitation of using DOF data is that it includes about 2.4 percent of the population of California who live in "group quarters" (i.e., persons living with nine or more unrelated persons and includes, for example nursing homes, prisons, dormitories, etc.). These persons were excluded from the CHIS target population and, as a result, the number of persons living in group quarters was estimated and removed from the DOF control totals prior to calibration.

The DOF control totals used to create the CHIS 2019-2020 weights are based on 2010 Census counts, as were those used for the 2017-2018 cycle. Please pay close attention when comparing estimates using CHIS 2019-2020 data with estimates using data from CHIS cycles before 2010. The most accurate California population figures are available when the U.S. Census Bureau conducts the decennial census. For periods between each census, population-based surveys like CHIS must use population projections based on the decennial count. For example, population control totals for CHIS 2009 were based on 2009 DOF estimates and projections, which were based on Census 2000 counts with adjustments for demographic changes within the state between 2000 and 2009. These estimates become less accurate and more dependent on the models underlying the adjustments over time. Using the most recent Census population count information to create control totals for weighting produces the most statistically accurate population estimates for the current cycle, but it may produce unexpected increases or decreases in some survey estimates when comparing survey cycles that use 2000 Census-based information and 2010 Census-based information.

1.7 Imputation Methods

Missing values in the CHIS data files were replaced through imputation for nearly every variable. This was a substantial task designed to enhance the analytic utility of the files. SSRS imputed missing values for those variables used in the weighting process and UCLA-CHPR staff imputed values for nearly every other variable.

Three different imputation procedures were used by SSRS to fill in missing responses for items essential for weighting the data. The first imputation technique was a completely random selection from the observed distribution of respondents. This method was used only for a few variables when the percentage of the items missing was very small. The second technique was hot-deck imputation. The hot-deck approach is one of the most commonly used methods for assigning values for missing responses. Using a hot deck, a value reported by a respondent for a specific item was assigned or donated to a "similar" person who did not respond to that item. The characteristics defining "similar" vary for different variables. To carry out hot-deck imputation, the respondents who answered a survey item formed a pool of donors, while the item non-respondents formed a group of recipients. A recipient was matched to the subset pool of donors based on household and individual characteristics. A value for the recipient was then randomly imputed from one of the donors in the pool. SSRS used hot-deck imputation to impute the same items that have been imputed in all CHIS cycles since 2003 (i.e., race, ethnicity, home ownership, and education). The last technique was external data assignment. This method was used for geocoding variables such as strata, Los Angeles SPA, San Diego HSSA region, and zip where the respondent provided inconsistent information. For such cases geocoding information was used for imputation.

UCLA-CHPR imputed missing values for nearly every variable in the data files other than those imputed by SSRS and some sensitive variables for which nonresponse had its own meaning. Overall, item nonresponse rates in CHIS 2019-2020 were low, with most variables missing valid responses for less than 1% of the sample. Questions that go to fewer overall respondents or that ask about more sensitive topics can have higher nonresponse.

The imputation process conducted by UCLA-CHPR started with data editing, sometimes referred to as logical or relational imputation: for any missing value, a valid replacement value was sought based on known values of other variables of the same respondent or other sample(s) from the same household. For the remaining missing values, model-based hot-deck imputation without donor replacement was used. This method replaced a missing value for one respondent using a valid response from another respondent with similar characteristics as defined by a generalized linear model with a set of control variables (predictors). The link function of the model corresponded to the nature of the variable being imputed (e.g. linear regression for continues variables, logistic regression for binary variables, etc.). Donors and recipients were grouped based on their predicted values from the model.

Control variables (predictors) used in the model to form donor pools for hot-decking always included standard measures of demographic and socioeconomic characteristics, as well as geographic region; however, the full set of control variables varies depending on which variable is being imputed.

Most imputation models included additional characteristics, such as health status or access to care, which are used to improve the quality of the donor-recipient match.

Among the standard list of control variables, gender, age, race/ethnicity, educational attainment and region of California were imputed by SSRS. UCLA-CHPR began their imputation process by imputing household income so that this characteristic was available for the imputation of other variables. Sometimes CHIS collects bracketed information about the range in which the respondent's value falls when the respondent will not or cannot report an exact amount. Household income, for example, was imputed using the hot-deck method within ranges defined by a set of auxiliary variables such as bracketed income range and/or poverty level.

The imputation order of the other variables generally followed the questionnaire. After all imputation procedures were complete, every step in the data quality control process was performed once again to ensure consistency between the imputed and non-imputed values on a case-by-case basis.

2. SCREENING INTERVIEW AND CATI INSTRUMENT STRUCTURE

For a given household, CHIS 2019-2020 interviews could include up to three substantive interviews: one adult, one child, and one adolescent extended interview. In addition to providing the substantive survey content, the computer-assisted web (CAWI) and computer-assisted telephone interviewing (CATI) instruments performed sampling and administrative functions, including identifying eligible individuals and selecting sample members from among them, identifying appropriate respondents for the various questionnaires, and sequencing the activities within a household. The selecting of adult sample members in the CAWI instrument was conducted through instructions in an invitation letter prior to entrance into the web survey. The functions described here were programmed into the CAWI and CATI instruments and are described in this chapter.

As a result of the move from a random digit dial (RDD) dual-frame landline/cellphone survey to an all address-based sample (ABS), only a single ABS sampling frame was utilized for CHIS 2019-2020. Predictive modeling was used to oversample groups of interest in the population who are traditionally underrepresented (for more details, see *CHIS 2019-2020 Methodology Series: Report 1 – Sample Design)*. Respondents could complete the survey via a web instrument or by phone.

2.1 Initial Screening Interview for Web Interviews

The majority of completed interviews were conducted via the CAWI instrument. After logging on to the web survey using a secure access code, the potential respondent goes through the following screening sequence:

- Confirmation that the respondent is 18 years of age or older.
- Confirmation that the address where the invitation was received is the full-time residential address of at least one person.
- If more than one person lives at the address, confirmation that the survey is being completed by the adult who will have the next birthday, as requested in the letter of invitation. If the

screener respondent is not the selected adult, the web program informs the respondent that the adult with the next birthday needs to complete that portion of the survey[2].

Once eligibility is confirmed, the respondent acknowledges their consent to participate. Next, the respondent creates a personal password (PIN) to facilitate their ability to suspend the survey and return at a later time. Respondents are also given the opportunity to set answers to security questions for PIN recall. Upon creation of the PIN and security questions, the survey moves into the substantive questions. To re-enter the survey both the secure access code and PIN are required.

2.2 Initial Screening Interview for Telephone Interviews

The CHIS 2019-2020 sample was composed of addresses selected as described in *CHIS 2019-2020 Methodology Series: Report 1 – Sample Design*. For those households that did not respond to any of the mailed reminders by completing the survey and for whom a telephone number was able to be matched to the mailing address, calls were made to complete a CATI interview. In addition, all recruiting materials offered a telephone number for respondents to dial in and request to be interviewed over the phone. Screening for any telephone interviewing regardless of whether the respondent called in or was contacted by a telephone interviewer, was essentially the same. On first contact with a sampled telephone number, interviewers:

- Identified a household member 18 years of age or older to act as informant (i.e., screener respondent);
- Determined whether the telephone number was associated with the specific residential address sampled; and
- Asked how many persons 18 or older lived in the household and selected one for the extended interview.

As with previous waves of CHIS, adults are considered to be any person 18 years of age or older. Adult selection in CATI follows the next-birthday method of within household sampling is a quasi-probability design. This method does not require enumerating all adults within a household. This

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[2] The verification question was adapted from Olson & Smyth (2017) to help improve selection accuracy by providing the respondent an active task. CHIS ABS pilot tests experimentally tested the verification question against alternative within-household selection approaches and found it had significantly improved selection accuracy (Wells et al., 2018, 2019).

method is intended to reduce screener duration and respondent burden. The total number of adults in the household is collected in the screener[3]. With this information in hand, the procedure works as follow:

- The program asks the screener respondent for the number of adults in the household.
- If only one adult lives in the household, then that adult is selected for CHIS.
- If two or more adults live in the household, respondents are asked whether they are the person with the next birthday. If so, they are chosen as the adult respondent. If not, the interviewer asks the screener respondent for the first name or initials of the adult in the household with the next birthday, and then requests to speak with that person.

Once eligibility is confirmed the survey moves into the adult extended interview.

In the cases where the screener respondent is not the selected adult respondent, additional information about the household is gathered. The following elements are included in the initial CATI screener to establish the household roster and develop survey weights:

- Number of children under 12 years of age living in the household;[4] and
- Number of adolescents between 12 and 17 years of age living in the household[5]

2.3 Overall Structure of CHIS 2019-2020 Interviews

Given the number of different instruments and the rules for who could respond to each, one household could potentially have several individuals acting as respondents, including:

- the screener respondent for the CATI instrument;
- a sampled adult who answered questions in the adult interview on either web or CATI,
- a sampled adult (parent) who was the respondent for the child extended interview on either web or CATI;
- an adult who knew the most about the child's health (e.g., "sufficiently knowledgeable adult" or SKA) who was the respondent for the child extended interview on CATI but did not answer the adult questionnaire (i.e., "child-first"), and
- a sampled adolescent who answered for themselves.

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[3] Olson, K.; Stange, M.; and Smyth, J.D., (2014). Assessing Within-Household Selection Methods in Household Mail Surveys *Public Option Quarterly*, *78 (3),* p. 656-678.
[4] See *CHIS 2019 Methodology Series: Report 5 – Weighting and Variance Estimation*, Section 5.1.
[5] See *CHIS 2019 Methodology Series: Report 5 – Weighting and Variance Estimation*, Section 6.1.

In practice, one adult usually filled multiple roles in households with adolescents or children. However, the possibility of multiple respondents required rules for ordering survey instruments and various administrative activities (e.g., selecting sampled persons, identifying, and contacting respondents) and Web/CATI tools for navigating through the administrative and questionnaire screens. The default sequence of the questionnaire and navigation sections is presented in Figures 2-1 and 2-2.

If the sampled adult was unable to answer for himself/herself due to illness or impairment, there could also be a proxy respondent who answered questions for the adult. If the proxy was identified during a telephone interview, the interview would continue with that person. If the need for a proxy was identified during the web survey, the proxy person would be called back by a telephone interview to complete the survey.

Figure 2-1. CAWI screening interview flow
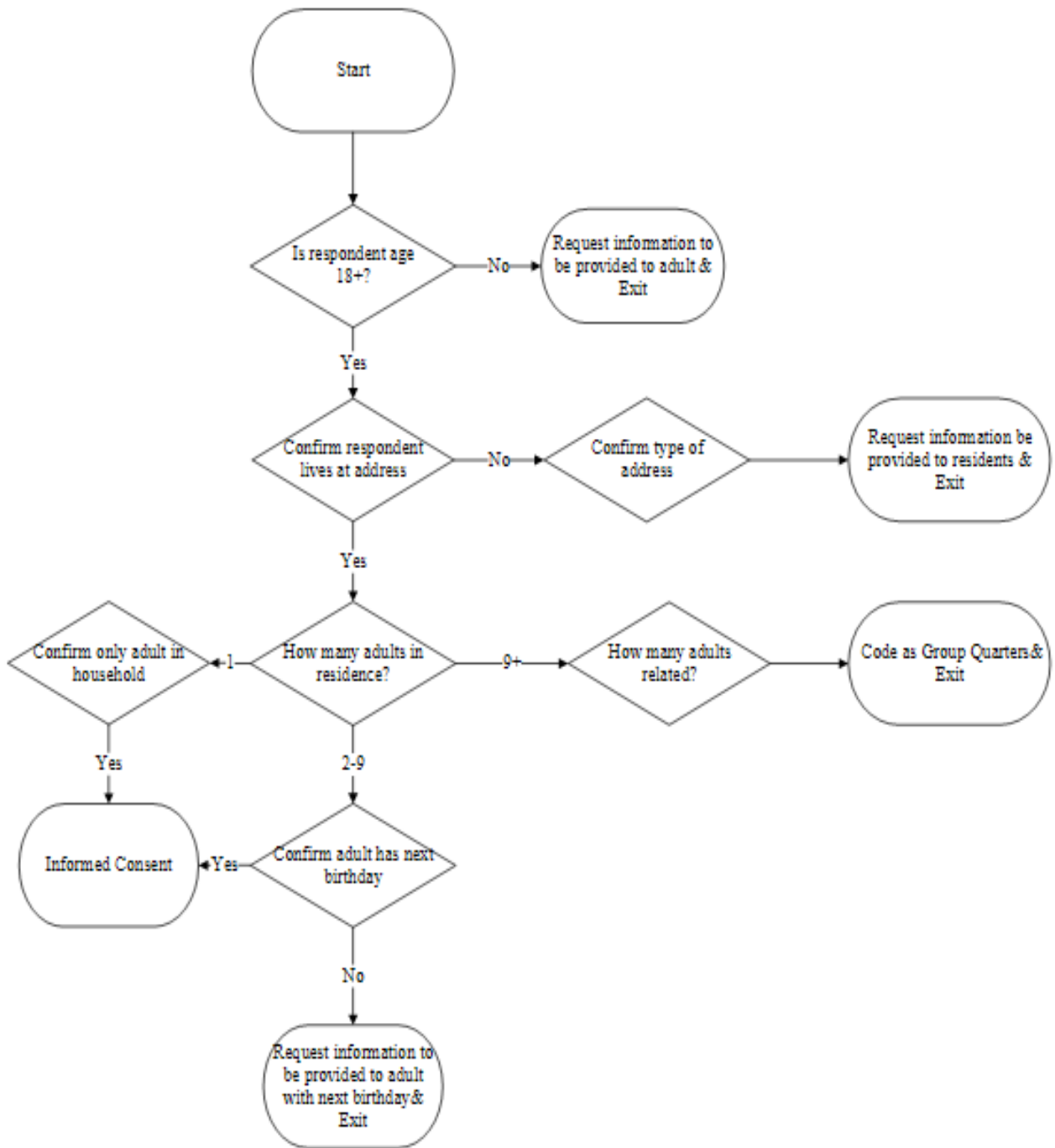
Figure 2-2. CATI screening interview flow

Start

Set time for Callback & Exit ←Yes— Are you driving? ←Cell— [from Start]
Landline

No

Is respondent age 18+?

No → Ask for adult
Not Available → Thank & Exit
Adult Available → Confirm respondent lives at address

Yes → Confirm respondent lives at address

End
Any Response
Confirm type of address
No
Do you know anyone at address?
Yes → Identify adult and return to Introduction or Callback

Confirm respondent lives at address — No → Do you know anyone at address?
Yes → How many adults in residence?

Confirm only adult in household ←1— How many adults in residence?

Eligible child present? ← Initiate Adult Interview (Section A) ← Confirm only adult in household

Yes → Conduct Child Interview → Continue with Adult Interview (Section B)
No → Continue with Adult Interview (Section B)

How many adults in residence?
2-8
9+

Selected=Adult Respondent ← Select adult with next birthday ←2-8— How many related adults? ←9+→ Code as Group Quarters & Exit

Selected <> Adult respondent

Set callback & Exit ←No children or teens— Household roster, including children and teens ←Yes— Is SR AR's spouse? —No→ Is Spouse in household? —No→ Set callback & Exit

Yes children or teens

Is AR parent of all children? —No→ Is AR parent of any children- repeat for every child —No→ Set callback & Exit

Yes

Conduct Child Interview ←Yes parent of selected child

Is AR parent of any children- repeat for every child
Yes → Repeat Intro & proceed to Child Interview
No → Ask for name of AR Spouse/Contact Info

Is Spouse in household? Yes → Repeat Intro & proceed to Child Interview
No → Ask for name of AR Spouse/Contact Info → Set callback & Exit

End ←No— Is teen sampled? ←Yes parent of selected teen

Yes

Ask for permission to interview teen —Refused→ End

Granted

Conduct Teen Interview → End

2-6

A basic principle of the CATI interview flow is that the interviewer should attempt to complete as many different interviews as possible for which the household member currently on the telephone is eligible (e.g., child and permission for the adolescent interview). Once that has happened, the system goes to the HHSELECT screen (see Exhibit 2-1). HHSELECT displayed all interviews scheduled for a household, the name of the respondent, and whether the interview had been completed. The interviewer selected one of the outstanding interviews from HHSELECT, and was routed to the appropriate introductory screens for that interview. HHSELECT reappeared when the household member currently on the telephone completed all interviews he or she was eligible to complete. or the interview was attempted but not completed. It also appeared when an interviewer first entered a case started by another interviewer.

In the web instrument, the survey naturally flows from one section to the other for the adult and child. The teen instrument is programmed separately from the other instruments, and the eligible teen accesses the specific teen instrument. An invitation is mailed to the teens and they are provided with their own secure access code to log into the survey. They also are also required to set a PIN and are asked to provide answers to security questions in the event they suspend an interview to complete it at a later date.

Exhibit 2-1. CHIS 2019-2020 HHSELECT CATI screen

List of people in HH eligible for interviews. Please ask for person in the listed order.
If the adult respondent (AR) is not available, and a child interview (#4) is listed but has not been started, please ask for the spouse of the AR in order to complete the child interview.

○   ADULT, AR=June (female aged 026) partial

○   CHILD, AR=June (female aged 026) , CHILD=Judy (female aged 03)

○   4 CHILD, SPOUSE/PARTNER=Greg (male aged 043) , CHILD=Judy (female aged 03) [if needed AR=June (female aged 026)

○   None available/Set Callback

☐   AR wishes for proxy

[Next]   [Special]

2.3.1 Adult and Child Survey Ordering

Ordering of the adult extended interview and the child interview varied based on which adult in household was the screener respondent.

For the majority of interview, a "child-then-adult' ordering was employed. In an effort to increase the number of completed child interviews, the household/child rostering section was moved up to the end of Adult Section A from its previous location, Adult Section G, for 2019-2020. This alteration in questionnaire order showed successful results during the 2018 Fall web experiment resulting in higher child completion rates with minimal or no effect on adult completes (Wells et al., 2019). At that point, if the adult respondent was determined to have an eligible child in the household, the child interview was attempted before returning and resuming the adult interview.

For most cases, the screening interview resumed at the end of Section A of the adult extended questionnaire, with the following items:

- Determining age and gender of adult respondent's spouse or partner if living in the household;
- Enumeration of adolescents and children in the household; and
- Determining for which adolescents and children the adult respondent and/or spouse or partner is the parent or legal guardian.

This information was used by the program to select one adolescent and one child among those for whom the sampled adult was the parent or legal guardian. Adolescents or children who did not have a parent or legal guardian in the household were not eligible for selection. This exception includes foster children who are legally considered wards of the state, which means that foster parents could not give permission for them to participate in the survey. Households in which there was no one 18 years old or older were also not included in the sample.

Because sampling children and adolescents was part of the adult interview except for child-first cases, the adult interview had to be initiated before the teen interview. The child interview is embedded in the adult interview to make sure the child interview is completed, since collecting a sufficient number of child interviews has been challenging in recent CHIS cycles. Other basic principles of the CATI system flow, once the adult interview is completed, included:

- Attempting to complete as many components as possible with the current respondent before asking for someone else; and

- Attempting the child interview before asking permission for the adolescent interview.

Prior to 2019, the household and child rostering section was in Section G of the adult questionnaire, and the child extended interview questions were asked towards the end of the survey for most respondents, except those qualifying under the "child-first" procedure described below. Figure 2-3 shows a schematic of the structural move of the household/child rostering section and the child extended interview questions.

Figure 2-3. Schematic for structural move of household/child rostering and child extended interview questions.

Prior CHIS cycles → Completed adult extended interview → Child extended interview

2019-2020 CHIS cycle → Section A of adult extended interview → Household/child rostering → Child extended interview, if eligible → Return to adult extended interview

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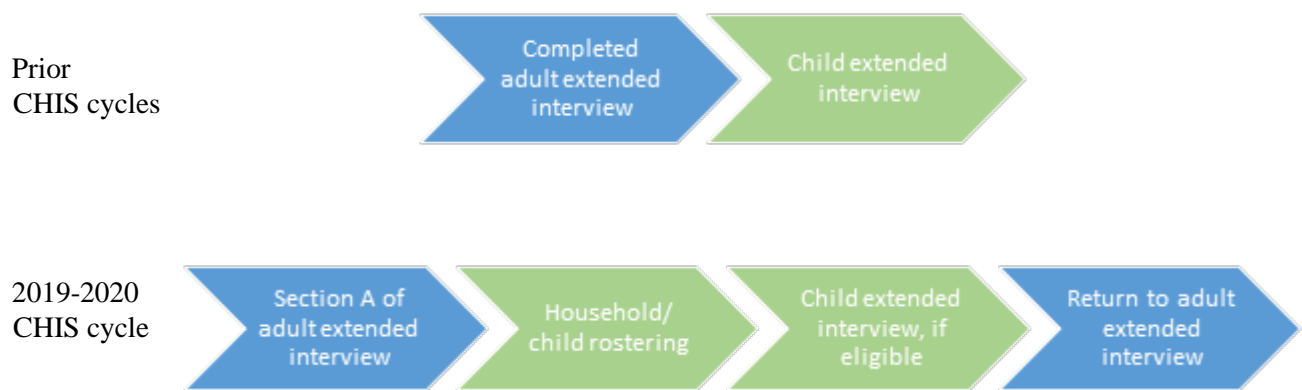
For a small number of telephone interviews, a "child-first" procedure was employed. Starting with CHIS 2005, a "Child-first procedure" was implemented for the landline and list screening interviews. This change was implemented to increase the number of completed child interviews. Under this procedure, if the sampled adult was not available, a knowledgeable adult could complete survey questions about the child. The interviewer would call back later to complete the adult extended interview. CHIS 2019-2020 allowed sampling of children and adolescents as part of the screening interview for telephone interviews only if the following circumstances applied:

- The household included one or more children age 11 or under;
- The sampled adult was the parent or legal guardian of one or more of those children; and
- The sampled adult was the spouse of the screener respondent.

Similarly, an adolescent interview could be first completed if the sampled adult respondent was not the screener respondent. If the screener respondent could give permission and the screener respondent was both the spouse of the sampled respondent and a parent or guardian of the adolescent, an adolescent

could be interviewed. The adolescent interview was attempted for households with an eligible teen. For CHIS 2019-2020, we continued to follow this process for interviews conducted via the CATI mode under the circumstances outlined above.

3. EXTENDED INTERVIEWS

3.1 Questionnaire Development Process

CHIS employs complex survey instruments comprising both core questions typically repeated across survey cycles and new content reflecting emerging public health issues. The questionnaire content is largely driven by the research needs of UCLA, sponsoring agencies, and a variety of government, academic and other partners. However, the concern about respondent burden (and its effect on response rates) limits the overall administration time to an average of 35 minutes for the adult questionnaire, 20 minutes for the adolescent questionnaire, and 15 minutes for the child questionnaire.

With the addition of the self-administered web interview, the 2019-2020 questionnaire updates included structural and content changes. Structural changes to facilitate web interviewing include alterations to language as well as providing information directly to respondents, including:

- Verbiage changes from interviewer focused to project team focused, e.g. "I'm going to ask you some questions" in CATI is changed to "We'd like to ask you some questions" for web.
- Pre-coded lists with numerous responses were shortened to show only the most frequently mentioned categories from past surveys (specifically list of health insurance plans).
- CATI interviewer instructions were shown on the web to provide respondent additional information or examples to clarify what is meant, such as "For example, in brownies, cakes, cookies, or candy." This text was typically separated from the main question and italicized.
- CATI interviewer instructions were shown on the web to provide respondent specific instruction on how to respond, for example "Select all that apply" or "Do not include decimal points or commas" in numeric answers. This text was typically separated from the main question and italicized.

In early 2019, UCLA provided SSRS with revisions to the existing questionnaire. SSRS reviewed and provided feedback on the new questions. These new sections of the instrument were then prepared for pretesting.

3.2 Questionnaire Content

The 2019-2020 adult extended questionnaire was divided into 14 sections:

A. Demographics, Part I – Age, gender assignment, gender identity, race, ethnicity, languages spoken at home, English proficiency, marital status, household roster.

B. Health Conditions – General health, asthma, diabetes, pre-diabetes/borderline diabetes, gestational diabetes, hypertension, heart disease, COVID-19 prevalence, testing and impacts.

C. Health Behaviors – Dietary intake, use of cigarettes, use of e-cigarettes, secondhand smoke exposure, use of other types of tobacco products, marijuana, heroin, prescription painkillers, methamphetamines, prescription stimulants, influences on health.

D. General Health, Disability, and Sexual Health – Height and weight, disability, sexual partners and sexual orientation, registered domestic partners, Pre-Exposure Prophylaxis, HIV testing.

F. Mental Health – K6 mental health assessment, Sheehan scale, access and utilization, stigma, mental health and technology.

G. Demographics, Part II – Self and parent's country of birth, citizenship and immigration, teen permission, paid childcare, education, veteran status, employment of self and spouse.

H. Health Care and Health Insurance – Usual source of care, emergency room visits, current coverage by public or private plans, coverage of prescription drugs, coverage over past 12 months, spouse's coverage, high deductible health plans, reasons for lack of coverage, hospitalizations, partial scope Medi-Cal, use of Covered California.

I. Adolescent and Child Health Insurance – For sampled adolescent and child, current coverage by public or private plans, source of coverage, managed care plan characteristics, high deductible plans, coverage in past 12 months, reasons for lack of coverage, use of Covered California; country of parents, citizenship and immigration, teen health provider visits.

J. Health Care Utilization and Access – Visits to medical doctor, personal doctor, patient-centered care, timely appointments, tele-medical care, care coordination, communication problems with doctor, delays in care, pregnancy status, family planning**,** Planned Parenthood utilization, dental health, sexual violence, caregiving.

K. Employment, Income, Poverty Status, Food Security – Hours worked, income last month, household annual income, number of persons supported, availability of food in household and hunger.

L. Public Program Participation – Participation in public social programs, assets, alimony and child support, worker's compensation, Social Security/pensions, reasons for non-enrollment in Medi-Cal, public charge.

M. Housing and Social Cohesion – Type of housing and tenure, social cohesion and safety, civic engagement.

P. Voter Engagement – Voter registration, voting in recent elections, frequency of voting in state and national elections.

S. Suicide Ideation and Closing – History of suicide attempts, thoughts of suicide, willingness to participate in follow-up study.

The 2019-2020 child extended questionnaire was comprised of eight sections:

A. **Demographics (Part I) and Health Status** – Gender, age, height and weight, breastfeeding, school attendance, general health, asthma, and other conditions.
B. **Dental Health** – Most recent visit to a dentist, main reason for not visiting a dentist, dental insurance, emergency room/urgent care.
C. **Diet, Physical Activity, Park Use** – Dietary intake, commute from school to home, name of school, sedentary time, use of parks.
D. **Health Care Access and Utilization** – Usual source of care, emergency room use, visits to medical doctor, personal doctor, care coordination, developmental screening, timely appointments, communication problems with doctor, delays in care, and difficulty finding a doctor.
E. **Public Programs** – Participation in TANF/CalWORKs, Food Stamps, and WIC.
F. **Parental Involvement** – First 5 California: "Talk, Read, Sing" program, First 5 California: Kit for New Parents.
G. **Child Care and Social Cohesion** – Types of child care used, difficulty finding care.
H. **Demographics (Part II, Part III)** – Race and ethnicity, country of birth (child and parents), citizenship/immigration status of child and parents.

For child-first cases, the following topics from the adult questionnaire were administered to the SKA as part of Section K of the child questionnaire so that these children would have essential household-level and insurance information for analysis and weighting in the event an adult interview was not completed.

- **Section K. Child First** – Languages spoken at home, SKA's education, employment status, and age; spouse's education and employment status; health insurance coverage for the sampled adult, spouse, sampled child, and sampled adolescent; household income; type of housing and tenure, social cohesion, and primary caretaker of child

Finally, the 2019-2020 adolescent extended questionnaire comprised 12 sections, presented in the order they appear in the interview:

A. **Demographics** – Age, gender assignment, gender identity, school attendance, name of school.

B. **Health Status and Health Conditions** – Self-reported health status, height and weight, missed school days, asthma.

C. **Diet and Nutrition** – Dietary intake.

D. **Physical Activity** – Physical activity, commute from school to home, park and neighborhood safety, social cohesion, sedentary time.

E. **Cigarette, Alcohol and Drug Use** – Cigarette use, e-cigarette use, and alcohol use/abuse.

F. **Mental Health** – K6 mental health assessment, mental health and technology.

G. **Sexual Behaviors** – Sexual activity, birth control.

H. **Health Care Utilization and Access** – Usual source of care, emergency room visits, most recent doctor visit, personal doctor, timely appointments, care coordination, delays in care, dental health.

J. **Demographics, Part II** – Race and ethnicity, country of birth, citizenship and immigration, languages spoken at home (expanded list of languages).

K. **Suicide Ideation and Attempts**.

L. **Civic Engagement and Resiliency** – Volunteer work and support from adults, Pre-Exposure Prophylaxis, and HIV testing.

M. **Closing** – Willingness to participate in follow-up study and closing.

3.3 Translation of Questionnaires

As in previous cycles, CHIS 2019-2020 instruments were administered in English, Spanish, Chinese (Mandarin and Cantonese dialects), Vietnamese, Korean, and Tagalog (Tagalog was CATI only). Translation of the CHIS 2019-2020 questionnaires began in August 2019 after instruments were finalized. The translation process for each language began with original translation of all new items included in CHIS 2019-2020. The work was reviewed by a second translator, who was responsible for reconciling differences and making final recommendations to UCLA. Once received by UCLA, the initial translations for each language were reviewed by an ATA-certified translator or state court-certified interpreter and recommended changes were discussed during a phone meeting between the certified translator and the respective language team, including an adjudicator. The questions were overlaid into the survey program and checked by G3 Translate, and members of the SSRS and CHIS teams. G3 Translate, subcontracted by SSRS, is a specialized provider of language solutions and communications services. They performed all of the questionnaire translations and participated in the language adjudication discussions.

3.3.1 Letter Translations

The translation of contact materials and consent scripts followed the same procedure used for translations of the survey instruments. The majority of the CHIS 2019-2020 contact materials remained similar to the 2017-2018 materials, with modifications made to adapt them to the 2018 Fall web experiment materials due to the switch to the ABS methodology (see Wells et al., 2019).

Review of translations followed the same process as the questionnaires, with multiple reviews by different translators. Any discrepancies amongst the translators and interpreter were discussed and finalized during a phone meeting between the certified translator and the respective language team, including an adjudicator.

3.4 Pretest and Pilot Test

SSRS pretested an abbreviated and simplified CHIS 2019-2020 CATI questionnaire using a hard copy questionnaire and a small team of experienced interviewers capable of navigating the skip patterns without a programmed CATI instrument. This CATI pretest was carried out in May of 2019.

The formal pilot test was conducted through web administration and SSRS's call center from August 29 through September 12, 2019. During that time, SSRS completed 326 adult interviews, 36 child interviews, and 6 interviews with adolescents between ages 12 to 17. For purposes of the pilot testing the full three contact mailing protocol was not implemented, only a single invitation letter was mailed. For those with appended phone numbers, phone follow-ups commenced ten days after the invitation letter. Calls continued for one week.

SSRS trained experienced interviewers on CHIS protocols and procedures. The pilot test was intended as a dress rehearsal for the main study—almost all used an English-language instrument, with only five adult web interviews using a Spanish-language instrument—and no attempt was made to convert refusals or follow up with language problem cases. Table 3-1 presents the results of the pilot test and provides cooperation rates from pilot tests back to 2011. The screener and adult cooperation rate are considerably higher than past cycles and the highest they have ever been. The lack of refusals for child and adolescents resulted in a 100% cooperation rate, consistent with the high cooperation rates seen over the past cycles, while the permission cooperation rate is the lowest it has ever been.

Table 3-1. Number of completed interviews and refusals in the CHIS 2019-2020 pilot and cooperation rates in -previous pilots

Instrument	CHIS 2019-2020 Pilot		Pilot Cooperation Rates				
	Interviews	Refusals	2019-2020	2017-2018	2015-2016	2013-2014	2011-2012
Screener	485	344	59%	34%	41%	22%	28%
Adult	326	29	92%	74%	82%	56%	64%
Child	36	0	100%	93%	77%	100%	93%
Adolescent Permission	22	23	49%	80%	N/A	67%	94%
Adolescent	6	0	100%	100%	N/A	100%	86%

Source: UCLA Center for Health Policy Research, 2019-2020 California Health Interview Survey.

Staff from UCLA, the Public Health Institute (PHI), and SSRS monitored the pretest and interviews from the pilot test. Results of the observations and debriefing helped inform decisions about cutting and modifying questions between the pilot test and the main study.

3.5 Changes in the Questionnaire during Data Collection

To improve the quality of the 2019-2020 CHIS questionnaire, several steps were taken to review questionnaire content throughout data collection:

- SSRS, UCLA, and PHI staff monitored interviews
- Interviewer debriefing sessions were conducted
- SSRS data collection staff reviewed all problem sheets provided by interviewers and considered if any changes or interventions were necessary to ameliorate the problem.
- Changes to the program during the field period in 2019-2020 were generally limited to correcting the program to be consistent with the original intention of the programming instructions in the questionnaire.
- A series of new questions was added in 2020 to understand the impact of COVID-19 on Californians.

4. DATA COLLECTOR RECRUITING AND TRAINING

This chapter describes activities related to supporting CATI data collection. SSRS conducted CHIS 2019-2020 CATI interviewing at several interviewing sites. These included: Recon MR at multiple Texas sites, Precision in Las Vegas, SSRS Las Vegas, and SSRS Allentown, PA. All data collectors received the same training and supervision. Dialing from all locations came through the SSRS server and SSRS supervisors monitored all interviewing. In 2020, COVID-19 precautions required a shift to interviewers work from home. While remotely working, training and supervision continued as described in the subsequent sections.

4.1 Pretest and Pilot Test Recruiting and Training

SSRS selected experienced data collectors from its interviewing staff for the pretest and the pilot. For the pretest, data collectors were trained informally on paper and pencil versions of the CHIS 2019 draft questionnaire. Training was conducted by members of the CHIS team. The training program was developed and implemented by the Director of Telephone Operations and anticipated the training for the main study. CATI was used for administration of the pilot interviews.

4.2 Recruiting and Training for English-language Telephone Interviewing

The field period for the 2019-2020 survey began September 26, 2019 and ended on November 30, 2020, with a one month break in February 2020. Bilingual Spanish data collectors were trained along with English-only data collectors to prepare for in-language interviewing but also had individualized training with bilingual supervisors. Asian-language interviewers were trained later once the programs were ready.

4.2.1 Recruiting Telephone Data Collectors

The CHIS 2019-2020 interviewing workforce was a combination of SSRS-experienced and newly hired data collectors who spent at least a few weeks interviewing on less complex jobs. After all training sessions were held, 354 SSRS data collectors and partners had successfully completed the training. New interviewers were recruited for the CHIS team if they pick up the basic interviewer training materials quickly and demonstrated good work habits such as excellent attendance, volunteering for extra shifts, having a better-than-average production rate, and demonstrated excellent teamwork skills.

SSRS recruits new data collectors for our Las Vegas phone center through Indeed, Craigslist, and the Nevada Unemployment Office. SSRS holds job fairs at the unemployment office and at hotels and

casinos in the area. The Allentown center attends local job fairs and works with the office of vocational rehabilitation as well as posting on online employment sites.

Additionally, all prospective hires for interviewer positions at SSRS go through the following steps, and SSRS holds all external partners to the same hiring standards:

- A candidate interview that includes factual and behavioral questions to assess professionalism, reliability and work style.
- A mock interview conducted to assess comprehension and diction
- A Learning Management On-line Assessment to assess comprehension/retention and ability to follow directions
- Any potential new recruits for the CHIS would undergo this standard interviewing process.

Those who successfully completed their interview and met the standards of the SSRS site managers then commenced with general training. General training for interviewers consists of three days of trainer-led classroom work with a focus on general survey work and concepts. This includes call listening, role playing and participating in limited dialing on a basic (not complex) study. All candidates are reviewed on their performance on the phone and given comprehensive feedback.

The fourth day of training for new interviewers is a full shift of dialing with a dedicated offline staff member who assists with the interview and provides side by side coaching.

4.2.2 Data Collector Training

Project-specific training for CHIS 2019-2020 included CATI system training on the interview instrument led by a trainer and dyad role plays. Training for main data collection began in September 2019. Additional trainings were conducted as needed throughout the data collection period.

Development of the training started with an outline of key concepts to be covered. The agenda and the development of materials followed from this starting point. The appearance of all materials was standardized, and presentations were scripted so that all trainers could follow the format and deliver a consistent training program across groups.

Training Program Agenda. The agenda identified the format of the sessions (self-tutorial materials, instructor-led trainings and dyad role plays), the topics to be covered, and the length of time the session was scheduled to take (see Exhibit 4-1).

Trainer's Manual. A Power Point presentation with all information presented by the lead trainer was distributed in binders to all interviewers. The presentation contained the following topics:

- CHIS Introduction & Background (including video)

- Protecting Human Research Participants

- Confidentiality Form & Mailing Materials

- Respondent Selection

- Gaining Cooperation with Adolescents

- Proxy Interviews

- Questionnaire Topics

- Distressed/Emergency/Suicide Protocol

- Pronunciation Review

- FAQs & Pop Quiz

- Intro & Screening Round Robin Role Play

- Review Child First & Different Adult Responses

- Intro Round Robin Role Play

- Sensitivity Training

- Protocol for Referring Distressed Respondents

- Pronunciation Practice & Assessment

- FAQs & Refusal Avoidance Role Playing

- Mock Adult Survey

- Mock Child Survey

- Mock Teen Survey

- Problem Sheet Review

- Coding / Dispositions and Other Specifies

In addition to the materials found in the Power Point presentation, data collectors received separate copies of the FAQs, pronunciation guide, and a condensed version of FAQs with key information

more easily accessible. This included emergency and suicide protocol information as well as numbers to contact project management staff and UCLA.

In-person training sessions. After completion of the standard training sessions for all SSRS and partner interviewers, data collectors attended two nights of five-hour in-person training sessions and one night of a six-hour session specifically for CHIS. The first two-nights predominantly consisted of two trainers going through a detailed agenda of topics relevant to CHIS data collection. The third night consisted of interviewers familiarizing themselves with the CATI program and performing mock interviews. All interviewers went through multiple scenarios and emphasized moving from one interview type to another as well as addressing distressed respondents.

The in-person training team for each group consisted of a lead trainer and one supervisor. The lead trainer was responsible for the overall presentation and the pace of training. The supervisor was responsible for individual assistance, troubleshooting, and trainee evaluation. The agenda for the in-person sessions is presented in Exhibit 4-1.

Exhibit 4-1. Agenda for CHIS 2019-2020 English-Language In-Person Data Collector Training

Night	Topic
1	▪ Welcome, Introductions
	▪ CHIS Introduction and background (including CHIS video)
	▪ Protecting Human Research Participants
	▪ Confidentiality form and advance letter
	▪ Respondent Selection
	▪ Gaining Cooperation with adolescents
	▪ Proxy Interviews
	▪ Questionnaire topics
	▪ Distress Protocol
	▪ Pronunciation review
	▪ FAQs and Pop Quiz
	▪ Introduction and Screening Round Robin Role Play
	▪ Review Child First and Different Adult Responses
	▪ Recap Q&A
2	▪ Welcome Back / Q&A from night one
	▪ Introduction and round robin role play
	▪ Sensitivity training
	▪ Protocol for referring distressed respondents
	▪ Pronunciation practice and assessment
	▪ FAQ and refusal avoidance role playing
	▪ Mock adult survey
	▪ Mock child survey
	▪ Mock teen survey
	▪ Problem sheet review
	▪ Coding/dispositions and other specifics and recap / Q&A
3	▪ Welcome back / Q&A from night one
	▪ Paired role playing and assessments
	▪ Recap / Q&A

In-person training began with an introduction to the CHIS study and the provision of information about how the data collected are used in the state of California. Supervisors provided the interviewing staff with an understanding of the importance of the work they would be doing in order to keep the staff motivated through the long interviewing period. The head trainer also went through a detailed explanation of Human Subjects regulations and permissions and discussed respondent confidentiality. Interviewers reviewed the advance letter in order to be familiar with what the respondent had received in the cases of

matched sample. They then went through the process of respondent selection, an overview of the topics covered in the CHIS instrument, the distressed respondent protocol, and a review of correct pronunciations of challenging words. Following a review of the FAQs and a pop quiz, interviewers did round-robin role playing to familiarize themselves with the FAQs. Finally, the trainers went over the concept of the child-first interviews and answered final questions that arose after the first night's training.

Night two of training began with another round of role playing and the opportunity for interviewers to ask any questions about the material covered thus far. The trainers reviewed the protocols for asking sensitive questions and reviewed again the distressed respondent process. They carried out an assessment of interviewer pronunciations.

In order to introduce the CATI program, interviewers participated in a trainer-led round-robin. Each data collector read a segment of questions, and the trainer provided responses. A screen in the front of the training room was viewed by everyone participating, and an assistant trainer entered data as the process moved forward. This continued through child and adolescent interviews.

On the third day of training, data collectors paired off for role play interviews, taking turns as data collector and respondent, with the latter using a prepared script. Data collectors reversed roles after the end of each role play. Each data collector participated in several dyads. The training team members monitored the role plays and evaluated data collector performance. They also responded to any questions that arose during the role playing.

Table 4-1 shows the timing of project-specific data collector training sessions for CHIS 2019-2020. The first trainings began in September 2019 and were held as needed throughout the life of the project.

4.2.3 Follow-up and Specialized Data Collector Training

After data collectors started live interviewing, they received supplemental training on specific questionnaire issues that arose after training, and additional training in gaining respondent cooperation. Interviewers with completion rates that lagged behind other members of the team received additional training from supervisors in an effort to improve performance.

Table 4-1. CHIS 2019-2020 data collector training dates, provider and number of data collectors trained

Training Dates	Provider	Data Collectors Completing Training
9/17/2019	SSRS	12
9/24/2019	SSRS	15
9/30/2019	SSRS	6
10/21/2019	SSRS	14
10/29/2019	SSRS	21
10/30/2019	SSRS	32
11/4/2019	SSRS	18
11/11/2019	SSRS	9
11/18/2019	SSRS	28
12/2/2019	SSRS	9
12/4/2019	SSRS	9
12/15/2019	SSRS	8
11/3/2019	Precision	12
11/6/2019	Precision	13
11/10/2019	Precision	6
11/18/2019	Precision	11
11/25/2019	Precision	7
12/2/2019	Precision	8
12/16/2019	Precision	6
12/10/2019	Recon	17
12/12/2019	Recon	16
12/15/2019	Recon	16
12/17/2019	Recon	15
12/18/2019	Recon	16
12/20/2019	Recon	15
07/29/2020	Recon	15

Refusal Avoidance and Conversion. Interviewers who demonstrated fluency and ease with the FAQs were given the opportunity to receive extra coaching to take on the role of refusal converters. Once they began dialing refusals, their performance was monitored real time. Continuous monitoring on the productivity of refusal converters allowed intervention in the form of additional training where necessary, or, in extreme cases, removal from the conversion team.

Bilingual Interviewing. Prior to being assigned to bilingual interviewing, the candidates for these assignments completed several interviews with experienced bilingual interviewers who certified that they could both read questions and understand responses adequately for conducting interviews on their

own with fluency and accuracy. SSRS requires that bilingual interviewers be able to read and write a sentence in English as well as in the language in which they will be conducting interviews.

4.3 Training for Spanish-language Interviewing

Spanish-language interviewers practiced and roleplayed in the Spanish version of the program. Interviewers discussed wording and the overall meaning of the questions and answer choices given in the Spanish program. Supervisors and trainers worked with bilingual interviewers to become comfortable with pronunciations and other nuances of the CATI program prior to commencement of Spanish-language interviewing. Specific Spanish pronunciation assessments were administered to Spanish-language interviewers.

4.4 Training for Asian-language Interviewing

Bilingual and multilingual staff hired and staffed by SSRS conducted CHIS interviews in Vietnamese, Mandarin, Cantonese, Korean, and Tagalog. The training for Asian-language data collectors was conducted in multiple stages. Data collectors were first trained to administer English interviews. All trainees were hired on the premise that some of their interviewing time would be spent conducting English interviews. Asian-language speaking households were identified in limited quantities. To make their interviewing time efficient, data collectors had to demonstrate an ability to conduct English interviews. Additionally, preparation was necessary to conduct the adult interview in an Asian language followed by an adolescent interview where the preferred language was English. Chinese and Korean characters, and Vietnamese accented text, were displayed in CATI in the Asian languages. Data collector instructions and help text remained in English.

Vietnamese, Mandarin, Cantonese, Korean, and Tagalog Training Assistance. Vietnamese, Mandarin, Cantonese, Korean and Tagalog speaking SSRS staff assisted in the creation of training materials. Data collectors were provided with translated copies of the advance letter and the Commonly Asked Questions and Answers. Vietnamese, Cantonese, Mandarin, Korean, and Tagalog dyads were developed like the English dyads but with the Asian text shown for the respondent to follow on the screenshots. Staff members who spoke Asian languages either served as respondents for Asian speaking data collectors or monitored the Asian dyads to assess readiness for data collection.

Dyad Role Plays. Once the instrument had been thoroughly reviewed, the trainees were given the opportunity to practice using role plays. The trainee acting the part of the data collector would use the CATI instrument to administer the CHIS questionnaire in Vietnamese, Mandarin, Cantonese, Korean, or

Tagalog. The trainee acting the part of the respondent would respond to the data collector's questions. An adolescent role play interview to be conducted in English was included in the set as an attempt to simulate a common real-life scenario and provided additional English practice.

At any point in the interviewing process, data collectors had the capability to change the displayed text on a screen from English to an Asian language or vice versa. Additionally, data collectors could move a case to any of the other language work classes using a control key sequence if it was appropriate to have an interview done by a bilingual data collector speaking another language. Practice on this capability was included in the language-specific trainings.

Live Interviewing. After training and practice, the data collectors began interviewing in Vietnamese, Mandarin, Cantonese, Korean, and Tagalog. Having a CATI instrument with these language translations, including diacritical marks, provided a streamlined and greatly simplified interviewing process. Since all cases were contained in the CATI scheduler, case control was easily managed with cases designated for a specific language only being delivered to data collectors trained in interviewing in that Asian language.

Bilingual Monitoring. Asian speaking GDCC staff members were used to measure interviewing quality and to provide feedback to individual data collectors. GDCC, subcontracted by SSRS, provides international telephonic fieldwork services to leading market research and consultancy agencies. They have global offices in the United States and overseas and utilized overseas reviewers to conduct this quality control monitoring.

Specific monitoring forms and guidelines describing what to look and listen for were utilized. After a data collector had completed a monitoring session, the staff member would provide a review of the monitoring sheets completed. The monitoring information would further be used to follow up with the data collector who had been monitored and review strengths and weaknesses exhibited.

4.5 Data Collector Performance

Data collector performance was evaluated through examination of performance reports and monitoring of live and recorded interviews for the skills needed for effective interviewing. Five percent of interviewing time was monitored throughout the data collection period. Supervisors monitored data collectors for a minimum of 15 minutes at a time. The monitoring was followed by a one-on-one coaching session to review techniques that were or were not working and to either reinforce exemplified skills or provide feedback for improving interviewing style. Data collectors were monitored by supervisors and

training staff to determine if the following skills were demonstrated: use of a conversational style; reading fluency; ability to answer respondent questions quickly, accurately, and completely; ability to gain respondent cooperation; reading screens verbatim; and using neutral probes. Data collectors whose performance fell below acceptable levels attended additional coaching sessions with an emphasis on gaining respondent cooperation and answering respondent questions.

The following techniques were used to identify and reinforce behaviors effective in gaining respondent cooperation:

- Supervisors targeted specific interviewers for extra monitoring based on deviations in their productivity. The issues that were to be focused on during monitoring were also provided, such as the data collector's ability to answer respondent questions/concerns quickly and accurately and read all screens (especially the screener introduction) at the appropriate pace and tempo for the respondent; read screens verbatim; and probe neutrally and appropriately. For refusal data collectors, the emphasis was on the ability to engage respondents and use appropriate techniques.

- Supervisors provided feedback to data collectors on an individual basis after monitoring sheets had been completed. This included feedback on positive aspects of the interview and suggestions for improving performance.

- Project Coordinators sent reports regarding data collector performance to the operations manager. Reports identified strengths and weaknesses as reported in monitoring sheets. They also provided input on data collectors recommended for special tasks.

- Project coordinator reports were used in combination with cooperation rates to identify data collectors for refusal conversion and other specialized tasks.

- Comments sent from the project team to the data collection coordinators throughout the field period were general reminders for all data collectors concerning the following areas:
  - Reviewed data collection techniques geared towards obtaining respondent cooperation
  - Reiterated the importance of following the correct screening procedures for both the landline and cell phone frames to correctly select the appropriate respondent
  - How to correctly identify the parent or guardian qualified to give teen permission and the age requirement for teen interviews
  - How to correctly identify the adult eligible to complete a child interview
  - Making the transition from adult interview to child/teen interview as seamless as possible to immediately obtain the child/teen interview

- Reminders about how to handle sensitive questions
- The creation of a Spanish pronunciation document
- Provided feedback to specific bilingual (English/Spanish or English/Asian language) interviewers

Staff from UCLA and PHI also monitored interviews in CHIS 2019-2020. While these monitoring sessions were primarily focused on assessment of the instruments, occasionally interviewer performance issues would arise. The latter were handled by SSRS supervisors who monitored along with the UCLA staff as described above. Some issues with the instruments could not be solved by changes to the CATI program; in such situations, data collectors were advised of the issues and how to deal with them.

5. SCHEDULING AND RELEASE OF WORK

This chapter describes activities related to initiating data collection, including preparation and release of sample, mailing sizes and dates, contents of mailings, and handling inbound calls to SSRS's CHIS toll-free number. Data collection for the 2019-2020 survey began September 26, 2019 and ended on November 30, 2020, with a one month break in February 2020. Sample was released in twenty-six staggered waves during this period.

5.1 Sample Presentation

Address-based sample (ABS) for the 2019-2020 CHIS survey was selected according to protocols outlined in *CHIS 2019-2020 Methodology Series: Report 1 – Sample Design.* The address-based sample is randomly generated from the United States Postal Service's (USPS) Computerized Delivery Sequence File (CDS). Phone numbers were appended to the sample to enable follow-up protocols for non-response where available. Table 5-1 contains the total number of pieces of sample of addresses randomly generated and fielded by modeled strata, and it also enumerates the number of phone appends.

Table 5-1. CHIS 2019-2020 total sample generated and fielded

	2019	2020	2019-2020
Total Sample Modeled	847,930	517,759	1,365,689
Purged after Modeling	593,134	327,377	920,511
Final Sample Mailed	254,796	190,382	445,178
Mailed Sample with Phone Appended	172,511	134,622	307,133

Source: UCLA Center for Health Policy Research, 2019-2020 California Health Interview Survey.

Similar to the previous wave, CHIS 2019-2020 utilized 44 primary geographic strata, which are shown in Table 5-2, along with their corresponding sample size and phone append rates.

Table 5-2. CHIS 2019-2020 sample cases released by strata

Sampling Stratum	Total Sample Modeled	Sample Purged after Modeling	Sample Mailed	Percent with Phone Appended
1 Los Angeles	321,167	216,132	105,035	70%
2 San Diego	137,269	92,179	45,090	70%
3 Orange	67,806	44,688	23,118	73%
4 Santa Clara	42,082	28,286	13,796	66%
5 San Bernardino	48,754	29,165	19,589	72%
6 Riverside	57,417	37,061	20,356	77%
7 Alameda	37,359	25,712	11,647	68%
8 Sacramento	36,991	25,875	11,116	66%
9 Contra Costa	24,941	16,739	8,202	74%
10 Fresno	31,142	21,414	9,728	62%
11 San Francisco	25,895	17,641	8,254	61%
12 Ventura	17,446	12,282	5,164	81%
13 San Mateo	18,061	12,508	5,553	71%
14 Kern	30,480	22,477	8,003	65%
15 San Joaquin	20,375	12,819	7,556	70%
16 Sonoma	13,121	8,640	4,481	70%
17 Stanislaus	18,933	12,937	5,996	67%
18 Santa Barbara	14,835	10,536	4,299	67%
19 Solano	14,124	8,204	5,920	70%
20 Tulare	16,757	10,973	5,784	64%
21 Santa Cruz	14,037	9,810	4,227	70%
22 Marin	11,992	8,043	3,949	72%
23 San Luis Obispo	12,987	9,676	3,311	69%
24 Placer	13,059	8,881	4,178	72%
25 Merced	17,068	10,852	6,216	63%
26 Butte	13,995	9,799	4,196	65%
27 Shasta	15,046	10,877	4,169	69%
28 Yolo	13,537	9,887	3,650	65%
29 El Dorado	11,730	8,077	3,653	71%
30 Imperial	22,411	15,450	6,961	63%
31 Napa	14,380	9,476	4,904	72%
32 Kings	26,616	18,788	7,828	62%
33 Madera	17,816	11,370	6,446	62%
34 Monterey	16,569	11,265	5,304	68%
35 Humboldt	14,078	10,500	3,578	67%
36 Nevada	12,725	9,159	3,566	73%
37 Mendocino	13,231	9,340	3,891	63%
38 Sutter	21,158	14,424	6,734	67%
39 Yuba	18,113	12,043	6,070	62%

(continued)

Table 5-2. CHIS 2019-2020 sample cases released by strata (continued)

Sampling Stratum	Total Sample Modeled	Sample Purged after Modeling	Sample Mailed	Percent with Phone Appended
40 Lake	17,258	12,242	5,016	65%
41 San Benito	15,975	10,451	5,524	67%
42 Tehama, etc.	14,544	9,017	5,527	64%
43 Del Norte, etc.	11,821	8,201	3,620	59%
44 Tuolumne, etc.	10,587	6,614	3,973	67%
Total	1,365,689	920,511	445,178	69%

Source: UCLA Center for Health Policy Research, 2019-2020 California Health Interview Survey.

5.2 Sample Release

The sample was released over 26 waves of varying sample sizes from September 2019-October 2020. In 2019, each sampled address potentially received up to three mailings delivered by the USPS. In 2020, each sampled address potentially received up to four mailings delivered by the USPS. If a phone number was appended, follow up phone calls were initiated to non-responsive sample.

Table 5-3. Sample release by wave and mailing dates

Mail Wave	Initial Sample Size	Initial Mailing	Second Mailing	Third Mailing	Fourth Mailing	Outbound Calls
Wave 1	38,267	9/26/19	10/3/19	10/23/19		11/4/19
Wave 2	38,281	10/3/19	10/10/19	10/31/19		11/11/19
Wave 3	38,277	10/10/19	10/17/19	11/7/19		11/20/19
Wave 4	27,358	10/17/19	10/31/19	11/13/19		11/27/19
Wave 5	26,577	10/24/19	11/7/19	11/20/19		12/4/19
Wave 6	26,576	10/31/19	11/14/19	11/27/19		12/11/19
Wave 7	17,738	11/7/19	11/14/19	12/5/19		12/12/19
Wave 8	35,763	11/21/19	11/28/19	12/4/19		12/12/19
Wave 9	5,959	12/4/19	12/11/19	12/16/19		12/23/19

(continued)

Table 5-3. Sample release by wave and mailing dates (continued)

Mail Wave	Initial Sample Size	Initial Mailing	Second Mailing	Third Mailing	Fourth Mailing	Outbound Calls
Wave 10	11,434	3/5/20	3/19/20	4/2/20	4/16/20	4/30/20
Wave 11	11,431	3/12/20	3/26/20	4/9/20	4/16/20	4/30/20
Wave 12	19,397	4/16/20	4/30/20	5/14/20	5/21/20	6/4/20
Wave 13	19,396	4/27/20	5/11/20	5/26/20	6/9/20	6/23/20
Wave 14	14,997	5/4/20	5/14/20	5/28/20	6/11/20	6/25/20
Wave 15	19,994	5/7/20	5/21/20	6/4/20	6/18/20	7/2/20
Wave 16	19,997	5/14/20	5/28/20	6/11/20	6/25/20	7/9/20
Wave 17	14,926	5/28/20	6/11/20	6/25/20	7/9/20	7/23/20
Wave 18	14,926	6/4/20	6/18/20	7/2/20	7/16/20	7/30/20
Wave 19	14,926	6/18/20	7/2/20	7/16/20	7/30/20	8/13/20
Wave 20	3,112	7/2/20	7/16/20	7/30/20	8/13/20	8/27/20
Wave 21	3,113	7/9/20	7/23/20	8/6/20	8/20/20	9/3/20
Wave 22	3,112	7/16/20	7/30/20	8/13/20	8/27/20	9/10/20
Wave 23	3,854	7/30/20	8/6/20	8/20/20	9/3/20	9/17/20
Wave 24	3,032	8/6/20	8/13/20	8/27/20	9/10/20	9/24/20
Wave 25	3,031	8/13/20	8/27/20	9/10/20	9/24/20	10/1/20
Wave 26	9,704	8/27/20	9/10/20	9/24/20	10/8/20	10/15/20
TOTAL	445,178					

Source: UCLA Center for Health Policy Research, 2019-2020 California Health Interview Survey.

In 2019, the sequence of mailings included: an initial invitation letter, a sealed postcard reminder, and a final reminder letter which was delivered as certified mail. In 2020, the sequence of mailings was altered to include an initial invitation letter, a sealed postcard reminder, a second reminder letter, and a sealed postcard final reminder. Examples of all mailings can be found in *Appendix A*.

The mailings varied based on the predominant language featured based on results of the sample modeling (described in *CHIS 2019-2020 Methodology Series: Report 1 – Section 2.2*). Sample that was modeled as either Korean, Vietnamese, or Other Asian identification was sent an Asian Dominant mailing, those identified as Hispanic or Spanish speaking household received the Spanish Dominant, and all others received the English Dominant mailings. The three language conditions and sample sizes our outlined in Table 5-4.

Table 5-4. Sample size by language mailing conditions

	Initial Sample Size
English	346,936
Spanish Dominant	66,845
Asian Dominant	31,397

Source: UCLA Center for Health Policy Research, 2019-2020 California Health Interview Survey.

The first mailing contained the initial invitation letter, a $2 pre-incentive, and a Frequently Asked Questions (FAQ) sheet. The letter prominently featured who should complete the survey, the survey URL and a secure access code unique to the household. In addition, a toll-free number was offered for those who wished to complete the survey by phone.

For those in the Spanish dominant language condition, the letters and FAQs were printed on an 11 by 17 sheet and folded as a booklet. In addition, the materials were printed and folded in a way so that the Spanish language materials would be displayed first upon opening the envelope. The envelopes also prominently featured Spanish on the front exterior, with the text reading, "Your health and opinion matter. Respond today." The initial contact also included multilingual letters in Chinese, Vietnamese, Korean, and Tagalog with instructions on how to complete the survey over the phone if needed. For those in the Asian dominant condition, all six languages are featured on the back envelope due to space limitation on the front side of the envelope, with the text reading, "Your health and opinion matter. Respond today."

The second mailing was a pressure sealed postcard reminder sent to all sampled addresses. This invitation also included the survey URL and a secure access code unique to the household. Again, predominant language featured in the postcard varied according to modeling information.

In 2019, the third mailing, a letter and FAQ was sent to households who had not yet responded, refused, or designated as undeliverable. For most waves in 2019, this was sent using a USPS Certified Mail® option. Certified mail requires a signature from the responding household when delivered. If no one is home, a delivery reminder slip is left in the mailbox by the letter carrier. This reminder informs the person a USPS Certified Mail® letter is being held at the local Post Office for pick-up. If no one picks up the letter after 5 to 7 days, USPS leaves a second delivery notice. Again, the delivery slip reminder is left by the letter carrier. Finally, after 5 to 7 days the final delivery attempt is made to the delivery address. After the final reminder is left the letter is taken back to the Post Office and held for 5 to 7 days prior to being returned to sender. These mail pieces are given a disposition of "unclaimed." To alleviate respondent burden in Wave 9 and all of 2020, the certified letter was altered to a first class letter.

In 2020, an additional mailing was sent to households who had not yet responded, refused, or designated as undeliverable. This fourth mailing was a sealed postcard reminder which included the survey URL and a secure access code specific to the household. The predominant language in the postcard was dependent on the modeling information.

Finally, for those non-responsive households where a telephone number was appended, up to six outbound calls were made.

Table 5-5. Language conditions of mailings and content description

Language Condition	Initial Mailing	Second Mailing	Third Mailing	Fourth Mailing
English Dominant	Letter & FAQ in English Multi Language Insert in Spanish, Chinese, Korean, Vietnamese, and Tagalog	Pressure sealed postcard in English and Spanish	Letter[1] & FAQ in English and Spanish Multi Language Insert in Chinese, Korean, Vietnamese, and Tagalog	Pressure sealed postcard in English and Spanish
Spanish Dominant	Letter & FAQ in Spanish and English Multi Language Insert in Chinese, Korean, Vietnamese, and Tagalog Front of envelope prominently featured Spanish language	Pressure sealed postcard in Spanish and English	Letter & FAQ in English and Spanish Multi Language Insert in Chinese, Korean, Vietnamese, and Tagalog	Pressure sealed postcard in Spanish and English
Asian Dominant	Letter & FAQ in English Multi Language Insert in Chinese, Korean, Vietnamese, Tagalog, and Spanish Back of envelope prominently featured all languages	Pressure sealed postcard in English, Chinese, Korean, Vietnamese, Tagalog, and Spanish	Letter & FAQ in English and Spanish Multi Language Insert in Chinese, Korean, Vietnamese, and Tagalog	Pressure sealed postcard in English, Chinese, Korean, Vietnamese, Tagalog, and Spanish

Source: UCLA Center for Health Policy Research, 2019-2020 California Health Interview Survey.

[1] Certified letter was replaced with a first class letter in the final wave (Wave 9) of 2019 and all of 2020 to alleviate respondent burden.

5.3 CATI Sample Management

Within the CATI system, active and completed cases were allocated into special types, which are divisions of the sample that are to be worked by interviewers with special training or skills. SSRS's CATI scheduler treats each special type as an independent sample. Priority codes are assigned to qualified interviewers. For example, on the occasions when one of these specially trained interviewers is assigned to convert refusals they would be delivered a refusal case if one was available before being given a case from the default code. However, refusal converters are not always limited to dialing this special type to avoid interviewer fatigue. The CHIS 2019-2020 priorities were defined as follows:

- **Default**—All cases on initial release, and continuing sample cases that had not been moved to another work class; available to all interviewers;
- **Refusal**—Any CATI sample case that encountered a refusal at any point in the interview process, whether at the screener or any extended interview level; available only to interviewers selected to work and trained as refusal converters. Refusals were divided into qualified refusals and initial refusals. In the case of qualified refusals, we knew one or more people in the household was qualified for an interview;
- **Language (Spanish)**—Any case determined or suspected to require a Spanish bilingual interviewer to re-contact; available only to the appropriate bilingual interviewers; there was also a refusal work class for Spanish-language cases;
- **Language (Mandarin, Cantonese, Vietnamese, Korean, and Tagalog)**—All cases determined or suspected to require a Mandarin, Cantonese, Vietnamese, Korean, or Tagalog bilingual interviewer to re-contact; available only to the appropriate bilingual interviewers; and
- **Language (Other)**—Any sample case determined or suspected to require contact in a language other than Spanish, Mandarin, Cantonese, Korean, Vietnamese, or Tagalog; available to bilingual interviewers for verification of language spoken by the respondent.

During the field period, SSRS data collection and sample department staff monitored the yield (number of completed interviews) by stratum. As the number of completed interviews neared the targets, several actions were possible. The monitoring process was repeated several times, re-calibrating the fielded sample as more information on progress to date became available. A few strata required purchase of additional sample because of unexpectedly low residency and/or response rates, or because the target number of completed interviews was increased. See *CHIS 2019-2020 Methodology Series: Report 1 –*

Sample Design for a discussion of meeting the target numbers of completed adult and child interviews by stratum.

5.4 Inbound Toll-Free Calls

SSRS maintained three toll-free numbers for respondents to call with questions about or to complete the survey. Separate toll-free numbers were specified for English, Spanish, and Asian languages. These toll-free lines were staffed weekdays from 9:00 a.m. to 9:00 p.m. Pacific time, Saturdays from 10:00 a.m. to 5 p.m., and Sundays from 12 p.m. to 7 p.m. In the event an operator was not available to answer the call or for calls made outside of the above time frames, the caller was directed to a voicemail message specific to CHIS and their dominant language.

Callers used the toll-free number for multiple purposes including completing the survey, refusing participation, or to report that the sampled adult was too ill to participate. Most of these calls were simply to verify the legitimacy of the study or ask general questions with no further action required.

UCLA also maintained a separate toll-free number during the field period, which was available on the CHIS web site. SSRS interviewers provided the UCLA number to respondents who specifically wanted to talk with someone at UCLA, and in other cases to help persuade the person to do the interview. There was frequent communication between UCLA and SSRS in response to these calls. SSRS followed up on any calls complaining about an interviewer's behavior by identifying the interviewer and reviewing the case with her or him. SSRS also added respondents to the Do-Not-Call list as requested by UCLA in response to incoming calls received.

5.5 Web Respondents Support

In addition to offering toll free numbers for respondent questions, each page of the web survey provided an email link directed to technical support. The email delivered indicated a respondent identifier and the question they stopped on. After review by technical support to determine if there was a programmatic issue, the email was forwarded to the project team. Project staff determined the best course of action – such as removing of the sample piece from additional contacts or responding to the participants email with additional instructions or information.

5.6 Adolescent Protocols

New to 2019-2020 was an alternate strategy to recruit teens to participate in the survey. As described in *Report 1 – Sample Design*, an adolescent is defined for CHIS as a person between the ages of

12 and 17 years normally residing in the sampled household. An adolescent was eligible for the study only if they were the legal child of the selected or screened adult respondent. A single adolescent within the household was selected with equal probability, i.e., the selection probability was one over the number of eligible teens. The eligible teens were rostered either at the end of Section A of the adult questionnaire or within in the screener under the child-first procedure.

Eligible parents of adolescents were asked for permission to recontact their teen to complete the survey either within the adult interview (within Section G) or in the screening interview. If the parent initially refused, they were re-asked with an offer that their teen's survey would exclude questions on sensitive topics such as drugs and sexual behavior. Parents who agreed at either point were asked for the best phone number to contact the teen and whether it is permissible to text the teen if the parent provided the teen's personal phone number. All adolescents were offered a $10 gift card for completing the survey.

Different letters were produced to reflect the mode of interview, permission status, and differential parental incentives for parents who refused permission (see *Appendix B* for Letters). Letters were also personalized to reflect the adolescent's gender and spoken language. Invitation letters were sent on a weekly basis, with the initial batch sent on October 25, 2019 and continuing through November 3, 2020. Due to the time needed to complete these recontact protocols, the teen interviewing was extended past adult survey data collection, with the final interview conducted November 30, 2020.

The first mailing was addressed to the parent and contained two interior envelopes – one addressed to the parent and one addressed to the adolescent (see Table 5-6). The parent's letter thanked them for their recent participation in the CHIS survey and informed them of the incentive(s) offered. The parent's letter emphasized that the teen's information would be kept confidential and conveyed how the results will help researchers better understand the unique health issues teens face. The letter addressed to the teen prominently featured the survey URL and individual access code, as well as information about the offered incentive. In addition, it emphasized how their individual response may help other teens across the state. In addition, the teen envelope also had a FAQ sheet.

Approximately seven days after the initial invitation, a reminder letter was sent to the non-responding teens whose parents had granted permission to recontact the teen. This letter contained survey URL and their individual access code. This letter stressed the importance of their individual response to the survey, and the potential benefits to other teens. The letter also reminded them of the incentive for completion.

As a final follow-up, text reminders and follow up phone calls were initiated to those teens whose parents had granted permission and provided phone information.

Table 5-6. Teen permission conditions mailings and content description

Condition	Initial Mailing	Second Mailing	Text Reminder	Phone Call Follow up
Permission Granted - CATI				
Parent	-	-	-	-
Teen	-	-	-	As needed
Permission Granted - CAWI				
Parent	Letter	-	-	-
Teen	Letter & FAQ	Letter & FAQ	If available	If available
Permission Refused - CATI & CAWI				
Parent	Letter	-	-	-
Teen	Letter & FAQ	-	-	-

Source: UCLA Center for Health Policy Research, 2019-2020 California Health Interview Survey.

For adult interviews that were conducted by CATI and the parent consented to having their teen interviewed, interviewers attempted to immediately continue on with the teen interview upon completing the adult interview. If the teen was not available, follow up phone calls were made to obtain the teen's input.

For all adult extended interviews completed in CAWI and CATI that did not result in parental permission to interview the teen, parents were re-contacted with a unique recontact effort to obtain an interview with the selected teen. The protocol for teens whose parent had refused included a single mailing to parent and teen, similar in structure to those who granted permission. The content of the parent letter reflected the permission status and was tailored to persuade the parent to allow the teen to participate.

In CHIS 2019, parents who denied permission were also offered differential incentives to determine which would be the most effective at refusal conversion for teen permission. Parents who completed the survey via CATI who denied permission were offered a $10 gift card if their adolescent completed. Parents who did not grant permission in CAWI were randomly assigned into one of three incentive conditions, as follows:

- $2 bill pre-incentive (regardless of completed adolescent interview)
- $10 gift card post-incentive (with completed adolescent interview)

- $20 gift card post-incentive (with completed adolescent interview)

Results from this differential incentive experiment can be found in Section 6.2.4.1. Based on these results, for 2020 only the $10 gift card post-incentive (with completed adolescent interview) was offered.

When a teen completed the survey, separate teen and adult (if applicable) thank you letters containing the incentive gift cards were mailed through USPS. The letters thanked them for their vital contribution to the survey and included their individual gift cards.

6. DATA COLLECTION RESULTS

This chapter provides detailed results for the CHIS 2019-2020 data collection. Section 6.1 provides information about survey completes by mode of interview and timing of completion. Section 6.2 provides detailed information for screening outcomes, out of scope cases, and extended interviews. Results for the extended interviews include the adult, child, and adolescent interviews. Further results presented in this section are the number of children sampled and the number of child interviews completed; and number of adult interviews completed by language and sample stratum. Section 6.3 provides the mean administration times by language of administration for the screener and all types of extended interviews.

6.1 Overall Results

The majority of participants completed through the web survey instrument, rather than by phone interview. Table 6-1 shows the division by mode logged at the end of the completed interview. Ninety-one percent of adult completes were web interviews, while nine percent completed an adult interview by phone. This pattern is similar when reviewing child and teen completes by mode of completion.

Table 6-1. Number of completes by mode of interview

	Total Interviews	Web Interviews	% Web Interviews	CATI Interviews	% CATI Interviews
Screener	55,630	47,791	85.9%	7,839	14.1%
Adult	44,109[1]	40,072	90.8%	4,037	9.2%
Child	6,557	6,295	96.0%	262	4.0%
Teen	2,212	2,000	90.4%	212	9.6%

Source: UCLA Center for Health Policy Research, 2019-2020 California Health Interview Survey.
[1] Includes interviews meeting the criteria as partially complete

Desktop or laptop computers were most frequently used to complete the survey. Among adult completes, 77 percent completed on a personal or laptop computer with the remainder completing on various mobile devices. The share completing by a personal or laptop computer is lower for child interview and teen interviews (see Table 6-2).

Table 6-2. Percentage of completes by device type

	Total Web Interviews	% Completed by PC	% Completed by Mobile Device
Screener	47,791	74.4%	25.6%
Adult	40,072	76.8%	23.2%
Child	6,294	65.2%	34.8%
Teen	2,000	68.4%	31.6%

Source: UCLA Center for Health Policy Research, 2019-2020 California Health Interview Survey.

6.1.1 Results by Mailing Phase

In relation to the mailing phase, overall most adult respondents who logged in responded to the first mailing (measured by completion prior to the second mailing arrival) (see Table 6-3). When comparing web to phone interviews, it is the inverse – a greater share of web interviews came in at the beginning of the field period, while a greater share of phone interviews come at the end. Roughly forty-six percent of CATI interviews occurred before outbound dialing began as a result of inbound calls.

Table 6-3. Completed adult response by mailing phase

	Total Interviews	Web Interviews	CATI Interviews
Prior to Postcard	41.4%	44.3%	12.6%
After Postcard-Before 2nd Letter	21.2%	22.0%	12.7%
After 2nd Letter-Before Outbound Dialing	24.6%	25.0%	20.3%
After Outbound Dialing	12.9%	8.7%	54.4%

Source: UCLA Center for Health Policy Research, 2019-2020 California Health Interview Survey.

6.2 Detailed Results by Outcome

For sample that was dialed, interviewers assigned a result code to each attempt to reach a sampled telephone number. The telephone result codes are divided into interim and final codes. Several tables in this section provide the final result codes for the screener and extended interviews. Other tables in this section provide outcomes that do not directly reference the final result code, but use broader categories, such as completed or ineligible. During data collection, each case was tracked according to its most recent result code.

At the end of the field period, all cases were assigned final result codes based on web data, call history, or information about undeliverable mail. Many cases for which some contact had been made received the Maximum Call code, with the actual designation depending on what else had happened during each cases' call history.

6.2.1 Screening Interview

Table 6-4 provides results for CHIS 2019-2020 screening interviews. Overall, 13.5 percent of sampled cases completed the screener. Most sampled cases were coded as noncontact and nonresponse. Refusals represented 1.6 percent of sampled cases.

The predominant status amongst sample without phone appends was final unresolved residential status, whilst amongst those with a phone append it was no contact.

Table 6-4. Detailed results of CHIS 2019-2020 data collection, screening interview

	TOTAL			WITH PHONE APPENDED			NO PHONE APPENDED		
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
SAMPLE AVAILABLE	**445,178**			**307,133**			**138,045**		
CATEGORY 1 - Completed Screener (C)	**60,306**		**13.5%**	**46,876**		**15.3%**	**13,430**		**9.7%**
CATEGORY 2 - Eligible, non-interview									
REFUSAL (R)	7,126	6.9%		7,122	7.0%		4	0.3%	
BREAKOFF (R)	46,150	44.8%		44,688	44.0%		1,462	97.1%	
NO CONTACT – REACHED ANSWERING MACHINE	49,423	47.9%		49,384	48.7%		39	2.6%	
APPOINTMENT MADE	71	0.07%		71	0.07%		-	0.0%	
LANGUAGE QUEUE CASE	225	0.22%		225	0.22%		-	0.0%	
Total Eligible, non-interview	**102,995**		**23.1%**	**101,490**		**33.0%**	**1,505**		**1.1%**
CATEGORY 3 - Unknown Eligibility, non-interview									
NO CONTACT – OTHER[1]	162,505	63.3%		143,722	98.9%		18,783	16.8%	
FINAL UNRESOLVED RESIDENTIAL STATUS[2]	94,373	36.7%		1,563	1.1%		92,810	83.2%	
Total Unknown Eligibility	**256,878**		**57.7%**	**145,285**		**47.3%**	**65,368**		**80.8%**
CATEGORY 4 - Ineligible (I)									
INELIGIBLE SCREENER	952	3.8%		849	6.3%		103	0.9%	
NON-RESIDENTIAL	24,047	96.2%		12,633	93.7%		11,414	99.1%	
Total Ineligible	**24,999**		**5.6%**	**13,482**		**4.4%**	**9,414**		**8.3%**
ELIGIBILITY RATE (C / (C+I))		70.7%			77.7%			53.8%	
COOPERATION RATE ((C+I) / (C+I+R))		61.6%			53.8%			94.0%	

Source: UCLA Center for Health Policy Research, 2019-2020 California Health Interview Survey.

[1] NO CONTACT – OTHER includes no reply, unobtainable, privacy manager, and max calls reached.

[2] FINAL UNRESOLVED RESIDENTIAL STATUS includes USPS designations of "cannot be delivered", "undeliverable", and "insufficient address."

6.2.2 Adult Extended Interview

The number of completed screeners with eligible households sets the maximum number of cases for the adult extended interviews. As in past cycles, data were included from partially completed adult interviews if the interview went at least through Section K of the instrument. Adult interviews that did not include complete Section K were not included in the data.

The results of data collection efforts for the adult extended interview are shown in Table 6-5. Adult extended interviews were completed for 73.1 percent of the 60,306 sample adults who completed the screener. Partial completes made up 1.5 percent of all adult interviews counted as complete. The proportion of refusals in the 2019-2020 adult sample was less than one percent, while the proportion of other nonresponse was 19.2 percent.

Table 6-5. Detailed results of CHIS 2019-2020 data collection, adult extended interview

	TOTAL			WITH PHONE APPENDED			NO PHONE APPENDED		
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
TOTAL ADULTS SAMPLED	**60,306**			**46,876**			**13,430**		
CATEGORY 1 - Completed Interview (C)									
COMPLETED ADULT INTERVIEW	43,467	98.5%		33,610	98.6%		9,857	98.3%	
PARTIAL ADULT INTERVIEW	642	1.5%		468	1.4%		174	1.7%	
Total Completed Interviews	**44,109**		**73.1%**	**34,078**			**10,031**		**74.7%**
CATEGORY 2 - Eligible, non-interview									
REFUSAL (R)	584	4.8%		576	5.9%		8	0.3%	
BREAKOFF (R)	11,482	94.2%		9,024	92.9%		2,458	99.5%	
APPOINTMENT MADE	116	0.9%		112	1.2%		4	0.2%	
Total Eligible, non-interview	**12,182**		**20.2%**	**9,712**		**20.7%**	**2,470**		**18.4%**
CATEGORY 3 - Unknown Eligibility									
NO CONTACT	3,950			3,028			922		
Total Unknown Eligibility	**3,950**		**6.5%**			**6.5%**			**6.9%**
CATEGORY 4 – Ineligible (I)									
INELIGIBLE ADULT	65			58			7		
Total Ineligible	**65**		**0.1%**			**0.1%**			**0.05%**
ELIGIBILITY RATE (C / (C+I))			**99.9%**			**99.8%**			**99.9%**
COOPERATION RATE ((C+I) / (C+I+R))			**78.5%**			**78.1%**			**80.3%**

Source: UCLA Center for Health Policy Research, 2019-2020 California Health Interview Survey.

6.2.3 Child Extended Interview

Results for the child extended interviews are shown in Table 6-6. In total, 6,557 child extended interviews were fully completed. The completion rate for the 2019-2020 child interview was 80.4 percent. Six percent of those initially determined to have a child in the household were screened out due to the child not being an age within the eligible age range. Fourteen percent of eligible interviews abandoned the child survey prior to completion.

Since 2005, multiple design changes have been made to maximize the child sample size and have affected the selection of children in screened households in recent CHIS cycles. The first was the "child-first" procedure, initially adopted in CHIS 2005 (outlined in *Report 1 – Sample Design,* Section 2.2). The second was the addition of the cell sample, and sampling children from the cell sample, first done in CHIS 2009. The cell sample did not use the "child-first" procedure because the adult answering the cell phone was selected for the adult interview, and the adult interview was completed first before a child interview was attempted.

The most recent change implemented in CHIS 2019-2020, child-then-adult ordering, moved the child rostering interview to end of Adult Section A from its previous location, Adult Section G. If the adult respondent had an eligible child in the household, the survey then shifted to the child extended interview. At the end of the child interview, the respondent resumed the adult extended interview. Essentially every child interview was conducted prior to completing the adult interview and could be considered a type of "child-first" protocol.

Table 6-7 summarizes sampling and completing interviews about children from CHIS 2007 through CHIS 2019-2020, which provides data to examine the effects of altering the design over time. The transition to ABS methodology and child-then-adult ordering in CHIS 2019-2020 resulted in noticeable rebounds in the declining completion rates for child interviews higher than the overall rates in 2007 before CHIS introduced the cell sample.

Table 6-6. Detailed results of CHIS 2019-2020 data collection, child extended interview

	TOTAL			WITH PHONE APPENDED			NO PHONE APPENDED		
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
TOTAL CHILDREN SAMPLED	**8,154**			**5,588**			**2,566**		
CATEGORY 1 - Completed Child Interview (C)	**6,557**		**80.4%**	**4,499**		**80.5%**	**2,058**		**80.2%**
CATEGORY 2 - Eligible, non-interview									
BREAKOFF (R)	1,126			753			373		
Total Eligible, non-interview	**1,126**		**13.8%**	**753**		**13.5%**	**373**		**14.5%**
CATEGORY 3 - Unknown Eligibility									
NO CONTACT	-			-			-		
Total Unknown Eligibility	**0**		**0.0%**	**0**		**0.0%**	**0**		**0.0%**
CATEGORY 4 – Ineligible (I)									
INELIGIBLE CHILD	471			336			135		
Total Ineligible	**471**		**5.8%**	**336**		**6.0%**	**135**		**5.3%**
ELIGIBILITY RATE (C / (C+I))		**93.2%**			**92.1%**			**93.8%**	
COOPERATION RATE ((C+I) / (C+I+R))		**86.2%**			**86.5%**			**85.5%**	

Source: UCLA Center for Health Policy Research, 2019-2020 California Health Interview Survey.

Table 6-7. Number of children sampled and child interviews completed across all sample types, CHIS 2007 through 2019-2020

	Total Children Sampled	Completed Child Interviews	Completion Rate	Child Sampled per Completed Screener	Child Sampled per Completed Adult
CHIS 2019-2020	**8,154**	**6,557**	**80.4%**	.13	.18
CHIS 2017-2018	**5,841**	**3,144**	**53.8%**		
Cell Sample	3,885	2,060	53.0%	.08	.17
Other Samples	1,956	1,084	55.4%	.05	.06
CHIS 2015-2016	**9,551**	**4,293**	**44.9%**		
Cell Sample	5,655	2,585	45.7%	.15	.19
Other Samples	3,896	1,708	43.8%	.09	.08
CHIS 2013-2014	**7,475**	**5,470**	**73.2%**		
Cell Sample	1,601	1,256	78.5%	.11	.21
Other Samples	5,874	4,214	71.7%	.09	.18
CHIS 2011-2012	**9,764**	**7,337**	**75.1%**		
Cell Sample	1,941	1,523	78.5%	.12	.21
Other Samples	7,823	5,814	74.3%	.12	.23
CHIS 2009	**12,129**	**8,981**	**74.1%**		
Cell Sample	595	486	81.7%	.08	.20
Other Samples	11,534	8,495	73.7%	.15	.26
CHIS 2007	**13,089**	**9,933**	**75.9%**		
Cell Sample	0	0	n/a	n/a	n/a
Other Samples	13,089	9,933	75.9%	.15	.26

Source: UCLA Center for Health Policy Research, 2019-2020 California Health Interview Survey.

6.2.4 Adolescent Extended Interview

Similar to the adult and child interview tables, Table 6-8 presents detailed data collection results for the adolescent extended interviews for the 2019-2020 sample. Numbers and percentages include all households with an eligible adolescent present.

The overall completion rate among all adolescents was 32.8 percent. A majority of parents provided permission (54.5 percent) either initially during their interview or during the refusal conversion process. While 45.5 percent did not provide permission to interview their adolescent – this rate includes both specific refusals, as well as cases where there was an eligible adolescent in the household, but the adult broke off prior to the teen permission section.

Table 6-8. Detailed results of CHIS 2019-2020 data collection, parental permission, and adolescent interviews

	TOTAL			ADULT WEB INTERVIEWS			ADULT CATI INTERVIEWS		
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
Parental Permission									
INITIAL PERMISSION (ADULT INTERVIEW)	3,379	91.8%		3,221	91.7%		158	95.8%	
PERMISSION (REFUSAL CONVERSION)	300	8.2%		293	8.3%		7	4.2%	
Total Permission Received	**3,679**		**54.5%**	**3,514**		**55.2%**	**165**		**43.2%**
PERMISSION NOT RECEIVED	3,071		**45.5%**	2,848		**44.7%**	223		**57.4%**
TOTAL ADOLESCENTS SAMPLED	**6,750**			**6,362**			**388**		
TOTAL ADOLESCENT SAMPLE AVAILABLE	**3,679**			**3,514**			**165**		
CATEGORY 1 – Completed Interview (C)									
COMPLETED ADOLESCENT INTERVIEW	**2,212**		**60.1%**	**2,156**		**61.3%**	**56**		**33.9%**
CATEGORY 2 – Eligible, non-interview									
PERMISSION, BUT NO TEEN INTERVIEW (R)[1]	1,413	96.3%		1,331	98.0%		82	75.2%	
BREAKOFF (R)	54	3.7%		27	2.0%		27	24.8%	
Total Eligible, non-interview	**1,467**		**39.9%**	**1,358**		**38.6%**	**109**		**66.0%**
CATEGORY 3 – Unknown Eligibility									
NO CONTACT	-			-			-		
Total Unknown Eligibility	**0**		**0.0%**	**0**		**0.0%**	**0**		**0.0%**
CATEGORY 4 – Ineligible (I)									
INELIGIBLE ADOLESCENT	-			-			-		
Total Ineligible	**0**		**0.0%**	**0**		**0.0%**	**0**		**0.0%**
ELIGIBILITY RATE (C / (C+I))		**100.0%**			**100.0%**			**100.0%**	
COOPERATION RATE ((C+I) / (C+I+R))		**60.1%**			**61.4%**			**33.9%**	
COMPLETION RATE (C / PERMISSION)		**60.1%**			**61.4%**			**33.9%**	
COMBINED COMPLETION RATE (C / SAMPLED)		**32.8%**			**33.9%**			**14.4%**	

Source: UCLA Center for Health Policy Research, 2019-2020 California Health Interview Survey.

[1]Within this category are 199 cases that did not receive follow up mailing.

6.2.4.1 Parental Refusal Conversion Experiment Results

As described in Section 5.6, a differential outreach and incentive structure was offered to parents who initially refused permission to interview their adolescent.

Letters were sent to parents who initially refused permission asking them to reconsider giving permission to conduct an interview with their teen. For parents who initially refused to provide permission, a variable monetary incentive for the parent was tested. During data collection in 2019, three different pre- and post-incentives for parents who initially refused to provide permission were tested in an attempt to increase the parental permission rate.

While the $2 bill pre-incentive and $20 gift card post-incentive both yielded slightly better completion rates, the completion rates are statistically equivalent and the cost impact was too significant to justify the minimal improvement. In 2020, only the $10 gift card post-incentive for parents whose teen completed the survey was offered.

Table 6-9. 2019 Parental permission refusal conversion results

	Screener Interview	Adult Interview	Adolescent Interview	Completion Rate
CAWI Recruited				
$2 bill pre-incentive	379	306	48	12.7%
$10 gift card post-incentive	347	273	43	12.4%
$20 gift card post-incentive	350	292	46	13.1%
CATI Recruited				
$10 gift card post-incentive	56	40	5	8.9%

Source: UCLA Center for Health Policy Research, 2019-2020 California Health Interview Survey.

6.2.5 Completed Interviews by Language

Table 6-10 shows the number of adult extended interviews completed in each of the six languages offered in CHIS 2019-2020 by stratum.

Overall, 1,354 adult interviews from these samples were conducted in Spanish, which was 3.1 percent of all adult interviews. The highest percentage of adult interviews completed in Spanish in the landline sample was in Imperial County (24.6 percent), which was four times greater than the next highest stratum (Los Angeles 6.1 percent).

A total of 763 adult extended interviews were conducted in an Asian language. Chinese language represents 56 percent of all Asian language interviews. The highest proportions of Asian language adult interviews were in the Santa Clara stratum (5.4 percent), followed by Alameda (4.2 percent).

See Table 7-1 in *CHIS 2019-2020 Methodology Series: Report 4—Response Rates* for more on numbers of interviews conducted by language.

Table 6-10. Number of adult interviews[1] completed by language and sample stratum

Stratum	Sampling stratum	English	Spanish	Chinese[2]	Korean	Vietnamese	Tagalog	Total	% Spanish	% Asian
1	Los Angeles	7,761	519	139	126	10	0	8,555	6.1%	3.2%
2	San Diego	4,578	113	18	24	6	1	4,740	2.4%	1.0%
3	Orange	2,377	40	36	39	21	0	2,513	1.6%	3.8%
4	Santa Clara	1,474	15	52	13	20	0	1,574	1.0%	5.4%
5	San Bernardino	1,489	66	25	12	1	0	1,593	4.1%	2.4%
6	Riverside	1,733	63	10	8	3	0	1,817	3.5%	1.2%
7	Alameda	1,338	22	52	3	4	0	1,419	1.6%	4.2%
8	Sacramento	1,263	19	11	1	7	0	1,301	1.5%	1.5%
9	Contra Costa	920	14	11	2	3	0	950	1.5%	1.7%
10	Fresno	778	16	2	1	1	0	798	2.0%	0.5%
11	San Francisco	883	5	33	2	0	0	923	0.5%	3.8%
12	Ventura	645	16	5	0	0	0	666	2.4%	0.8%
13	San Mateo	631	7	13	1	0	0	652	1.1%	2.1%
14	Kern	655	30	0	1	1	0	687	4.4%	0.3%
15	San Joaquin	569	18	2	1	1	0	591	3.0%	0.7%
16	Sonoma	574	7	0	0	0	0	581	1.2%	0.0%
17	Stanislaus	531	10	0	0	1	0	542	1.8%	0.2%
18	Santa Barbara	515	18	0	1	0	0	534	3.4%	0.2%
19	Solano	565	5	2	1	2	0	575	0.9%	0.9%
20	Tulare	482	21	0	0	0	0	503	4.2%	0.0%
21	Santa Cruz	527	14	0	0	0	0	541	2.6%	0.0%
22	Marin	523	4	1	0	1	0	529	0.8%	0.4%
23	San Luis Obispo	514	1	1	0	0	0	516	0.2%	0.2%
24	Placer	537	2	0	1	0	0	540	0.4%	0.2%
25	Merced	490	28	1	0	0	0	519	5.4%	0.2%

(continued)

Table 6-10. Number of adult interviews completed by language and sample stratum (continued)

Stratum	Sampling stratum	English	Spanish	Chinese[2]	Korean	Vietnamese	Tagalog	Total	% Spanish	% Asian
26	Butte	512	2	2	1	0	0	517	0.4%	0.6%
27	Shasta	533	0	1	0	0	0	534	0.0%	0.2%
28	Yolo	519	5	2	4	0	0	530	0.9%	1.1%
29	El Dorado	505	0	0	1	0	0	506	0.0%	0.2%
30	Imperial	391	129	0	4	0	0	524	24.6%	0.8%
31	Napa	551	5	1	1	1	0	559	0.9%	0.5%
32	Kings	552	22	0	0	0	0	574	3.8%	0.0%
33	Madera	502	22	1	0	0	0	525	4.2%	0.2%
34	Monterey	481	21	1	2	0	0	505	4.2%	0.6%
35	Humboldt	545	3	0	0	0	0	548	0.5%	0.0%
36	Nevada	518	1	0	0	0	0	519	0.2%	0.0%
37	Mendocino	503	6	0	0	0	0	509	1.2%	0.0%
38	Sutter	542	8	0	0	0	0	550	1.5%	0.0%
39	Yuba	491	13	1	1	0	0	506	2.6%	0.4%
40	Lake	510	6	0	2	0	0	518	1.2%	0.4%
41	San Benito	477	21	0	0	0	0	498	4.2%	0.0%
42	Tehama, etc.	481	12	0	0	0	0	493	2.4%	0.0%
43	Del Norte, etc.	491	3	0	0	0	0	494	0.6%	0.0%
44	Tuolumne, etc.	536	2	2	1	0	0	541	0.4%	0.6%
	Total	**41,992**	**1,354**	**425**	**254**	**83**	**1**	**44,109**	**3.1%**	**1.7%**

Source: UCLA Center for Health Policy Research, 2019-2020 California Health Interview Survey.

[1] Includes completed and partial adult interviews

[2] Chinese represents Chinese CAWI interviews as well as Mandarin and Cantonese CATI interviews.

6.3 Length of Interview

Table 6-11 presents interview duration for the adult, child, and adolescent questionnaires throughout 2019-2020. As expected, the CAWI interviews were considerably shorter in duration than those completed through CATI. The duration of the CAWI interviews averaged roughly 35 minutes, 13 minutes, and 17 minutes for the adult, child, and adolescent questionnaires, respectively. The CATI interviews averaged close to 48 minutes, 25 minutes, and 23 minutes to administer the adult, child, and adolescent questionnaires respectively; all of which were higher than their respective targets.

Due to the self-directed nature of the web interviews the pacing and length is wholly dependent on the respondent. One may read and answer a question extremely quickly. Another respondent may start the survey and get interrupted several times, leaving pages/screen open and increasing the length of interview calculated.

Table 6-12 presents mean administration times across all samples for the four questionnaires – screener, adult, child, and adolescent – by language for CHIS 2019-2020.

Overall, the adult interviews in other languages took longer than the English one. The exception was the Korean adult CAWI interviews duration which was on par with the English adult CAWI. On the other hand, both the Vietnamese and Chinese adult CATI interviews took 50% longer than the English ones; the ratios are based off few CATI interviews, respectively, and so are not reliable estimates. No adult interviews were administered in Tagalog.

The ratios for other languages relative to English for the child interviews followed the same pattern as the adult interviews: they were longer than the English child interviews, with the exception of the Korean child CAWI interviews, which had the same average duration as the English child CAWI. No child interviews were administered in either Cantonese or Tagalog.

Almost all of the adolescent interviews were administered in English, with twenty being in Spanish, and one in Korean and two in Mandarin. The duration of the Spanish interviews was relatively longer than those in English for the administered adolescent CATI interviews, and on par for the adolescent CAWI.

Table 6-11. CHIS 2019-2020 extended interview timing data, by questionnaire type

		Number of Interviews	Mean	Median	Shortest Time	Longest Time
Screener	CATI	9,093[1]	4.1	2.9	.6	136.2
	CAWI	51,206	1.6	1.7	.1	35.9
	Total	60,299				
Adult	CATI	4,097	47.9	45.6	21.3	138.3
	CAWI	39,370	34.6	31.7	3.4	184.7
	Total	43,467[2]				
Child	CATI	273	25.8	24.7	5.9	58.1
	CAWI	6,284	12.8	11.5	2.0	61.2
	Total	6,557				
Adolescent	CATI	221	22.7	21.5	11.1	50.5
	CAWI	1,991	17.1	15.4	4.0	64.8
	Total	2,212				

Source: UCLA Center for Health Policy Research, 2019-2020 California Health Interview Survey.

[1] 7 screener completes did not have any length information and are not included in the table.

[2] To get an accurate read on length partial completes are excluded from this table.

Table 6-12. Median and Mean administration times (in minutes), relative times, and sample sizes for CHIS 2019-2020 by language and mode of administration[1]

	CATI				CAWI				Total			
	N	Median	Mean	Ratio to English[2]	N	Median	Mean	Ratio to English[2]	N	Median	Mean	Ratio to English[2]
Screener Interview												
All Languages	9,093[3]	2.9	4.1		51,206	1.1	1.9		60,299	1.2	1.9	
English	8,081	2.8	3.8	1	48,479	1.0	1.6	1	52,560	1.2	1.9	1
Spanish	931	4.7	6.1	1.6	1,774	2.2	2.9	1.9	2,705	2.9	4.0	2.1
Chinese[4]	34	5.8	7.2	1.9	550	1.5	2.2	1.4	584	1.6	2.4	1.3
Korean	21	3.9	5.4	1.4	299	1.4	2.2	1.4	320	1.6	2.4	1.3
Vietnamese	24	4.7	6.3	1.6	104	2.5	3.2	2.0	128	3.1	3.8	2.0
Tagalog	2	11.6	11.6	3.0	0	n/a	n/a	n/a	2	11.6	11.6	6.2
Adult Interview												
All Languages	4,097	45.6	47.9		39,370	31.7	34.6	1	43,467	33.0	35.9	
English	3,768	44.6	46.5	1	37,641	31.3	34.0	1.5	41,409	32.6	35.2	1
Spanish	279	65.2	65.7	1.4	1,033	47.6	50.7	1.6	1,312	52.1	53.9	1.5
Chinese[4]	26	65.0	67.1	1.4	390	39.1	42.7	1.3	416	41.0	44.3	1.3
Korean	12	43.3	44.5	.9	238	34.7	37.7	1.1	250	35.5	38.0	1.1
Vietnamese	12	48.8	52.7	1.1	68	51.1	54.5	1.6	80	51.1	54.2	1.5
Tagalog	0	n/a	n/a	n/a	0	n/a	n/a	n/a	0	n/a	n/a	n/a

(continued)

Table 6-12. Median and Mean administration times (in minutes), relative times, and sample sizes for CHIS 2019-2020 by language and mode of administration[1]

	CATI				CAWI				Total			
	N	Median	Mean	Ratio to English[2]	N	Median	Mean	Ratio to English[2]	N	Median	Mean	Ratio to English[2]
Child Interview												
All Languages	273	24.8	25.8		6,284	11.5	12.8		6,557	11.7	13.3	
English	236	23.7	25.1	1	5,741	11.2	12.3	1	5,977	11.4	12.8	1
Spanish	36	29.4	30.8	1.2	419	18.0	19.2	1.6	455	18.7	20.1	1.6
Chinese[4]	-	-	-	-	79	14.8	15.9	1.3	79	14.8	15.9	1.2
Korean	-	-	-	-	34	10.7	11.5	.9	34	10.7	11.5	.9
Vietnamese	1	22.1	22.1	.9	11	15.9	19.3	1.6	12	18.0	19.5	1.5
Tagalog	-	-	-	-	n/a	n/a	n/a	n/a	-	-	-	-
Adolescent Interview												
All Languages	221	21.5	22.7		1,991	15.4	17.1		2,212	16.2	17.7	
English	215	21.4	22.8	1	1,974	15.4	17.1	1	2,189	16.1	17.7	1
Spanish	6	28.9	28.6	1.3	14	20.2	20.1	1.2	20	24.1	22.6	1.3
Chinese[4]					2	16.9	16.9	.9	2	16.9	16.9	.9
Korean	-	-	-	-	1	18.6	18.6	1.1	1	18.6	18.6	1.1
Vietnamese	-	-	-	-	-	-	-	-	-	-	-	-
Tagalog	-	-	-	-	n/a	n/a	n/a	n/a	-	-	-	-

Source: UCLA Center for Health Policy Research, 2019-2020 California Health Interview Survey

[1] Timing and totals does not include partial interviews.

[2] The ratio compares the mean in-language length to the mean length in English.

[3] 7 screener completes did not have any length information and are not included in the table.

[4] Chinese represents Chinese CAWI interviews as well as Mandarin and Cantonese CATI interviews.

7. QUALITY CONTROL

SSRS's quality control procedures were in place throughout the study. Some of them, such as program testing and interviewer training, were used before data collection began as preventive quality controls. Others, such as supplemental interviewer training, monitoring, and problem sheet review were used during data collection to respond to issues with interviewers or to adjust the questionnaires. Interviewer training is described in Chapter 4. Each of the other quality control methods is briefly described below.

7.1 Program Testing

Quality control of the survey questionnaires began with development of specifications for CATI and CAWI programming. SSRS translated programming instructions into the programming language used by internal programming staff. Changes to programs were tracked using spreadsheets indicating who requested the change and when the change was completed and checked. Members of the UCLA and SSRS teams checked all changes to the CHIS CATI and CAWI programs.

Once programming commenced, quality control continued with testing to make sure that the instrument was working according to the specifications. The questions and skip patterns were tested as soon as the questionnaires were programmed. This testing included review by SSRS staff (including programmers and project management staff), UCLA, and PHI. Updates to the programs were tracked using spreadsheets indicating who requested the change, when the programming change was completed, and the date it was checked by project management staff.

After the pilot test and intermittently throughout the statewide field period, the data preparation and programming staffs reviewed frequency counts from each instrument to make sure that the program was performing correctly, and all responses and administrative data were being stored in the appropriate variable fields. Project management staff performed a separate full check of the data by recreating variables to ensure that skip patterns were working correctly. Based on these reviews, updates and corrections were made to the program after the field commenced.

7.2 Programmed Ranges and Logic Checks

In questions that involved open-ended reporting of values such as ages, weights, etc., "Hard-range" checks prevented the interviewers from continuing without entering an answer within the range programmed, while "soft-range" checks merely required an interviewer to confirm an unlikely entry. In the rare situations where a CATI respondent insisted on an answer that violated a hard-range check, the

interviewer entered "Don't know" for the response to the item and wrote a comment describing the situation that was later reviewed by data preparation staff. In addition, SSRS received a few emails during the field period from respondents who indicated their answer violated the hard-range check. One specific example of this is AH131 which asks for money saved in a health savings account where the field did not allow for adequate number of digits.

Other edits checked logic between responses. For example, if a respondent 65 years of age or older reported not being covered by Medicare, a verification question was asked of the respondent.

7.3 Interviewer Memoranda

As discussed in Chapter 4, interviewer memoranda were given to the staff to clarify and reinforce issues, as well as to inform staff of procedural changes in the form of regular emails to the Director of Telephone Operations who then disseminated the memoranda as necessary.

7.4 Interviewer Monitoring

SSRS monitored telephone interviewer performance throughout the field period, including live monitoring and monitoring of recorded interviews for both internal interviewers and partners. Any interviewers who were identified as in need of additional monitoring were given additional training and evaluated based on further monitoring and quality metrics. If an acceptable level of improvement was not achieved, the interviewer was removed from CHIS team.

SSRS's team leaders and monitors listen to both the interviewer and the respondent through our monitoring system. At the same time, the team leader can see what appears on the interviewer's computer screen and the responses that the interviewer entered. Team leaders simultaneously check on interviewing technique and the interviewer's ability to correctly capture data.

Team leaders performed extra monitoring if there was a concern about an interviewer's performance. An interview monitoring report form was completed each time an interviewer was monitored. Interviewers who continued to have significant problems after receiving feedback or remedial training were released from the study.

During the first weeks following completion of training, the results of monitoring were discussed with each interviewer immediately following the monitoring session. This discussion provided feedback to the interviewer and suggestions to improve his or her techniques to gain cooperation, ask questions, or record responses. Subsequent reports were only reviewed with an interviewer if there was a specific

problem, in which case the report was discussed immediately. Team leaders reviewed the monitoring reports throughout the survey period to identify any common problems that might have revealed the need for additional interviewer-wide training.

Monitoring of all Asian in-language CATI interviews was done by GDCC, an international telephonic fieldwork services to who provided quality control review for Asian interviewing. GDCC staff reviewed audio recordings on completed interviews, which were available on the SSRS portal. GDCC was given restricted access to the SSRS portal. GDCC representatives were fully briefed on the specific requirements of the survey. All completed Asian in-language interviews were monitored in their entirety, and the GDCC team filled out verification sheets that itemized each part of the consent portion of the interview. New questions were added periodically to the verification sheet.

7.5 Case Triage

Interviewing during all hours of operation is supported by specially trained interviewing supervisors. Supervisors were called whenever a problem interfered with the ability to conduct CATI interviewing. When the supervisor received a problem report, he or she diagnosed the problem and called the appropriate personnel. Hardware, software, and project-specific support were always available via home or cell telephones.

7.6 Using Comments and Problem Sheets to Find Problems

Interviewers sent emails via supervisors to project management staff whenever a response did not fit a category and/or when they perceived a problem with a question. The staff would provide guidance as to how to enter an accurate response or brought concerns to the CHIS team.

Problem sheets were also used for quality control. When interviewers or team leaders encountered a problem in conducting or monitoring an interview, they completed a CATI problem sheet. These sheets were reviewed by a triage team leader and forwarded to the appropriate staff member for resolution. Any problems that suggested a change to the questionnaire were discussed with the UCLA project director.

7.7 CAWI Specific Quality Control

With the addition of CAWI interviews to CHIS 2019-2020, additional types of quality monitoring were employed. SSRS created additional variables to review data quality, such as measures of no answer and straight lining on similarly constructed questions that appeared in succession. In addition, in cases of

an incomplete interview or breakoff, the last question answered was recorded. These measures were regularly reviewed by SSRS for any potential areas of concern.

Ninety-two percent of adult web completes answered 95 percent or more of the questions they were asked. For those who completed the child portion, 92 percent of adults had similar results. For the teens, 98 percent provided answers on at least 95 percent of the questions they saw.

Two series of questions with similar construction were identified for straight-lining review. Results were similar across both web and phone administration on both series.

Once past the screening interview, 16 percent of adults who started the adult interview on the web abandoned prior to completion. The greatest share of breakoffs occurred fairly early in the survey, other points of breakoff occur throughout the survey.

8. REFERENCES

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Wells, B. M., Hughes, T., Park, R., CHIS Redesign Working Group, Rogers, T. B., & Ponce, N. (2018). *Evaluating the California Health Interview Survey of the future: Results from a methodological experiment to test an address-based sampling mail push-to-web data collection.* Los Angeles, CA: UCLA Center for Health Policy Research.

Wells, B. M., Hughes, T., Park, R., CHIS Redesign Working Group, & Ponce, N. (2019). *Evaluating the California Health Interview Survey of the future: Results from a statewide pilot of an address-based sampling mail push-to-web data collection.* Los Angeles, CA: UCLA Center for Health Policy Research.

9. APPENDIX A – ADULT & TEEN LETTERS IN ENGLISH

Initial Invitation Letter

Dear California Resident,

Your household has been randomly selected for this year's **California Health Survey**.

This important survey is conducted by UCLA and collects information on the health of people in California and about issues they have getting health care. The results may help people and families in your community. Your household has been selected to represent many other households like yours.

Step 1: Identify who should complete the survey

Please have the adult, age 18 years of age or older, in your household who has the **next birthday** complete the survey.

If you are not the selected adult, please share this information with the selected adult and ask them to complete the survey by going to the website listed below.

Step 2: Respond now!

www.cahealthsurvey.com

Your secure access code is: **1B2C3D4**

We are not selling anything or asking for money. To thank you in advance, we are enclosing a $2 bill. This small gift is for you to keep whether or not you decide to participate (this money is not from State or local taxes).

If you do not have access to the internet or would prefer to complete the survey over the phone, please call (1-844-384-9393/1-877-207-4746).

Your help is very important to this study's success. Thank you for your cooperation.

Sincerely,

Dr. Ninez Ponce
Principal Investigator, California Health Survey

10960 Wilshire Boulevard, Suite 1550, Los Angeles, CA 90024

Dear California Resident,

Last week, we mailed you a letter asking for your help with the **California Health Survey**, a study about the health of people in California and issues they have getting health care.

If you or someone in your household has already completed the questionnaire, please accept our sincere thanks. If you have not already responded, please have the adult, age 18 years or older, with the **next birthday** go to the website listed below to complete the survey.

> Respond now at **www.cahealthsurvey.com**
> Your secure access code is: **A1B2C3D4**

If you do not have access to the internet or would prefer to complete the survey over the phone, please call (1-844-384-9393/1-877-207-4746).

Thank you.

Estimado/a residente de California:

La semana pasada le enviamos una carta por correo postal para pedirle ayuda con la **Encuesta de Salud de California**, un estudio que trata sobre la salud de los californianos y de los problemas que enfrentan para recibir atención médica.

Si usted o alguien más en su hogar ya completó este cuestionario, se lo agradecemos muy sinceramente. Si todavía no lo han respondido, por favor pídale al adulto de 18 años o más, cuyo **cumpleaños es el más próximo**, que visite el sitio web abajo mencionado para completar la encuesta.

> Responda la encuesta ahora en **www.cahealthsurvey.com**
> Su código de acceso seguro es: **A1B2C3D4**

Si no tiene acceso a Internet o prefiere completar la encuesta por teléfono, llame al (1-844-384-9393/1-877-207-4746).

Reminder Letter

Dear California Resident,

Your household has been randomly selected for this year's **California Health Survey**.

This important survey is conducted by UCLA and collects information on the health of people in California and about issues they have getting health care. The results may help people and families in your community. Your household has been selected to represent many other households like yours.

Step 1: Identify who should complete the survey

Please have the adult, age 18 years of age or older, in your household who has the **next birthday** complete the survey.

If you are not the selected adult, please share this information with the selected adult and ask them to complete the survey by going to the website listed below.

Step 2: Respond now!

www.cahealthsurvey.com

Your secure access code is: **<<SAC>>**

We are not selling anything or asking for money.

If you do not have access to the internet or would prefer to complete the survey over the phone, please call (1-844-384-9393/1-877-207-4746).

Your help is very important to this study's success. Thank you for your cooperation.
Sincerely,

Dr. Ninez Ponce
Principal Investigator, California Health Survey

10960 Wilshire Boulevard, Suite 1550, Los Angeles, CA 90024

2nd Postcard

Dear California Resident,

Recently, we mailed you instructions for completing the **California Health Survey**. If you or someone in your household has already completed the survey, please accept our sincere thanks.

If your household has not responded, please consider this final opportunity to respond online and have your voice heard on important health and health care issues affecting our state. California, and local communities, depend on information from this survey to better serve you and your community.

Please have the **adult with the next birthday, living at your address,** complete the survey by going to the website below.

> Respond now at **www.cahealthsurvey.com**
> Your secure access code is: **A1B2C3D4**

If that adult prefers to respond by phone, he or she may call 1-877-207-4746. If that adult is not able to respond soon, we will call to request his or her participation in the survey.

Thank you for your prompt response.

_____

Estimado/a residente de California:

Recientemente, le enviamos instrucciones para responder la **Encuesta de Salud de California**. Si usted o alguien más en su hogar ya completó este cuestionario, se lo agradecemos muy sinceramente.

Si su grupo familiar aún no ha respondido, considere esta última oportunidad de contestar la encuesta en línea y hacer que se escuche su voz en temas importantes sobre salud y atención médica que afectan nuestro estado. California, y las comunidades locales, dependen de la información de esta encuesta para poder prestarle un mejor servicio a usted y a su comunidad.

Por favor, pídale **al adulto que viva en su hogar y que cumpla años en la fecha más cercana** que visite el sitio web abajo mencionado para completar la encuesta.

> Responda la encuesta ahora en **www.cahealthsurvey.com**
> Su código de acceso seguro es: **A1B2C3D4**

Si dicho adulto prefiere responder la encuesta por teléfono, puede hacerlo llamando al 1-877-207-4746. Si a esta persona no le es posible responder pronto, la llamaremos para pedirle que participe en la encuesta.

Gracias por su pronta respuesta.

Parent Letter –Teen Permission Granted (CAWI)

Dear <<Parent Name/ Parent or Guardian >>,

 I want to thank you for recently completing the California Health Survey. During your survey, we also selected one <female/male> adolescent, age <<age>> to be interviewed. Thank you for giving us permission to interview your teenager.

 So your teen can complete his survey and receive his $10 gift card, please provide your <female/male> teen, age <<age>> the sealed envelope included with this letter. Inside the envelope is a letter that will explain the study to your teen and provide him a secure access code for him to complete the survey online.

 The information your teen will provide will be kept confidential and will help us better understand health issues currently facing teens. The study results will then help in designing policies and programs that can help teens in your community and across the state of California. When your teen completes the survey, we will send <her/him> a $10 gift card in appreciation.

 If you have any questions, you may call toll-free at 1-844-384-9393. If you want to learn more about this survey, you can visit our website at www.californiahealthsurvey.org.

 Your help is very important to this study's success. Thank you for your cooperation.

 Sincerely,

Dr. Ninez Ponce
Principal Investigator, California Health Survey

10960 Wilshire Boulevard, Suite 1550, Los Angeles, CA 90024

Parent Letter – Teen Permission Refused (CATI)

Dear <<Parent Name/California Resident>>,

I want to thank you for recently completing the California Health Survey. As we explained in the telephone survey, <u>we also selected one <female/male> adolescent, age <<age>> to be interviewe</u>d. However, we did not receive permission over the phone to interview that teenager. We respect that decision and will not interview anyone under 18 years old without permission.

I want to ask the parent or guardian of this teen to please reconsider. The information your teen will provide will be kept confidential and will help us better understand health issues currently facing teens. The study results will then help in designing policies and programs that can help teens in your community and across the state of California. Your child's responses are important because they are part of a scientific sample representing many other similar young people. His answers cannot be replaced.

When your teen completes the survey, we will send <her/him> a $10 gift card in appreciation.

As an additional token of our appreciation for allowing your teen to complete our survey, **we will also send you a $10 gift card after your teen completes the survey.**

If you give your teen permission to complete the survey, please provide your <female/male> teen, age <<age>> the sealed envelope included with this letter. Inside the envelope is a letter that will explain the study to your teen and provide them a secure access code for <her/him> to complete the survey online.

If you have any questions or if your teen would prefer to respond by telephone, you may call toll-free at 1-844-384-9393. If you want to learn more about this survey, you can visit our website at www.californiahealthsurvey.org.

Your help is very important to this study's success. Thank you for your cooperation.

Sincerely,

Dr. Ninez Ponce
Principal Investigator, California Health Survey

10960 Wilshire Boulevard, Suite 1550, Los Angeles, CA 90024

Parent Letter – Teen Permission Refused (CAWI)

Dear <<name/Parent or Guardian>>,

<< I want to thank you for recently completing the California Health Survey. / We recently did a web survey with an adult in your household. I want to thank that person for his or her time. >> As we explained in the online survey, we also selected one <female/male> adolescent, age <<age>> to be interviewed. However, we did not receive permission in the online survey to interview that teenager. We respect that decision and will not interview anyone under 18 years old without permission.

I want to ask the parent or guardian of this teen to please reconsider. The information your teen will provide will be kept confidential and will help us better understand health issues currently facing teens. The study results will then help in designing policies and programs that can help teens in your community and across the state of California. Your child's responses are important because they are part of a scientific sample representing many other similar young people. <Her/His> answers cannot be replaced.

When your teen completes the survey, we will send <her/him> a $10 gift card in appreciation.
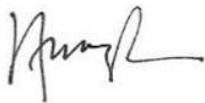
As an additional token of our appreciation for allowing your teen to complete our survey, **we will also send you a $10 gift card after your teen completes the survey.**

If you give your teen permission to complete the survey, please provide your <female/male> teen, age <<age>> the sealed envelope included with this letter. Inside the envelope is a letter that will explain the study to your teen and provide them a secure access code for <her/him> to complete the survey online.

If you have any questions, you may call toll-free at 1-844-384-9393. If you want to learn more about this survey, you can visit our website at www.californiahealthsurvey.org.

Your help is very important to this study's success. Thank you for your cooperation.

Sincerely,

Dr. Ninez Ponce
Principal Investigator, California Health Survey

10960 Wilshire Boulevard, Suite 1550, Los Angeles, CA 90024

Teen Invitation Letter

Dear <<adolescent's first name/California teen>>,

You have been randomly selected to participate in this year's California Health Survey.

This important survey is conducted by UCLA and collects information on the health of teens in California. Your answers may help other teens like you across California.

We recently spoke with one of your parents or guardians about their health. They have given us permission to contact you and ask you to participate in this important survey.

As a token of our appreciation, we will send you a $10 gift card to thank you for your help with this important survey.

Respond now at **www.cahealthsurvey.com/teen**

Your secure access code is: <<SAC>>

This survey will only take 15 minutes. Your participation is completely voluntary and confidential. You can skip any question and can stop at any time.

Your help is very important to this study's success. Thank you.

Sincerely,

Dr. Ninez Ponce
Principal Investigator, California Health Survey

10960 Wilshire Boulevard, Suite 1550, Los Angeles, CA 90024

Teen Reminder Letter

Dear <<adolescent's first name/California teen>>,

Now is the time to respond

Over the last couple of weeks, we have tried contacting you to complete the California Health Survey. Our records show that we do not have your response yet.

Why your response is important

This statewide study collects information on the health and experiences of teens across California. Your answers may help state organizations better help other teens like you.

Why we need you

You were randomly selected out of all the teens in California to participate in this study. Without your responses, our results will not accurately reflect the needs and challenges of California's youth.

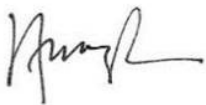Respond now at www.cahealthsurvey.com/teen

Your secure access code is: **<<SAC>>**

As a token of our appreciation, we will send you a $10 gift card to thank you for your help with this important survey.

If you do not respond soon, an interviewer may contact you by phone to complete the survey.

Thank you for your quick response.

Sincerely,

Dr. Ninez Ponce
Principal Investigator, California Health Survey

10960 Wilshire Boulevard, Suite 1550, Los Angeles, CA 90024