

OVERVIEW

The California Health Interview Survey (CHIS) is a biennial population-based, omnibus health survey of California. It is the largest telephone survey in California and the largest state health survey in the country. CHIS 2009 is the fifth data collection cycle following CHIS 2001, 2003, 2005, and 2007. For a full report of the 2009 sampling methods see [Report 1 Sample Design](#)¹ of the CHIS 2009 Methodology Report Series.

CHIS randomly selects one adult to interview in each of the more than 40,000 participating households throughout California. In addition to adults, interviews are conducted about the health of children (ages 0 to 11 by proxy with the adult most knowledgeable about the health of the selected child) and adolescents (age 12 to 17 following parental permission). The selected adult respondent must be the parent or legal guardian of children and/or adolescents living in the household in order for children and/or adolescents to be eligible for interview. This results in approximately 3,500 adolescent interviews and information on approximately 9,500 young children throughout the state. Major content areas for the 2009 survey include health-related behaviors, health status and conditions, cancer screening, diet, physical activity, health insurance coverage, inter-personal violence, mental health, and access to health care and mental health services. To capture the rich diversity of the California population, interviews are conducted in five languages: English, Spanish, Chinese (Mandarin and Cantonese dialects), Vietnamese, and Korean.

In addition to the main landline RDD sample, CHIS 2009 also includes a statewide cell-phone sample. More information about these samples is provided below in *The CHIS 2009 Sample in Detail*.

Overall, the CHIS sample is designed to provide population-based estimates for most California counties and all major ethnic groups, including several ethnic subgroups. The sample is designed to meet and optimize two goals:

1. Provide local-level estimates for counties with populations of 60,000 or more for local planning and comparisons among counties;
2. Provide statewide estimates for California's overall population, its major race/ethnic groups, as well as for several Asian ethnic groups.

¹ http://healthpolicy.ucla.edu/Documents/Newsroom%20PDF/CHIS2009_method1.pdf

The collected information and results are available to state and local health agencies, community-based organizations, health care providers and organizations, advocacy groups, and policy makers. CHIS results and data are available through multiple dissemination channels:

- CHIS web site with an interactive query system (*AskCHIS*) for tailored data estimates
- Public-use data files for researchers and analysts
- Published reports
- Scholarly publications
- The UCLA Center for Health Policy Research Data Access Center with special, more-detailed data files only available in this secure environment

CHIS also provides technical assistance for researchers and all users of web-based and public-use data.

The CHIS 2009 Sample in Detail

CHIS 2009 includes 2 separate samples, both administered through a computer assisted telephone interview (CATI) system:

1. Main landline random digit-dial (RDD) sample supplemented by surname-listed sample, and
2. Statewide cell-phone sample of about 1,700 adults.

Landline RDD Sample

The main landline RDD sample consists of adults, adolescents and children from more than 40,000 households. Nearly all of these cases are selected through an RDD methodology and supplemented by surname-listed sample to increase the yield of Vietnamese and Korean cases. The landline RDD sample is geographically-stratified by county (see *Sample Size by County* below). Only residential households with landline telephones are included in the landline RDD sample. The sample weights that accompany the data files are statistically adjusted to compensate for households without telephones.

Cell Phone Sample

The number of households that do not have landline telephones has grown rapidly in recent years, and most of this change is due to households with only a cellular telephone. There is growing evidence that households without landline telephones are systematically different than households with landline telephones. In order to include this growing population segment in CHIS, a separate cell-phone sample is conducted with a target sample size of about 1,700 completed adult interviews statewide. This sample is drawn using RDD methodology from banks of telephone numbers that are assigned for cellular use. The sampled telephone numbers are called and screened to determine whether the person who answers the phone is an adult and if so, whether or not s/he has a landline telephone. If s/he does have a landline telephone an additional question is asked to determine if most or all of their phone calls are conducted via cell phone. Only cell-only or cell-mainly respondents are eligible for the extended adult interview; for all others, the call is terminated after attempting to reimburse for air time. For the cell-only and cell-mainly cases, additional questions are asked to determine if the phone is shared among other

adults in the same household and one adult is randomly selected to conduct the adult extended interview. After the extended interview is finished, an attempt is made to reimburse the respondent for the cost of cell phone air time. This methodology was pilot tested in CHIS 2005 and a cell-only sample of over 800 adults was completed in CHIS 2007.

Sample Size by County

The geographic stratification of the CHIS sample was revised in 2005 to provide data for more individual counties than the original sample design used in CHIS 2001 and 2003. This revised design is continued in CHIS 2009. California's 58 counties are arranged into 44 strata (see Table 1). Forty-one counties form their own independent sampling stratum (expanded from 33 in the previous design). The remaining 17 counties are arranged into 3 multiple county strata.

As in all CHIS cycles, agencies may partner with CHIS to increase the sample size or add county-specific content in their county through supplemental funding.

Sample Size by Age Category

From each household, as many as three persons, one from each of three age categories is selected to be interviewed. One adult (ages 18 and older) from each household is part of the adult sample. In households with adolescents (ages 12-17) residing at home, one adolescent is interviewed (parental consent and adolescent ascent are required). In homes with children under age 12, the adult who is most knowledgeable about a selected child is interviewed. As in previous data collection cycles, CHIS 2009 produces three distinct samples: adult, adolescent, and child. The estimated number of interviews for each sample is more than 40,000 adults, approximately 3,500 adolescents, and approximately 9,000 children by adult proxy.

Over-sampling Asian Ethnic Groups

Two Asian ethnic groups, Vietnamese and Korean, are augmented in CHIS 2009 with additional sample so that each group's total sample size of adult interviews reaches a target of 500. A combination of geographic targeting based on areas with high concentration of these groups plus listed-surname sampling is used to increase the number of Vietnamese and Koreans in the sample.

Because the CHIS 2009 sample produces a sufficient number of Chinese, Filipinos, Japanese, and South Asians, there is no need to over-sample these groups.

Table 1. CHIS 2009 RDD Sample Size Targets for Counties

Stratum	DOF 2009 est. Households	CHIS 2009 Sample
Los Angeles	3,442,863	7,800
San Diego	1,028,998	4,800
Orange	1,142,357	2,240
Santa Clara	665,839	1,240
San Bernardino	712,889	1,440
Riverside	610,185	1,540
Alameda	557,586	1,150
Sacramento	533,758	1,150
Contra Costa	386,935	850
Fresno	305,817	610
San Francisco	271,657	760
Ventura	348,030	760
San Mateo	277,265	570
Kern	259,554	570
San Joaquin	234,928	500
Sonoma	176,891	500
Stanislaus	185,601	500
Santa Barbara	130,879	500
Solano	143,951	500
Tulare	151,116	500
Santa Cruz	134,250	500
Marin	122,926	1,920
San Luis Obispo	91,412	500
Placer	106,331	500
Merced	107,339	500
Butte	79,816	500
Shasta	89,374	500
Yolo	71,357	500
El Dorado	74,526	500
Imperial	67,798	500
Napa	52,951	500
Kings	45,238	500
Madera	46,544	500
Monterey	51,954	500
Humboldt	54,229	800
Nevada	40,836	500
Mendocino	35,693	500
Sutter	34,133	500
Yuba	26,655	500
Lake	27,426	500
San Benito	18,720	500
Tehama-Glenn-Colusa	42,216	400
Del Norte-Siskiyou-Lassen- Trinity-Modoc-Plumas-Sierra	62,100	400
Tuolumne-Calaveras-Amador- Inyo-Mariposa-Mono-Alpine	78,777	400
TOTAL	13,129,700	41,900