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CHIS 2017 Methodology Report Series

Report 2

Data Collection Methods

CALIFORNIA HEALTH INTERVIEW SURVEY

CHIS 2017 METHODOLOGY SERIES

REPORT 2

DATA COLLECTION METHODS

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www.chis.ucla.edu

This report provides analysts with information about the sampling methods used for CHIS 2017, including both the household and person (within household) sampling. This report also provides a discussion on achieved sample size and how it compares to the planned sample size.

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The California Health Interview Survey is a collaborative project of the UCLA Center for Health Policy Research, the California Department of Public Health, and the Department of Health Care Services. Funding for CHIS 2017 came from multiple sources: the California Department of Health Care Services, the California Department of Health Care Services (Mental Health Services Division), the California Department of Public Health, The California Endowment, the California Health Benefit Exchange, the California Health Care Foundation, the California Wellness Foundation, First 5 California, Kaiser Permanente, San Diego County Health and Human Services Agency, and Imperial County Public Health Department.

PREFACE

Data Collection Methods is the second in a series of methodological reports describing the 2017 California Health Interview Survey (CHIS 2017). The other reports are listed below.

CHIS is a collaborative project of the University of California, Los Angeles (UCLA) Center for Health Policy Research, the California Department of Public Health, and the Department of Health Care Services. SSRS was responsible for data collection and the preparation of five methodological reports from the 2017 survey. The survey examines public health and health care access issues in California. The telephone survey is the largest state health survey ever undertaken in the United States.

Methodological Report Series for CHIS 2017

The methodological reports for CHIS 2017 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 how data were collected for CHIS 2017, a random digit dial (RDD) telephone survey of landline and cellular telephone numbers in California, supplemented with list samples to augment the yield for certain ethnic groups and an address based sample (ABS) to increase the yield in one county. All data were collected using a computer-assisted telephone interviewing (CATI) system with the exception of a mailed household information sheet to obtain telephone numbers for the ABS sample.

For further methodological details not covered in this report, refer to the other methodological reports in the series at http://healthpolicy.ucla.edu/chis/design/Pages/methodology.aspx. General information on CHIS data can be found on the California Health Interview Survey Web site at http://www.chis.ucla.edu or by contacting CHIS at CHIS@ucla.edu.

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1. CHIS 2017 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 2017.

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

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

The CHIS is a population-based 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 the California Department of Public Health and the California Department of Health Care Services. CHIS collects extensive information for all age groups on health status, health conditions, health-related behaviors, health insurance coverage, access to health care services, and other health and health-related issues.

The sample is designed and optimized to meet two objectives:

1) Provide estimates for large- and medium-sized counties in the state, and for groups of the smallest counties (based on population size), and
2) Provide statewide estimates for California's overall population, its major racial and ethnic groups, as well as several racial and ethnic subgroups.

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

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

1.2 Switch to a Continuous Survey

From the first CHIS cycle in 2001 through 2009, CHIS data were collected during a 7 to 9 month period every other year. Beginning in 2011, CHIS data have been collected continually over a 2-year cycle. This change was driven by several factors including the ability to track and release information about health in California on a more frequent and timely basis and to eliminate potential seasonality in the biennial data.

CHIS 2017 data were collected between June and December, 2017. As in previous CHIS cycles, weights are included with the data files and are based on the State of California's Department of Finance population estimates and projections, adjusted to remove the population living in group quarters (such as nursing homes, prisons, etc.) and thus not eligible to participate in CHIS. When the weights are applied to the data, the results represent California's residential population during that year for the age group corresponding to the data file in use (adult, adolescent, or child). In CHIS 2017, data users will be able to produce single-year estimates using the weights provided.

See what's new in the 2017 CHIS sampling and data collection here:
http://www.chis.ucla.edu/chis/design/Documents/whats-new-chis-2017.pdf

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

Additional documentation on constructing the CHIS sampling weights is available in the *CHIS 2017 Methodology Series: Report 5—Weighting and Variance Estimation* posted at http://www.chis.ucla.edu/chis/design/Pages/methodology.aspx. Other helpful information for understanding the CHIS sample design and data collection processing can be found in the four other methodology reports for each CHIS cycle year.

1.3 Sample Design Objectives

The CHIS 2017 sample was designed to meet the two sampling objectives discussed above: (1) provide estimates for adults in most counties and in groups of counties with small populations; and (2) provide estimates for California's overall population, major racial and ethnic groups, and for several smaller racial and ethnic subgroups.

To achieve these objectives, CHIS employed a dual-frame, multi-stage sample design. The random-digit-dial (RDD) sample included telephone numbers assigned to both landline and cellular service. The RDD sample was designed to achieve the required number of completed adult interviews by using approximately 50% landline and 50% cellular phone numbers. For the RDD 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 period—to provide health estimates for adults at the local level. Asian surname sample list frames added 38 Korean, and 74 Vietnamese adult interviews based on self-identified ethnicity for the 2017 survey year.[1] Additional samples from both the landline and cell phone frames produced 635 interviews in 2017 within San Diego County. Furthermore, an address-based sample from the USPS Delivery Sequence File produced 332 landline or cell phone interviews in 2017 within the northern part of Imperial County.

Within each geographic stratum, residential telephone numbers were selected, and within each household, one adult (age 18 and over) respondent was randomly selected. In those households with adolescents (ages 12-17) and/or children (under age 12), one adolescent and one child of the randomly selected parent/guardian were randomly selected; the adolescent was interviewed directly, and the adult sufficiently knowledgeable about the child's health completed the child interview.

[1] For the 2017, all sample frames produced totals of 113 Korean, and 148 Vietnamese adult interviews.

Table 1-1. California county and county group strata used in the CHIS 2017 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. Plumas, Sierra, Siskiyou,
4. Santa Clara	24. Placer	Lassen, Modoc, Trinity, Del Norte
5. San Bernardino	25. Merced	44. Mariposa, Mono, Tuolumne,
6. Riverside	26. Butte	Alpine, Amador, Calaveras, Inyo

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

The CHIS RDD sample is of sufficient size to accomplish the second objective (produce estimates for the state's major racial/ethnic groups, as well as many ethnic subgroups). However, given the smaller sample sizes of one-year data files, two or more pooled cycles years of CHIS data are generally required to produce statistically stable estimates for small population groups such as racial/ethnic subgroups, children, teens, etc. To increase the precision of estimates for Koreans and Vietnamese, areas with relatively high concentrations of these groups were sampled at higher rates. These geographically targeted oversamples were supplemented by telephone numbers associated with group-specific surnames, drawn from listed telephone directories to increase the sample size further for Koreans and Vietnamese.

To help compensate for the increasing number of households without landline telephone service, a separate RDD sample was drawn of telephone numbers assigned to cellular service. In CHIS 2017, the goal was to complete approximately 50% of all RDD interviews statewide with adults contacted via cell

phone. Because the geographic information available for cell phone numbers is limited and not as precise as that for landlines, cell phone numbers were assigned to the same 44 geographic strata (i.e., 41 strata defined by a single county and 3 strata created by multiple counties) using a classification associated with the rate center linked to the account activation. The cell phone stratification closely resembles that of the landline sample and has the same stratum names, though the cell phone strata represent slightly different geographic areas than the landline strata. The adult owner of the sampled cell phone number was automatically selected for CHIS. Cell numbers used exclusively by children under 18 were considered ineligible. A total of 448 teen interviews and 1,600 child interviews were completed in CHIS 2017 with approximately 51% of teen interviews and 66% of child interviews coming from the cell phone sample.

The cell phone sampling method used in CHIS has evolved significantly since its first implementation in 2007 when only cell numbers belonging to adults in cell-only households were eligible for sampling adults. These changes reflect the rapidly changing nature of cell phone ownership and use in the US.[2] There have been three significant changes to the cell phone sample since 2009. First, all cell phone sample numbers used for non-business purposes by adults living in California were eligible for the extended interview. Thus, adults in households with landlines who had their own cell phones or shared one with another adult household member could have been selected through either the cell or landline sample. The second change was the inclusion of child and adolescent extended interviews. The third, enacted in CHIS 2015-2016 was to increase the fraction of the sample comprised of cell phones from 20% to 50% of completed interviews. In 2017, we additionally sampled out-of-area cell phone numbers. These are cell phone numbers with exchanges outside of California that can be matched to an address that is within California, indicating that the owner of the cell phone resides in California but purchased a cell phone in another state.

The cell phone sample design and targets by stratum of the cell phone sample have also changed throughout the cycles of the survey. In CHIS 2007, a non-overlapping dual-frame design was implemented where cell phone only users were screened and interviewed in the cell phone sample. Beginning in 2009, an overlapping dual-frame design has been implemented. In this design, dual phone users (e.g., those with both cell and landline service) can be selected and interviewed from either the landline or cellphone samples.

The number of strata has also evolved as more information about cell numbers has become available. In CHIS 2007, the cell phone frame was stratified into seven geographic sampling strata

[2] https://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201806.pdf

created using telephone area codes. In CHIS 2009 and 2011-2012, the number of cell phone strata was increased to 28. These strata were created using both area codes and the geographic information assigned to the number. Beginning in CHIS 2011, with the availability of more detailed geographic information, the number of strata was increased to 44 geographic areas that correspond to single and grouped counties similar to the landline strata. The use of 44 geographic strata continued in CHIS 2017.

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 dialects), Vietnamese, Korean, and Tagalog. Tagalog interviews were conducted for part of the CHIS 2013-2014 cycle, but 2015-2016 were the first cycle years that Tagalog interviewers were conducted from the beginning of data collection. 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 designed the methodology and collected data for CHIS 2017, 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, SSRS staff interviewed one randomly selected adult in each sampled household, and 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. Children and adolescents were generally sampled at the end of the adult interview. If the screener respondent was someone other than the sampled adult, children and adolescents could be sampled as part of the screening interview, and the extended child (and adolescent) interviews could be completed before the adult interview. This “child-first” procedure was first used in CHIS 2005 and has been continued in subsequent CHIS cycles because it substantially increases the yield of child interviews. While numerous subsequent attempts were made to complete the adult interview for child-first cases, the final data contain completed child and adolescent interviews in households for which an adult interview was not completed. Table 1-2 shows the number of completed adult, child, and adolescent interviews in CHIS 2017 by the type of sample (landline RDD, surname list, cell RDD, and ABS). Note that these figures were accurate as of data collection completion for 2017 and may differ slightly from numbers in the data files due to data cleaning and edits. Sample sizes to compare against data files you are using are found online at http://www.chis.ucla.edu/chis/design/Pages/sample.aspx.

Table 1-2. Number of completed CHIS 2017 interviews by type of sample and instrument

Type of sample[1]	Adult[2]	Child	Adolescent
Total all samples	21,153	1,600	448
Landline RDD[3]	9,831	501	206
Cell RDD	10,722	1,037	219
Vietnamese surname list landline	47	6	2
Vietnamese surname list cell phone	44	4	3
Korean surname list landline	133	9	3
Korean surname list cell phone	19	1	
Both Korean and Vietnamese Landline	18		
Imperial County ABS Oversample	339	42	15

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

[1] Completed interviews listed for each sample type refer to the sampling frame from which the phone number was drawn. Interviews could be conducted using numbers sampled from a frame with individuals who did not meet the target criteria for the frame but were otherwise eligible residents of California. For example, only 69 of the 120 adult interviews completed from the Vietnamese surname list involved respondents who indicated being having Vietnamese ethnicity.

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

[3] Breakdown of completes by frame deviates slightly from original sample numbers due to numbers changing frames following post-sampling database processing.

Interviews in all languages were administered using SSRS's computer-assisted telephone interviewing (CATI) system. The average adult interview took about 43 minutes to complete. The average child and adolescent interviews took about 19 minutes and 24 minutes, respectively. For "child-first" interviews, additional household information asked as part of the child interview averaged about 14 minutes. Interviews in non-English languages typically took longer to complete with an average length of about 53 minutes for the adult interview, 31 minutes for the teen, and 21 minutes for the child. More than seven 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 seven percent of all adolescent interviews.

Table 1-3 shows the major topic areas for each of the three survey instruments (adult, child, and adolescent.)

Table 1-3. CHIS 2017 survey topic areas by instrument

Health status	**Adult**	**Teen**	**Child**
General health status	✓	✓	✓
Days missed from work or school due to health problems	✓	✓	✓
Health conditions	**Adult**	**Teen**	**Child**
Asthma	✓	✓	✓
Diabetes, gestational diabetes, pre-diabetes/borderline diabetes	✓		
Heart disease, high blood pressure	✓		
Physical disability	✓		
Physical, behavioral, and/or mental conditions			✓
Developmental assessment, referral to a specialist by a doctor			✓
Mental health	**Adult**	**Teen**	**Child**
Mental health status	✓	✓	
Perceived need, access and utilization of mental health services	✓	✓	
Functional impairment, stigma, three-item loneliness scale	✓		
Suicide ideation and attempts	✓	✓	
Health behaviors	**Adult**	**Teen**	**Child**
Dietary and water intake, breastfeeding (younger than 3 years)	✓	✓	✓
Physical activity and exercise		✓	✓
Commute from school to home		✓	✓
Walking for transportation and leisure	✓		
Marijuana	✓	✓	
Opioid use	✓		
Alcohol, cigarette use, E-cigarette	✓	✓	
Sexual behaviors	✓	✓	
HIV testing, HIV prevention medication	✓	✓	
Sleep and technology		✓	
Sedentary time		✓	✓
Contraceptive use	✓	✓	
Women's health	**Adult**	**Teen**	**Child**
Pregnancy status, postpartum care	✓		
Dental health	**Adult**	**Teen**	**Child**
Last dental visit, main reason haven't visited dentist	✓	✓	✓
Current dental insurance coverage	✓		✓
Condition of teeth	✓		

(continued)

Table 1-3. CHIS 2017 survey topic areas by instrument (continued)

Neighborhood and housing	**Adult**	**Teen**	**Child**
Safety, social cohesion	✓	✓	✓
Homeownership, length of time at current residence	✓		
Park use, park and neighborhood safety		✓	✓
Civic engagement	✓	✓	
Access to and use of health care	**Adult**	**Teen**	**Child**
Usual source of care, visits to medical doctor	✓	✓	✓
Emergency room visits	✓	✓	✓
Delays in getting care (prescriptions and medical care)	✓	✓	✓
Communication problems with doctor	✓		✓
Discrimination	✓		
Timely appointment	✓		✓
Access to specialist and general doctors	✓		
Tele-medical care	✓		
Voter engagement	**Adult**	**Teen**	**Child**
Voter engagement	✓		
Food environment	**Adult**	**Teen**	**Child**
Access to fresh and affordable foods	✓		
Availability of food in household over past 12 months	✓		
Hunger	✓		
Health insurance	**Adult**	**Teen**	**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	✓		
Public program eligibility	**Adult**	**Teen**	**Child**
Household poverty level	✓		
Program participation (CalWORKs, Food Stamps, SSI, SSDI, WIC, TANF)	✓	✓	✓
Assets, child support, Social security/pension	✓		
Medi-Cal eligibility, Medi-Cal renewal	✓		
Reason for Medi-Cal non-participation	✓		

(continued)

Table 1-3. CHIS 2017 survey topic areas by instrument (continued)

Bullying	**Adult**	**Teen**	**Child**
Bullying, school safety		✓	
Parental involvement/adult supervision	**Adult**	**Teen**	**Child**
Parental involvement			✓
Parental support, teach support		✓	
Child care and school	**Adult**	**Teen**	**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			✓
School instability, school programs and organizational involvement		✓	
Employment	**Adult**	**Teen**	**Child**
Employment status, spouse's employment status	✓		
Hours worked at all jobs	✓		
Industry and occupation, firm size	✓		
Income	**Adult**	**Teen**	**Child**
Respondent's and spouse's earnings last month before taxes	✓		
Household income, number of persons supported by household income	✓		
Respondent characteristics	**Adult**	**Teen**	**Child**
Race and ethnicity, age, gender, height, weight	✓	✓	✓
Veteran status	✓		
Marital status, registered domestic partner status (same-sex couples)	✓		
Sexual orientation, gender identity	✓		
Gender expression		✓	
Living with parents	✓		
Education, English language proficiency	✓		
Citizenship, immigration status, country of birth, length of time in U.S., languages spoken at home	✓	✓	✓

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

1.5 Response Rates

The overall response rates for CHIS 2017 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 2017, the landline/list sample household response rate was 9.3 percent (the product of the screener response rate of 13.2 percent and the extended interview response rate at the household level of 70.3 percent). The cell sample household response rate was 6.5 percent, incorporating a screener response rate of 10.0 percent household-level extended interview response rate of 65.2 percent. CHIS uses AAPOR response rate RR4 (see more detailed in *CHIS 2017 Methodology Series: Report 4 – Response Rates*).

Within the landline and cell phone sampling frames for 2017, the extended interview response rate for the landline/list sample varied across the adult (61.0 percent), child (63.3 percent) and adolescent (26.6 percent) interviews. The adolescent rate includes the process of obtaining permission from a parent or guardian.

The adult interview response rate for the cell sample was 66.6 percent, the child rate was 63.9 percent, and the adolescent rate was 20.3 percent in 2017 (see Table 1-4a). 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 each survey year (see Table 1-4b). As in previous years, household and person level response rates vary by sampling stratum. CHIS response rates are similar to, and sometimes higher than, other comparable surveys that interview by telephone.

Table 1-4a. CHIS response rates - Conditional

Type of Sample	Screener	Household	Adult (given screened)	Child (given screened & eligibility)	Adolescent (given screened & permission)
Overall	11.0%	66.8%	63.0%	63.7%	23.4%
Landline RDD/List	13.2%	70.3%	61.0%	63.3%	26.6%
Cell RDD/List	10.0%	65.2%	66.6%	63.9%	20.3%

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

Table 1-4b. CHIS response rates – Unconditional

Type of Sample	Screener	Household	Adult (given screened)	Child (given screened & eligibility	Adolescent (given screened & permission)
Overall	11.0%	7.1%	6.7%	6.7%	2.4%
Landline RDD/List	13.2%	9.3%	8.1%	8.4%	3.5%
Cell RDD/List	10.0%	6.5%	6.6%	6.4%	2.0%

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey

To maximize the response rate, especially at the screener stage, an advance letter in six languages was mailed to all landline sampled telephone numbers for which an address could be obtained from reverse directory services. An advance letter was mailed for 36.5 percent of the landline RDD sample telephone numbers not identified by the sample vendor as business numbers or not identified by SSRS's dialer software as nonworking numbers, and for 100 percent of surname list sample numbers. Combining these two frames, advance letters were sent to 36.9 percent of all fielded landline telephone numbers. For cell sample, an advance letter was mailed for 38.5 percent of the RDD sample telephone numbers not identified by the sample vendor as business numbers or not identified by SSRS's dialer software as nonworking numbers, and for 100 percent of surname list sample numbers. Combining these two frames, advance letters were sent to 40.7 percent of all fielded cell telephone numbers. As in all CHIS cycles since CHIS 2005, a $2 bill was included with the CHIS 2017 advance letter to encourage cooperation. Unlike previous cycles, additional incentives were not offered to cell phone and nonresponse follow up (NRFU) respondents.

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 2017, either a spouse/partner or adult child completed a proxy interview for 3 adults. A reduced questionnaire, with questions identified as appropriate for a proxy respondent, was administered.

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

1.6 Weighting the Sample

To produce population estimates from CHIS data, weights were applied to the sample data to compensate for the probability of selection and a variety of other factors, some directly resulting from the design and administration of the survey. The sample was weighted to represent the noninstitutionalized population for each sampling stratum and statewide. The weighting procedures used for CHIS 2017 accomplish the following objectives:

- Compensate for differential probabilities of selection for phone numbers (households) and persons within household;
- Reduce biases occurring because nonrespondents may have different characteristics than respondents;
- Adjust, to the extent possible, for undercoverage in the sampling frames 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 telephone number) and a variety of 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 2017 were created primarily from the California Department of Finance's (DOF) 2017 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 Region in San Diego County), and education. One limitation of using Department of Finance (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 Department of Finance control totals prior to calibration.

The DOF control totals used to create the CHIS 2017 weights are based on 2010 Census counts, as were those used for the 2015-2016 cycle. Please pay close attention when comparing estimates using CHIS 2017 data with estimates using data from CHIS cycles before 2010. The most accurate California population figures are available when the U.S. Census Bureau conducts the decennial census. For periods between each census, population-based surveys like CHIS must use population projections based on the decennial count. For example, population control totals for CHIS 2009 were based on 2009 DOF estimates and projections, which were based on Census 2000 counts with adjustments for demographic changes within the state between 2000 and 2009. These estimates become less accurate and more dependent on the models underlying the adjustments over time. Using the most recent Census population count information to create control totals for weighting produces the most statistically accurate population estimates for the current cycle, but it may produce unexpected increases or decreases in some survey estimates when comparing survey cycles that use 2000 Census-based information and 2010 Census-based information.

1.7 Imputation Methods

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

Three different imputation procedures were used by SSRS to fill in missing responses for items essential for weighting the data. The first imputation technique was a completely random selection from the observed distribution of respondents. This method was used only for a few variables when the percentage of the items missing was very small. The second technique was hot deck imputation. The hot deck approach is one of the most commonly used methods for assigning values for missing responses. Using a hot deck, a value reported by a respondent for a specific item was assigned or donated to a "similar" person who did not respond to that item. The characteristics defining "similar" vary for different variables. To carry out hot-deck imputation, the respondents who answered a survey item formed a pool of donors, while the item nonrespondents 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, SPA, HSR, 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 2017 were low, with most variables missing valid responses for less than 1% of the sample.

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 and region of California were imputed by SSRS. UCLA-CHPR began their imputation process by imputing household income and educational attainment, so that these characteristics are 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 2017 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 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. These functions were programmed into the CATI instrument and are described in this chapter.

As described in Chapter 1, five distinct sampling frames were used for CHIS 2017. The landline RDD (referred to as "landline") and cellular RDD (referred to as "cell") were part of CHIS cycles since 2009. CHIS 2017 also included a list sample to increase the number of respondents of Korean and Vietnamese descent. Finally, an address-based sample (ABS) was used to increase the yield of residents of Northern Imperial County. Administrative functions varied slightly across samples, but the content of the extended interview questionnaires was virtually identical for each sample.

2.1 Initial Screening Interview for the Landline and List Samples

The CHIS 2017 sample was composed of telephone numbers selected as described in *CHIS 2017 Methodology Series: Report 1 – Sample Design*. On first contact with a sampled landline 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 a residence; and
- asked how many persons 18 or older lived in the household, and selected one for the extended interview.

These basic elements were scripted into the initial screening interview for the landline sample. As in other CHIS cycles since 2003, the initial screener usually did not include an enumeration of adults in the household. Rather, the sample selection algorithm described by Rizzo et al. (2004) was based on the number of adults reported as follows:

- If one adult in the household, that adult was selected;
- If two adults in the household, either the screener respondent or the other adult was randomly selected with probability equal to 0.5 for each; or

- If three or more adults in the household, the screener respondent was randomly selected with probability equal to one over the number of adults.

The following elements were included in the initial landline screener to establish the household roster and develop survey weights:

- Number of children under 12 years of age living in the household;[3] and
- Number of adolescents between 12 and 17 years of age living in the household[4]

If an adolescent was also sampled in the screener, an adolescent interview could be completed before the adult interview if the screener respondent could give permission and the screener respondent was both the spouse of the selected respondent and a parent or guardian of the adolescent.

Starting with CHIS 2005, the landline/list screening interview included enumeration and sampling of children and adolescents once an adult was sampled for the extended interview 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.

This change was implemented to increase the number of completed child interviews. Once a child was selected, the child interview could be completed before the adult interview if the sufficiently knowledgeable adult (SKA) was not the sampled adult. This "child-first" protocol is described further in Section 2.4. If the above conditions were not met, children and adolescents were enumerated as part of the adult extended interview as in CHIS cycles before 2005.

2.2 Screening Interview for the 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 owner of the sampled phone number was selected with certainty for the adult interview if he/she was 18 years of age or older and was a

[3] See *CHIS 2017 Methodology Series: Report 5 – Weighting and Variance Estimation*, Sections 5.3.
[4] See *CHIS 2017 Methodology Series: Report 5 – Weighting and Variance Estimation*, Sections 6.2.

California resident. The following elements were also included in the cellphone screener to establish the household roster and develop survey weights:

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

2.3 Screening Interview for the Northern Imperial County ABS

The Northern Imperial County ABS was composed of addresses rather than telephone numbers. MSG, the sample vendor, matched telephone numbers to many of the sampled addresses. There were three kinds of screening interviews for this sample: a brief mail questionnaire whose primary purpose was to obtain a telephone number for follow-up; a visit from a County Department of Health representative whose primary purpose was to obtain a telephone number for follow-up; and a CATI screener essentially the same as that used for the RDD samples. For more details, see Section 6.3 in this report.

2.4 Overall Structure of CHIS 2017 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 CATI respondents, including:

- the screener respondent,
- a sampled adult who answered questions in the adult interview,
- an adult who could give permission for the adolescent interview (e.g., "permission-giving adult"),
- a sampled adolescent who answered for themselves, and
- an adult who knew the most about the child's health (e.g., "sufficiently knowledgeable adult" or SKA) who was the respondent for the child extended interview.

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.

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 CATI tools for navigating through the administrative and questionnaire screens. The default sequence of the questionnaire and navigation sections is presented in Figure 2-1. A basic principle of the 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). If there are remaining interviews that couldn't be completed by that adult, the interviewer selects the appropriate individual (e.g., the sampled adult, the SKA for the Child Questionnaire or permission-giving adult for the adolescent permission).

As described in Section 2.1, CHIS 2017 allowed sampling of children and adolescents as part of the screening interview for the landline, surname, and ABS samples under certain circumstances. If the screener respondent was the sampled adult's spouse and was also determined to be the SKA, the child interview could be completed immediately or at another time before the adult interview. These cases are referred to as "child-first" cases. The adolescent interview could also be completed before the adult interview in child-first cases.

For cases other than those meeting the child-first criteria, the screening interview resumed in the middle of Section G of the Adult Extended Questionnaire, with the following items:

- Identification of adult respondent's spouse 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 is the parent or legal guardian.

This information was used by the CATI 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 completed first. Other basic principles of the CATI system flow, once the adult interview is completed, included:

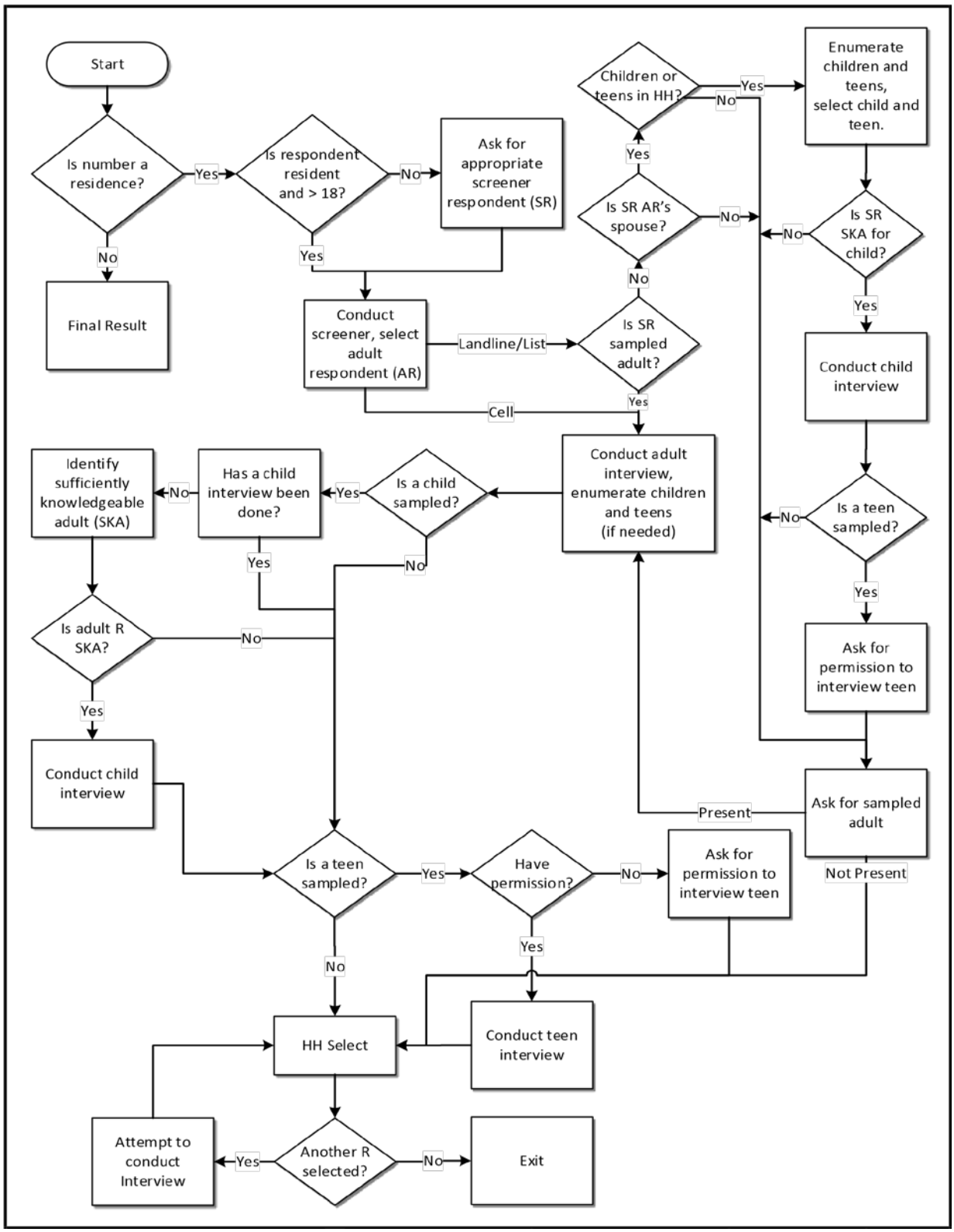
- Attempting to complete as many components as possible with the current respondent before asking for someone else; and
- Attempting the child interview before asking permission for the adolescent interview.

After a cell phone sample adult interview was completed, or after a landline or surname list sample adult interview was completed for non-child-first cases, if an adolescent and/or child was selected the sampled adult was asked:

- To identify the SKA in the household to serve as respondent for the Child Extended Questionnaire; and
- To give permission for the selected adolescent to be interviewed.

Figure 2-1 shows the interview flow for landline/surname list and cell samples.

Figure 2-1. CHIS 2017 interview flow for landline/surname and cell samples



Once all possible components were attempted with the current respondent, the CATI program displayed a master navigation screen called HHSELECT. A sample HHSELECT screen is presented as 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 after each component was completed, or attempted but not completed. It also appeared when an interviewer first entered a case started by another interviewer.

Exhibit 2-1. CHIS 2017 HHSELECT CATI screen

Top of Form

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

Bottom of Form

3. EXTENDED INTERVIEWS

3.1 Questionnaire Development Process

CHIS employs complex 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 administration time to 35 min for the adult questionnaire, 20 min for the adolescent questionnaire, and 15 minutes for the child questionnaire.

In early 2017, UCLA provided SSRS with revisions to the existing questionnaire. SSRS reviewed revisions and provided feedback on the new questions. These new sections of the instrument were then prepared for pretesting.

Several changes took place between the 2015-2016 survey administration and the 2017 survey. In the adult extended survey, 2017 saw the addition of questions about asthma and allergy symptoms, exercise and dietary intake, marijuana and opioid use, HIV-related questions about pre-exposure prophylaxis or PrEP, HIV testing, mammography, post-partum visits, questions related to insurance coverage and medical debt, health savings accounts, care coordination and delays in health care, family planning, Medi-Cal renewal, WIC participation and voter engagement.

Deleted questions included those covering some aspects of diabetes, fast food consumption, cigarette use, disabilities, HIV/AIDS, mammography, the AR's spouse or partner, high deductible health plans, patient-centered care, internet use, family planning, the Momose's Sekentei 12-item scale, a poverty level test, civic engagement, and the California Endowment Building Healthy Communities program.

In the child instrument, questions were added about allergy symptoms for the Imperial County sample only. For the overall sample, new question topics included the child's medication needs, needs for special therapy, dental health, emergency room and urgent care, and the First 5 California Kit for New Parents. Deletions included questions about duration of health insurance coverage, bottle feeding, fast food consumption, the child's school commute, patient-centered health care, flu shot administration, internet use, child care and social cohesion.

Imperial Country allergy symptom questions were also added to the adolescent instrument. For the total sample, the 2017 adolescent instrument has new questions on social cohesion, sleep and

technology, marijuana use, family planning, health care coordination, dental health, PrEP use, and HIV testing. Questions regarding the adolescent's food environment, the commute to school, physical activity, recall of provider advice, health care coordination, and civic engagement and resiliency were deleted.

3.2 Questionnaire Content

The 2017 adult extended questionnaire was divided into 15 sections:

A. Demographics, Part I – Age, gender, race, ethnicity, marital status.

B. Health Conditions – General health, asthma, diabetes, pre-diabetes/borderline diabetes, gestational diabetes, hypertension, heart disease.

C. Health Behaviors – Walking for transportation and leisure, dietary intake, access to fresh and affordable foods, cigarette and alcohol use/abuse.

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

E. Women's Health – Pregnancy status.

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

G. Demographics, Part II – Self and parent's country of birth, languages spoken at home, additional language use, English proficiency, citizenship and immigration, household composition, paid child care, 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 birth, citizenship and immigration.

J. Health Care Utilization and Access – Visits to medical doctor, personal doctor, patientcentered care, timely appointments, tele-medical care, care coordination, communication problems with doctor, change of usual source of care, delays in care, internet use, family planning, dental health.

DM. Discrimination

K. Employment, Income, Poverty Status, Food Security – Hours worked, income last month, household annual income, number of persons supported, poverty level test, 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.

M. Housing and Social Cohesion – Type of housing and tenure, social cohesion and safety, civic engagement, the California Endowment: Building Healthy Communities.

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

S. Suicide Ideation – History of suicide attempts, thoughts of suicide.

N. Final Demographics – County of residence, address, use of cell phone, willingness to participate in follow-up study.

The 2017 child extended questionnaire was comprised of nine sections:

A. Demographics and Health Status – Gender, age, height and weight, breastfeeding, school attendance, general health, asthma, and other conditions.

B. Dental Health – Most recent visit to a dentist, main reason for not visiting a dentist.

C. Diet, Physical Activity, and Park Use – Dietary intake, fast food, food environment, commute from school to home, name of school, physical activity, sedentary time, use of parks.

D. Health Care Access and Utilization – Usual source of care, emergency room use, visits to medical doctor, personal doctor, patient-centered care, developmental screening, timely appointments, care coordination, communication problems with doctor, delays in care, and difficulty finding a doctor.

E. Public Program Participation – Participation in TANF/CalWORKs, Food Stamps, and WIC.

F. Parental Involvement with child – First 5 California: "Talk, Read, Sing" program.

G. Child Care and Social Cohesion – Types of child care used, difficulty finding care, social cohesion and safety.

H. Demographics, Part II – Race and ethnicity, country of birth, citizenship/immigration status of child and parents, languages spoken at home, and level of education of respondent and primary caretaker of child.

K. Child First – Sampled adult's education, employment status, and age; health insurance coverage for the sampled adult, spouse, sampled child, and sampled adolescent; household income; type of housing and tenure; and address information

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

- Imperial County air quality questions
- Section K. Child First – Sampled adult's education, employment status, and age; health insurance coverage for the sampled adult, spouse, sampled child, and sampled adolescent; household income; type of housing and tenure; and address information
- Social Cohesion
- Volunteerism
- Access to fresh and affordable foods

Finally, the 2017 adolescent extended questionnaire comprised 13 sections, presented in the order they appear in the interview:

A. Demographics – Age, gender, school attendance, name of school, school instability.

N. Personal and School Safety – Self-reported school safety assessment and interpersonal violence

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

C. Diet, Nutrition, and Food Environment – Dietary intake, food environment, water consumption.

D. Physical Activity – Physical activity, commute from school to home, park or playground use and safety, social cohesion, sedentary time, sleep and technology.

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

F. Mental Health – K6 mental health assessment, emotional and psychological counseling.

G. Sexual Behaviors – Sexual activity.

H. Health Care Utilization and Access – Usual source of care, emergency room visits, most recent doctor visit, recall of provider advice, personal doctor, patient-centered care, timely appointments, care coordination, and delays in care.

J. Demographics, Part II – Race and ethnicity, country of birth, citizenship and immigration, languages spoken at home.

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 2017 instruments were administered in English, Spanish, Chinese (Mandarin and Cantonese dialects), Vietnamese, Korean, and Tagalog. Translation of the CHIS 2017 questionnaires began in August 2017, after all instruments were finalized. The translation process for each language began with original translation of all new items included in CHIS 2017. 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 CA court-certified interpreter and recommended changes were discussed during a phone meeting between the certified translator and the respective language team, including an adjudicator. Due to scheduling issues, in a number of cases, adjudication meetings were attended by translators who had not done the initial translations.

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 2017 contact materials remained unchanged from the CHIS 2015-2016 translation, but several improvements were recommended in each language.

The multi-language advance letter was printed in the same layout as in CHIS 2015-2016—an 11” x 17” folded document with English on the front, Spanish on the back, and Chinese, Korean, Tagalog, and Vietnamese printed on the inside two pages

3.4 Pretest and Pilot Test

SSRS pretested a subset of the 2017 CHIS questions using a hard copy questionnaire and a small team of experienced interviewers capable of navigating the skip patterns without a programmed CATI instrument. This pretest was carried out in February of 2017. The formal pilot test was conducted through SSRS’s call center from June 3 through June 17, 2017. During that time, SSRS completed 178 adult interviews, 25 child interviews, and 7 interviews with adolescents. SSRS trained experienced interviewers

on CHIS protocols and procedures. The pilot test was intended as a full dress rehearsal of the main study, except that only an English-language instrument was used, and no attempt was made to convert refusals or follow up with language problem cases. Table 3-1 presents the results of the pilot test, and compares cooperation rates from pilot tests back to 2003. The screener cooperation rate is down from last wave but higher than several previous cycles. The adult rate shows a similar trend. The child rate is on-par with cycles prior to 2015-2016, while the permission cooperation rate is on the higher end of the overall trend. The small N and lack of refusals for adolescents results in a 100% cooperation rate, which is the same as in 2013-2014.

Table 3-1. Number of completed interviews and refusals and cooperation rates in the CHIS 2017, 2015-2016, 2013-2014, 2011-2012, 2009, 2007, 2005, 2003 pilot cooperation rates

Completed			Timeframe							
Instrument	Interviews	Refusals	2017	2015-2016	2013-2014	2011-2012	2009	2007	2005	2003
Screener	572	572	34%	41%	22%	28%	29%	31%	39%	43%
Adult	178	63	74%	82%	56%	64%	68%	71%	70%	79%
Child	25	2	93%	77%	100%	93%	90%	91%	95%	96%
Permission	16	4	80%	N/A	67%	94%	71%	74%[a]	69%	N/A
Adolescent	7	0	100%	N/A	100%	86%	85%	82%	92%	78%

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

[a] Rate reported in 2007 was incorrect; the rate reported here is correct.

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

3.5 Changes in the Questionnaire during Data Collection

To improve the quality of the 2017 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 CATI during the field period in 2017 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

SSRS conducted CHIS 2017 at several interviewing sites. These included: Recon MR at multiple Texas sites, Precision in Las Vegas, SSRS Las Vegas, and SSRS Allentown, PA. All data collectors received the same training and supervision. Dialing from all locations came through the SSRS server and SSRS supervisors monitored interviewing at all sites.

4.1 Pretest and Pilot Test Recruiting and Training

SSRS selected experienced data collectors from its interviewing staff for the pretest and the pilot. For the pretest, data collectors were trained informally on paper and pencil versions of the CHIS 2017 draft questionnaire. Training was conducted by members of the CHIS team. The training program was developed and implemented by the Director of Telephone Operations and anticipated the training for the main study. CATI was used for administration of the pilot interviews.

4.2 Recruiting and Training for English-language Telephone Interviewing

The field period for CHIS 2017 began in June 2017, and ran for 7 months ending on December 31, 2017. SSRS started interviewing on a gradual basis with unmatched sample as we finalized mailing materials. 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 interviewers were trained later once the programs were ready.

4.2.1 Recruiting Telephone Data Collectors

The CHIS 2017 interviewing force 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, 589 SSRS data collectors and partners had successfully completed the training. New interviewers were recruited for the CHIS team if they pick up the basic interviewer training materials quickly and demonstrated good work habits such as excellent attendance, volunteering for extra shifts, having a better-than-average production rate, and demonstrated excellent teamwork skills.

SSRS recruits new data collectors for our Las Vegas phone center through Indeed, Craigslist, and the Nevada Unemployment Office. SSRS holds job fairs at the unemployment office and at hotels and casinos in the area. The Allentown center attends local job fairs and works with the office of vocational rehabilitation as well as posting on online employment sites.

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

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

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

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

To maintain a local presence during data collection, SSRS used ISA, a contractor based in California to conduct Asian-language interviews throughout data collection. Initial training for all interviewing sites, including this one, was conducted by SSRS staff.

4.2.2 Data Collector Training

Project-specific training for CHIS 2017 included CATI system training on the interview instrument led by a trainer and dyad role plays. Trainings began May 23, 2017. 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. The protocol for CHIS 2017 was newly created.

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

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

- CHIS Introduction & Background (including video)
- Protecting Human Research Participants
- Confidentiality Form & Advanced Letter
- Respondent Selection
- Gaining Cooperation with Adolescents
- Proxy Interviews
- Questionnaire Topics
- Distressed Protocol
- Pronunciation Review
- FAQs & Pop Quiz
- Mock Child Survey
- Mock Teen Survey
- Problem Sheet Review
- Coding / Dispositions and Other Specifies
- 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

In addition to the materials found in the manual, data collectors received separate copies of the FAQs, pronunciation guide, and a condensed version of FAQs with key information more easily accessible. This included emergency and suicide protocol information as well as numbers to contact project management staff and UCLA.

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

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

Exhibit 4-1. Agenda for CHIS 2017 English-Language In-Person Data Collector Training

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

In-person training began with an introduction to the CHIS study and the provision of information about how the data collected are used in the state of California. Supervisors provided the interviewing staff with an understanding of the importance of the work they would be doing in order to keep the staff motivated through the long interviewing period. The head trainer also went through a detailed explanation of Human Subjects regulations and permissions and discussed respondent confidentiality. Interviewers reviewed the advance letter in order to be familiar with what the respondent had received in the cases of matched sample. They then went through the process of respondent selection, an overview of the topics covered in the CHIS instrument, the distressed respondent protocol, and a review of correct pronunciations of challenging words. Following a review of the FAQs and a pop quiz, interviewers did round-robin role playing to familiarize themselves with the FAQs. Finally, the trainers went over the concept of the child-first interviews and answered final questions that arose after the first night's training.

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

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

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

Table 4-1 shows the timing of project-specific data collector training sessions for CHIS 2017. The first trainings began May 23, 2017 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 2017 Data Collector Training Dates and Location and Number of Data Collectors Trained

Training Dates	Location	Data Collectors Completing Training	Training Dates	Location	Data Collectors Completing Training
5/23/2017	Las Vegas	9	9/11/2017	Recon College St.	6
5/30/2017	Las Vegas	15	9/30/2017	Allentown	17
5/31/2017	Allentown	15	10/2/2017	Recon Houston	7
6/6/2017	Las Vegas	18	10/2/201	Recon College St.	4
6/12/2017	Allentown	21	10/3/2017	Las Vegas	12
6/13/2017	Las Vegas	21	10/3/2017	Recon San Marcos	8
6/21/2017	Las Vegas	11	10/9/2017	Allentown	10
6/26/2017	Recon San Marcos	10	10/10/2017	Recon Houston	12
6/27/2017	Allentown	7	10/11/2017	Recon College St.	27
6/28/2017	Las Vegas	11	10/11/2017	Las Vegas	11
7/5/2017	Recon San Marcos	11	10/16/2017	Recon Houston	14
7/11/2017	Recon San Marcos	3	10/16/2017	Allentown	9
7/12/2017	Precision	18	10/17/2017	American Directions	54
7/13/2017	Recon College St.	14	10/29/2017	Recon Houston	3
7/17/2017	Recon San Marcos	4	10/30/2017	Recon College St.	4
7/18/2017	Recon College St.	11	11/6/2017	Recon Houston	7
7/25/2017	Recon College St.	7	11/6/2017	Recon College St.	4
7/26/2017	Las Vegas	27	11/9/2017	Las Vegas	10
7/28/2017	Recon College St.	5	11/11/2017	Allentown	14
7/31/2017	Recon College St.	3	11/15/2017	ISA	12
8/8/2017	Recon College St.	7	12/2/2017	Allentown	18

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, a special log was put in place by call center managers to track how many hours were being dedicated to refusal conversion and which interviewers were dialing refusals in that time. This provided continuous information on the productivity of refusal converters and 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. ISA requires that bilingual interviewers be able to write a sentence in English as well as in the language in which they will be conducting interviews.

Training for surname list sample interviewing. The language-appropriate bilingual data collectors screened the Korean and Vietnamese targeted sample. Refusal cases from the surname sample were re-called for a conversion attempt by the bilingual data collectors who had the capability to move the cases to another language if needed.

4.3 Training for Spanish-language Interviewing

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

4.4 Training for Asian-language Interviewing

Bilingual and multilingual staff from ISA 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 staff were drawn from various areas of SSRS and ISA to assist 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. Asian staff members 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 ISA staff members were used to measure interviewing quality and to provide feedback to individual data collectors. Specific monitoring forms and guidelines describing what to look and listen for were utilized. After a data collector had completed a monitoring session, the staff member would provide a review of the monitoring sheets completed. The monitoring information would further be used to follow up with the data collector who had been monitored and review strengths and weaknesses exhibited.

4.5 Data Collector Performance

Data collector performance was evaluated through examination of performance reports and monitoring of live and recorded interviews for the skills needed for effective interviewing. Five percent of interviewing time was monitored throughout the data collection period. Supervisors monitored data collectors for a minimum of 15 minutes at a time. The monitoring was followed by a one-on-one coaching session to review techniques that were or were not working and to either reinforce exemplified skills or provide feedback for improving interviewing style. Data collectors were monitored by supervisors and training staff to determine if the following skills were demonstrated: use of a conversational style; reading fluency; ability to answer respondent questions quickly, accurately, and completely; ability to gain respondent cooperation; reading screens verbatim; and using neutral probes. Data collectors whose performance fell below acceptable levels attended additional coaching sessions with an emphasis on gaining respondent cooperation and answering respondent questions.

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

- Supervisors targeted specific interviewers for extra monitoring based on deviations in their productivity. The issues that were to be focused on during monitoring were also provided, such as the data collector's ability to answer respondent questions/concerns quickly and accurately and read all screens (especially the screener introduction) at the appropriate pace and tempo for the respondent; read screens verbatim; and probe neutrally and appropriately. For refusal data collectors, the emphasis was on the ability to engage respondents and use appropriate techniques.
- Supervisors provided feedback to data collectors on an individual basis after monitoring sheets had been completed. This included feedback on positive aspects of the interview and suggestions for improving performance.
- Project Coordinators sent reports regarding data collector performance to the operations manager. Reports identified strengths and weaknesses as reported in monitoring sheets. They also provided input on data collectors recommended for special tasks.
- Project coordinator reports were used in combination with cooperation rates to identify data collectors for refusal conversion and other specialized tasks.
- Comments sent from the project team to the data collection coordinators throughout the field period were general reminders for all data collectors concerning the following areas:
  - Reviewed data collection techniques geared towards obtaining respondent cooperation
  - Reiterated the importance of following the correct screening procedures for both the landline and cell phone frames to correctly select the appropriate respondent
  - How to correctly identify the parent or guardian qualified to give teen permission and the age requirement for teen interviews
  - How to correctly identify the adult eligible to complete a child interview
  - Making the transition from adult interview to child/teen interview as seamless as possible to immediately obtain the child/teen interview
  - Reminders about how to handle sensitive questions
  - The creation of a Spanish pronunciation document
  - Provided feedback to specific bilingual (English/Spanish) interviewers

Staff from UCLA and PHI also monitored interviews in CHIS 2017. 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 sampled telephone numbers, how the sample was organized in the CATI system, mailing advance letters, and handling inbound calls to SSRS's CHIS toll-free number. Before releasing sampled telephone numbers for interviewing, SSRS arranged for purging out of scope telephone numbers for the landline and cell phone samples.

Data collection for the 2017 statewide landline and cell samples began June 19, 2017 and ended on December 30, 2017. The Korean and Vietnamese list samples were called during quarters three and four in 2017. The mail screener for the Northern Imperial County ABS started August 22, 2017. Telephone calls to ABS sample cases began August 29, 2017 and concluded December 31, 2017.

5.1 Sample Presentation

Table 5-1 shows the number of cases that were sampled, purged, ported from landline (to cell) and the final sample size.

Table 5-1. CHIS 2017 Sizes for Sample Numbers, Purged Numbers, Ported Numbers, and Final

	Landline	Cell	Combined
Sampled	1,389,095	369,328	
Purged	1,015,903	84,715	
	73%	23%	
Ported	(358)	358	
Final	372,834	284,971	657,805

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

5.1.1 Landline Sample

The landline sample for CHIS 2017 was selected and released to CATI in much the same way as in previous CHIS cycles. *CHIS 2017 Methodology Series: Report 1 – Sample Design* describes the selection process in detail; it is summarized here to demonstrate how the sample was fielded.

Table 5-2 shows the number and proportion of sampled telephone numbers in each landline RDD stratum and the surname supplemental samples that were excluded because they were identified as nonworking or business numbers. See *CHIS 2017 Methodology Series: Report 1 – Sample Design* for more details on these procedures.

A total of 1,389,095 telephone numbers was selected for the landline sample. Overall, 73% percent of sampled numbers were purged as non-residential/non-working. The proportion of landline numbers purged as non-residential/non-working ranged from a low of 29.5 percent in San Benito County strata to a high of 62.2 percent in Yuba County.

An advance letter signed by the CHIS Principal Investigator was sent for all sampled landline and list sample telephone numbers for which an address was available from reverse directory services. The advance letter (shown in Appendix A in English only) used for the RDD samples was printed on CHIS letterhead in English, Spanish, Chinese, Korean, Tagalog and Vietnamese. For the northern Imperial County ABS, this advance letter in English and Spanish was sent to households with matched telephone numbers; a somewhat different letter was included with the mail screener for non-matched addresses. The screener questionnaire served as an attempt to collect telephone numbers for the unmatched ABS sample. Unlike previous cycles, those who were designated as initial refusals to the screener did not receive refusal conversion letters.

5.1.2 Supplemental List Samples

Supplemental samples were fielded for CHIS 2017 to increase the yield of interviews with persons of Korean and Vietnamese heritage. These samples were based on surname lists and published telephone numbers. SSRS does not scrub listed samples prior to fielding.

5.1.3 Cell Sample

CHIS 2017 included a sample of telephone numbers assigned to cellular service, as was done in previous CHIS cycles. The sample was selected from banks of numbers allocated to cellular service, and included numbers from the landline sample that were identified as belonging to cell phones. The cell sample included 284,613 numbers from cellular banks and 358 identified from the landline, for a total of 284,971 numbers (see Table 5-3). A total of 522,610 telephone numbers was selected for the cellphone sample. Overall, 46% percent of sampled numbers were purged as non-residential/non-working. The proportion of cellphone numbers purged as non-residential/non-working ranged from lows of 0 percent in Yuba County and 15 percent Stanislaus County to a high of 89 percent in the combined area of Colusa, Glenn and Tehama Counties.

An advance letter signed by the CHIS Principal Investigator was sent for all sampled cellphone numbers for which an address was available from a database of billing addresses.

Table 5-2. CHIS 2017 landline cases sampled, purged and released by strata

Sampling Stratum	Sampled Landline Cases	Purged Landline Cases	Released Landline Cases	Percent Purged Per Stratum	Percent Matched with Address
1 Los Angeles	321,794	234,893	86,901	73.0%	40%
2 San Diego	216,285	163,458	52,827	75.6%	29%
3 Orange	134,643	93,510	41,133	69.5%	32%
4 Santa Clara	45,215	32,571	12,644	72.0%	46%
5 San Bernardino	67,244	50,027	17,217	74.4%	34%
6 Riverside	63,104	40,587	22,517	64.3%	47%
7 Alameda	60,068	48,008	12,060	79.9%	29%
8 Sacramento	23,360	17,122	6,238	73.3%	36%
9 Contra Costa	22,776	16,386	6,390	71.9%	42%
10 Fresno	16,160	11,134	5,026	68.9%	40%
11 San Francisco	34,812	27,780	7,032	79.8%	37%
12 Ventura	32,418	23,125	9,293	71.3%	31%
13 San Mateo	29,661	22,292	7,369	75.2%	37%
14 Kern	14,335	9,863	4,472	68.8%	42%
15 San Joaquin	8,641	5,332	3,309	61.7%	37%
16 Sonoma	9,669	7,633	2,036	78.9%	37%
17 Stanislaus	8,769	5,943	2,826	67.8%	44%
18 Santa Barbara	8,062	5,377	2,685	66.7%	34%
19 Solano	9,701	6,916	2,785	71.3%	41%
20 Tulare	9,862	6,650	3,212	67.4%	32%
21 Santa Cruz	7,805	5,458	2,347	69.9%	35%
22 Marin	7,998	3,763	4,235	47.0%	32%
23 San Luis Obispo	9,412	8,671	741	92.1%	50%
24 Placer	9,412	8,452	960	89.8%	38%
25 Merced	9,091	5,794	3,297	63.7%	49%
26 Butte	7,805	6,920	885	88.7%	43%
27 Shasta	9,412	8,410	1,002	89.4%	45%

(continued)

Table 5-2. CHIS 2017 landline cases sampled, purged and released by strata (continued)

Sampling stratum	Sampled Landline Cases	Purged Landline Cases	Released Landline Cases	Percent Purged Per Stratum	Percent Matched with Address
28 Yolo	9,476	8,777	699	92.6%	42%
29 El Dorado	9,605	8,789	816	91.5%	44%
30 Imperial	16,998	7,800	9,198	45.9%	42%
31 Napa	14,908	10,162	4,746	68.2%	21%
32 Kings	13,269	9,374	3,895	70.6%	39%
33 Madera	9,412	6,788	2,624	72.1%	42%
34 Monterey	14,105	10,981	3,124	77.9%	35%
35 Humboldt	9,412	8,626	786	91.6%	49%
36 Nevada	14,002	11,673	2,329	83.4%	42%
37 Mendocino	8,383	6,686	1,697	79.8%	31%
38 Sutter	8,126	5,236	2,890	64.4%	49%
39 Yuba	8,898	6,433	2,465	72.3%	41%
40 Lake	8,641	6,718	1,923	77.7%	32%
41 San Benito	20,469	15,737	4,732	76.9%	38%
42 Colusa, Glenn, Tehama	6,250	5,501	749	88.0%	48%
43 Del Norte, Lassen, Modoc, Plumas, Sierra, Siskiyou, Trinity	6,250	5,540	710	88.6%	25%
44 Amador, Alpine, Calaveras, Inyo, Mariposa, Mono, Tuolumne	6,250	5,365	885	85.8%	27%
Total Landline	**1,381,968**	**1,016,261**	**365,707**	**73.5%**	**37%**
Korean Surname	4,149	0	4,149	NA	
Vietnamese Surname	2,978	0	2,978	NA	

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

Table 5-3. CHIS 2017 cell phone cases sampled, purged and released by strata

Sampling stratum	Sampled Cell Cases	Purged Cell Cases	Released Cell Cases	Percent Purged Per Stratum	Percent Matched with Address
1 Los Angeles	88,410	35,672	52,738	40.3%	45%
2 San Diego	59,241	29,656	29,585	50.1%	44%
3 Orange	24,484	6,630	17,854	27.1%	51%
4 Santa Clara	22,174	11,968	10,206	54.0%	63%
5 San Bernardino	17,420	7,515	9,905	43.1%	33%
6 Riverside	21,048	4,858	16,190	23.1%	37%
7 Alameda	13,433	4,672	8,761	34.8%	38%
8 Sacramento	13,503	3,175	10,328	23.5%	34%
9 Contra Costa	20,895	11,635	9,260	55.7%	49%
10 Fresno	8,665	2,940	5,725	33.9%	35%
11 San Francisco	20,343	13,451	6,892	66.1%	53%
12 Ventura	7,513	3,032	4,481	40.4%	38%
13 San Mateo	7,814	1,925	5,889	24.6%	42%
14 Kern	7,980	2,742	5,238	34.4%	35%
15 San Joaquin	4,767	1,540	3,227	32.3%	43%
16 Sonoma	4,768	2,407	2,361	50.5%	43%
17 Stanislaus	4,768	721	4,047	15.1%	37%
18 Santa Barbara	4,768	1,515	3,253	31.8%	29%
19 Solano	12,126	6,687	5,439	55.1%	54%
20 Tulare	4,768	1,918	2,850	40.2%	34%
21 Santa Cruz	4,768	2,328	2,440	48.8%	27%
22 Marin	4,768	944	3,824	19.8%	30%
23 San Luis Obispo	6,560	5,381	1,179	82.0%	21%
24 Placer	4,768	3,464	1,304	72.7%	29%
25 Merced	9,630	5,790	3,840	60.1%	35%
26 Butte	4,768	3,510	1,258	73.6%	23%
27 Shasta	4,768	3,503	1,265	73.5%	20%

(continued)

Table 5-3. CHIS 2017 cell phone cases sampled, purged and released by strata (continued)

Sampling stratum	Sampled Cell Cases	Purged Cell Cases	Released Cell Cases	Percent Purged Per Stratum	Percent Matched with Address
28 Yolo	4,768	3,424	1,344	71.8%	20%
29 El Dorado	4,768	3,310	1,458	69.4%	24%
30 Imperial	14,431	9,578	4,853	66.4%	39%
31 Napa	5,638	1,055	4,583	18.7%	31%
32 Kings	9,119	5,178	3,941	56.8%	38%
33 Madera	5,856	1,946	3,910	33.2%	23%
34 Monterey	6,496	2,461	4,035	37.9%	39%
35 Humboldt	4,768	3,530	1,238	74.0%	12%
36 Nevada	4,768	1,608	3,160	33.7%	20%
37 Mendocino	4,768	1,199	3,569	25.1%	14%
38 Sutter	13,279	9,103	4,176	68.6%	39%
39 Yuba	3,145	0	3,145	0.0%	100%
40 Lake	7,839	4,533	3,306	57.8%	18%
41 San Benito	7,020	2,551	4,469	36.3%	22%
42 Colusa, Glenn, Tehama	9,388	8,343	1,045	88.9%	20%
43 Del Norte, Lassen, Modoc, Plumas, Sierra, Siskiyou, Trinity	3,821	2,740	1,081	71.7%	11%
44 Amador, Alpine, Calaveras, Inyo, Mariposa, Mono, Tuolumne	3,820	2,196	1,624	57.5%	30%
Total Cell	**522,610**	**242,334**	**280,276**	**46.4%**	**41%**
Korean Surname	942	0	942	NA	
Vietnamese Surname	2,679	0	2,679	NA	

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

5.2 Sample Management

All sampled telephone numbers were divided into "replicates," or random subsets of the overall samples, separately by sample type (landline with address, landline no address, list, cell phone with address, cell phone with no address). Those with addresses were fielded in such a way that the pre-notification letters would be received prior to the initial telephone contact attempt but within a few days of letter receipt.

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. Quotas were given priority order for delivery of work to qualified interviewers. For example, a refusal converter would always be delivered a refusal quota case if one was available before being given a case from the default quota. The CHIS 2017 quota were defined as follows:

- **Default**—All RDD and surname list cases on initial release, and continuing RDD and surname list sample cases that had not been moved to another work class; available to all interviewers;
- **Refusal**—Any RDD 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 RDD 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 RDD or county supplemental 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. Some cases in each stratum were held in reserve; in strata that appeared to be falling short of the targets, additional sample was released for calling. 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 2017 Methodology Series: Report 1 – Sample Design* for a discussion of meeting the target numbers of completed adult and child interviews by stratum.

5.3 Inbound Toll-Free Calls

SSRS maintained a toll-free number for respondents to call with questions about the survey. The toll-free line was staffed weekdays from 9:00 a.m. to 9:00 p.m. Pacific time, Saturdays from 10:00 a.m. – 5 p.m., and Sundays from 12 p.m. – 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.

Respondents had access to the toll-free number from multiple sources. The toll-free number was included on all advance letters with an invitation for respondents with questions to call. Interviewers also provided the number throughout the data collection period to respondents who requested additional information.

Between the start of data collection in June 2017 and the end in December 2017, 66,072 calls were made to the toll-free number, more than were made over the two-year period of 2015-2016. Callers used the toll-free number for multiple purposes including 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 continual back-and-forth contact 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.

6. DATA COLLECTION RESULTS

This chapter provides detailed results for the CHIS 2017 data collection. Section 6.1 provides results for screening outcomes, out of scope cases, and extended interviews for both landline and cell samples. This section provides screening results for list samples (Asian surname lists) as well. 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; cooperation and completion rates in the landline sample for adult extended interviews by whether children were reported in screener and whether sampled adult is the screener respondent; the distribution of completed adult interviews and final adult dispositions by sampled quarter and nonresponse wave; number of adult interviews completed by language and sample/landline sample stratum; and mean administration times by language of administration for the screener and all types of extended interviews.

Section 6.2 provides data collection outcomes for an address-based sampling (ABS) oversample of the northern part of Imperial County as part of 2017 CHIS data collection. These results include outcomes for the screener and extended interviews (adult, child, and adolescent) for this special oversample.

6.1 Detailed Results by Outcome

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 (alphabetic) 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 remaining interim cases were assigned final result codes according to their call history. 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.

6.1.1 Screening Interview

Landline and cell samples. Table 6-1 provides results for CHIS 2017 screening interviews for both landline and cell samples. Overall, 4.4 percent of sampled landline cases and 6.0 percent of sampled cell cases completed the screener. Ineligible cases were relatively low overall, but about 6.5 times higher

for cell cases compared to landline cases. Out of scope cases were higher for the landline sample (45.2 percent) than the cell sample (30.5 percent), due to the larger number of non-residential and non-working telephone numbers identified in the landline sample. No contact cases and refusals were slightly lower in the landline sample than the cell sample. Refusals were quite a bit higher in the cell sample (17.1 percent) than in the landline (8.2 percent). Other nonresponse cases were low in both frames.

List Samples. Two Asian surname list samples were used for CHIS 2017 for both landline and cell phone sample: Korean and Vietnamese. Table 6-2 provides the same set of outcomes as Table 6-1 for the two list samples. The proportion of sampled cases that completed the screener was lowest in the Vietnamese landline list sample (3.6 percent) and highest in the Korean landline list sample (5.6 percent). The Vietnamese list sample had a slightly higher percent of out of scope cases as the Korean sample did in both frames. The Vietnamese list sample (37.7 percent landline 31.6 percent cell) had a somewhat higher proportion of noncontact cases than the Korean (28.1 percent landline and 30.3 percent), but for the most part, this was only the case for the landline frame. The highest percent of refusers were found among Korean cell phone respondents (17 percent).

Table 6-1. Detailed results of CHIS 2017 data collection, screening interview, landline and cell sample

	LANDLINE [1]			CELL		
	Number	Within category	of Total	Number	Within category	of Total
NUMBERS AVAILABLE TO BE CALLED	362,169			280,760		
TOTAL NUMBERS DIALED	362,169			280,760		
CS – COMPLETED SCREENER (C)	**15,771**		**4.4%**	**16,788**		**6.0%**
Ineligible (I)						
IF - INELIGIBLE SCREENER; >9 UNRELATED ADULTS	6	0.3%		-	0.0%	
IO - INELIGIBLE OUT OF STATE	810	36.7%		8,187	56.5%	
IS - INELIGIBLE SCREENER; NO ELIGIBLE ADULTS	476	21.6%		4,710	32.5%	
OTHER INELIGIBLE SCREENER (GROUP QUARTERS/INCAPABLE)	915	41.5%		1,597	11.0%	
Total Ineligible	**2,207**		**0.6%**	**14,494**		**5.2%**
Out of Scope						
NR - NON-RESIDENTIAL PHONE NUMBER	28,190	17.2%		13,364	15.6%	
NW - NON-WORKING PHONE NUMBER	134,933	82.4%		71,694	83.6%	
OD - DUPLICATE TELEPHONE NUMBER	209	0.1%		285	0.3%	
OTHER OUT OF SCOPE	402	0.2%		426	0.5%	
Total Out of Scope	**163,734**		**45.2%**	**85,769**		**30.5%**
Noncontact						
NA - NO CONTACT MADE AFTER TIME SLICES	125,274	93.9%		59,469	83.7%	
NM - NO CONTACT – REACHED ANSWERING MACHINE	8,124	6.1%		11,612	16.3%	
Total Noncontact	**133,398**		**36.8%**	**71,081**		**25.3%**
Refusal (R)						
RB - FINAL REFUSAL	28,468	95.5%		46,165	96.0%	
RC - UNFULFILLED CALLBACK	1,357	4.5%		1,942	4.0%	
Total Refusal	**29,825**		**8.2%**	**48,107**		**17.1%**

(continued)

Table 6-1. Detailed results of CHIS 2017 data collection, screening interview, landline and cell sample (continued)

	LANDLINE [1]			CELL		
	Number	Within category	of Total	Number	Within category	of Total
Other Nonresponse						
PM - CALL BLOCKING	1,038	6.0%		2,180	4.9%	
LP - LANGUAGE PROBLEM	702	4.1%		535	1.2%	
CC - CELL PHONE CAPTURE	28	0.2%		155	0.3%	
EP - EMERGECY PROTOCOL	22	0.1%		120	0.3%	
NO - OTHER NON-RESPONSE	15,444	89.6%		41,531	93.3%	
Total Nonresponse	**17,234**		**4.8%**	**44,521**		**15.9%**
ELIGIBILITY RATE (C / (C+I))		87.7%			53.7%	
COOPERATION RATE ((C+I) / (C+I+R))		37.6%			39.4%	

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

[1] Breakdown of completes by frame deviates slightly from original sample numbers due to numbers changing frames following post-sampling database processing.

Table 6-2. Detailed results of CHIS 2017 data collection, list sample screening

	KOREAN SAMPLE						VIETNAMESE SAMPLE					
	Landline			Cell			Landline			Cell		
	#	Within category	of Total	#	Within category	of Total	#	Within category	of Total	#	Within category	of Total
NUMBERS AVAILABLE TO BE CALLED	3,756			742			2,525			1,884		
TOTAL NUMBERS DIALED	3,756			742			2,525			1,884		
CS – COMPLETED SCREENER (C)	**209**		**5.6%**	**32**		**4.3%**	**90**		**3.6%**	**80**		**4.2%**
Ineligible (I)												
IO - INELIGIBLE OUT OF STATE	1	1.0%		19	39.6%		1	1.7%		32	26.9%	
IS - INELIGIBLE SCREENER; NO ELIGIBLE ADULTS	5	5.2%		4	8.3%		3	5.1%		27	22.7%	
OTHER INELIGIBLE SCREENER (GROUP QUARTERS/INCAPABLE)	9	9.3%		3	6.3%		6	10.2%		10	8.4%	
NR - NON-RESIDENTIAL PHONE NUMBER	82	84.5%		22	45.8%		49	83.1%		50	42.0%	
Total Ineligible	**97**		**2.6%**	**48**		**6.5%**	**59**		**2.3%**	**119**		**6.3%**
Out of Scope												
NW - NON-WORKING PHONE NUMBER	1,029	97.4%		118	86.8%		791	98.4%		376	89.1%	
OD - DUPLICATE TELEPHONE NUMBER	5	0.5%		1	0.7%		0	0.0%		2	0.5%	
OTHER OUT OF SCOPE	23	2.2%		17	12.5%		13	1.6%		44	10.4%	
Total Out of Scope	**1,057**		**28.1%**	**136**		**18.3%**	**804**		**31.8%**	**422**		**22.4%**
Noncontact												
NA - NO CONTACT MADE AFTER TIME SLICES	1,345	86.1%		183	81.3%		812	85.4%		515	86.6%	
NM - NO CONTACT – REACHED ANSWERING MACHINE	217	13.9%		42	18.7%		139	14.6%		80	13.4%	
Total Noncontact	**1,562**		**28.1%**	**225**		**30.3%**	**951**		**37.7%**	**595**		**31.6%**

(continued)

Table 6-2. Detailed results of CHIS 2017 data collection, list sample screening (continued)

	KOREAN SAMPLE						VIETNAMESE SAMPLE					
	Landline			Cell			Landline			Cell		
	#	Within category	of Total	#	Within category	of Total	#	Within category	of Total	#	Within category	of Total
Refusal (R)												
RB - FINAL REFUSAL	392	86.9%		113	89.7%		330	91.4%		245	88.1%	
RC - UNFULFILLED CALLBACK	30	6.7%		8	6.3%		21	5.8%		21	7.6%	
PM - CALL BLOCKING	29	6.4%		5	4.0%		10	2.8%		12	4.3%	
Total Refusal	**451**		**12.0%**	**126**		**17.0%**	**361**		**14.3%**	**278**		**14.8%**
Other Nonresponse												
LP - LANGUAGE PROBLEM	18	4.7%		2	1.1%		9	100.0%		5	1.3%	
EP - EMERGECY PROTOCOL	2	0.5%		1	0.6%		0	0.0%		2	0.5%	
NO - OTHER NON-RESPONSE	360	94.7%		172	98.3%		251			383	98.2%	
Total Nonresponse	**43**		**10.1%**	**175**		**23.6%**	**260**		**10.3%**	**390**		**20.7%**
ELIGIBILITY RATE (C / (C+I))		68.3%			40.0%			60.4%			40.2%	
COOPERATION RATE ((C+I) / (C+I+R))		40.4%			38.8%			29.2%			41.7%	

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

Screening Outcomes Over Time. Tables 6-3a and 6-3b provide comparisons of screener outcomes (excluding out of scope cases) for CHIS 2017 compared to prior CHIS cycles. Table 6-3a provides a comparison of landline screener outcomes going back to CHIS 2001 and Table 6-3b provides a comparison of cell screener outcomes going back to CHIS 2009.

For landline sample, the screening rate has decreased steadily since 2001 and the ineligible rate has increased in recent cycles. Noncontact and refusal rates have generally increased over these cycles, although refusal rates appear to have leveled off and even declined over the past two cycles. We are seeing a large increase in noncontact in 2017 on the landline frame. Other nonresponse outcomes decreased significantly in the 2017 cycle relative to last cycle for landline numbers. The difference is less pronounced for cell phone.

For cell sample, the screening rate has also decreased steadily since cell phone sampling began in the 2011-2012 cycle. The ineligible rate is relatively on-par with cycles prior to 2015-2016. Noncontact and refusal rates are up from last cycle, but refusal rates are still lower than they were prior to 2015-2016.

6.1.2 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 of Section K were not included in the data.

The results of data collection efforts for the adult extended interview for the landline and cell samples are shown in Table 6-4a and the same results are shown for the list samples in Table 6-4b. Adult extended interviews were completed for 62.3 percent of the 15,771 landline sample adults, which was higher than in 2015-2016. Less than 1 percent of all adult interviews counted as complete were partial completes (CP). The proportion of refusals in the 2017 landline adult sample (14.0 percent) was close to 2015-2016, but the proportion of other nonresponse decreased to zero on landline and less than one percent on the cell phone frame.

The completion rate for the cell sample of 63.9 percent was quite close to the landline sample and similarly higher than 2015-2016. Like the landline sample, less than 1 percent of adult interviews counted as complete were partial completes (CP). The proportion of adult interview refusals in the 2017 cell sample (7.9 percent) was about 3 points lower than in 2015-2016, and again other nonresponse was down to almost zero.

Table 6-3a. Comparison of landline RDD screener outcomes excluding out of scope case CHIS 2001 through CHIS 2017

	CHIS 2017	CHIS 2015-2016	CHIS 2013-2014	CHIS 2011-2012	CHIS 2009	CHIS 2007	CHIS 2005	CHIS 2003	CHIS 2001
Sample Size	198,435	159,511	269,470	243,799	295,894	316,785	198,372	153,452	154,639
Completed Screeners	7.9%	18.8%	23.1%	25.6%	27.5%	26.8%	35.1%	43.2%	53.0%
Ineligible	1.1%	0.6%	0.1%	0.1%	0.1%	<0.1%	<0.1%	0.5%	<0.1%
Noncontact	67.2%	45.4%	47.2%	43.9%	38.3%	30.2%	23.6%	19.7%	19.8%
Refusal	15.0%	19.1%	25.5%	25.7%	28.5%	36.8%	34.8%	28.7%	20.9%
Other Nonresponse	8.7%	16.1%	4.1%	4.7%	5.7%	6.2%	6.5%	7.9%	6.3%

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

Table 6-3b. Comparison of cell RDD screener outcomes excluding out of scope cases CHIS 2009 through CHIS 2017

	CHIS 2017	CHIS 2015-2016	CHIS 2013-2014	CHIS 2011-2012	CHIS 2009
Sample Size	194,991	271,813	74,995	77,172	41,633
Completed Screeners	8.6%	13.9%	19.0%	21.2%	12.5%
Ineligible	7.4%	2.6%	10.7%	10.1%	5.3%
Noncontact	36.5%	36.5%	27.0%	23.6%	36.2%
Refusal	24.7%	20.7%	37.9%	39.4%	39.3%
Other Nonresponse	22.8%	26.3%	5.4%	5.7%	6.8%

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

Table 6-4a. Detailed results of CHIS 2017 data collection, adult extended interview

	LANDLINE			CELL		
	Number	Within category	of Total	Number	Within category	of Total
Completed Interviews (C)						
CA - COMPLETED ADULT EXTENDED	9,769	99.4%		10,625	99.1%	
CP - ADULT PARTIAL COMPLETE FINISHED	62	0.6%		97	0.9%	
Total Completed Interviews	**9,831**		**62.3%**	**10,722**		**63.9%**
Ineligible (I)						
IA - INELIGIBLE AGE FOR ADULT EXTENDED	175	100.0%		25	100.0%	
Total Ineligible	**175**		**1.1%**	**25**		**0.1%**
Refusal (R)						
RB - FINAL REFUSAL	1,289	58.4%		757	57.2%	
RC - UNFULFILLED CALLBACK	892	40.4%		544	41.1%	
PM - CALL BLOCKING	28	1.3%		23	1.7%	
Total Refusal	**2,209**		**14.0%**	**1,324**		**7.9%**
Other Nonresponse						
LP - FINAL LANGUAGE PROBLEM	46	1.3%		31	0.7%	
MC - MAX CALLS	3,501	98.5%		4,665	98.9%	
CC - CELL PHONE CAPTURE	3	0.1%		12	0.3%	
EP - EMERGECY PROTOCOL	6	0.2%		5	0.1%	
NO - OTHER NON-RESPONSE	0	0.0%		4	0.1%	
Total Nonresponse	**3,556**		**22.5%**	**4,717**		**28.1%**
TOTAL	**15,771**			**16,788**		
ELIGIBILITY RATE (C / (C+I))		98.3%			99.8%	
COOPERATION RATE ((C+I) / (C+I+R))		81.9%			89.0%	

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

Table 6-4b. Detailed results of CHIS 2017 data collection, adult extended interview for list samples

	KOREAN SAMPLE						VIETNAMESE SAMPLE					
	Landline			Cell			Landline			Cell		
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
Completed Interviews (C)												
CA - COMPLETED ADULT EXTENDED	133	100.0%		19	100.0%		65	100.0%		43	97.7%	
CP - ADULT PARTIAL COMPLETE FINISHED	0	0.0%		0	0.0%		0	0.0%		1	2.3%	
Total Completed Interviews	**133**		**63.6%**	**19**		**90.5%**	**65**		**72.2%**	**44**		**57.9%**
Ineligible (I)												
IA - INELIGIBLE AGE FOR ADULT EXTENDED	7	100.0%		0	0.0%		1	100.0%		0	0.0%	
Total Ineligible	**7**		**3.3%**	**0**		**0.0%**	**1**		**1.1%**	**0**		**0.0%**
Refusal (R)												
RB - FINAL REFUSAL	21	61.8%		1	50.0%		4	44.4%		3	75.0%	
RC - UNFULFILLED CALLBACK	12	35.3%		1	50.0%		4	44.4%		0	0.0%	
PM - CALL BLOCKING	1	2.9%		0	0.0%		1	11.1%		1	25.0%	
Total Refusal	**34**		**16.3%**	**2**		**9.5%**	**9**		**10.0%**	**4**		**5.3%**
Other Nonresponse												
LP - FINAL LANGUAGE PROBLEM	1	3.0%		0	0.0%		0	0.0%		1	3.6%	
MC - MAX CALLS	34	97.1%		0	0.0%		13	86.7%		27	96.4%	
CC - CELL PHONE CAPTURE	0	0.0%		0	0.0%		1	6.7%		0	0.0%	
EP - EMERGECY PROTOCOL	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
NO - OTHER NON-RESPONSE	0	0.0%		0	0.0%		1	6.7%		0	0.0%	
Total Nonresponse	**35**		**16.7%**	**0**		**0.0%**	**15**		**16.7%**	**28**		**36.8%**
TOTAL	**209**			**21**			**90**			**76**		
ELIGIBILITY RATE (C / (C+I))		95.0%			100.0%			98.5%			100.0%	
COOPERATION RATE ((C+I) / (C+I+R))		80.5%			90.5%			88.0%			91.7%	

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

The completion rates for the Korean surname list sample (63.6 percent) was significantly higher than 2015-2016 but lower than the Vietnamese surname list sample (72.2 percent). The proportion of refusals was double on Vietnamese landline than cell phone sample. The highest refusal rate was in the Korean landline sample (16.3 percent), with a 9.5 percent refusal rate on the cell phone frame. Nonresponse was basically the same between the two surname samples with lower nonresponse for both on the landline frame.

6.1.3 Child Extended Interview

Results for the child extended interviews for the landline, cell, and surname list samples are shown in Table 6-5. The completion rate for the landline sample was 58.1 percent, which was a significant increase from CHIS 2015-2016. The completion rate for the cell sample was also significantly higher than CHIS 2015-2016 (47.8) at 58.3 percent. The total number of child completes from Asian surname sample was quite low in 2017, and so calculations are based on very little data. The surname list sample had a completion rate of above 70 percent. The very small N sizes of sample in other dispositions make any comparisons over time or sample types less meaningful.

Two design changes have affected the selection of children in screened households in recent CHIS cycles. The first was the child-first procedure, first adopted in CHIS 2005. The second was the addition of the cell sample, and sampling children from the cell sample, first done in CHIS 2009. The cell sample does not use the child-first procedure because most adults selected from the cell sample are also the screener respondent.

Table 6-6 summarizes sampling and completing interviews about children from CHIS 2007 through CHIS 2017, which provides data to examine the effects of these two design features over time. The proportion of the child sample coming from cell numbers has risen from none in 2007 to 67% percent in 2017. The sharp increase is attributable to the change in 2015 to 50% of the RDD sample coming from the cell phone frame. The proportion of children selected “child first” decreased from about 12 percent in 2015-2016 to 7.1 percent in 2017.

Table 6-5. Detailed results of CHIS 2017 data collection, child extended interview by sample type

	LANDLINE			CELL			LISTED[1]		
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
Completed Interviews (C)									
CC - COMPLETED CHILD EXTENDED	501	100.0%		1,037	100.0%		20	100.0%	
Total Completed Interviews	**501**		**58.1%**	**1,037**		**58.3%**	**20**		**71.4%**
Ineligible (I)									
IC - INELIGIBLE	19	100.0%		18	100.0%		1	100.0%	
Total Ineligible	**19**		**2.2%**	**18**		**1.0%**	**1**		**3.6%**
Refusal (R)									
RB - FINAL REFUSAL	62	38.0%		98	30.2%		0	0.0%	
RC - UNFULFILLED CALLBACK	99	60.7%		217	67.0%		4	100.0%	
PM - CALL BLOCKING	2	1.2%		9	2.8%		0	0.0%	
Total Refusal	**163**		**18.9%**	**324**		**18.2%**	**4**		**14.3%**
Other Nonresponse									
LP - FINAL LANGUAGE PROBLEM	2	1.1%		4	0.1%		0	0.0%	
MC - MAX CALLS	178	98.9%		396	8.4%		3	100.0%	
NO - OTHER NON-RESPONSE	0	0.0%		0	0.0%		0	0.0%	
Total Nonresponse	**180**		**20.9%**	**400**		**22.5%**	**3**		**10.7%**
TOTAL	**863**			**1,779**			**28**		
ELIGIBILITY RATE (C / (C+I))		96.3%			98.3%			95.2%	
COOPERATION RATE ((C+I) / (C+I+R))		76.1%			76.5%			80.0%	

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

[1] Listed sample includes landline and cell Vietnamese and Korean surname samples.

Table 6-6. Number of children sampled and child interviews completed across all sample types, CHIS 2007 through 2017

	CHIS 2017	CHIS 2015-2016	CHIS 2013-2014	CHIS 2011-2012	CHIS 2009	CHIS 2007
Total children sampled	**2,670**	**9,551**	**7,475**	**9,764**	**12,129**	**13,089**
Cell sample	1,788	5,655	1,601	1,941	595	0
Percentage of all children	*67.0%*	*59.2%*	*21.4%*	*19.9%*	*4.9%*	*0.0%*
Other samples	882	3,896	5,874	7,823	11,534	13,089
Child first	189	1,137	3,016	3,922	5,816	6,335
Percentage of all samples	*7.1%*	*11.9%*	*40.3%*	*40.2%*	*48.0%*	*48.4%*
Percentage of other samples	*21.4%*	*29.2%*	*51.3%*	*50.1%*	*50.4%*	*48.4%*
Child first no adult completed	155	958	2,236	2,737	4,034	4,189
Percentage of child first	*82.0%*	*84.3%*	*74.1%*	*69.8%*	*69.4%*	*66.1%*
Completed child interviews	**1,558**	**4,293**	**5,470**	**7,337**	**8,981**	**9,933**
Cell sample	1,044	2,585	1,256	1,523	486	0
Percentage of all child interviews	*67.0%*	*60.2%*	*23.0%*	*20.8%*	*5.4%*	*0.0%*
Other samples	514	1,708	4,214	5,814	8,495	9,933
Child first	142	584	1,952	2,646	3,751	4,532
Percentage of all samples	*9.1%*	*13.6%*	*35.7%*	*36.1%*	*41.8%*	*45.6%*
Percentage of other samples	*27.6%*	*34.2%*	*46.3%*	*45.5%*	*44.2%*	*45.6%*
Completion rate	*75.1%*	*51.4%*	*64.7%*	*67.5%*	*64.5%*	*71.5%*
Child first no adult completed	111	422	1,234	1,596	2,163	2,545
Percentage of child first	*78.2%*	*72.3%*	*63.2%*	*60.3%*	*57.7%*	*56.2%*
Completion rate	*71.6%*	*44.1%*	*55.2%*	*58.3%*	*53.6%*	*60.8%*
Child sampled per completed adult						
Cell sample	0.17	0.19	0.21	0.21	0.20	n/a[1]
Other samples	0.09	0.08	0.18	0.23	0.26	0.26
Child sampled per completed screener						
Cell sample	0.11	0.15	0.11	0.12	0.08	n/a[1]
Other samples	0.06	0.09	0.09	0.12	0.15	0.15

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

[1] No child interviews were completed in cell phone cases in 2007. For more details see *CHIS 2007 Methodology Series: Report 2 – Data Collection Methods*.

The second panel of Table 6-6 shows results on the number and source of child interviews completed in each cycle. The percent of child interviews from the cell sample continued to increase to 67% from 60% in the previous cycle. This is not surprising as the age of people in the landline frame continues to increase over time. At the same time, the completion rate for child first interviews were higher in 2017 at about 75% percent in 2017 compared with about 51 percent in 2015-2016. A smaller number of identified child first households, however, resulted in a low number of interviews (even considering the data are for only one year) regardless of the higher cooperation rate.

The third section of Table 6-6 shows ratios of children sampled per adult interviews completed for each cycle. The cell sample ratio has declined somewhat since the 2015-2016 cycle, while the other samples have remained relatively steady.

The final section of Table 6-6 shows the trend in overall yield of sampled children as a proportion of completed screeners. The proportion for other samples has declined steadily from 0.15 in 2007 to 0.06 in 2017. The proportion for cell sample had increased from 0.08 in 2009 to 0.15 in 2015-2016 and dropped somewhat to 0.11 in 2017. These somewhat inconsistent, but generally opposing changes over recent cycles indicates the cell sample continues to grow in importance for the yield of child interviews. The continued decline in child yield in the landline and list samples is likely due in part to a continuing increase in households with children being cell-only and could also reflect greater reluctance of families with children to answer their landlines when they do not recognize the caller.

Table 6-7 presents cooperation and completion rates for landline sample adult interviews, by whether children were reported in the screener and whether the sampled adult is the screener respondent, from the 2003 through the 2017 cycles. In addition, changes in cooperation and completion rates among the past three CHIS cycles are also presented. Similar rates are included for cellphone sample adult interviews from 2011-2012 through 2017. These results provide more details on the impact of children in the household and whether the sampled adult completed the screener on adult interviews.

The general pattern shown in Table 6-7 is that cooperation and completion rates for the adult interview are higher in households when the screening respondent is also the adult selected for the interview. These results reflect the advantages of either (1) completing screenings in households with only one adult or (2) being able to segue immediately into the adult interview after completing the screening in households with more than one adult. A second pattern is that cooperation and completion rates are generally higher in households without any children identified. We did not see a continuation of the pattern noted in prior years of better completion rates in households without children.

Table 6-7. Cooperation and completion rates, landline RDD sample and cell phone RDD sample adult extended interview, by whether children were reported in screener and whether sampled adult is the screener respondent

	Sampled Adult Is Screener Respondent		Sampled Adult Is Not Screener Respondent		
	Children Reported	No Children Reported	Children Reported	No Children Reported	Total
Cooperation rate					
CHIS 2003	84.0%	83.8%	64.8%	62.2%	76.1%
CHIS 2005	78.9%	79.8%	55.3%	56.4%	70.9%
Change '03-'05	*-5.1*	*-4.0*	*-9.5*	*-5.8*	*-5.2*
CHIS 2007	76.7%	79.8%	47.8%	51.2%	68.7%
Change '05-'07	*-2.2*	*0.0*	*-7.5*	*-5.2*	*-2.2*
CHIS 2009	71.8%	74.7%	47.7%	50.4%	65.3%
Change '07-'09	*-4.9*	*-5.1*	*-0.1*	*-0.8*	*-3.4*
CHIS 2011-2012	74.3%	76.4%	46.9%	48.9%	65.9%
Change '09-'11	*2.5*	*1.7*	*-0.8*	*-1.5*	*0.6*
CHIS 2013-2014	70.3%	74.8%	41.3%	45.4%	63.7%
Change '11-'13	*-4.1*	*-1.7*	*-5.6*	*-3.4*	*-2.2*
CHIS 2015-2016	84.5%	84.1%	64.2%	59.4%	77.7%
Change '13-'15	*14.2*	*9.3*	*22.9*	*14.0*	*14.0*
CHIS 2017	97.4%	89.6%	50.9%	60.5%	*81.9%*
Change '16-'17	*12.9*	*5.5*	*-13.3*	*-1.1*	*4.2*
CHIS 2011-2012 cell	66.4%	68.6%	37.5%	28.9%	66.9%
CHIS 2013-2014 cell	65.4%	67.7%	32.0%	28.0%	65.9%
Change '11-'13	*-1.0*	*-0.9*	*-5.5*	*-0.9*	*-1.0*
CHIS 2015-2016 cell	83.5%	82.2%	43.5%	48.7%	82.2%
Change '13-'15	*18.1*	*14.5*	*11.5*	*20.7*	*16.2*
CHIS 2017 cell	96.5%	60.5 %	0.0%	0.0%	89.0%
Change '16-'17	*13.1*	*-21.7*	*NA*	*NA*	*6.8*

(continued)

Table 6-7. Cooperation and completion rates, landline RDD sample and cell phone RDD sample adult extended interview, by whether children were reported in screener and whether sampled adult is the screener respondent (continued)

	Sampled Adult Is Screener Respondent		Sampled Adult Is Not Screener Respondent		
	Children Reported	No Children Reported	Children Reported	No Children Reported	Total
Completion rate					
CHIS 2003	70.6%	76.7%	44.9%	47.7%	63.1%
CHIS 2005	65.3%	72.9%	37.6%	43.0%	58.4%
Change '03-'05	*-5.3*	*-3.8*	*-7.3*	*-4.7*	*-4.7*
CHIS 2007	63.8%	73.8%	32.1%	39.5%	57.5%
Change '05-'07	*-1.5*	*0.9*	*-5.5*	*-3.5*	*-0.9*
CHIS 2009	56.7%	66.8%	29.4%	37.4%	52.5%
Change '07-'09	*-7.1*	*-7.0*	*-2.7*	*-2.1*	*-5.0*
CHIS 2011-2012	59.1%	67.9%	28.8%	35.1%	52.3%
Change '09-'11	*2.4*	*1.1*	*-0.6*	*-2.3*	*-0.2*
CHIS 2013-2014	55.6%	66.9%	25.2%	32.1%	50.9%
Change '11-'13	*-3.5*	*-1.0*	*-3.6*	*-2.9*	*-1.5*
CHIS 2015-2016	51.9%	64.7%	24.4%	30.6%	51.5%
Change '15-'16	*-3.7*	*-2.2*	*-0.8*	*-1.5*	*0.6*
CHIS 2017	92.4%	75.7%	33.2%	34.8%	62.3%
Change '16-'17	*40.5*	*11.0*	*8.8*	*4.2*	*10.8*
CHIS 2011-2012 cell	53.9%	59.3%	21.5%	18.6%	56.0%
CHIS 2013-2014 cell	52.1%	57.8%	17.1%	19.7%	54.6%
Change '11-'13	*-1.8*	*-1.4*	*-4.4*	*1.1*	*-1.4*
CHIS 2015-2016 cell	50.4%	55.7%	14.3%	22.1%	54.0%
Change '13-'15	*-1.7*	*-2.1*	*-2.8*	*2.4*	*-0.6*
CHIS 2017 cell	91.4%	60.6%	0.0%	0.0%	63.9%
Change '16-'17	*41.0*	*4.9*	*NA*	*NA*	*9.9*

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

6.1.4 Adolescent Extended Interview

Like the adult and child interview tables, Table 6-8 presents detailed data collection results for the adolescent extended interviews for the 2017 landline, cell, and list samples. Numbers and percentages for all but the last three rows of the tables refer to sampled adolescents for whom permission to interview was obtained from a parent or legal guardian. The bottom three rows factor in the parental permission rates for sampled adolescents.

The completion rate among adolescents for the landline sample cases with parental permission completed (77.2 percent) higher than 2015-2016 (70.1 percent). The cell phone completion rate for 2017 was also higher at 68.5 percent. The proportion of selected adolescents for whom parental permission was refused (72.3 percent on landline, 75.3 percent on cell) increased from 2015-2016. The combined completion rate for 2017 for landline adolescent sample was 21.4 percent and 16.8 percent for cellphone. Both indicate a decline from the previous cycle, although the landline rate is much closer to 2015-2016 (23.4 percent) than cellphone (23.3 percent). The number of adolescent completes from listed surname sample is in the single digits in 2017, and so the data are not appropriate for comparisons to previous cycles.

Table 6-8. Detailed results of CHIS 2017 data collection, adolescent extended interview by sample type

	LANDLINE			CELL			LISTED[1]		
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
Completed Interviews (C)									
CT - COMPLETED TEEN EXTENDED	206	100.0%		219	100.0%		8	100.0%	
Total Completed Interviews	**206**		**77.2%**	**219**		**68.2%**	**8**		**61.5%**
Ineligible (I)									
IT - INELIGIBLE	14	100.0%		4	100.0%		4	100.0%	
Total Ineligible	**14**		**5.2%**	**4**		**1.2%**	**4**		**30.8%**
Refusal (R)									
RB - FINAL REFUSAL	42	91.3%		80	84.2%		1	100.0%	
RC - UNFULFILLED CALLBACK	4	8.7%		15	15.8%		0	0.0%	
PM - CALL BLOCKING	0	0.0%		0	0.0%		0	0.0%	
Total Refusal	**46**		**17.2%**	**86**		**29.6%**	**1**		**7.7%**
Other Nonresponse									
LP - FINAL LANGUAGE PROBLEM	0	0.0%		0	0.0%		0	0.0%	
MC - MAX CALLS	0	0.0%		0	0.0%		0	0.0%	
NO - OTHER NON-RESPONSE	1	100.0%		3	100.0%		0	0.0%	
Total Nonresponse	**1**		**0.4%**	**3**		**0.9%**	**0**		**0.0%**
TOTAL	**267**			**321**			**13**		
COOPERATION RATE (C+I) / (C+I+R))		82.7%			72.2%			92.3%	
ADOLESCENTS SAMPLED	964			1,300			37		
PERMISSION NOT RECEIVED	697	72.3%		979	75.3%		24	64.9%	
COMBINED COMPLETION RATE (C / SAMPLED)		21.4%			16.8%			21.6%	

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

[1] Listed sample includes landline and cell Vietnamese and Korean surname samples.

As in 2015-2016, the net yields for the Asian surname list samples were lower than both the landline and cell samples, though N sizes are quite small. There were no cell completes from the Korean listed sample. There was no appreciable difference between willingness to give permission on landline Vietnamese listed compared with cell listed sample. Overall, there is a combined adolescent interview completion rate among all adolescents sampled from the list samples of 13.1 percent.

The child-first procedure also affects the adolescent interview yield, because adolescents could also be sampled and interviewed in a child-first household before completion of the adult interviews although not to the same extent as the child yield. As noted in Section 6.1.3, the proportion of the RDD sample allocated to cell numbers increased from 20 percent to 50 percent in 2015-2016 as was maintained in 2017. This change reduced opportunities to initiate the child first protocol in households with adolescents identified, because the child first protocol is not used in the cell sample.

6.1.5 Completed Interviews by Language

Tables 6-9 and 6-10 show the number of adult extended interviews completed in each of the six languages offered in CHIS 2017 by landline and cell stratum, respectively. The lower section of this table provides these same results separately for the landline Asian surname list sample and the ABS sample.

Overall, 1,513 adult interviews from these samples were conducted in Spanish, which was 7.2 percent of all adult interviews. This cannot be compared to 2015-2016 since it represents only one year of data collection. The highest percentage of adult interviews completed in Spanish in the landline sample was in Imperial County (32.8), which was almost four times greater than the next highest strata (Merced, 8.6). The same is true for the cell phone sample where 29.3% of Imperial County interviews were conducted in Spanish. Imperial County had the highest proportion in 2015-2016 as well.

In the landline sample, there were 23 adult interviews conducted in an Asian language, 49 in the cell phone sample, and 51 in the listed sample. The highest landline RDD proportions of Asian language adult interviews were in the Santa Clara stratum (2.0 percent), followed by San Francisco (1.2 percent), and then Orange (0.9). For the cell phone sample, Orange has the largest percent of Asian-language completes (1.8 percent), followed by Sacramento (1.1 percent) and Alameda (1.0%). Among all samples, the Vietnamese surname list sample (24.8 percent) had the highest proportion of adult interviews conducted in an Asian language.

See Table 7-2 in *CHIS 2017 Methodology Series: Report 4—Response Rates* for more on numbers of interviews conducted by language.

Table 6-9. Number of adult interviews completed by language and sample/landline sample stratum

Stratum	Sampling Stratum	English	Spanish	Korean	Chinese	Tagalog	Vietnamese	Total	% Spanish	% Asian
1	LOS ANGELES	1,643	124	0	6	0	0	1,773	7.0%	0.3%
2	SAN DIEGO	1,091	53	0	0	0	0	1,144	4.6%	0.0%
3	ORANGE	671	22	4	0	0	2	699	3.1%	0.9%
4	SANTA CLARA	334	3	1	1	0	5	344	0.9%	2.0%
5	SAN BERNARDINO	309	9	0	0	0	0	318	2.8%	0.0%
6	RIVERSIDE	490	16	0	0	0	0	506	3.2%	0.0%
7	ALAMEDA	250	4	0	0	0	0	254	1.6%	0.0%
8	SACRAMENTO	250	3	0	0	0	1	254	1.2%	0.4%
9	CONTRA COSTA	190	2	0	0	0	0	192	1.0%	0.0%
10	FRESNO	174	6	0	0	0	0	180	3.3%	0.0%
11	SAN FRANCISCO	164	3	0	2	0	0	169	1.8%	1.2%
12	VENTURA	150	8	0	0	0	0	158	5.1%	0.0%
13	SAN MATEO	165	0	0	1	0	0	166	0.0%	0.6%
14	KERN	146	9	0	0	0	0	155	5.8%	0.0%
15	SAN JOAQUIN	104	2	0	0	0	0	106	1.9%	0.0%
16	SONOMA	95	1	0	0	0	0	96	1.0%	0.0%
17	STANISLAUS	105	1	0	0	0	0	106	0.9%	0.0%
18	SANTA BARBARA	100	5	0	0	0	0	105	4.8%	0.0%
19	SOLANO	78	1	0	0	0	0	79	1.3%	0.0%
20	TULARE	91	5	0	0	0	0	96	5.2%	0.0%
21	SANTA CRUZ	110	0	0	0	0	0	110	0.0%	0.0%
22	MARIN	125	0	0	0	0	0	125	0.0%	0.0%
23	SAN LUIS OBISPO	132	2	0	0	0	0	134	1.5%	0.0%
24	PLACER	113	0	0	0	0	0	113	0.0%	0.0%
25	MERCED	96	9	0	0	0	0	105	8.6%	0.0%

(continued)

Table 6-9. Number of adult interviews completed by language and sample/landline sample stratum (continued)

Stratum	Sampling Stratum	English	Spanish	Korean	Chinese	Tagalog	Vietnamese	Total	% Spanish	% Asian
26	BUTTE	158	1	0	0	0	0	159	0.6%	0.0%
27	SHASTA	194	1	0	0	0	0	195	0.5%	0.0%
28	YOLO	119	1	0	0	0	0	120	0.8%	0.0%
29	EL DORADO	116	0	0	0	0	0	116	0.0%	0.0%
30	IMPERIAL	90	44	0	0	0	0	134	32.8%	0.0%
31	NAPA	102	0	0	0	0	0	102	0.0%	0.0%
32	KINGS	112	6	0	0	0	0	118	5.1%	0.0%
33	MADERA	136	4	0	0	0	0	140	2.9%	0.0%
34	MONTEREY	74	5	0	0	0	0	79	6.3%	0.0%
35	HUMBOLDT	189	1	0	0	0	0	190	0.5%	0.0%
36	NEVADA	136	0	0	0	0	0	136	0.0%	0.0%
37	MENDOCINO	84	1	0	0	0	0	85	1.2%	0.0%
38	SUTTER	129	2	0	0	0	0	131	1.5%	0.0%
39	YUBA	121	0	0	0	0	0	121	0.0%	0.0%
40	LAKE	89	2	0	0	0	0	91	2.2%	0.0%
41	SAN BENITO	115	3	0	0	0	0	118	2.5%	0.0%
42	TEHAMA, ETC	111	6	0	0	0	0	117	5.1%	0.0%
43	DEL NORTE, ETC	92	0	0	0	0	0	92	0.0%	0.0%
44	TUOLUMNE, ETC	101	0	0	0	0	0	101	0.0%	0.0%
	TOTAL LANDLINE RDD	**9,444**	**365**	**5**	**10**	**0**	**8**	**9,832**	**3.7%**	**0.2%**
	KOREAN LIST	16	0	3	0	0	0	19	0.0%	15.8%
	VIETNAMESE LIST	40	0	0	0	0	4	44	0.0%	9.1%
	IMPERIAL COUNTY ABS	241	98	0	0	0	0	339	28.9%	0.0%
	TOTAL	**9,741**	**463**	**8**	**10**	**0**	**12**	**10,234**	**4.5%**	**0.3%**

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

Table 6-10. Number of adult interviews completed by language and sample/cell phone sample stratum

Stratum	Sampling Stratum	English	Spanish	Korean	Chinese	Tagalog	Vietnamese	Total	% Spanish	% Asian
1	LOS ANGELES	1,551	258	6	5	0	3	1,823	14.2%	0.8%
2	SAN DIEGO	948	93	1	1	1	3	1,047	8.9%	0.6%
3	ORANGE	494	47	1	2	0	7	551	8.5%	1.8%
4	SANTA CLARA	358	23	0	1	0	1	383	6.0%	0.5%
5	SAN BERNARDINO	300	32	0	1	0	1	334	9.6%	0.6%
6	RIVERSIDE	517	69	1	0	0	0	587	11.8%	0.2%
7	ALAMEDA	276	14	0	2	0	1	293	4.8%	1.0%
8	SACRAMENTO	349	11	0	1	0	3	364	3.0%	1.1%
9	CONTRA COSTA	306	16	0	1	0	0	323	5.0%	0.3%
10	FRESNO	187	32	0	0	0	0	219	14.6%	0.0%
11	SAN FRANCISCO	229	8	0	2	0	1	240	3.3%	1.3%
12	VENTURA	147	17	0	0	0	1	165	10.3%	0.6%
13	SAN MATEO	151	12	0	1	0	0	164	7.3%	0.6%
14	KERN	160	31	0	0	0	0	191	16.2%	0.0%
15	SAN JOAQUIN	121	13	0	0	0	0	134	9.7%	0.0%
16	SONOMA	102	3	0	0	0	0	105	2.9%	0.0%
17	STANISLAUS	124	14	0	0	0	0	138	10.1%	0.0%
18	SANTA BARBARA	107	35	0	0	0	0	142	24.6%	0.0%
19	SOLANO	170	6	0	0	0	0	176	3.4%	0.0%
20	TULARE	123	22	0	0	0	0	145	15.2%	0.0%
21	SANTA CRUZ	130	14	0	0	0	0	144	9.7%	0.0%
22	MARIN	123	6	0	0	0	1	130	4.6%	0.8%
23	SAN LUIS OBISPO	99	7	0	0	0	0	106	6.6%	0.0%
24	PLACER	123	0	0	0	0	0	123	0.0%	0.0%
25	MERCED	125	25	0	0	0	0	150	16.7%	0.0%
26	BUTTE	109	2	0	0	0	0	111	1.8%	0.0%
27	SHASTA	134	0	0	0	0	0	134	0.0%	0.0%

(continued)

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

Stratum	Sampling Stratum	English	Spanish	Korean	Chinese	Tagalog	Vietnamese	Total	% Spanish	% Asian
28	YOLO	110	7	0	0	0	0	117	6.0%	0.0%
29	EL DORADO	135	6	0	0	0	0	141	4.3%	0.0%
30	IMPERIAL	87	36	0	0	0	0	123	29.3%	0.0%
31	NAPA	157	22	0	0	0	0	179	12.3%	0.0%
32	KINGS	130	26	0	0	0	0	156	16.7%	0.0%
33	MADERA	106	35	0	0	0	0	141	24.8%	0.0%
34	MONTEREY	115	34	0	0	0	0	149	22.8%	0.0%
35	HUMBOLDT	129	2	0	0	0	0	131	1.5%	0.0%
36	NEVADA	133	4	0	0	0	0	137	2.9%	0.0%
37	MENDOCINO	169	11	0	0	0	0	180	6.1%	0.0%
38	SUTTER	163	13	0	0	0	0	176	7.4%	0.0%
39	YUBA	119	5	0	0	0	0	124	4.0%	0.0%
40	LAKE	139	9	0	0	0	0	148	6.1%	0.0%
41	SAN BENITO	134	25	0	0	0	0	159	15.7%	0.0%
42	TEHAMA, ETC	64	3	0	0	0	0	67	4.5%	0.0%
43	DEL NORTE, ETC	93	0	0	0	0	0	93	0.0%	0.0%
44	TUOLUMNE, ETC	76	1	0	0	0	0	77	1.3%	0.0%
	TOTAL CELL RDD	**9,622**	**1,049**	**9**	**17**	**1**	**22**	**10,720**	**9.8%**	**0.5%**
	KOREAN LIST	112	0	9	12	0	0	133	0%	15.7%
	VIETNAMESE LIST	42	0	1	5	0	17	65	0%	35.4%
	TOTAL	**9,776**	**1,049**	**19**	**34**	**1**	**39**	**10,918**	**9.6%**	**0.9%**

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

6.2 Length of Interview

Tables 6-11a through 6-11c present interview duration by section for the adult, child, and adolescent questionnaires, respectively throughout 2017. The adult extended interview averaged just about 43 minutes to administer, longer than the target of 35 minutes. The child interview averaged 19.2 minutes, and the adolescent interview about 24.7 minutes, which was also longer than their respective targets. The screening interview and permission to interview adolescents both took about 3 minutes, on average.

Table 6-12 presents mean administration times across all samples for the four questionnaires – screener, adult, child, and adolescent – by language for CHIS 2017, CHIS 2015-2016, and CHIS 2013-2014. For all languages combined, mean administration times for the 2017 questionnaires were somewhat longer in 2017 compared to 2015-2016.

The mean administration time for the English adult extended interview was just over four minutes longer in 2017 than 2015-2016. The ratio of mean adult interview administration time relative to English decreased for Chinese and Vietnamese interviews 2017. This ratio increased for Korean and stayed about the same for Spanish. Tagalog increased, but with only one interview, it is not a reliable estimate.

The child interview, with an overall mean length of 19.2 minutes, was nearly two minutes longer than in 2015-2016. The ratios for other languages compared to English followed the same pattern of increases and decreases as the adult interviews, but no child interviews were administered in either Korean or Tagalog.

The longer adolescent interview (over 24 minutes across all languages) relative to 2015-2016 also had a slightly longer Spanish duration relative to English. Only one adolescent interview was administered in other languages.

Table 6-11a. CHIS 2017 adult extended interview timing data, by section

Module	Number of Interviews	Mean	Median	Shortest Time	Longest Time
Total	20,986	43.1	41.1	1.0	166.2
Section A – Demographic Information	20,986	1.4	1.0	0.01	31.0
Section B – Health Conditions	20,986	1.8	1.0	0.01	58.0
Section C – Health Behaviors	20,986	6.8	6.4	0.01	67.9
Section D – General Health, Disability, and Sexual Health	20,986	1.9	2.0	0.01	23.0
Section E – Women's Health	11,705	0.02	0.00	0.00	8.0
Section F – Mental Health	20,986	3.7	3.0	0.01	44.0
Section G – Demographic Information, Part II	20,986	3.4	3.0	0.01	30.0
Section H – Health Insurance	20,986	6.7	6.0	0.01	59.0
Section I – Child and Adolescent Health Insurance	1,481	1.5	1.0	0.01	28.0
Section J – Health Care Utilization and Access	20,986	5.0	5.0	0.01	32.0
Section DM – Discrimination	20,986	1.0	1.0	0.01	44.0
Section K – Employment, Income, Poverty Status, Food Security	20,986	2.4	2.0	0.01	18.0
Section L - Public Program Participation	20,986	1.4	1.0	0.01	16.0
Section M – Housing and Social Cohesion	20,986	2.3	2.0	0.01	27.0
Section P – Voter Engagement	21,022	0.9	1.0	0.01	14.0
Section S – Suicide Ideation and Attempts	21,012	0.2	0.0	0.01	18.0
Section N –Demographic Information Part III and Closing	20,816	2.1	1.9	0.01	28.0

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

Table 6-11b. CHIS 2017 child extended interview timing data, by section

Module	Number of Interviews	Mean	Median	Shortest Time	Longest Time
Total	1,600	19.2	17.5	0.01	67.2
Section A – Demographics Part I, Health Conditions	1,600	2.7	2.4	0.01	22.6
Section B – Dental Health	1,600	1.9	1.9	0.01	7.0
Section C – Diet, Physical Activity, Park Use	1,600	3.8	3.9	0.01	10.1
Section D – Health Care Access and Utilization	1,600	4.4	4.3	0.01	19.0
Section E – Public Programs	1,600	0.2	0.0	0.01	1.8
Section F – Parental Involvement	1,600	1.4	1.3	0.01	8.6
Section G – Child Care and Social Cohesion	1,600	1.0	0.6	0.01	6.3
Section H – Demographics, Part II	1,600	1.2	1.2	0.01	7.2
Section K – Child First	152	14.0	13.6	0.01	29.3
Section H2 – Demographics, Part III	1,585	0.3	0.3	0.01	2.7

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

Table 6-11c. CHIS 2017 adolescent extended interview timing data, by section

Module	Number of Interviews	Mean	Median	Shortest Time	Longest Time
Total	448	24.7	23.8	8.1	37.1
Section A – Demographics Part I and civic engagement	448	1.5	1.4	0.01	5.0
Section B – Health Status and Health Conditions	448	1.4	1.1	0.01	6.4
Section C - Diet, Nutrition, and Food Environment	448	1.5	1.5	0.01	3.3
Section D - Physical Activity	448	4.7	4.5	0.01	10.6
Section E - Cigarette, Alcohol and Drug Use	448	1.1	0.9	0.01	5.3
Section F – Mental Health	448	2.4	2.2	0.01	6.5
Section G – Sexual Behaviors	448	0.4	0.4	0.01	1.9
Section H – Health Care Utilization and Access	448	2.3	2.2	0.01	6.0
Section J - Demographic Information Part II	448	1.3	1.2	0.01	5.0
Section K – Suicide Ideation and Attempts	448	0.4	0.2	0.01	4.0
Section L – Civic Engagement and Resiliency	448	3.5	3.4	0.01	7.2
Section M – Closing	447	0.3	0.3	0.01	1.8
Section N – Personal and School Safety	448	1.4	1.4	0.01	4.4

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

Table 6-12. Median and Mean administration times (in minutes), relative times, and sample sizes for CHIS 2017, 2015-2016, and 2013-2014 instruments by language of administration[1]

	CHIS 2017				CHIS 2015-2016				CHIS 2013-2014			
	N	Median	Mean	Ratio to English[2]	N	Median	Mean	Ratio to English[2]	N	Median	Mean	Ratio to English[2]
Screener												
All Languages	33,714	2.48	2.79		80,378	2.61	3.02		77,306	2.50	2.18	
English	30,306	2.42	2.71	1.00	68,938	2.53	2.90	1.00	65,661	2.35	2.08	1.00
Spanish	3,291	3.11	3.50	1.29	9,409	3.09	3.59	1.22	9,371	3.29	2.92	1.40
Vietnamese	36	2.80	3.25	1.21	678	3.79	4.27	1.50	646	3.11	2.93	1.32
Korean	31	3.65	4.37	1.61	474	3.04	3.44	1.20	569	3.42	3.12	1.46
Chinese (2015) Cantonese (pre-2015)	47	3.03	3.43	1.27	804	3.96	4.42	1.57	471	4.01	3.55	1.71
Mandarin									526	3.45	3.04	1.47
Tagalog	3	6.48	6.00	2.21	75	4.48	5.03	1.77	62	3.41	3.23	1.45
Adult Interview												
All Languages	20,986	41.10	43.05		42,089	37.45	38.73		39,625	35.92	33.60	
English	19,382	40.35	42.10	1.00	37,303	36.53	37.65	1.00	35,170	34.42	32.65	1.00
Spanish	1,481	53.22	55.03	1.31	3,795	46.68	47.38	1.28	3,282	49.64	47.97	1.44
Vietnamese	51	39.98	42.60	1.01	375	46.84	47.90	1.28	397	32.80	31.82	0.95
Korean	27	52.23	52.64	1.25	225	41.23	41.24	1.13	300	44.24	42.52	1.29
Chinese (2015) Cantonese (pre-2015)	44	47.76	51.06	1.21	341	50.22	50.48	1.37	190	53.31	49.48	1.55
Mandarin									259	46.97	44.27	1.36
Tagalog	1	78.32	78.32	1.86	50	57.55	56.50	1.58	27	47.25	46.4	1.37

(continued)

Table 6-12. Median and Mean administration times (in minutes), relative times, and sample sizes for CHIS 2017, 2015-2016, and 2013-2014 instruments by language of administration[1] (continued)

	CHIS 2017				CHIS 2015-2016				CHIS 2013-2014			
	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	1,600	17.52	19.25		4,293	17.14	17.47		5,470	16.34	15.43	
English	1,382	16.93	18.67	1.00	3,376	16.61	16.91	1.00	4,228	15.29	14.67	1.00
Spanish	214	21.66	22.95	1.23	866	19.41	19.41	1.17	1,119	20.11	19.48	1.32
Vietnamese	1	17.20	17.20	0.92	25	21.90	21.33	1.32	53	15.61	15.13	1.02
Korean	0			NA	5	14.65	15.31	0.88	23	18.45	17.78	1.21
Chinese (2015) Cantonese (pre-2015)	3	20.78	19.88	1.07	19	22.76	22.00	1.37	24	22.77	20.19	1.49
Mandarin	-	-	-	-	-	-	-	-	22	17.62	17.28	1.15
Tagalog	0			NA	2	24.17	24.17	1.46	1	13.98	13.98	0.91
Adolescent Interview												
All Languages	448	23.79	24.72		1,594	20.90	21.66		2,238	22.86	22.31	
English	413	23.40	24.30	1.00	1,447	20.64	21.46	1.00	2,136	22.69	22.17	1.00
Spanish	34	29.72	29.78	1.23	142	22.98	23.62	1.11	92	26.59	26.32	1.17
Vietnamese	1	24.77	24.77	1.02	3	23.61	23.31	1.14	4	24.11	23.38	1.06
Korean	0			NA	0			NA	3	24.20	27.37	1.07
Chinese (2015) Cantonese (pre-2015)	0			NA	1			NA	0			NA
Mandarin	-	-	-	-	-	-	-	-	0			NA
Tagalog	0			NA	1			NA	3	26.39	26.47	1.16

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey

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

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

6.3 Detailed Results for the 2017 Northern Imperial County Oversample

UCLA received funding to supplement the CHIS 2017 sample in the northern part of Imperial County for starting after Labor Day and continuing through the end of the year in 2017. Consistent with the 2016 effort and due to the small, isolated geography, an ABS oversample was used to sample Imperial County rather than an RDD sample. The design for this oversample included:

- Selecting a sample of addresses in the targeted communities in northern Imperial County;
- Attempting to matching as many of the addresses as possible to telephone numbers;
- Sending a mailed advance letter to addresses with a matched telephone number;
- Sending a mailed advance letter and a returnable household information form to addresses without a matched telephone number, with the purpose of obtaining one or more telephone numbers associated with the residents of these addresses;
- Loading telephone numbers for addresses initially matched from databases and those received later via returned household information forms into CATI; and
- Attempting to obtain telephone interviews through outbound and inbound calls following the same protocol as interviews for the RDD and list samples of telephone numbers;
- Conducting in-person visits to nonresponding households with the purpose of obtaining one or more telephone numbers associated with the residents of these addresses via a household information form or encouraging residents at these addresses to call the toll-free number to complete the screening interview.

The sample was released in two waves in order to assess the yield without releasing all sample records. The ABS supplement comprised an initial sample of 2,499 addresses in northern Imperial County. One thousand five hundred eleven (61 percent) of these sample addresses were matched to telephone numbers. The remaining 988 addresses were sent a household information form along with the advance letter, as an attempt to obtain one or more phone numbers for these cases. For the second sample release, 2,751 addresses were selected, 1,581 of which were matched with a phone number and 1,170 of which were not able to be matched.

Imperial County Department of Public Health staff organized by the Imperial County Department of Public Health attempted to visit every non-responding household to obtain a household information form with one or more phone numbers and to encourage residents at these addresses to call the toll-free number to complete the screening interview. A total of 1,605 sampled households complete the Household Information sheet, either by responding to the initial mailings or during an in-person visit.

Given the ABS method used, nearly all sampled households were eligible to complete the adult interview and, when appropriate, the child and adolescent interviews. Cooperation rates for completing the screener were significantly higher for the unmatched sample (66.7 percent) than the matched sample (53.3 percent). This outcome likely resulted from more of the unmatched cases returning a household information form by mail, providing a household information form to an in-person recruiter, or calling the toll-free number to complete the screener. Unlike in the previous cycle, health department employees did attempt to visit matched sample members as well as the unmatched.

Table 6-14 shows results for the adult interviews by type of sample for northern Imperial County ABS oversample. A total of 339 adult interviews were completed, 233 from the matched sample and 106 from the unmatched sample. Unlike the cooperation rates for the screening interview, the cooperation rate for the adult interview was basically equal for the unmatched sample (54.8 percent) and the matched sample (52.7 percent).

Table 6-15 shows results for child interviews by type of sample which included 42 completed interviews. The majority of the child interviews (30) came from the smaller unmatched sample. This outcome seems likely due to households with children being more likely to only have cell service and, therefore, their cell numbers are less likely to be matched to their addresses like landline numbers.

Likewise, Table 6-16 shows results for adolescent interviews by type of sample. Only 15 adolescent interviews were completed from this sample, 11 from the matched sample and four from the unmatched sample.

Table 6-13. Results of CHIS 2017 data collection for Imperial County ABS sample, screening interview, by source and type of sample

	MATCHED			UNMATCHED			TOTAL	
	Number	Within category	of Total	Number	Within category	of Total	Number	of Total
HOUSEHOLDS TO BE CONTACTED	3,094			2,158			5,252	
TOTAL HOUSEHOLDS CONTACTED	3,094			2,158			5,252	
CS – COMPLETED SCREENER (C)	**513**		**16.6%**	**231**		**10.7%**	**744**	**14.2%**
Ineligible (I)								
IS – INELIGIBLE SCREENER; NO ELIGIBLE ADULTS, OTHER INELIGIBLE SCREENER	51	100.0%		9	100.0%		60	
Total Ineligible	**51**		**1.7%**	**9**		**0.4%**	**60**	**1.1%**
Out of Scope								
NR – NON-RESIDENTIAL	426	100.0%		39	100.0%		465	
Total Out of Scope	**426**		**13.8%**	**39**		**1.8%**	**465**	**8.9%**
Noncontact								
NA - FINAL NONCONTACT RESIDENTIAL	1,552	100.0%		1,743	100.0%		3,295	
Total Noncontact	**1,552**		**50.2%**	**1,743**		**80.8%**	**3,315**	**63.1%**
Refusal (R)								
RB - FINAL REFUSAL	403	81.4%		100	83.3%		503	
RC - UNFULFILLED CALLBACK	92	18.6%		20	16.7%		112	
Total Refusal	**495**		**16.1%**	**120**		**5.6%**	**615**	**11.7%**
Other Nonresponse								
LP – LANGUAGE PROBLEM	36	63.2%		10	62.5%		46	
NO – OTHER NON-RESPONSE	21	36.8%		6	37.5%		27	
Total Nonresponse	**57**		**1.8%**	**16**		**0.7%**	**73**	**1.4%**
TOTAL	**3,094**			**2,158**			**5,272**	
ELIGIBILITY RATE		91.0%			96.3%			92.5%
COOPERATION RATE ((C+1)/(C+I+R))		53.3%			66.7%			56.7%

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

Table 6-14. Results of CHIS 2017 data collection for Imperial County ABS sample, adult interview, by source and type of sample

	MATCHED			UNMATCHED			TOTAL	
	Number	Within category	of Total	Number	Within category	of Total	Number	of Total
Completed Interviews (C)								
CA - COMPLETED ADULT EXTENDED	230	98.7%		102	96.2%		332	
CP - ADULT PARTIAL COMPLETE FINISHED	3	1.3%		4	3.8%		7	
Total Completed Interviews	**233**		**45.4%**	**106**		**45.9%**	**339**	**45.6%**
Ineligible (I)								
IA – INELIGIBLE FOR ADULT EXTENDED	14	100.0%		8	100.0%		22	
Total Ineligible	**14**		**2.7%**	**8**		**3.5%**	**22**	**3.0%**
Refusal (R)								
RB - FINAL REFUSAL	204	62.8%		69	73.4%		273	
RC - UNFULFILLED CALLBACK	18	37.2%		25	26.6%		43	
Total Refusal	**222**		**43.3%**	**94**		**40.7%**	**316**	**42.5%**
Other Nonresponse								
LP - FINAL LANGUAGE PROBLEM	0	0.0%		0	0.0%		0	
EP - EMERGECY PROTOCOL	0	0.0%		0	0.0%		0	
NO - OTHER NON-RESPONSE	44	100.0%		23	100.0%		67	
Total Nonresponse	**44**		**8.6%**	**23**		**10.1%**	**67**	**9.0%**
TOTAL	**513**			**231**			**744**	
ELIGIBILITY RATE (C / (C+I))		94.3%			93.0%			93.9%
COOPERATION RATE ((C+I) / (C+I+R))		52.7%			54.8%			53.3%

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

Table 6-15. Results of CHIS 2017 data collection for Imperial County ABS sample, child interview, by source and type of sample

	MATCHED			UNMATCHED			TOTAL	
	Number	Within category	of Total	Number	Within category	of Total	Number	of Total
Completed Interviews (C)								
CC - COMPLETED CHILD EXTENDED	12	100.0%		30	100.0%		42	
Total Completed Interviews	**12**		**35.3%**	**30**		**54.5%**	**42**	**47.2%**
Ineligible (I)								
IC - INELIGIBLE	0	0.0%		1	100.0%		1	
Total Ineligible	**0**		**0.0%**	**1**		**1.8%**	**1**	**1.1%**
Refusal (R)								
RB - FINAL REFUSAL	2	25.0%		1	5.6%		3	
RC - UNFULFILLED CALLBACK	6	75.0%		17	94.4%		23	
Total Refusal	**8**		**23.5%**	**18**		**32.7%**	**26**	**29.2%**
Other Nonresponse								
LP - FINAL LANGUAGE PROBLEM	0	0.0%		0	0.0%		0	
NO - OTHER NON-RESPONSE	14	100.0%		6	100.0%		20	
Total Nonresponse	**14**		**41.2%**	**6**		**10.9%**	**20**	**22.5%**
TOTAL	**34**			**55**			**89**	
ELIGIBILITY RATE (C / (C+I))		100.0%			96.8%			97.7%
COOPERATION RATE ((C+I) / (C+I+R))		60.0%			63.3%			62.3%

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

Table 6-16. Results of CHIS 2017 data collection for Imperial County ABS sample, adolescent interview, by source and type of sample

	MATCHED			UNMATCHED			TOTAL	
	Number	Within category	of Total	Number	Within category	of Total	Number	of Total
Completed Interviews (C)								
CT - COMPLETED TEEN EXTENDED	11	100.0%		4	100.0%		15	
Total Completed Interviews	**11**		**91.7%**	**4**		**50.0%**	**15**	**75.0%**
Ineligible (I)								
IT - INELIGIBLE	0	0.0%		0	0.0%		0	
Total Ineligible	**0**		**0.0%**	**0**		**0.0%**	**0**	**0.0%**
Refusal (R)								
RB - FINAL REFUSAL	1	100.0%		4	100.0%		5	
RC - UNFULFILLED CALLBACK	0	0.%		0	0.0%		0	
Total Refusal	**1**		**8.3%**	**4**		**50.0%**	**5**	**25.0%**
Other Nonresponse								
NO - OTHER NON-RESPONSE	0	100.0%		0	100.0%		0	
Total Other Nonresponse	**0**		**0.0%**	**0**		**0.0%**	**0**	**0.0%**
TOTAL	**12**			**8**			**20**	
COOPERATION RATE (C+I / (C+I+R))		91.7%			50.0%			75.0%
ADOLESCENTS SAMPLED	39			25			64	
PERMISSION NOT RECEIVED	27	69.2%		17	68.0%		44	68.8%
COMBINED COMPLETION RATE (C / SAMPLED)		28.2%			16.5%			23.4%

Source: UCLA Center for Health Policy Research, 2017 California Health Interview Survey.

7. QUALITY CONTROL

SSRS's quality control procedures were in place throughout the study. Some of them, such as CATI 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 Computer-Assisted Telephone Interview Testing

Quality control of the survey questionnaires began with development of specifications for CATI 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 program.

Once programming commenced, quality control continued with testing to make sure that the CATI 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 project staff (including programmers, ROC staff, data collection staff, and data analysts), UCLA, and PHI.

After the pilot test and then again during the first months of the statewide field period, the data preparation and programming staffs reviewed frequency counts from each instrument to make sure that the CATI 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. It was necessary to make a number of corrections to the CATI 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 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.

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 appeared on the CATI screen.

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.

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.

8. REFERENCES

Rizzo, L., Brick, J., & Park, I. (2004). A Minimally Intrusive Method for Sampling Persons in Random Digit Dial Surveys. *Public Opinion Quarterly*. 68(2): 267-274.

APPENDIX A – CHIS 2017 ADVANCE LETTER IN ENGLISH

Dear California Resident,

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

This important telephone 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 as part of a scientific sample to represent many other households like yours. Since 2001, more than 400,000 Californians have talked to us about many different health topics.

We will be calling sometime in the next two weeks, and one adult in your household will be selected for the interview. If you have a teenager (ages 12-17), we may ask to interview one teen after receiving permission from a parent. Participation is voluntary and strictly confidential. Your answers will be combined with other participants and used only for statistical reporting.

Please share this information with others in your household. **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).

To participate in the California Health Survey, you can call toll-free, **1-888-978-4640**. We also encourage you to contact us with any questions or visit the California Health Survey 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

Major funders of this survey include the California Department of Health Care Services (DHCS), DHCS Mental Health Services Division, California Department of Public Health, California Health Benefit Exchange, First 5 California, The California Endowment, California HealthCare Foundation, and Kaiser Permanente.

Relevant to Privacy Act Information, the legislative authority for this survey is 42 USC 285.

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