CHIS 2021-2022 Methodology Report Series

Report 2

Data Collection Methods

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UCLA CENTER FOR HEALTH POLICY RESEARCH

CALIFORNIA HEALTH INTERVIEW SURVEY

CHIS 2021-2022 METHODOLOGY SERIES

REPORT 2

DATA COLLECTION METHODS

SEPTEMBER 2023

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www.chis.ucla.edu

This report describes the data collection methods used in CHIS 2021-2022. 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 2021-2022 California Health Interview Survey (CHIS 2021-2022). 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 2021-2022 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 2021-2022

The methodological reports for CHIS 2021-2022 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 2021-2022. The CHIS 2021-2022 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 https://healthpolicy.ucla.edu/our-work/california-health-interview-survey-chis/chis-design-and-methods/chis-methodology-reports-repository. 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.

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1. CHIS 2021-2022 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 2021-2022.

- 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 https://healthpolicy.ucla.edu/our-work/california-health-interview-survey-chis/chis-design-and-methods/chis-methodology-reports-repository.

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 https://healthpolicy.ucla.edu/our-work/publications for examples of CHIS studies).

1.2 Sample Additions and Data Collection Methodology Updates

Starting in 2021, the CHIS added a prepaid cell phone sample to the primary ABS sample. A second innovation was altering the envelope for the initial mailing to have a window that would allow the incentive to be seen. The CHIS research team deemed these changes necessary to improve representation of California's diverse population and improve response rates.

For CHIS 2021-2022, respondents in the ABS sample 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, a standard letter, and a final postcard. Where addresses can be matched to a listed telephone number, the nonresponding households are also called up to six times to attempt to complete an interview before the sampled household is considered to be a resolved nonresponse.

The prepaid cell phone sample followed the same dialing protocol of up to six dials before retiring the sample. In addition, the sampled phone number was screened for respondents who were either aged 18 to 24, Hispanic, African American, or would take the survey in one of the non-English languages offered for CHIS 2021-2022.

The CHIS design regularly includes additional samples for focused analysis of specific geographic areas or populations. The CHIS 2021-2022 included four oversamples:

1) In 2021 only, the Cedar-Sinai oversample was composed of ABS sample from LA County Service Planning Areas 1,2,4, and 5. These households were screened for Latinos or Asians who are aged 50 or older.

2) In both 2021 and 2022 American Indian and Alaska Natives (AIAN), were also oversampled in 2021. Respondents in this sample were asked in the screener whether they considered themselves to be American Indian or Alaska Native or to be of American Indian or Alaska Native decent.

3) CHIS 2022 oversampled households from 13 ZIP codes in LA County Service Planning Areas 6, 7, and 8 that surround the Martin Luther King Community Healthcare (MLKCH) hospital.

4) Lastly, CHIS 2022 oversampled Santa Clara County households.

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 https://healthpolicy.ucla.edu/our-work/training?keys=&gid%5B45%5D=45&sort_bef_combine=publish_date_DESC.

Additional documentation on constructing the CHIS sampling weights is available in the *CHIS 2021-2022 Methodology Series: Report 5—Weighting and Variance Estimation* posted at https://healthpolicy.ucla.edu/our-work/california-health-interview-survey-chis/chis-design-and-methods/chis-methodology-reports-repository. 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 2021-2022 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, as with CHIS 2019-2020, CHIS 2021-2022 continued to employ 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.

As with CHIS 2019-2020, the address-based sample in CHIS 2021-2022 was stratified into different strata that had higher incidences of individuals with targeted characteristics. For CHIS 2021-2022, these strata were based on predictive models that employed Big Data techniques to identify household attributes such as demographics, spoken languages, and even attitudinal metrics that are correlated with important respondent characteristics. The process begins by taking prior data and

building models with those data, and then scoring future samples with the outcomes of those models. In addition to evaluating the predictive models, for CHIS 2021-2022 we also investigated the utility of individual sample flags provided by MSG database information, including the surname flags, child indicator variables, and resident age information as well as PDB block-group characteristics including the density of households with African American residents and households with limited English proficiency.

For CHIS 2021-2022, the following strata were created[1]:

1. Vietnamese
2. Korean
3. Likely Asian-language Interview
4. Likely Spanish-language interview
5. Hispanic
6. Other high-density non-English
7. Other Asian
8. High density African American
9. HH with children
10. Other 65+
11. Residual - Match
12. Residual – No match

This stratification scheme was deigned to make use of the most effective predictive variables to target key demographic subgroups in an efficient way that minimizes the impact of the disproportionate sampling on the design effect. Those models that were not sufficiently predictive to add value were excluded. It should be noted that this stratification includes two additional strata: 1) sample records for which none of the variables or models predicted any attribute, but for which auxiliary data could be matched to the address ("Residual - Match" sample) and sample for which no Big Data was found ("Residual - No match" sample). The final step in utilizing the models is to develop sampling fractions by which modelled households will be selected. The final sample fractions balanced the need to increase the frequency of the lowest incidence groups, while accounting for subgroups differences in response propensity and minimizing disproportionate weighting whenever possible.

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

[1] The Santa Clara oversample employs a slightly different strata, please refer to Methodology Report 1 – Sample Design for additional details.

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. The child interview was completed by the randomly selected respondent who was the parent or guardian.

Table 1-1. California county and county group strata used in the CHIS 2021-2022 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, 2021-2022 California Health Interview Survey.

Prepaid cell phone numbers are associated with cell phones that are “pay-as-you-go” and do not require a contract. Prepaid numbers are more likely to be used by Hispanics, people with lower education and lower income, and other related groups that are often underrepresented in general population samples (e.g., the uninsured). To better target populations not adequately covered under the ABS frame in CHIS 2021-2022, we utilized a Prepaid cell oversample and targeted 900 completes to obtain additional in-

language interviews, Hispanic and African American samples, and young adults. The CHIS ABS sample and the prepaid oversample were of sufficient size to accomplish the second objective, i.e., 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. 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 2021-2022, 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 2021-2022 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.

Table 1-2 shows the number of completed adult, child, and adolescent interviews in CHIS 2021-2022 by mode of interview. Note that these figures were accurate as of data collection completion for 2021-2022 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 https://healthpolicy.ucla.edu/our-work/california-health-interview-survey-chis/chis-design-and-methods/chis-design.

Table 1-2. Number of completed interviews by mode of interview and instrument[1]

	Adult	Child	Adolescent
Totals[2]	46,810	7,505	2,177
Completes by Web	41,912	6,963	2,012
Completes by phone	4,898	542	165

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.

[1] This table excludes the Santa Clara oversample.
[2] 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 72 minutes, 19 minutes, and 30 minutes for the adult, child, and adolescent interviews, respectively; the duration of the CAWI interviews averaged around 47 minutes, 13 minutes, and 21 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 83 minutes, 22 minutes, and 33 minutes for the adult, child, and adolescent interviews respectively; the non-English CAWI interviews had an average length of about 56 minutes, 16 minutes, and 23 minutes for the adult, child, and adolescent interviews, respectively. Nearly 8 percent of the adult interviews were completed in a language other than English, as were about 13 percent of all child (parent proxy) interviews and 2 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 2021-2022 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	✓		
Mental health	**Adult**	**Adolescent**	**Child**
Mental health status	✓	✓	
Perceived need, access and utilization of mental health services	✓	✓	
Functional impairment, stigma	✓		
Suicide ideation and attempts	✓	✓	
Mental health and technology	✓	✓	
Climate Change	✓	✓	
Health behaviors	**Adult**	**Adolescent**	**Child**
Dietary and nutritional intake, breastfeeding (younger than 3 years)	✓		✓
Sugar-sweetened beverages		✓	✓
Alcohol use, Cigarette use, E-cigarette use, Marijuana use, CBD use		✓	
Opioid use	✓		
Exposure to second-hand smoke/vapor, Exposure to marijuana smoke	✓		
Sexual behaviors, HIV testing, HIV prevention medication	✓	✓	
Caregiving	✓		
Gun Violence	**Adult**	**Adolescent**	**Child**
Firearm ownership/presence, loaded, and secure, firearm victimization, quick access to firearm	✓	✓	✓
Women's health	**Adult**	**Adolescent**	**Child**
Pregnancy status/plans and birth control	✓	✓	
Intimate Partner violence	**Adult**	**Adolescent**	**Child**
Intimate partner violence	✓		
Dental health	**Adult**	**Adolescent**	**Child**
Last dental visit, Main reason have not visited dentist, Number of dental visits, Location of dental service	✓	✓	✓
Current dental insurance coverage	✓		✓
Condition of teeth	✓	✓	

(continued)

Table 1-3. CHIS 2021-2022 survey topic areas by instrument (continued)

Neighborhood and housing	**Adult**	**Adolescent**	**Child**
Safety, social cohesion	✓	✓	✓
Housing security/stability, length of residency	✓		
Civic engagement, community involvement	✓	✓	
Encounters with police	✓		
Adverse Childhood Experiences	**Adult**	**Adolescent**	**Child**
ACES Screener	✓	✓	
Past ACES screener	✓	✓	✓
Positive Childhood Experiences	✓	✓	
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	✓		✓
Contraception	✓	✓	
Timely appointment	✓	✓	✓
Access to specialist and general doctors	✓		
Tele-medical care	✓		
Mammogram screening, colon cancer screening, HPV vaccination (only administered in Los Angeles Service Planning Areas 1, 2, 4, 5)	✓		
Care coordination	✓	✓	✓
Discrimination in healthcare setting	✓		
Voter engagement	**Adult**	**Adolescent**	**Child**
Voter engagement	✓		
Voter attitudes	✓		
Food environment	**Adult**	**Adolescent**	**Child**
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	✓	✓	✓
Partial scope Medi-Cal, medical debt, hospitalizations	✓		

(continued)

Table 1-3. CHIS 2021-2022 survey topic areas by instrument (continued)

Public program eligibility	**Adult**	**Adolescent**	**Child**
Household poverty level	✓		
Program participation (CalWORKs, Food Stamps, SSI, SSDI, WIC, TANF)	✓	✓	✓
Assets, child support, Social security/pension, worker's compensation	✓		
Medi-Cal eligibility, Medi-Cal renewal, Notice of actions from Medi-Cal	✓		
Reason for Medi-Cal non-participation among potential beneficiaries	✓	✓	✓
Use of public benefits among immigrant residents	✓		
Parental involvement/adult supervision	**Adult**	**Adolescent**	**Child**
Parental involvement			✓
Book ownership, source of reading materials, challenges to reading to child			✓
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		✓	✓
Preschool quality			✓
Employment	**Adult**	**Adolescent**	**Child**
Employment status, spouse's employment status	✓		
Hours worked at all jobs	✓		
Industry and occupation, firm size	✓		
Paid Family Leave	✓		
Income	**Adult**	**Adolescent**	**Child**
Respondent's and spouse's earnings last month before taxes	✓		
Household income, number of persons supported by household income	✓		

(continued)

Table 1-3. CHIS 2021-2022 survey topic areas by instrument (continued)

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	✓	✓	✓
COVID-19	**Adult**	**Adolescent**	**Child**
Ever though had COVID-19	✓		
Ever tested positive for COVID-19	✓		
COVID-19 vaccine status	✓	✓	✓
Challenges experience due to COVID-19 pandemic	✓		
Risk reduction practices	✓		
Hate Incident (2022 only)	**Adult**	**Adolescent**	**Child**
Experienced hate incident	✓		

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.

1.5 Response Rates

The overall response rates for CHIS 2021-2022 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 2021-2022, the overall household response rate was 9.2 percent (the product of the screener response rate of 13.3 percent and the extended interview response rate at the household level of 69.5 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 2021-2022 Methodology Series: Report 4 – Response Rates*).

The extended interview response rate for the ABS sample varied across the adult (64.6 percent), child (82.5 percent) and adolescent (28.6 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 2021-2022 (see Table 1-4b).

Table 1-4a. CHIS response rates - Conditional

Type of Sample	Screener[1]	Household (given screened)[1]	Adult (given screened)[1]	Child (given screened & eligibility)[1]	Adolescent (given screened & permission)[1]
Overall	13.3%	69.5%	64.6%	82.5%	28.6%

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.

[1] The prepaid cell, Cedars-Sinai, MLKCH, Santa Clara, and AIAN oversamples are not included in these rates.

Table 1-4b. CHIS response rates - Unconditional

Type of Sample	Screener[1]	Household (given screened)[1]	Adult (given screened)[1]	Child (given screened & eligibility)[1]	Adolescent (given screened & permission)[1]
Overall	13.3%	9.2%	8.6%	10.9%	3.8%

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.

[1] The prepaid cell, Cedars-Sinai, MLKCH, Santa Clara, and AIAN oversamples are not included in these rates.

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 2021-2022, either a spouse/partner or adult child completed a proxy interview for twenty-two 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 https://healthpolicy.ucla.edu/our-work/california-health-interview-survey-chis/chis-design-and-methods/chis-design/chis-2019-2020-redesign.

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 2021-2022 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 under coverage 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 2021-2022 were primarily created from the California Department of Finance's (DOF) 2021 and 2022 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 2021-2022 weights are based on 2010 Census counts, as were those used for the 2019-2020 cycle. Please pay close attention when comparing estimates using CHIS 2021-2022 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 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 2021-2022 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 2021-2022 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 selection 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 primarily an address-based sample (ABS). Predictive modeling was used to oversample groups of interest in the population who are traditionally underrepresented (for more details, see *CHIS 2021-2022 Methodology Series: Report 1 – Sample Design)*. In CHIS 2021-2022, four additional samples for specialized analyses of geographic areas and hard-to-reach groups were added.

- Cedars Sinai Oversample - an ABS sample of Latinos and Asians aged 50 and older in LA County SPAs 1,2,4, and 5. The Cedars Sinai Oversample is not included in the overall CHIS 2021 file. Data was collected during 2021.
- Prepaid cell phone sample used to target in-language interviews, Hispanic and African-American samples and young adults. Data was collected in 2021 and 2022.
- American Indian and Alaska Natives (AIAN) sample an ABS sample of American Indian or Alaska Natives and rural areas. Data was collected in 2021 and 2022.
- Martin Luther King Community Hospital (MLKCH) sample an ABS sample of 13 zip codes in LA county SPAs 6,7, and 8 that surround MLKCH hospital. Data was collected in 2022.
- Santa Clara a geographic ABS sample of Santa Clara county. Data was collected in 2022.

Administrative function varied slightly across samples, but the content of the extended interview questionnaires was virtually identical for each sample. With the exception of the prepaid

cell phone sample that was limited to CATI interviewing only, 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 2021-2022 sample was composed of addresses selected as described in *CHIS 2021-2022 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

[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).

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 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]

[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 2021-2022 Methodology Series: Report 5 – Weighting and Variance Estimation*, Section 5.1.
[5] See *CHIS 2021-2022 Methodology Series: Report 5 – Weighting and Variance Estimation*, Section 6.1.

2.3 Screening Interview for Cedar-Sinai Oversample

The Cedar-Sinai ABS was composed of ABS Sample. MSG, the sample vendor, matched telephone numbers to many of the sampled addresses. Households were screened for Latinos and Asians aged 50 and older residing in LA County SPAs 1,2,4, and 5.

2.4 Screening Interview for AIAN Oversample

A low-incidence population group, American Indian and Alaska Natives (AIAN), were oversampled in 2021-2022. Respondents in this sample were asked in the screener whether they considered themselves to be American Indian or Alaska Native or to be of American Indian or Alaska Native decent. Only those who said yes continued with the interview.

2.5 Screening Interview for Prepaid Cell Sample

The goals of the screening interview for the cell sample were similar to those of the landline screener: to determine whether the telephone was associated with a household and to identify an eligible adult respondent. One important difference from the landline design is that most cell phones are linked with a single individual rather than a household. For that reason, the respondent answering the sampled phone number was selected for the adult interview if he/she was 18 years of age or older and was a California resident. In addition, the sampled phone number was screened for respondents who were either aged 18 to 24, Hispanic, African American, or would take the survey in one of the non-English languages offered for CHIS 2021-2022.

2.6 Screening Interview for MLKCH Oversample

The MLKCH sample was composed of ABS Sample. MSG, the sample vendor, matched telephone numbers to many of the sampled addresses. Households were screened for adults residing in 13 zip codes of LA County SPAs 6, 7, and 8.

2.7 Screening Interview for Santa Clara County Oversample

The Santa Clara sample was composed of ABS Sample. MSG, the sample vendor, matched telephone numbers to many of the sampled addresses. Households were screened for adults residing in Santa Clara County.[6]

[6] Data for the Santa Clara County Oversample is not included in publicly release of data.

2.8 Overall Structure of CHIS 2021-2022 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;
- a sampled adolescent who answered for themselves.

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 interviewer to complete the survey.

Figure 2-1. CAWI screening interview flow

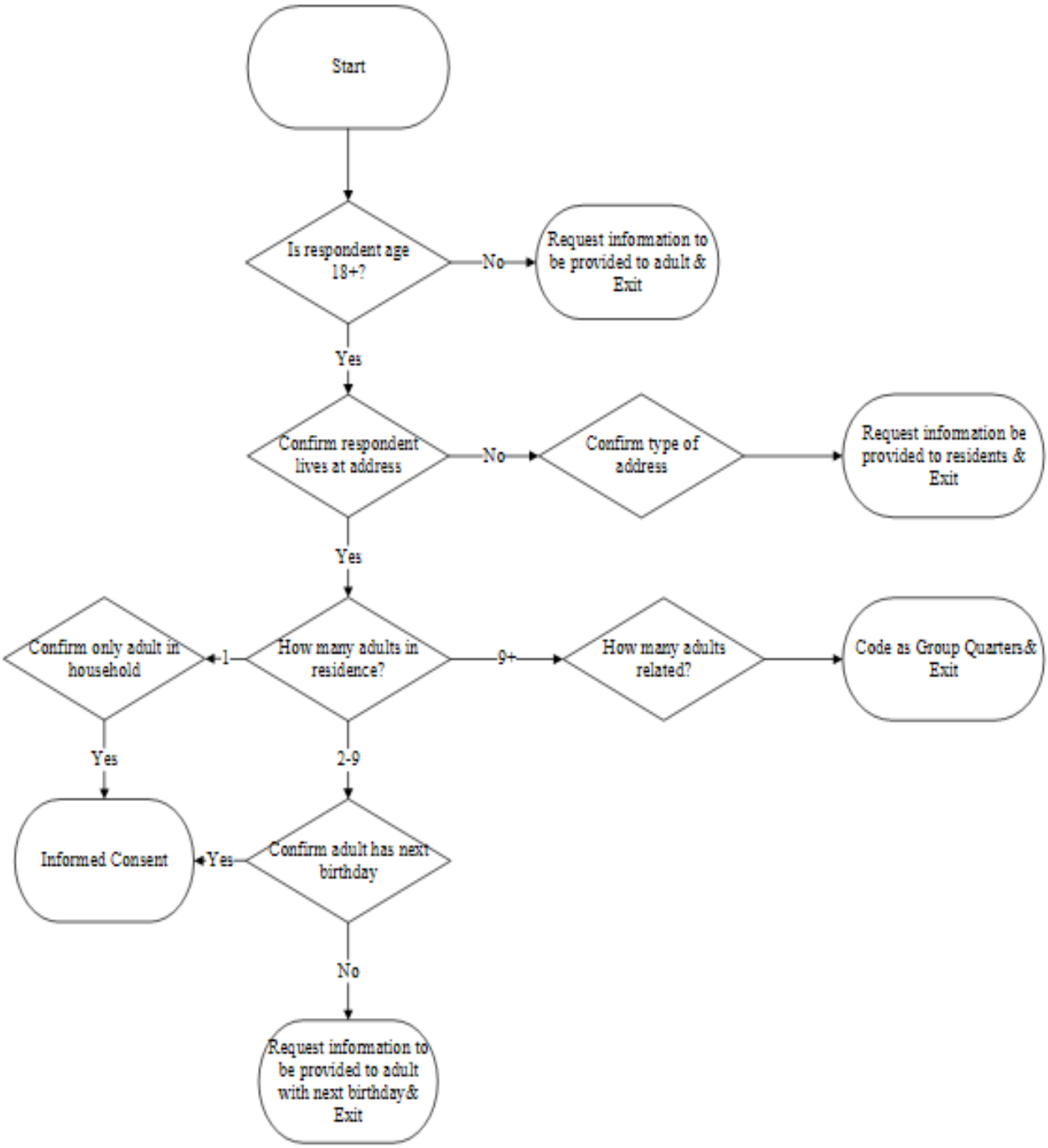


Figure 2-2. CATI screening interview flow

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 2021-2022 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

2.8.1 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 interviews, 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.

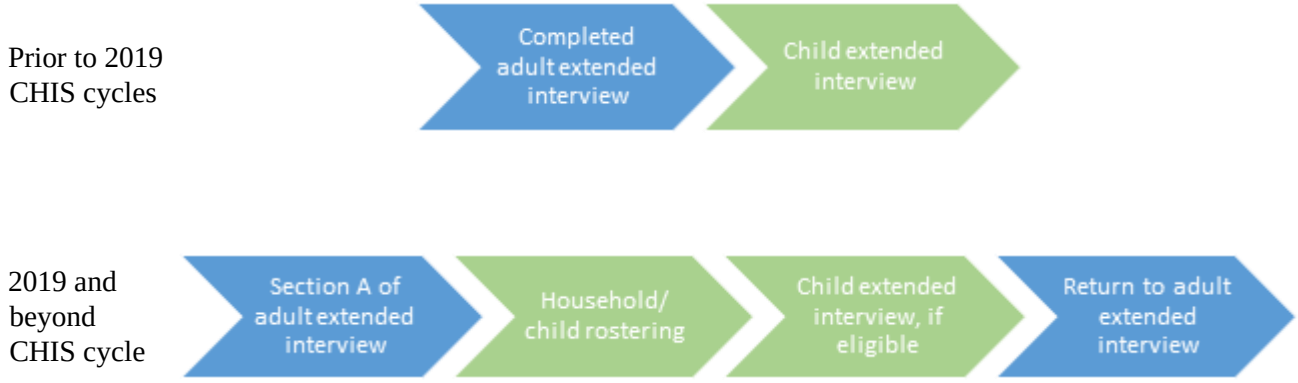
This information was used by the program to select one adolescent and one child among those for whom the sampled adult was the parent or legal guardian. Adolescents or children who did not have a parent or legal guardian in the household were not eligible for selection. This exception includes foster 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.



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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. In 2021, the "child-first" procedure was removed. 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. Prior to 2021 CHIS 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, prior to 2019-2020, 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.

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 50 minutes for the adult questionnaire, 22 minutes for the adolescent questionnaire, and 13 minutes for the child questionnaire.

Due to the mixed mode design, structural differences within the CATI and CAWI instruments were made. These included changing language to reflect self-administration, shortening pre-coded lists, and adding information and instructions that would otherwise be read by a telephone interviewer or shown to the interviewer. An example of such a difference would include specific instruction on CAWI for respondents to 'Select all that apply' versus an interviewer instruction to record all responses.

3.2 Questionnaire Content

The 2021-2022 adult extended questionnaire was divided into 17 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, cancer, COVID-19 prevalence, testing vaccination, and impacts.

CV. COVID-19 – Diagnosis of COVID-19, challenges experienced due to COVID-19 pandemic, risk reduction practices.

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

GV. Gun Violence – Firearm ownership/presence, loaded, security, firearm victimization, quick access to firearm.

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, climate change impacts.

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**,** mammogram, colon cancer, HPV vaccination, discrimination in healthcare, dental health, sexual and partner violence, and 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, housing insecurity, encounters with police, social cohesion and safety, civic engagement.

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

Q. Adverse Childhood Experiences – Adverse childhood experiences screening, positive childhood experiences.

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

The 2021-2022 child extended questionnaire was comprised of seven 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, visits 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.

F. Parental Involvement – First 5 California: "Talk, Read, Sing" program, First 5 California: Kit for New Parents, reading to child and books in household.

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.

Finally, the 2021-2022 adolescent extended questionnaire comprised 13 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, diabetes.

C. Diet and Nutrition – Dietary intake.

D. Physical Activity –Park and neighborhood safety, firearms, social cohesion, sedentary time.

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

F. Mental Health – K6 mental health assessment, mental health and technology, climate change impacts.

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).

Q. **Adverse Childhood Experiences -** Adverse childhood experiences screening, positive childhood experiences.

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 2021-2022 instruments were administered in English, Spanish, Chinese (Mandarin and Cantonese dialects), Vietnamese, Korean, and Tagalog. Translation of the CHIS 2021-2022 questionnaires began in January 2021 after instruments were finalized. The translation process for each language began with original translation of all new items included in CHIS 2021-2022. 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 Protranslating, and members of the SSRS and CHIS teams. Protranslating, 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 2021-2022 contact materials remained similar to the 2019-2020 materials.

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

The UCLA CHIS staff and content development subcontractor, Public Health Institute, conducted the CHIS 2021-2022 pretest from August 24-September 3, 2020. Pretest evaluated questions for the 2021-2022 CHIS questionnaires that were proposed by several different sponsors and stakeholders. The pretest included the self-administered web instrument (CAWI) and computer-assisted telephone interview instrument (CATI). Respondent characteristics were identified before recruitment to ensure coverage of the pretest questions. A total of 45 respondents completed 20 adult CAWI questionnaires, 10 child CAWI questionnaires, 10 teen CAWI questionnaires, and 5 adult CATI questionnaires. In previous cycles, a formal pilot study was conducted to evaluate data collection protocol and the full instrument (see Table 3-1).

Table 3-1. Number of completed interviews and refusals in previous pilot studies and cooperation rates in previous pilots

	Pilot Cooperation Rates				
Instrument	2019-2020	2017-2018	2015-2016	2013-2014	2011-2012
Screener	59%	34%	41%	22%	28%
Adult	92%	74%	82%	56%	64%
Child	100%	93%	77%	100%	93%
Adolescent Permission	49%	80%	N/A	67%	94%
Adolescent	100%	100%	N/A	100%	86%

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.

Staff from UCLA, the Public Health Institute (PHI) monitored the pretest interviews and respondent debriefing sessions. Results of the observations and debriefing helped inform decisions about cutting and modifying questions for administration in the main study.

3.5 Changes in the Questionnaire during Data Collection

To improve the quality of the 2021-2022 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 2021-2022 were generally limited to correcting the program to be consistent with the original intention of the programming instructions in the questionnaire.

4. DATA COLLECTOR RECRUITING AND TRAINING

This chapter describes activities related to supporting CATI data collection. SSRS conducted CHIS 2021-2022 CATI interviewing at several interviewing sites, including work at home interviewing. These included: Recon MR at multiple Texas sites, Ebony Marketing Systems, and SSRS. All data collectors received the same training and supervision. Dialing from all locations came through the SSRS server and SSRS supervisors monitored interviewing across sites. While remotely working, training and supervision continued as described in the subsequent sections.

4.1 Pretest Recruiting and Training

Due to the COVID 19 pandemic, the pretest used a video conferencing platform. At the beginning of each video conference session, CHIS staff introduced themselves, reviewed the purpose of the pretest and consented respondents. CAWI respondents received a link to the survey and shared their screens, so progress through the questionnaire could be monitored. Respondents selected for the CATI instrument followed a similar process, but the survey was implemented by a trained interviewer. After completing the survey, CHIS staff asked the respondent a series of probing questions to evaluate the respondent's understanding of the pretest items and to collected feedback on the questions and survey overall.

4.2 Recruiting and Training for English-language Telephone Interviewing

The field period for the 2021-2022 survey began March 18, 2021, and ended on January 3, 2023 with a 6 week break in January and February 2022. 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 2021-2022 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, 209 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 through a variety of measures including current employee referrals and online job search tools, including Indeed, and the SSRS website.

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 virtual 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 2021-2022 included CATI system training on the interview instrument led by a trainer and dyad role plays. Training for main data collection began in March 2021. 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 virtual 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.

CHIS specific training sessions. After completion of the standard training sessions for all SSRS and partner interviewers, interviewers who had previously worked on CHIS attended a one day refresher course that reviewed new questionnaire topics and pronunciations as well as sensitivity training, disposition coding, and other key items. New CHIS data collectors attended two nights of five-hour virtual 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 CHIS 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 virtual sessions is presented in Exhibit 4-1.

Exhibit 4-1. Agenda for CHIS 2021-2022 English-Language 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

Virtual 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 mailing materials 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 training screen was shared and 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 2021-2022. The first trainings began in March 2021 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 2021-2022 data collector training dates, provider and number of data collectors trained

Training Dates	Provider	Data Collectors Completing Training
3/17/2021	SSRS	2
5/24/2021	SSRS	3
6/8/2021	SSRS	4
6/17/2021	SSRS	22
6/23/2021	SSRS	23
6/24/2021	SSRS	22
7/28/2021	SSRS	8
8/3/2021	SSRS	1
9/8/2021	SSRS	9
9/23/2021	SSRS	5
10/14/2021	SSRS	4
6/1/2021	Recon	5
6/16/2021	Recon	5
6/17/2021	Recon	7
6/24/2021	Recon	7
7/28/202	Recon	4
8/3/2021	Recon	30
9/8/2021	Recon	2
9/23/2021	Recon	4
10/14/2021	Recon	1
9/10/2021	Ebony	11
2/28/2022	SSRS	16
3/2/2022	SSRS	3
7/30/2022	SSRS	4
8/2/2022	SSRS	8
8/26/2022	SSRS	12
2/24/2022	Recon	25
8/18/2022	Recon	13
3/1/2022	Ebony	19

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 from Ebony Marketing Systems 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 interviewing 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 regularly reported on data collector performance. 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 2021-2022. 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 2021-2022 survey began March 18, 2021and ended on November 30, 2022. Sample was released in staggered waves during this period.

5.1 Sample Presentation

Address-based sample (ABS) for the 2021-2022 CHIS survey was selected according to protocols outlined in *CHIS 2021-2022 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 2021-2022 sample generated and fielded

	2021	2022	2021-2022
Total Sample Modeled	1,004,374	745,962	1,750,336
Purged after Modeling	685,043	432,607	1,117,609
Final Sample Mailed	319,331	313,339	632,670
Mailed Sample with Phone Appended	276,944	160,167	384,707

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.

Similar to the previous years, CHIS 2021-2022 utilized 44 primary geographic strata, which are shown in Table 5-2, along with their corresponding sample size and phone append rates. Sample sizes and phone append rates for the ABS oversamples are also shown in Table 5-2.

Table 5-2. CHIS 2021-2022 ABS sample cases released by strata

Sampling Stratum	Total Sample Modeled	Sample Purged after Modeling	Sample Mailed	Percent with Phone Appended
1 Los Angeles	343,914	203,836	140,078	60.9%
2 San Diego	178,468	116,568	61,900	62.1%
3 Orange	94,670	61,629	33,041	63.4%
4 Santa Clara	49,723	31,344	18,379	59.9%
5 San Bernardino	71,154	41,880	29,274	62.2%
6 Riverside	84,635	54,432	30,203	64.8%
7 Alameda	39,377	23,444	15,933	62.4%
8 Sacramento	42,999	27,331	15,668	62.6%
9 Contra Costa	31,942	20,707	11,235	67.6%
10 Fresno	37,530	23,193	14,337	60.2%
11 San Francisco	29,338	19,073	10,265	57.6%
12 Ventura	27,313	18,714	8,599	66.7%
13 San Mateo	22,024	14,478	7,546	63.4%
14 Kern	33,545	21,122	12,423	59.2%
15 San Joaquin	28,254	17,888	10,366	62.6%
16 Sonoma	22,010	16,474	5,536	59.8%
17 Stanislaus	26,705	17,413	9,292	62.6%
18 Santa Barbara	20,176	13,843	6,333	58.2%
19 Solano	16,109	9,225	6,884	68.2%
20 Tulare	25,935	16,098	9,837	56.7%
21 Santa Cruz	20,056	14,365	5,691	58.4%
22 Marin	18,237	12,827	5,410	64.5%
23 San Luis Obispo	17,901	12,991	4,910	58.2%
24 Placer	20,475	14,504	5,971	66.8%
25 Merced	26,472	16,289	10,183	57.4%
26 Butte	23,496	17,630	5,866	57.0%
27 Shasta	21,126	15,216	5,910	61.1%
28 Yolo	16,596	11,194	5,402	57.5%
29 El Dorado	21,257	15,528	5,729	62.5%
30 Imperial	21,971	11,650	10,321	56.6%
31 Napa	19,163	12,805	6,358	62.9%
32 Kings	31,592	19,056	12,536	58.9%
33 Madera	28,863	17,613	11,250	57.1%
34 Monterey	22,652	14,820	7,832	57.0%
35 Humboldt	17,973	13,014	4,959	54.8%
36 Nevada	20,544	15,391	5,153	59.6%
37 Mendocino	20,515	14,464	6,051	49.0%
38 Sutter	27,368	17,703	9,665	60.6%
39 Yuba	27,204	16,925	10,279	59.5%

(continued)

Table 5-2. CHIS 2021-2022 ABS sample cases released by strata (continued)

Sampling Stratum	Total Sample Modeled	Sample Purged after Modeling	Sample Mailed	Percent with Phone Appended
40 Lake	24,335	16,429	7,906	49.9%
41 San Benito	18,262	8,192	10,070	62.6%
42 Tehama, etc.	23,619	15,863	7,756	53.7%
43 Del Norte, etc.	15,985	10,840	5,145	49.3%
44 Tuolumne, etc.	18,853	13,665	5,188	56.6%
Sub-Total	1,750,336	1,117,666	632,670	60.8%
Cedar-Sinai Oversample	91,436	53,185	38,251	65.7%
AIAN Oversample	--	--	50,428	41.0%
MLK Oversample	40,202	24,431	15,771	46.6%
Santa Clara Oversample	133,417	105,667	27,750	54.3%

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.

5.2 Sample Release

The main ABS sample was released over 50 waves of varying sample sizes from March 2021-November-2022. In 2021-2022, 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 shows mailing dates and sample sizes for all ABS sample during 2021-2022.

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

Mail Wave	Initial Sample Size	Initial Mailing	Second Mailing	Third Mailing	Fourth Mailing	Outbound Calls
Main CHIS						
Wave 1	13,860	3/15/2021	3/29/2021	4/12/2021	4/26/2021	5/6/2021
Wave 2	13,858	3/15/2021	3/29/2021	4/12/2021	4/26/2021	5/6/2021
Wave 3	13,862	3/18/2021	4/1/2021	4/15/2021	4/29/2021	5/9/2021
Wave 4	13,859	3/25/2021	4/8/2021	4/22/2021	4/29/2021	5/16/2021
Wave 5	13,862	4/1/2021	4/15/2021	4/29/2021	5/13/2021	5/23/2021
Wave 6	13,861	4/8/2021	4/22/2021	5/6/2021	5/20/2021	5/30/2021
Wave 7	13,862	4/15/2021	4/29/2021	5/13/2021	5/27/2021	6/6/2021
Wave 8	13,859	4/22/2021	5/6/2021	5/20/2021	6/3/2021	6/13/2021
Wave 9	13,862	4/29/2021	5/13/2021	5/27/2021	6/10/2021	6/20/2021

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	13,861	5/6/2021	5/20/2021	6/3/2021	6/17/2021	6/27/2021
Wave 11	13,861	5/13/2021	5/27/2021	6/10/2021	6/24/2021	7/4/2021
Wave 12	13,863	5/20/2021	6/3/2021	6/17/2021	7/1/2021	7/11/2021
Wave 13	13,862	5/27/2021	6/10/2021	6/24/2021	7/8/2021	7/18/2021
Wave 14	13,860	6/3/2021	6/17/2021	7/1/2021	7/15/2021	7/25/2021
Wave 15	13,862	6/10/2021	6/24/2021	7/8/2021	7/22/2021	8/1/2021
Wave 16	13,861	6/17/2021	7/1/2021	7/15/2021	7/29/2021	8/8/2021
Wave 17	13,111	6/24/2021	7/8/2021	7/22/2021	8/5/2021	8/15/2021
Wave 18	12,606	7/1/2021	7/15/2021	7/29/2021	8/12/2021	8/22/2021
Wave 19	12,281	7/8/2021	7/22/2021	8/5/2021	8/19/2021	8/29/2021
Wave 20	11,973	7/15/2021	7/29/2021	8/12/2021	8/26/2021	9/5/2021
Wave 21	12,491	7/22/2021	8/5/2021	8/19/2021	9/2/2021	9/12/2021
Wave 22	12,490	7/29/2021	8/12/2021	8/26/2021	9/9/2021	9/19/2021
Wave 23	7,744	8/12/2021	8/26/2021	9/9/2021	9/23/2021	9/23/2021
Wave 24	4,944	8/19/2021	9/2/2021	9/16/2021	9/30/2021	10/7/2021
Wave 25	9,916	9/2/2021	9/9/2021	9/23/2021	10/7/2021	10/14/2021
Wave 26	12,266	2/10/2022	2/24/2022	3/10/2022	3/24/2022	4/7/2022
Wave 27	12,268	2/10/2022	2/24/2022	3/10/2022	3/24/2022	4/7/2022
Wave 28	12,268	2/17/2022	3/3/2022	3/17/2022	3/31/2022	4/14/2022
Wave 29	12,268	2/24/2022	3/10/2022	3/24/2022	4/7/2022	4/21/2022
Wave 30	12,269	3/3/2022	3/17/2022	3/31/2022	4/14/2022	4/28/2022
Wave 31	11,887	3/10/2022	3/24/2022	4/7/2022	4/21/2022	5/5/2022
Wave 32	11,887	3/17/2022	3/31/2022	4/14/2022	4/28/2022	5/12/2022
Wave 33	11,887	3/24/2022	4/7/2022	4/21/2022	5/5/2022	5/19/2022
Wave 34	11,887	3/31/2022	4/14/2022	4/28/2022	5/12/2022	5/26/2022
Wave 35	11,887	4/7/2022	4/21/2022	5/5/2022	5/19/2022	6/2/2022
Wave 36	11,887	4/14/2022	4/28/2022	5/12/2022	5/26/2022	6/9/2022
Wave 37	11,886	4/21/2022	5/5/2022	5/19/2022	6/2/2022	6/16/2022
Wave 38	11,889	4/28/2022	5/12/2022	5/26/2022	6/9/2022	6/23/2022
Wave 39	11,060	5/12/2022	5/26/2022	6/9/2022	6/23/2022	7/7/2022
Wave 40	11,059	5/19/2022	6/2/2022	6/16/2022	6/30/2022	7/14/2022
Wave 41	14,733	6/2/2022	6/16/2022	6/30/2022	7/14/2022	7/28/2022
Wave 42	13,278	6/16/2022	6/30/2022	7/14/2022	7/28/2022	8/11/2022
Wave 43	13,277	6/16/2022	6/30/2022	7/14/2022	7/28/2022	8/11/2022
Wave 44	13,277	6/23/2022	7/7/2022	7/21/2022	8/4/2022	8/18/2022

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 45	12,931	6/30/2022	7/14/2022	7/28/2022	8/11/2022	8/25/2022
Wave 46	16,194	7/14/2022	7/28/2022	8/11/2022	8/25/2022	9/8/2022
Wave 47	14,490	7/21/2022	8/4/2022	8/18/2022	9/1/2022	9/15/2022
Wave 48	13,984	7/28/2022	8/11/2022	8/25/2022	9/8/2022	9/22/2022
Wave 49	12,856	8/4/2022	8/18/2022	9/1/2022	9/15/2022	9/29/2022
Wave 50	9,766	8/18/2022	9/1/2022	9/15/2022	9/29/2022	10/13/2022
Sub-total	**632,670**					
Cedar-Sinai						
Wave 61	11,408	5/6/2021	5/20/2021	6/3/2021	6/17/2021	7/1/2021
Wave 62	1,632	5/13/2021	5/27/2021	6/10/2021	6/24/2021	7/8/2021
Wave 63	1,632	5/20/2021	6/3/2021	6/17/2021	7/1/2021	7/15/2021
Wave 64	1,634	5/27/2021	6/10/2021	6/24/2021	7/8/2021	7/22/2021
Wave 65	1,633	6/3/2021	6/17/2021	7/1/2021	7/15/2021	7/29/2021
Wave 66	1,633	6/10/2021	6/24/2021	7/8/2021	7/22/2021	8/5/2021
Wave 67	1,633	6/17/2021	7/1/2021	7/15/2021	7/29/2021	8/12/2021
Wave 68	1,617	6/24/2021	7/8/2021	7/22/2021	8/5/2021	8/19/2021
Wave 69	15,429	7/22/2021	8/5/2021	8/19/2021	9/2/2021	9/16/2021
Sub-total	**38,251**					
AIAN						
Wave 80	7,402	9/24/2021	10/1/2021	10/8/2021	10/15/2021	10/22/2021
Wave 81	19,346	9/24/2021	10/1/2021	10/8/2021	10/15/2021	10/22/2021
Wave 82	627	4/14/2022	4/28/2022	5/12/2022	5/26/2022	6/9/2022
Wave 83	10,000	4/14/2022	4/28/2022	5/12/2022	5/26/2022	6/9/2022
Wave 84	1,658	8/4/2022	8/18/2022	9/1/2022	9/15/2022	9/29/2022
Wave 85	11,395	8/4/2022	8/18/2022	9/1/2022	9/15/2022	9/29/2022
Sub-total	**50,428**					
MLK						
Wave 70	6,128	4/7/2022	4/21/2022	5/5/2022	5/19/2022	6/2/2022
Wave 71	9,643	8/11/2022	8/25/2022	9/8/2022	9/22/2022	10/6/2022
Sub-total	**15,771**					
Santa Clara						
Wave 86	13,058	9/1/2022	9/15/2022	9/22/2022	9/29/2022	10/6/2022
Wave 87	13,031	11/3/2022	11/17/2022	11/23/2022	12/1/2022	12/8/2022
Wave 88	1,661	12/1/2022	n/a	n/a	n/a	n/a
Sub-total	**27,550**					

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.

In 2021-2022, the sequence of mailings consisted of 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 presented as determined by the results of the sample modeling (described in *CHIS 2021-2022 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 a 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. Main CHIS 2021-2022 main sample size by language mailing conditions

	Initial Sample Size
English	315,736
Spanish Dominant	230,803
Asian Dominant	86,131

Source: UCLA Center for Health Policy Research, 2021-2022 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 2021-2022, the third mailing, a letter and FAQ was sent to households who had not yet responded, refused, or designated as undeliverable.- This mailing was similar in content to the first mailing.

A final 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.

5.2.1 Windowed Envelope Experiment

In 2021, SSRS and UCLA included an experiment with a visible cash incentive to increase response rates and improve sample yield. A total of 27,726 sampled households were included in the experiment. 13,834 of the households received their initial invitation letter in an envelope with a small window that allowed a respondent to see that a $2 bill was contained within the envelope. The remaining 13,834 received the standard CHIS envelope with no window or visible cash (though the $2 was inside of all envelopes in both groups) Sampled households were randomly assigned to envelope condition. Households that received the visible cash envelope were significantly more likely to complete the survey than those with a standard envelope. As a result, after collecting a sufficient amount of data to determine the efficacy of the visible cash design, a windowed envelope was employed for the remainder of the 2021-2022 survey cycle.

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 & 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, 2021-2022 California Health Interview Survey.

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 2021-2022 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 2021-2022 Methodology Series: Report 1 –*

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

5.3.1 Adaptive Call Design

A model-based adaptive design to reduce outbound dialing costs while maintaining yield and the representativeness of the responding sample was employed beginning on May 24, 2022. Using data from previously completed CHIS phone samples, a random forest model was developed predicting the outcomes of later call attempts based on the outcomes of the first few call attempts. Specifically, for any cases that did not respond to the first 3 call attempts, this model predicted "response propensity" (RP) conditional on continued dialing—that is, the probability that a response would eventually be obtained if dialing continued on that case. Model predictors included the status codes, call durations, and other paradata from the first 3 call attempts.

The model assigned an RP score to each case with a matched phone number that passed the third call attempt without yet having responded. At that point, SSRS stopped dialing cases whose RP score was below a prespecified "cut point", while we continued calling the remaining higher-RP cases up to a maximum of 6 dials. The rationale for this approach was to direct the remaining dialing effort towards those cases for which it was most likely to be successful, while reducing effort for those that were unlikely to eventually yield a completed survey.

The RP models developed for CHIS were able to predict the outcomes of later call attempts with high accuracy. The use of the RP models thus allowed SSRS to stop dialing early for some cases while minimizing the reduction in the completion rate (and therefore any reduction in sample representativeness), since very few of the cases that were stopped early would ever respond.

The exact RP cutoff varied by sampling strata, with higher-priority strata assigned lower cutoffs (implying fewer cases had dialing end early). In three strata (modeled 65-plus and the two residual strata), dialing ended after 3 calls regardless of RP.

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

Continuing in the 2021-2022 cycle 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.

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 April 6, 2021 and continuing through December 26, 2022. 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 January 2, 2023.

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. 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 the 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, 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	Phone Call Follow up
Permission Granted - CATI			
Parent	-	-	-
Teen	-	-	As needed
Permission Granted - CAWI			
Parent	Letter	-	-
Teen	Letter & FAQ	Letter & FAQ	If available
Permission Refused - CATI & CAWI			
Parent	Letter	-	-
Teen	Letter & FAQ	-	-

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.

For adult interviews that were conducted by CATI and where 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.

Based on the results of a 2019 experiment testing the relative efficacy of a $2 pre-incentive, a $10 post incentive, and a $20 post-incentive, in 2021-2022 a $10 gift card post-incentive was offered to all parents whose teen completed an interview.

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 2021-2022 data collection – both in total and for individual oversamples. 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 percent of adult completes were web interviews. This pattern is similar when reviewing child and teen completes by mode of completion.

Table 6-1. Number of completes by mode of interview[7]

	Total Interviews	Web Interviews	% Web Interviews	CATI Interviews	% CATI Interviews
Screener	74,854[1]	58,299	77.9%	16,555	22.1%
Adult	46,810	41,912	89.5%	4,898	10.5%
Child	7,505	6,963	92.8%	542	7.2%
Teen	2,177	2,012	92.4%	165	7.6%

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.
[1] Includes one case with missing mode information.
[2] Includes interviews meeting the criteria as partially complete.

Desktop or laptop computers were most frequently used to complete the survey. Among adult web completes, 71 percent completed on a personal or laptop computer with the remainder completing on various mobile devices. The share completing by a desktop or laptop computer is lower for child and teen interviews (see Table 6-2).

[7] This table excludes the Santa Clara oversample.

Table 6-2. Percentage of completes by device type across ABS samples[8]

	Total Web Interviews	% Completed by PC	% Completed by Mobile Device
Screener	58,299	66.2%	33.8%
Adult	41,912	70.7%	29.3%
Child	6,963	52.4%	47.6%
Teen	2,012	58.6%	41.3%

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.
[1] Includes interviews meeting the criteria as partially complete.

6.1.1 Results by Mailing Phase

In relation to the mailing phase, web interviews occur earlier in the mailing cycle, while the bulk of CATI responses occur after outbound calls commence. Forty-four percent of adult respondents who accessed the survey online responded to the first mailing (measured by completion prior to the second mailing arrival) (see Table 6-3).

Table 6-3. Completed adult response by mailing phase across ABS sample[9]

	Total Interviews[1]	Web Interviews	CATI Interviews
Prior to Postcard	19,086	18,604	482
After Postcard-Before 2nd Letter	8,655	8233	422
After 2nd Letter-Before 2nd Postcard	8,245	7,766	479
After 2nd Postcard Before Outbound Dialing	3,594	3,169	425
After Outbound Dialing	3,769	1,922	1,847

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.
[1] Does not include interviews meeting the criteria as partially complete.

[8] This table excludes the Santa Clara oversample.
[9] This table excludes the Santa Clara oversample.

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 2021-2022 screening interviews. Overall, 10.6 percent of sampled cases completed the screener. Most sampled cases were coded as noncontact and nonresponse. Refusals represented 3.4 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.

AIAN and Cedar Sinai Oversamples: The completion rate for the AIAN oversample was under 1 percent (see Table 6-4b). While the completion rate for Cedar Sinai was 3.8 percent (see Table 6-4c). Most sampled cases were coded as noncontact and nonresponse.

MLKCH Oversample: The completion rate for the MLKCH oversample was 6.2%, with most cases being coded as noncontact and nonresponse (see Table 6-4d).

Santa Clara Oversample: The completion rate for the Santa Clara oversample was 10.6% with most cases being coded as noncontact and nonresponse (see Table 6-4e)

Prepaid Oversample: For the prepaid cell phone sample, the completion rate was 2.3 percent. Refusals accounted for 3.4% of sampled numbers. The majority of cases were coded as noncontact and nonresponse (see Table 6-4f).

Table 6-4a. Detailed results of CHIS 2021-2022 data collection, screening interview – Main sample

	TOTAL			WITH PHONE APPENDED			NO PHONE APPENDED		
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
SAMPLE AVAILABLE	**632,670**			**384,707**			**247,963**		
CATEGORY 1 - Completed Screener (C)	**67,126**		**10.6%**	**48,034**		**12.5%**	**19,092**		**7.7%**
CATEGORY 2 - Eligible, non-interview									
REFUSAL (R)	**4,194**	3.4%		4,186	3.5%		8	0.3%	
BREAKOFF (R)	89,488	72.6%		86,680	72.0%		2,808	95.3%	
NO CONTACT – REACHED ANSWERING MACHINE	29,005	23.5%		28,876	24.0%		129	4.4%	
APPOINTMENT MADE	320	0.3%		319	0.3%		1	0.0%	
LANGUAGE QUEUE CASE	312	0.3%		312	0.3%		0	0.0%	
Total Eligible, non-interview	**123,319**		**19.5%**	**120,373**		**31.3%**	**2,946**		**1.2%**
CATEGORY 3 - Unknown Eligibility, non-interview									
NO CONTACT – OTHER[1]	205,026	48.8%		203,741	98.9%		1,285	0.7%	
FINAL UNRESOLVED RESIDENTIAL STATUS[2]	215,096	51.2%		2,203	1.1%		212,893	99.3%	
Total Unknown Eligibility	**420,122**		**66.4%**	**205,944**		**53.5%**	**214,178**		**86.5%**
CATEGORY 4 – Ineligible (I)									
INELIGIBLE SCREENER	900	4.1%		692	6.7%		208	1.8%	
NON-RESIDENTIAL	21,203	95.9%		9,664	93.3%		11,539	98.2%	
Total Ineligible	**22,103**		**3.5%**	**10,356**		**2.7%**	**11,747**		**4.7%**
ELIGIBILITY RATE (C / (C+I))		**75.2%**			**82.3%**			**61.9%**	
COOPERATION RATE ((C+I) / (C+I+R))		**95.5%**			**93.3%**			**100.0%**	

Source: UCLA Center for Health Policy Research, 2021-2022 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.

Table 6-4b. Detailed results of CHIS 2021-2022 data collection, screening interview – AIAN oversample

	TOTAL			WITH PHONE APPENDED			NO PHONE APPENDED		
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
SAMPLE AVAILABLE	**50,428**			**20,665**			**29,763**		
CATEGORY 1 - Completed Screener (C)	**414**		**0.8%**	**206**		**1.0%**	**208**		**0.7%**
CATEGORY 2 - Eligible, non-interview									
REFUSAL (R)	**278**	3.3%		278	3.5%		0	0.0%	
BREAKOFF (R)	3,328	39.5%		3,078	38.4%		250	61.1%	
NO CONTACT – REACHED ANSWERING MACHINE	4,790	56.9%		4,631	57.8%		159	38.9%	
APPOINTMENT MADE	14	0.2%		14	0.2%		0	0.0%	
LANGUAGE QUEUE CASE	5	0.1%		5	0.1%		0	0.0%	
Total Eligible, non-interview	**8,415**		**16.7%**	**8,006**		**38.7%**	**409**		**1.4%**
CATEGORY 3 - Unknown Eligibility, non-interview									
NO CONTACT – OTHER[1]	7,829	26.4%		7,111	95.6%		718	3.2%	
FINAL UNRESOLVED RESIDENTIAL STATUS[2]	21,870	73.6%		330	4.4%		21,540	96.8%	
Total Unknown Eligibility	**29,699**		**58.9%**	**7,440**		**36.0%**	**22,258**		**74.8%**
CATEGORY 4 – Ineligible (I)									
INELIGIBLE SCREENER	5,174	43.5%		2,213	44.2%		2,961	43.0%	
NON-RESIDENTIAL	6,726	56.5%		2,799	55.8%		3,927	57.0%	
Total Ineligible	**11,900**		**23.6%**	**5,012**		**24.3%**	**6,888**		**23.1%**
ELIGIBILITY RATE (C / (C+I))		**3.4%**			**3.9%**			**2.9%**	
COOPERATION RATE ((C+I) / (C+I+R))		**97.8%**			**94.9%**			**100.0%**	

Source: UCLA Center for Health Policy Research, 2021-2022 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.

Table 6-4c. Detailed results of CHIS 2021 data collection, screening interview – Cedar Sinai oversample

	TOTAL			WITH PHONE APPENDED			NO PHONE APPENDED		
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
SAMPLE AVAILABLE	**38,251**			**25,112**			**13,139**		
CATEGORY 1 - Completed Screener (C)	**1,447**		**3.8%**	**1,180**		**4.7%**	**267**		**2.0%**
CATEGORY 2 - Eligible, non-interview									
REFUSAL (R)	**365**	4.3%		365	4.3%		0	0.0%	
BREAKOFF (R)	6,039	70.9%		5,924	70.5%		115	100.0%	
NO CONTACT – REACHED ANSWERING MACHINE	2,016	23.7%		2,016	24.0%		0	0.0%	
APPOINTMENT MADE	30	0.4%		30	0.4%		0	0.0%	
LANGUAGE QUEUE CASE	70	0.8%		70	0.8%		0	0.0%	
Total Eligible, non-interview	**8,520**		**22.3%**	**8,405**		**33.5%**	**115**		**0.9%**
CATEGORY 3 - Unknown Eligibility, non-interview									
NO CONTACT – OTHER[1]	10,008	46.3%		9,965	98.9%		43	0.6%	
FINAL UNRESOLVED RESIDENTIAL STATUS[2]	11,602	53.7%		113	1.1%		11,489	99.4%	
Total Unknown Eligibility	**21,610**		**56.5%**	**10,078**		**40.0%**	**11,532**		**88.0%**
CATEGORY 4 - Ineligible (I)									
INELIGIBLE SCREENER	2,853	42.7%		2,183	40.1%		670	54.7%	
NON-RESIDENTIAL	3,821	57.3%		3,266	59.9%		555	45.3%	
Total Ineligible	**6,674**		**17.4%**	**5,449**		**21.7%**	**1,225**		**9.3%**
ELIGIBILITY RATE (C / (C+I))		**17.8%**			**17.8%**			**17.9%**	
COOPERATION RATE ((C+I) / (C+I+R))		**95.7%**			**94.8%**			**100.0%**	

Source: UCLA Center for Health Policy Research, 2021-2022 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.

Table 6-4d. Detailed results of CHIS 2022 data collection, screening interview – MLKCH oversample

	TOTAL			WITH PHONE APPENDED			NO PHONE APPENDED		
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
SAMPLE AVAILABLE	**15,711**			**7,345**			**8,426**		
CATEGORY 1 - Completed Screener (C)	**980**		**6.2%**	**612**		**8.3%**	**368**		**4.4%**
CATEGORY 2 - Eligible, non-interview									
REFUSAL (R)	97	3.1%		97	3.1%		0	0.0%	
BREAKOFF (R)	2,339	75.3%		2,330	75.2%		9	100.0%	
NO CONTACT – REACHED ANSWERING MACHINE	613	19.7%		613	19.8%		0	0.0%	
APPOINTMENT MADE	6	0.2%		6	0.2%		0	0.0%	
LANGUAGE QUEUE CASE	51	1.6%		51	1.6%		0	0.0%	
Total Eligible, non-interview	**3,106**		**19.8%**	**3,097**		**42.2%**	**9**		**0.1%**
CATEGORY 3 - Unknown Eligibility, non-interview									
NO CONTACT – OTHER[1]	3,342	30.3%		3,329	100.0%		13	0.2%	
FINAL UNRESOLVED RESIDENTIAL STATUS[2]	7,696	69.7%		0	0.0%		7,696	99.8%	
Total Unknown Eligibility	**11,038**		**70.3%**	**3,329**		**45.3%**	**7,709**		**91.5%**
CATEGORY 4 – Ineligible (I)									
INELIGIBLE SCREENER	14	2.4%		10	3.3%		4	1.4%	
NON-RESIDENTIAL	573	97.6%		297	96.7%		276	98.6%	
Total Ineligible	**587**		**3.7%**	**307**		**4.2%**	**280**		**3.3%**
ELIGIBILITY RATE (C / (C+I))		**62.5%**			**66.6%**			**56.8%**	
COOPERATION RATE ((C+I) / (C+I+R))		**94.2%**			**90.5%**			**100.0%**	

Source: UCLA Center for Health Policy Research, 2021-2022 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.

Table 6-4e. Detailed results of CHIS 2022 data collection, screening interview – Santa Clara oversample

	TOTAL			WITH PHONE APPENDED			NO PHONE APPENDED		
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
SAMPLE AVAILABLE	**27,750**			**15,061**			**12,689**		
CATEGORY 1 - Completed Screener (C)	**2,940**		**10.6%**	**1,901**		**12.6%**	**1,039**		**8.2%**
CATEGORY 2 - Eligible, non-interview									
REFUSAL (R)	**170**	3.9%		170	4.1%		0	0.0%	
BREAKOFF (R)	2,078	47.9%		1,901	45.7%		177	100.0%	
NO CONTACT – REACHED ANSWERING MACHINE	2,080	48.0%		2,080	50.0%		0	0.0%	
APPOINTMENT MADE	4	0.1%		4	0.1%		0	0.0%	
LANGUAGE QUEUE CASE	4	0.1%		4	0.1%		0	0.0%	
Total Eligible, non-interview	**4,336**		**15.6%**	**4,159**		**27.6%**	**177**		**1.4%**
CATEGORY 3 - Unknown Eligibility, non-interview									
NO CONTACT – OTHER[1]	8,452	42.5%		8,450	100.0%		2	0.0%	
FINAL UNRESOLVED RESIDENTIAL STATUS[2]	11,416	57.5%		1	0.0%		11,415	100.0%	
Total Unknown Eligibility	**19,868**		**71.6%**	**8,451**		**56.1%**	**11,417**		**90.0%**
CATEGORY 4 – Ineligible (I)									
INELIGIBLE SCREENER	21	3.5%		14	2.5%		7	12.5%	
NON-RESIDENTIAL	585	96.5%		536	97.5%		49	87.5%	
Total Ineligible	**606**		**2.2%**	**550**		**3.7%**	**56**		**0.4%**
ELIGIBILITY RATE (C / (C+I))		**82.9%**			**77.6%**			**94.9%**	
COOPERATION RATE ((C+I) / (C+I+R))		**95.4%**			**93.5%**			**100.0%**	

Source: UCLA Center for Health Policy Research, 2021-2022 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.

Table 6-4f. Detailed results of CHIS 2021-2022 data collection, screening interview – Prepaid oversample

	TOTAL		
	Number	Within category	of Total
SAMPLE AVAILABLE	**208,628**		
CATEGORY 1 - Completed Screener (C)	**4,888**		**2.3%**
CATEGORY 2 - Eligible, non-interview			
REFUSAL (R)	3,208	3.4%	
BREAKOFF (R)	55,537	58.9%	
NO CONTACT – REACHED ANSWERING MACHINE	35,188	37.3%	
APPOINTMENT MADE	121	0.1%	
LANGUAGE QUEUE CASE	226	0.2%	
Total Eligible, non-interview	**94,280**		**45.2%**
CATEGORY 3 - Unknown Eligibility, non-interview			
NO CONTACT – OTHER[1]	80,970	99.8%	
FINAL UNRESOLVED RESIDENTIAL STATUS[2]	160	0.2%	
Total Unknown Eligibility	**81,130**		**38.9%**
CATEGORY 4 - Ineligible (I)			
INELIGIBLE SCREENER	6,721	23.7%	
NON-RESIDENTIAL	21,609	76.3%	
Total Ineligible	**28,330**		**13.6%**
ELIGIBILITY RATE (C / (C+I))		**14.7%**	
COOPERATION RATE ((C+I) / (C+I+R))		**91.2%**	

Source: UCLA Center for Health Policy Research, 2021-2022 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 65.7 percent of the 67,126 sample adults who completed the screener. Partial completes made up 5.2 percent of all adult interviews counted as complete. The proportion of refusals in the 2021-2022 adult sample was less than one percent, while the proportion of other nonresponse was 24.9 percent.

AIAN Oversample: The completion rate for adult interview for the AIAN oversample was 61.6 percent, while partial completes made up 3.5 percent of all adult interviews that counted as completes (see Table 6-5b). Refusals made up under one percent of sampled adults who completed the screener, while the proportion of non-response was 28 percent.

Cedar-Sinai Oversample: While the completion rate for Cedar Sinai was 57.8 percent, while partial completes made up 4 percent of all adult interviews that counted as completes (see Table 6-5c). Refusals made up under one percent of sampled adults who completed the screener, while the proportion of non-response was 29.5 percent.

MLKCH Oversample: While the completion rate for MLKCH oversample was 49.7 percent, while partial completes made up 10.7 percent of all adult interviews that counted as completes (see Table 6-5d). Refusals made up under 1.5 percent of sampled adults who completed the screener, while the proportion of non-response was 38.6 percent.

Santa Clara Oversample: While the completion rate for Santa Clara was 70.1 percent, while partial completes made up 5.5 percent of all adult interviews that counted as completes (see Table 6-5e). Refusals made up under one percent of sampled adults who completed the screener, while the proportion of non-response was 21.2 percent.

Prepaid Oversample: For the prepaid cell phone sample, the completion rate was 21.4 percent, while partial completes made up 11.6 percent of all adult interviews that counted as completes (see Table 6-5d). The proportion of non-response was 78.1 percent.

6.2.2.1 Transition Statement Experiment

During CHIS 2021 data collection, the CHIS team observed that a large proportion of questions in the adult extended interview with high break-off incidence began with transition statements, such as "The following questions are about…" or "These next questions are about...". Therefore, experiments were warranted to test whether eliminating transition statements leads to a reduction in survey break-offs during CHIS 2022. An experiment was conducted in CHIS 2022, where respondents were evenly split and randomly assigned to two conditions:

(1) a treatment group where transition statements were removed from the selected twenty-six questions;

(2) a control group with the original question wording, including transition statements.

Results from the experiment demonstrated that eliminating transition statements results in substantive survey break-offs reductions. Aggregated break-offs from the twenty-six questions decreased by 44.2%. For individual questions, reduction rates range from 14% to 82%. Results also show that removing these statements assisted in getting sufficient partials to fully complete the adult extended interview. Additionally, the removal of these statements decreased slightly the interview length.[10]

[10] See UCLA working paper for additional information. https://healthpolicy.ucla.edu/sites/default/files/2023-05/transition-statement-experiment-working-paper-final_12142022.pdf

Table 6-5a. Detailed results of CHIS 2021-2022 data collection, adult extended interview – Main sample

	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	**67,126**			**48,034**			**19,092**		
CATEGORY 1 - Completed Interview (C)									
COMPLETED ADULT INTERVIEW	41,833	94.8%		29,432	95.1%		12,401	94.2%	
PARTIAL ADULT INTERVIEW	2,296	5.2%		1,529	4.9%		767	5.8%	
Total Completed Interviews	**44,129**		**65.7%**	**30,961**		**64.5%**	**13,168**		**69.0%**
CATEGORY 2 - Eligible, non-interview									
REFUSAL (R)	243	1.4%		236	1.8%		7	0.2%	
BREAKOFF (R)	16,638	97.7%		12,392	97.1%		4,246	99.7%	
APPOINTMENT MADE	142	0.8%		137	1.1%		5	0.1%	
Total Eligible, non-interview	**17,023**		**25.4%**	**12,765**		**26.6%**	**4,258**		**22.3%**
CATEGORY 3 - Unknown Eligibility									
NO CONTACT	5,908			4,262			1,646		
Total Unknown Eligibility	**5,908**		**8.8%**	**4,262**		**8.9%**	**1,646**		**8.6%**
CATEGORY 4 - Ineligible									
INELIGIBLE ADULT	66			46			20		
Total Ineligible	**66**		**0.1%**	**46**		**0.1%**	**20**		**0.1%**
ELIGIBILITY RATE (C / (C+I))		**99.9%**			**99.9%**			**99.8%**	
COOPERATION RATE ((C+I) / (C+I+R))		**72.4%**			**71.1%**			**75.7%**	

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.

Table 6-5b. Detailed results of CHIS 2021-2022 data collection, adult extended interview – AIAN oversample

	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	**414**			**206**			**208**		
CATEGORY 1 - Completed Interview (C)									
COMPLETED ADULT INTERVIEW	246	96.5%		97	94.2%		149	98.0%	
PARTIAL ADULT INTERVIEW	9	3.5%		6	5.8%		3	2.0%	
Total Completed Interviews	**255**		**61.6%**	**103**		**50.0%**	**152**		**73.1%**
CATEGORY 2 - Eligible, non-interview									
REFUSAL (R)	6	4.9%		6	7.3%		0	0.0%	
BREAKOFF (R)	111	91.0%		72	87.8%		39	97.5%	
APPOINTMENT MADE	5	4.1%		4	4.9%		1	2.5%	
Total Eligible, non-interview	**122**		**29.5%**	**82**		**39.8%**	**40**		**19.2%**
CATEGORY 3 - Unknown Eligibility									
NO CONTACT	34			18			16		
Total Unknown Eligibility	**34**		**8.2%**	**18**		**8.7%**	**16**		**7.7%**
CATEGORY 4 - Ineligible									
INELIGIBLE ADULT	3			3			0		
Total Ineligible	**3**		**0.7%**	**3**		**1.5%**	**0**		**0.0%**
ELIGIBILITY RATE (C / (C+I))		**98.8%**			**97.2%**			**100.0%**	
COOPERATION RATE ((C+I) / (C+I+R))		**69.4%**			**58.6%**			**79.6%**	

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.

Table 6-5c. Detailed results of CHIS 2021 data collection, adult extended interview – Cedar Sinai oversample

	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	**1,447**			**1,180**			**267**		
CATEGORY 1 - Completed Interview (C)									
COMPLETED ADULT INTERVIEW	836	93.5%		674	93.9%		162	92.0%	
PARTIAL ADULT INTERVIEW	58	6.5%		44	6.1%		14	8.0%	
Total Completed Interviews	**894**		**61.8%**	**718**		**60.8%**	**176**		**65.9%**
CATEGORY 2 - Eligible, non-interview									
REFUSAL (R)	7	1.6%		7	1.9%		0	0.0%	
BREAKOFF (R)	414	95.4%		352	94.6%		62	100.0%	
APPOINTMENT MADE	13	3.0%		13	3.5%		0	0.0%	
Total Eligible, non-interview	**434**		**30.0%**	**372**		**31.5%**	**62**		**23.2%**
CATEGORY 3 - Unknown Eligibility									
NO CONTACT	117			89			28		
Total Unknown Eligibility	**117**		**8.1%**	**89**		**7.5%**	**28**		**10.5%**
CATEGORY 4 – Ineligible (I)									
INELIGIBLE ADULT	2			1			1		
Total Ineligible	**2**		**0.1%**	**1**		**0.1%**	**1**		**0.4%**
ELIGIBILITY RATE (C / (C+I))		**99.8%**			**99.9%**			**99.4%**	
COOPERATION RATE ((C+I) / (C+I+R))		**68.1%**			**66.8%**			**74.4%**	

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.

Table 6-5d. Detailed results of CHIS 2022 data collection, adult extended interview – MLKCH oversample

	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	**980**			**612**			**368**		
CATEGORY 1 - Completed Interview (C)									
COMPLETED ADULT INTERVIEW	434	89.3%		255	91.1%		179	86.9%	
PARTIAL ADULT INTERVIEW	52	10.7%		25	8.9%		27	13.1%	
Total Completed Interviews	**486**		**49.7%**	**280**		**45.8%**	**206**		**56.1%**
CATEGORY 2 - Eligible, non-interview									
REFUSAL (R)	15	3.8%		15	5.6%		0	0.0%	
BREAKOFF (R)	372	94.7%		247	92.2%		125	100.0%	
APPOINTMENT MADE	6	1.5%		6	2.2%		0	0.0%	
Total Eligible, non-interview	**393**		**40.2%**	**268**		**43.9%**	**125**		**34.1%**
CATEGORY 3 - Unknown Eligibility									
NO CONTACT	99			63			36		
Total Unknown Eligibility	**99**		**10.1%**	**63**		**10.3%**	**36**		**9.8%**
CATEGORY 4 - Ineligible									
INELIGIBLE ADULT	2			1			1		
Total Ineligible	**2**		**0.2%**	**1**		**0.2%**	**1**		**0.3%**
ELIGIBILITY RATE (C / (C+I))		**99.6%**			**99.6%**			**99.5%**	
COOPERATION RATE ((C+I) / (C+I+R))		**55.9%**			**51.8%**			**62.5%**	

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.

Table 6-5e. Detailed results of CHIS 2022 data collection, adult extended interview – Santa Clara oversample

	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	**2,940**			**1,901**			**1,039**		
CATEGORY 1 - Completed Interview (C)									
COMPLETED ADULT INTERVIEW	1,947	94.5%		1,257	94.4%		690	94.7%	
PARTIAL ADULT INTERVIEW	114	5.5%		75	5.6%		39	5.3%	
Total Completed Interviews	**2,061**		**70.1%**	**1,332**		**70.1%**	**729**		**70.2%**
CATEGORY 2 - Eligible, non-interview									
REFUSAL (R)	7	1.1%		7	1.7%		0	0.0%	
BREAKOFF (R)	624	98.7%		399	98.0%		225	100.0%	
APPOINTMENT MADE	1	0.2%		1	0.2%		0	0.0%	
Total Eligible, non-interview	**632**		**21.5%**	**407**		**21.4%**	**225**		**21.7%**
CATEGORY 3 - Unknown Eligibility									
NO CONTACT	245			161			84		
Total Unknown Eligibility	**245**		**8.3%**	**161**		**8.5%**	**84**		**8.1%**
CATEGORY 4 - Ineligible									
INELIGIBLE ADULT	2			1			1		
Total Ineligible	**2**		**0.1%**	**1**		**0.1%**	**1**		**0.1%**
ELIGIBILITY RATE (C / (C+I))		**99.9%**			**99.9%**			**99.9%**	
COOPERATION RATE ((C+I) / (C+I+R))		**76.6%**			**76.7%**			**76.5%**	

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.

Table 6-5f. Detailed results of CHIS 2021-2022 data collection, adult extended interview – Prepaid oversample

	TOTAL		
	Number	Within category	of Total
TOTAL ADULTS SAMPLED	**4,888**		
CATEGORY 1 - Completed Interview (C)			
COMPLETED ADULT INTERVIEW	925	88.4%	
PARTIAL ADULT INTERVIEW	121	11.6%	
Total Completed Interviews	**1,046**		**21.4%**
CATEGORY 2 - Eligible, non-interview			
REFUSAL (R)	5	0.1%	
BREAKOFF (R)	3,812	99.9%	
APPOINTMENT MADE	0	0.0%	
Total Eligible, non-interview	**3,817**		**78.1%**
CATEGORY 3 - Unknown Eligibility			
NO CONTACT	22		
Total Unknown Eligibility	**22**		**0.5%**
CATEGORY 4 – Ineligible (I)			
INELIGIBLE ADULT	3		
Total Ineligible	**3**		**0.1%**
ELIGIBILITY RATE (C / (C+I))		**99.7%**	
COOPERATION RATE ((C+I) / (C+I+R))		**21.6%**	

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.

6.2.3 Child Extended Interview

Results for the child extended interviews are shown in Table 6-6a. In total, 7,087 child extended interviews were fully completed. The completion rate for the 2021-2022 child interview was 78.5 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. Among eligible respondents 15.6 percent abandoned the child survey prior to completion.

Oversamples. The total number of child completes from the oversamples is quite low. There were fifty-four completes from the AIAN sample for a completion rate of 83.1 percent (see Table 6-6b). From Cedar-Sinai, 51 child interviews were conducted for a completion rate of 86.4 percent (see Table 6-6c). From MLKCH, 97 child interviews were conducted for a completion rate of 68.8 percent (see Table 6-6d). From Santa Clara 290 child interviews were conducted for a completion rate of 76.5 percent (see Table 6-6e). While the prepaid sample produced 222 child extended interviews for a completion rate of 68.8 percent (see table 6-6f).

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 2021-2022, 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 2021-2022, 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 2021-2022 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 6-6a. Detailed results of CHIS 2021-2022 data collection, child extended interview – Main sample

	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	**9,031**			**5,819**			**3,212**		
CATEGORY 1 - Completed Child Interview (C)	**7,087**		**78.5%**	**4,597**		**79.0%**	**2,490**		**77.5%**
CATEGORY 2 - Eligible, non-interview									
BREAKOFF (R)	1,406			885			521		
Total Eligible, non-interview	**1,406**		**15.6%**	**885**		**15.2%**	**521**		**16.2%**
CATEGORY 3 - Unknown Eligibility									
NO CONTACT	0			0			0		
Total Unknown Eligibility	**0**		**0.0%**	**0**		**0.0%**	**0**		**0.0%**
CATEGORY 4 – Ineligible (I)									
INELIGIBLE CHILD	538			337			201		
Total Ineligible	**538**		**6.0%**	**337**		**5.8%**	**201**		**6.3%**
ELIGIBILITY RATE (C / (C+I))		92.9%			93.2%			92.5%	
COOPERATION RATE ((C+I) / (C+I+R))		84.4%			84.8%			83.8%	

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.

Table 6-6b. Detailed results of CHIS 2021-2022 data collection, child extended interview – AIAN oversample

	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	**65**			**28**			**37**		
CATEGORY 1 - Completed Child Interview (C)	**54**		**83.1%**	**23**		**82.1%**	**31**		**83.8%**
CATEGORY 2 - Eligible, non-interview									
BREAKOFF (R)	9			4			5		
Total Eligible, non-interview	**9**		**13.8%**	**4**		**14.3%**	**5**		**13.5%**
CATEGORY 3 - Unknown Eligibility									
NO CONTACT	0			0			0		
Total Unknown Eligibility	**0**		**0.0%**	**0**		**0.0%**	**0**		**0.0%**
CATEGORY 4 – Ineligible (I)									
INELIGIBLE CHILD	2			1			1		
Total Ineligible	**2**		**3.1%**	**1**		**3.6%**	**1**		**2.7%**
ELIGIBILITY RATE (C / (C+I))		96.4%			95.8%			96.9%	
COOPERATION RATE ((C+I) / (C+I+R))		86.2%			85.7%			86.5%	

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.

Table 6-6c. Detailed results of CHIS 2021-2022 data collection, child extended interview – Cedar Sinai oversample

	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	**59**			**47**			**12**		
CATEGORY 1 - Completed Child Interview (C)	**51**		**86.4%**	**42**		**89.4%**	**9**		**75.0%**
CATEGORY 2 - Eligible, non-interview									
BREAKOFF (R)	1			0			1		
Total Eligible, non-interview	**1**		**1.7%**	**0**		**0.0%**	**1**		**8.3%**
CATEGORY 3 - Unknown Eligibility									
NO CONTACT	0			0			0		
Total Unknown Eligibility	**0**		**0.0%**	**0**		**0.0%**	**0**		**0.0%**
CATEGORY 4 – Ineligible (I)									
INELIGIBLE CHILD	7			5			2		
Total Ineligible	**7**		**11.9%**	**5**		**10.6%**	**2**		**16.7%**
ELIGIBILITY RATE (C / (C+I))		**87.9%**			**89.4%**			**81.8%**	
COOPERATION RATE ((C+I) / (C+I+R))		**98.3%**			**100.0%**			**91.7%**	

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview.

Table 6-6d. Detailed results of CHIS 2022 data collection, child extended interview – MLKCH oversample

	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	**141**			**74**			**67**		
CATEGORY 1 - Completed Child Interview (C)	**97**		**68.8%**	**49**		**66.2%**	**48**		**71.6%**
CATEGORY 2 - Eligible, non-interview									
BREAKOFF (R)	32			17			15		
Total Eligible, non-interview	**32**		**22.7%**	**17**		**23.0%**	**15**		**22.4%**
CATEGORY 3 - Unknown Eligibility									
NO CONTACT	0			0			0		
Total Unknown Eligibility	**0**		**0.0%**	**0**		**0.0%**	**0**		**0.0%**
CATEGORY 4 – Ineligible (I)									
INELIGIBLE CHILD	12			8			4		
Total Ineligible	**12**		**8.5%**	**8**		**10.8%**	**4**		**6.0%**
ELIGIBILITY RATE (C / (C+I))		89.0%			86.0%			92.3%	
COOPERATION RATE ((C+I) / (C+I+R))		77.3%			77.0%			77.6%	

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview.

Table 6-6e. Detailed results of CHIS 2022 data collection, child extended interview – Santa Clara oversample

	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	**379**			**189**			**190**		
CATEGORY 1 - Completed Child Interview (C)	**290**		**76.5%**	**140**		**74.1%**	**150**		**78.9%**
CATEGORY 2 - Eligible, non-interview									
BREAKOFF (R)	58			34			24		
Total Eligible, non-interview	**58**		**15.3%**	**34**		**18.0%**	**24**		**12.6%**
CATEGORY 3 - Unknown Eligibility									
NO CONTACT	0			0			0		
Total Unknown Eligibility	**0**		**0.0%**	**0**		**0.0%**	**0**		**0.0%**
CATEGORY 4 – Ineligible (I)									
INELIGIBLE CHILD	31			15			16		
Total Ineligible	**31**		**8.2%**	**15**		**7.9%**	**16**		**8.4%**
ELIGIBILITY RATE (C / (C+I))		90.3%			90.3%			90.4%	
COOPERATION RATE ((C+I) / (C+I+R))		84.7%			82.0%			87.4%	

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview.

Table 6-6f. Detailed results of CHIS 2021-2022 data collection, child extended interview – Prepaid oversample

	TOTAL		
	Number	Within category	of Total
TOTAL CHILDREN SAMPLED	**325**		
CATEGORY 1 - Completed Child Interview (C)	**224**		**68.9%**
CATEGORY 2 - Eligible, non-interview			
BREAKOFF (R)	92		
Total Eligible, non-interview	**92**		**28.3%**
CATEGORY 3 - Unknown Eligibility			
NO CONTACT	0		
Total Unknown Eligibility	**0**		**0.0%**
CATEGORY 4 – Ineligible (I)			
INELIGIBLE CHILD	9		
Total Ineligible	**9**		**2.8%**
ELIGIBILITY RATE (C / (C+I))		**96.1%**	
COOPERATION RATE ((C+I) / (C+I+R))		**71.7%**	

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview.

Table 6-7. Number of children sampled and child interviews completed across all sample types, CHIS 2007 through 2021-2022

	Total Children Sampled	Completed Child Interviews	Completion Rate	Child Sampled per Completed Screener	Child Sampled per Completed Adult
CHIS 2021-2022	**10,000**	**7,796**	**78.0%**	.13	.20
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, 2021-2022 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 2021-2022 sample. Numbers and percentages include all households with an eligible adolescent present.

The overall completion rate among all adolescents was 28.5 percent. Less than one-half of parents provided permission (48.9 percent) either initially during their interview or during the refusal conversion process. While 51.1 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.

Oversamples. The total number of adolescent completes from the oversamples is quite low. Six interviews were completed from the AIAN sample for a completion rate among all adolescents of 9.1 percent (see Table 6-8b). From Cedar-Sinai, 23 adolescent interviews were conducted for a completion rate of 13.0 percent (see Table 6-8c). The MLKCH oversample had 63 completed adolescent interviews for a completion rate of 21.3 percent (see Table 6-8d), while the Santa Clara oversample had 135 completed adolescent interview for a completion rate of 24.1 percent (see Table 6-8e). The prepaid sample produced 99 adolescent interviews for a completion rate of 6.3 percent (see table 6-8f).

Table 6-8a. Detailed results of CHIS 2021-2022 data collection, parental permission, and adolescent interviews – Main sample

	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)	3,357	93.1%		3,203	92.8%		154	98.1%	
PERMISSION (REFUSAL CONVERSION)	250	6.9%		247	7.2%		3	1.9%	
Total Permission Received	**3,607**		**48.9%**	**3,450**		**49.1%**	**157**		**45.2%**
PERMISSION NOT RECEIVED	3,773		**51.1%**	3,583		**50.9%**	190		**54.8%**
TOTAL ADOLESCENTS SAMPLED	**7,380**			**7,033**			**347**		
TOTAL ADOLESCENT SAMPLE AVAILABLE	**3,607**			**3,450**			**157**		
CATEGORY 1 – Completed Interview (C)									
COMPLETED ADOLESCENT INTERVIEW	**2,101**		**58.2%**	**2,044**		**59.2%**	**57**		**36.3%**
CATEGORY 2 – Eligible, non-interview									
PERMISSION, BUT NO TEEN INTERVIEW (R)	1446	96.0%		1398	99.4%		48	48.0%	
BREAKOFF (R)	60	4.0%		8	0.6%		52	52.0%	
Total Eligible, non-interview	**1,506**		**20.4%**	**1,406**		**40.8%**	**100**		**63.7%**
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))		**58.2%**			**44.5%**			**24.8%**	
COMPLETION RATE (C / PERMISSION)		**58.2%**			**32.6%**			**21.0%**	
COMBINED COMPLETION RATE (C / SAMPLED)		**28.5%**			**16.0%**			**9.5%**	

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.

Table 6-8b. Detailed results of CHIS 2021-2022 data collection, parental permission, and adolescent interviews – AIAN oversample

	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)	32	97.0%		32	97.0%		0	0.0%	
PERMISSION (REFUSAL CONVERSION)	1	3.0%		1	3.0%		0	0.0%	
Total Permission Received	**33**		**50.0%**	**33**		**52.4%**	**0**		**0.0%**
PERMISSION NOT RECEIVED	33		**50.0%**	30		**47.6%**	3		**100.0%**
TOTAL ADOLESCENTS SAMPLED	**66**			**63**			**3**		
TOTAL ADOLESCENT SAMPLE AVAILABLE	**33**			**33**			**0**		
CATEGORY 1 – Completed Interview (C)									
COMPLETED ADOLESCENT INTERVIEW	**6**		**18.2%**	**6**		**18.2%**	**0**		**0.0%**
CATEGORY 2 – Eligible, non-interview									
PERMISSION, BUT NO TEEN INTERVIEW (R)[1]	27	100.0%		27	100.0%		0	0.0%	
BREAKOFF (R)	0	0.0%		0	0.0%		0	0.0%	
Total Eligible, non-interview	**27**		**40.9%**	**27**		**81.8%**	**0**		**0.0%**
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))		**18.2%**			**18.2%**			**0.0%**	
COMPLETION RATE (C / PERMISSION)		**18.2%**			**18.2%**			**0.0%**	
COMBINED COMPLETION RATE (C / SAMPLED)		**9.1%**			**9.5%**			**0.0%**	

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.

Table 6-8c. Detailed results of CHIS 2021-2022 data collection, parental permission, and adolescent interviews – Cedar Sinai oversample

	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)	104	97.2%		95	96.9%		9	100.0%	
PERMISSION (REFUSAL CONVERSION)	3	2.8%		3	3.1%		0	0.0%	
Total Permission Received	**107**		**60.5%**	**98**		**61.3%**	**9**		**52.9%**
PERMISSION NOT RECEIVED	70		**39.5%**	62		**38.8%**	8		**47.1%**
TOTAL ADOLESCENTS SAMPLED	**177**			**160**			**17**		
TOTAL ADOLESCENT SAMPLE AVAILABLE	**107**			**98**			**9**		
CATEGORY 1 – Completed Interview (C)									
COMPLETED ADOLESCENT INTERVIEW	**23**		**21.5%**	**22**		**22.4%**	**1**		**11.1%**
CATEGORY 2 – Eligible, non-interview									
PERMISSION, BUT NO TEEN INTERVIEW (R)[1]	70	83.3%		62	81.6%		8	100.0%	
BREAKOFF (R)	14	16.7%		14	18.4%		0	0.0%	
Total Eligible, non-interview	**84**		**47.5%**	**76**		**77.6%**	**8**		**88.9%**
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))		**21.5%**			**22.4%**			**11.1%**	
COMPLETION RATE (C / PERMISSION)		**21.5%**			**22.4%**			**11.1%**	
COMBINED COMPLETION RATE (C / SAMPLED)		**13.0%**			**13.8%**			**5.9%**	

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.

Table 6-8d. Detailed results of CHIS 2021-2022 data collection, parental permission, and adolescent interviews – MLKCH oversample

	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)	58	92.1%		48	90.6%		10	100.0%	
PERMISSION (REFUSAL CONVERSION)	5	7.9%		5	9.4%		0	0.0%	
Total Permission Received	**63**		**44.7%**	**53**		**42.7%**	**10**		**58.8%**
PERMISSION NOT RECEIVED	78		**55.3%**	71		**57.3%**	7		**41.2%**
TOTAL ADOLESCENTS SAMPLED	**141**			**124**			**17**		
TOTAL ADOLESCENT SAMPLE AVAILABLE	**63**			**53**			**10**		
CATEGORY 1 – Completed Interview (C)									
COMPLETED ADOLESCENT INTERVIEW	**30**		**47.6%**	**28**		**52.8%**	**2**		**20.0%**
CATEGORY 2 – Eligible, non-interview									
PERMISSION, BUT NO TEEN INTERVIEW (R)[1]	30	90.9%		25	100.0%		5	62.5%	
BREAKOFF (R)	3	9.1%		0	0.0%		3	37.5%	
Total Eligible, non-interview	**33**		**23.4%**	**25**		**47.2%**	**8**		**80.0%**
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))		**47.6%**			**52.8%**			**20.0%**	
COMPLETION RATE (C / PERMISSION)		**47.6%**			**52.8%**			**20.0%**	
COMBINED COMPLETION RATE (C / SAMPLED)		**21.3%**			**22.6%**			**11.8%**	

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.

Table 6-8e. Detailed results of CHIS 2021-2022 data collection, parental permission, and adolescent interviews – Santa Clara oversample

	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)	118	87.4%		116	87.2%		2	100.0%	
PERMISSION (REFUSAL CONVERSION)	17	12.6%		17	12.8%		0	0.0%	
Total Permission Received	**135**		**45.2%**	**133**		**45.7%**	**2**		**25.0%**
PERMISSION NOT RECEIVED	164		**54.8%**	158		**54.3%**	6		**75.0%**
TOTAL ADOLESCENTS SAMPLED	**299**			**291**			**8**		
TOTAL ADOLESCENT SAMPLE AVAILABLE	**135**			**133**			**2**		
CATEGORY 1 – Completed Interview (C)									
COMPLETED ADOLESCENT INTERVIEW	**72**		**53.3%**	**72**		**54.1%**	**0**		**0.0%**
CATEGORY 2 – Eligible, non-interview									
PERMISSION, BUT NO TEEN INTERVIEW (R)[1]	62	98.4%		61	100.0%		1	50.0%	
BREAKOFF (R)	1	1.6%		0	0.0%		1	50.0%	
Total Eligible, non-interview	**63**		**21.1%**	**61**		**45.9%**	**2**		**100.0%**
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))		**53.3%**			**54.1%**			**0.0%**	
COMPLETION RATE (C / PERMISSION)		**53.3%**			**54.1%**			**0.0%**	
COMBINED COMPLETION RATE (C / SAMPLED)		**24.1%**			**24.7%**			**0.0%**	

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.

Table 6-8f. Detailed results of CHIS 2021-2022 data collection, parental permission, and adolescent interviews –Prepaid oversample

	TOTAL		
	Number	Within category	of Total
Parental Permission			
INITIAL PERMISSION (ADULT INTERVIEW)	97	98.0%	
PERMISSION (REFUSAL CONVERSION)	2	2.0%	
Total Permission Received	**99**		**36.9%**
PERMISSION NOT RECEIVED	169		**63.1%**
TOTAL ADOLESCENTS SAMPLED	**268**		
TOTAL ADOLESCENT SAMPLE AVAILABLE	**99**		
CATEGORY 1 – Completed Interview (C)			
COMPLETED ADOLESCENT INTERVIEW	**17**		**17.2%**
CATEGORY 2 – Eligible, non-interview			
PERMISSION, BUT NO TEEN INTERVIEW (R)[1]	40	48.8%	
BREAKOFF (R)	42	51.2%	
Total Eligible, non-interview	**82**		**30.6%**
CATEGORY 3 – Unknown Eligibility			
NO CONTACT	-		
Total Unknown Eligibility	**0**		**0.0%**
CATEGORY 4 – Ineligible (I)			
INELIGIBLE ADOLESCENT	-		
Total Ineligible	**0**		**0.0%**
ELIGIBILITY RATE (C / (C+I))		**100.0%**	
COOPERATION RATE ((C+I) / (C+I+R))		**17.2%**	
COMPLETION RATE (C / PERMISSION)		**17.2%**	
COMBINED COMPLETION RATE (C / SAMPLED)		**6.3%**	

Source: UCLA Center for Health Policy Research, 2021-2022 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 2021-2022 by stratum.

Overall, 981 adult interviews from these samples were conducted in Spanish, which was 4.7 percent of all adult interviews. Among, the main CHIS sample, the highest percentage of adult interviews completed in Spanish in the sample was in Imperial County (25.5 percent), the next highest stratum was Kern (6.8 percent).

A total of 1,908 adult extended interviews were conducted in an Asian language. Chinese language represents 41.2 percent of all Asian language interviews. Among, the main CHIS sample, the highest proportions of Asian language adult interviews were in the Santa Clara stratum (9.1 percent), followed by Orange County (8.7 percent).

See Table 7-1 in *CHIS 2021-2022 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	7,193	517	197	162	23	0	8,092	6.4%	4.7%
2	San Diego	4228	165	33	26	22	0	4,474	3.7%	1.8%
3	Orange	2,148	61	62	87	62	0	2,420	2.5%	8.7%
4	Santa Clara	1,412	23	86	26	29	2	1,578	1.5%	9.1%
5	San Bernardino	1,345	74	41	14	4	0	1,478	5.0%	4.0%
6	Riverside	1,566	77	13	9	2	1	1,668	4.6%	1.5%
7	Alameda	1,355	20	72	8	7	1	1,463	1.4%	6.0%
8	Sacramento	1,234	18	21	4	7	0	1,284	1.4%	2.5%
9	Contra Costa	900	18	14	2	1	1	936	1.9%	1.9%
10	Fresno	701	29	3	1	2	0	736	3.9%	0.8%
11	San Francisco	885	14	40	1	5	0	945	1.5%	4.9%
12	Ventura	616	15	3	5	2	1	642	2.3%	1.7%
13	San Mateo	609	5	27	2	1	0	644	0.8%	4.7%
14	Kern	575	43	1	4	0	0	623	6.9%	0.8%
15	San Joaquin	497	22	5	0	2	1	527	4.2%	1.5%
16	Sonoma	474	8	2	0	1	0	485	1.6%	0.6%
17	Stanislaus	456	24	3	1	0	0	484	5.0%	0.8%
18	Santa Barbara	494	18	1	1	0	0	514	3.5%	0.4%
19	Solano	501	9	3	1	0	1	515	1.7%	1.0%
20	Tulare	465	33	0	0	0	0	498	6.6%	0.0%
21	Santa Cruz	492	12	1	0	0	0	505	2.4%	0.2%
22	Marin	540	7	1	1	1	0	550	1.3%	0.5%
23	San Luis Obispo	507	4	1	1	0	0	513	0.8%	0.4%
24	Placer	492	3	1	2	0	0	498	0.6%	0.6%
25	Merced	460	33	2	1	0	0	496	6.7%	0.6%

(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	477	3	1	1	0	0	482	0.6%	0.4%
27	Shasta	472	4	1	0	0	0	477	0.8%	0.2%
28	Yolo	521	10	15	5	0	0	551	1.8%	3.6%
29	El Dorado	488	5	1	2	0	0	496	1.0%	0.6%
30	Imperial	374	130	4	1	0	0	509	25.5%	1.0%
31	Napa	472	15	1	0	1	0	489	3.1%	0.4%
32	Kings	474	33	1	0	1	0	509	6.5%	0.4%
33	Madera	474	35	0	1	1	0	511	6.8%	0.4%
34	Monterey	450	28	4	5	0	0	487	5.7%	1.8%
35	Humboldt	512	2	0	0	0	0	514	0.4%	0.0%
36	Nevada	483	5	0	0	0	0	488	1.0%	0.0%
37	Mendocino	493	8	2	0	1	0	504	1.6%	0.6%
38	Sutter	481	17	0	0	0	0	498	3.4%	0.0%
39	Yuba	475	23	3	1	1	0	503	4.6%	1.0%
40	Lake	493	13	2	1	0	0	509	2.6%	0.6%
41	San Benito	514	23	0	0	0	0	537	4.3%	0.0%
42	Tehama, etc.	384	23	0	1	0	0	408	5.6%	0.2%
43	Del Norte, etc.	399	1	0	0	0	0	400	0.3%	0.0%
44	Tuolumne, etc.	391	3	0	0	0	0	394	0.8%	0.0%
	Sub-Total	38,972	1,633	668	377	176	8	41,833	3.9%	2.9%
	Cedar-Sinai Oversample	620	117	18	72	6	3	836	14.0%	11.8%
	AIAN Oversample	246	0	0	0	0	0	246	0.0%	0.0%
	Prepaid Cell Oversample	605	262	38	8	10	2	925	28.3%	6.3%
	MLK Oversample	330	100	0	4	0	0	434	23.0%	0.9%
	Santa Clara Oversample	1,821	42	61	10	12	1	1,947	2.2%	4.3%

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.

[1] Includes completed adult interviews only.

[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 2021-2022. As expected, the CAWI interviews were considerably shorter in duration than those completed through CATI. The duration of the CAWI interviews averaged roughly 47 minutes, 13 minutes, and 21 minutes for the adult, child, and adolescent questionnaires, respectively. The CATI interviews averaged close to 72 minutes, 19 minutes, and 31 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 2021-2022.

Overall, the adult interviews in other languages took longer than the English ones. 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 2021-2022 extended interview timing data, by questionnaire type for all sample types

		Number of Interviews	Mean	Median	Shortest Time	Longest Time
Screener	CATI	16,717	1.5	1.3	0.0	46.2
	CAWI	61,074	1.6	1.1	0.2	44.6
	Total	77,791[1]	1.6	1.1	0.0	46.2
Adult	CATI	4,641	72.2	69.2	7.9	432.1
	CAWI	41,580	47.2	42.9	4.0	316.5
	Total	46,221	49.7	45.2	4.0	432.1
Child	CATI	544	19.8	18.9	5.2	53.2
	CAWI	7,251	12.8	11.1	2.1	74.9
	Total	7,795	13.3	11.6	2.1	74.9
Adolescent	CATI	168	30.2	29.7	16.7	44.2
	CAWI	2,081	21.1	18.7	5.6	98.0
	Total	2,249	21.8	19.5	5.6	98.0

Source: UCLA Center for Health Policy Research, 2021-2022 California Health Interview Survey.

[1] 4 Screener completes did not have any length information and are not included in this 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 2021-2022 by language and mode of administration[1] for all sample types

	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	16,717	2.1	2.6		61,074	1.1	1.8		77,791	1.2	2.0	
English	12,453	2.0	2.4	1.0	56,159	1.1	1.8	1.0	68,612	1.1	1.9	1.0
Spanish	3,557	2.6	3.1	1.3	3,042	1.9	2.8	1.6	6,599	1.2	3.0	1.6
Chinese[4]	288	3.5	4.0	1.6	1,050	1.3	2.2	1.2	1,338	1.4	2.6	1.4
Korean	183	3.4	4.0	1.7	561	1.5	2.6	1.5	744	1.7	3.0	1.6
Vietnamese	225	3.7	4.3	1.8	233	2.0	3.1	1.8	458	1.9	3.8	2.0
Tagalog	11	3.6	4.8	2.0	29	2.5	2.8	1.6	40	2.3	3.2	1.7
Adult Interview												
All Languages	4,641	69.2	72.2		41,580	42.9	47.2		46,221	45.2	49.7	
English	3,742	66.7	69.3	1.0	38,851	42.3	46.3	1.0	42,593	44.2	48.3	1.0
Spanish	645	83.3	85.5	1.2	1,509	61.5	66.0	1.4	2,154	70.0	71.8	1.5
Chinese[4]	112	85.5	88.4	1.3	673	45.5	51.9	1.1	785	49.8	57.1	1.2
Korean	61	74.6	79.3	1.1	410	46.1	51.6	1.1	471	50.7	55.2	1.1
Vietnamese	78	68.5	72.6	1.0	126	66.0	70.4	1.5	204	66.2	71.2	1.5
Tagalog	3	85.3	90.7	1.3	11	75.5	74.4	1.6	14	82.5	77.9	1.6

(continued)

Table 6-12. Median and Mean administration times (in minutes), relative times, and sample sizes for CHIS 2021-2022 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	544	18.9	19.8		7,251	11.1	12.8		7,795	11.6	13.3	
English	362	17.6	18.1	1.0	6,418	10.7	12.2	1.0	6,780	11.0	12.5	1.0
Spanish	157	22.3	22.9	1.3	592	17.4	19.1	1.6	749	18.4	19.9	1.6
Chinese[4]	20	22.1	24.4	1.3	164	11.9	13.8	1.1	184	13.0	14.9	1.2
Korean	1	19.5	19.5	1.1	53	9.7	10.9	0.9	54	9.9	11.1	0.9
Vietnamese	3	24.2	24.2	1.3	21	14.7	15.9	1.3	24	15.9	16.9	1.3
Tagalog	1	17.6	17.6	1.0	3	8.2	9.1	0.7	4	10.2	11.2	0.9
Adolescent Interview												
All Languages	168	29.7	30.2		2,081	18.7	21.1		2,249	19.5	21.8	
English	162	29.6	30.1	1.0	2,033	18.7	20.9	1.0	2,195	19.4	21.6	1.0
Spanish	6	33.5	31.4	1.0	37	25.3	30.9	1.5	43	28.5	31.0	1.4
Chinese[4]					9	17.4	18.6	0.9	9	17.4	18.6	0.9
Korean					2	16.4	16.4	0.8	2	16.4	16.4	0.8
Vietnamese												
Tagalog												

Source: UCLA Center for Health Policy Research, 2021-2022 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]4 screener completes did not have any length information and are not included in this 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 service 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

Additional data quality monitoring specific to web data collection were employed. Monitoring included security measures to avoid duplicate and fraudulent web responses, as well as assessments of data quality such as straight-lining, speeding and the distribution of visits amongst completed adult web

interviews. 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.

7.7.1 Security Measures

Efforts to avoid and identify duplicate responses entail a multi-step approach. Potential respondents access the web survey with a personalized secure access code provided in mailed materials. Once eligibility is confirmed, the respondent creates a personal password (PIN) to facilitate their ability to suspend the survey and return later. Respondents are also provided the opportunity to set responses to security questions to facilitate PIN recall. Upon creation of the PIN and security questions, the survey moves into the substantive questions. To re-enter the web survey both the secure access code and PIN are required. The majority of adult interviews from the web survey (78%) are finished within a single visit, with 22% being completed in two or more visits.

CHIS web survey deployed a service (RelevantID®) that identifies the exact device taking the survey in order to detect duplicates. RelevantID® flags cases which access the survey multiple times from the same device. Since CHIS respondents may suspend the survey and return at a later time on either web or CATI, examination was limited to cases who completed the survey within a single online visit. One percent of these single visit web cases were flagged as potential duplicates. When individual domains were reviewed from these duplicates, the majority were identified as businesses, organizations, or government entities. No cases were removed as duplicates.

To identify potential fraud, RelevantID® records a host of device and browser characteristics (see Appendix B for details). These measures include the geo-location of the respondent computer, if the respondent computer is communicating via an open proxy, or whether the computer is identified as a bot. Less than one percent of cases were identified as potentially fraudulent, defined as having a composite fraud score of 75 or greater. Each of these potentially fraudulent cases were flagged due to using an open or anonymous proxy (including VPNs). No cases were removed from the final data due to potential fraud.

7.7.2 Data Quality Measures

A variety of data quality assessments are employed for CHIS, including logic checks and straight lining measurement. Within the survey programming data and logic checks are employed. Some key questions in which respondents are asked to type in a numeric response (e.g., weight and income) receive additional confirmation. For annual household income all respondents are asked to confirm they entered

the correct amount. For others such as height and weight, responses outside a designated range are re-confirmed.

Additional variables are created to review data quality, such as straight lining on similarly constructed questions that appeared in succession, not answering questions, and speeding. Straight-line responses occur when respondents provide answers to a battery of questions (often in a form of grid questions) in the same place on a categorical scale. To measure straight-line responses, two series of questions with similar construction were identified (AJ29-AJ34 and AM19-AM21), AJ29-AJ34 asked six questions assessing the frequency of negative mental health emotions with a five-category scale (from "All of the time" to "None of the time"). Twenty-one percent of CAWI completes provided the same response across all items, while 27 percent of adult CATI completes did so. AM19-AM21, a second series of three questions regarding the respondent's neighborhood with a four-category agree or disagree scale, resulted in fewer identical responses across all questions– 6.3 percent of CAWI completes and 5.6 percent of CATI completes.

Among those who started and ended the adult portion of the survey on the web, less than one percent did not provide a response for 35 percent or more of the adult survey questions they were asked. No cases were removed due to higher percentage of skipped questions.

The mean length of the adult interview for those that completed via web in a single session was 45.6 minutes. The shortest survey taken to the last screen in a single session was 4 minutes, the longest was open for 4 hours 20 minutes. Beginning in 2022, surveys with a total length of less than 4 seconds per screen they viewed were removed due to short interview length. After review and discussion of these cases, none were removed due to a short interview length. For 2022, 178 respondents who had completed the screener were removed due to short interviews.

8. LIMITATIONS FOR DATA COLLECTION METHODS

While efforts were made to test each question for internal and external validity, as with any survey, there is the possibility of unmeasured measurement error due to comprehension, order effects, and mode effect.

9. REFERENCES

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10. 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

Postcard

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

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, we also selected one <female/male> adolescent, age <<age>> to be interviewed. 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

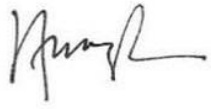
Your secure access code is: **<<SAC>>**

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