

OVERVIEW

The California Health Interview Survey (CHIS) began in 2001 as 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 2011-2012 is the sixth data collection cycle following CHIS 2001, 2003, 2005, 2007, and 2009.

Beginning in 2011, CHIS will become a continuous survey, with ongoing data collection throughout each two-year cycle. This change to a continuous survey will significantly enhance the role of CHIS as a critical source of public health surveillance information for California. While the change to a continuous survey is a significant enhancement, most aspects of the CHIS project will continue as before.

CHIS randomly selects one adult to interview in each participating household throughout California. In addition to adults, extended 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, directly interviewed 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 selected.

Major content areas for the 2011-2012 survey include health status and conditions, cancer screening, diet, physical activity, other health-related behaviors, health insurance coverage, mental health, and access and utilization of 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.

We anticipate about 70 to 80 percent of completed extended interviews will be obtained through the landline and surname list samples, and 20 to 30 percent of completed extended interviews will be completed through the cell phone sample. In addition to the main landline sample, CHIS 2011-2012 will also include a statewide cell phone sample. More information about these samples is provided below in *The CHIS 2011-2012 Sample Design in Detail*. After data collection, methodology reports with more details about the sample design, data collection methods, data processing procedures, response rates, and weighting and variance estimation will be available online at <http://healthpolicy.ucla.edu/chis/design/Pages/methodology.aspx>.

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

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

The collected information and results are available publicly, including to local, state and federal 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 website with a free, easy-to-use 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 operates a Data Access Center with special, more-detailed data files available only in this secure environment

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

The CHIS 2011-2012 Sample Design in Detail

CHIS 2011-2012 includes two separate samples, both administered through a Computer-Assisted Telephone Interview (CATI) system with random-digit dial (RDD) sampling:

1. a landline sample supplemented by surname-listed samples, and
2. a statewide cell phone sample.

Landline Sample

Nearly all of these cases are selected through an RDD methodology and supplemented by surname-listed samples to increase the number of Vietnamese and Korean cases. The landline sample is geographically stratified by county, groups of small counties, and some sub-county areas (see *Sample Size by County* below). Only residential households with landline telephones are eligible and included in the landline sample. The sample weights that accompany the data files are statistically adjusted to compensate for households without telephones or with multiple telephones.

Cell Phone Sample

The number of households that do not have landline telephones has grown rapidly in recent years; nearly all of this change is due to the growth of households with cellular telephones as their only telephone. There is considerable evidence that households that rely exclusively on cell phone 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 statewide, stratified at by a combination of area codes, county, and groups of small counties.

This sample is drawn using RDD methodology from banks of telephone numbers assigned for cellular use. Consistent with the methodology in CHIS 2009, CHIS 2011-2012 will include all cell phone users (including those who also have a landline telephone and those who do not). This contrasts with the CHIS 2007 cell phone sample in which sampled cell telephone numbers were screened to exclude households with a landline telephone. More detail on the CHIS 2007 and 2009 cell phone sample methodologies are available online at <http://healthpolicy.ucla.edu/chis/design/Pages/methodology.aspx>

In addition, in CHIS 2011-2012, as in CHIS 2009, child and adolescent extended interviews will be conducted as part of the cell phone sample as well as the landline sample. This contrasts with CHIS 2007, in which children and teens were enumerated as part of the CHIS screener interview, but extended interviews were not conducted with children and teens in the cell sample.

Sample Size by Age Category

From each household, as many as three persons will be sampled, one from each of three age categories. One adult (age 18 and older) from each household is selected for interview. In households with adolescents (age 12 to 17) residing at home, one adolescent is sampled and interviewed, after parental and adolescent consents are obtained. In homes with children under age 12, one child is sampled and the adult who is most knowledgeable about that child is interviewed. Thus, CHIS includes three distinct age-group samples: adults, adolescents, and children. The estimated number of interviews for each sample is more than 42,000 adults, approximately 3,000 adolescents, and approximately 9,000 children by adult proxy.

Sample Size by County

The CHIS landline sample is stratified into 56 geographic sampling strata, including 2 counties with sub-county strata (8 Service Planning Areas in Los Angeles County and 6 Health Districts in San Diego County), 39 single-county strata, and 3 multi-county strata comprised of the 17 remaining counties. The sample is allocated to achieve CHIS's goals of providing estimates for as many counties as possible and to provide estimates for major race/ethnic groups and subgroups. In this cycle we are also able to set county-level goals for the cell phone RDD sample due to advances in geographical targeting of cell phone numbers. In the past, we were only able to set targets at a broader regional level. Thus the current cell phone sampling method should produce better estimates for most counties than in the past. The CHIS 2011-2012 sample, as in previous CHIS cycles, will include a minimum sample size of approximately 500 households for the smallest counties; the largest county will have a sample of nearly 10,000 households (see Table 1). Agencies and organizations may partner with CHIS to increase the sample size or add county-specific content in their county through supplemental funding.

Samples of Race/Ethnic Groups

One of the key CHIS sampling goals is to produce data that reflects California's ethnic and racial diversity. CHIS includes samples of Whites, Latinos, Asians and Pacific Islanders, African Americans, and American Indians/Alaska Natives (AIANs) that reflect their shares of the state's population. Because of their large population sizes in California, CHIS also includes substantial samples of Latino and Asian ethnic groups. In order to have a sufficient number of two key Asian ethnic groups, CHIS oversamples Vietnamese and Koreans so that each group's total sample of adults reaches a target of 500; CHIS has been oversampling Vietnamese and Koreans since its first survey in 2001. Because the CHIS 2011-2012 sample produces a sufficient number of Chinese, Filipinos, Japanese, and South Asians, there is no need to oversample these groups. CHIS 2011-2012 will include a supplemental sample of American Indians/Alaska Natives to ensure that both urban and rural AIAN residents are adequately represented; CHIS 2001 oversampled AIANs as well. CHIS categorizes respondents to each race/ethnic group based on their own self-reported responses to a series of questions on race and ethnicity.

Table 1. CHIS 2011-2012 RDD Sample Size Targets for Counties

Stratum	Total Adult Sample
Los Angeles	9,605
San Diego	3,265
Orange	2,946
Riverside	2,164
San Bernardino	1,888
Santa Clara	1,788
Alameda	1,618
Sacramento	1,572
Contra Costa	1,136
San Francisco	1,013
Fresno	882
Ventura	795
Kern	790
San Mateo	772
San Joaquin	666
Butte	600
El Dorado	600
Humboldt	600
Imperial	600
Kings	600
Lake	600
Madera	600
Marin	600
Mendocino	600
Merced	600
Monterey	600
Napa	600
Nevada	600
Placer	600
San Benito	600
San Luis Obispo	600
Santa Barbara	600
Santa Cruz	600
Shasta	600
Solano	600
Sonoma	600
Stanislaus	600
Sutter	600
Tulare	600
Yolo	600
Yuba	600
Del Norte -Siskiyou -Lassen -Trinity -Modoc - Plumas -Sierra	500
Sierra -Tuolumne -Calaveras -Amador - Inyo -Mariposa -Mono - Alpine	500
Tehama-Glenn-Colusa	500
TOTAL	48,000