California Health Interview Survey

Making California's Voices Heard on Health

CHIS 2001 Methodology Series

Report 2

Data Collection Methods

CALIFORNIA HEALTH INTERVIEW SURVEY

CHIS 2001 METHODOLOGY SERIES

REPORT 2

DATA COLLECTION METHODS

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www.chis.ucla.edu

This report describes how data were collected for CHIS 2001. It was a telephone survey using a random digit dialing (RDD) sample, as well as list samples from different sources to augment the yield for certain racial and ethnic groups. All data were collected using a computer-assisted telephone interviewing (CATI) system. Activities included under "data collection" for purposes of this report include Westat involvement in developing and programming the survey instruments, recruiting and training interviewers to administer the survey in seven languages, planning and implementing a strategy for release of the sample in the CATI automated scheduler, contacting respondents and conducting interviews, and implementing quality assurance procedures.

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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 Health Services, and the Public Health Institute. Funding for CHIS 2001 came from multiple sources: the California Department of Health Services, The California Endowment, the California Children and Families Commission, the National Cancer Institute, the Centers for Disease Control and Prevention, and the Indian Health Service.

PREFACE

Data Collection Methods in CHIS 2001 is the second in a series of methodological reports describing the 2001 California Health Interview Survey (CHIS 2001). 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 Health Services, and the Public Health Institute. Westat was responsible for the data collection and the preparation of five methodological reports from the 2001 survey. The survey examines public health and health care access issues in California. The CHIS telephone survey is the largest state health survey ever undertaken in the United States. The plan is to monitor the health of Californians and examine changes over time by conducting periodic surveys in the future.

Methodological Reports

The first five methodological reports for the 2001 CHIS are as follows:

- Report 1: Sample Design for CHIS 2001
- Report 2: Data Collection Methods in CHIS 2001
- Report 3: Data Processing Procedures in CHIS 2001
- Report 4: Response Rates in CHIS 2001
- Report 5: Weighting and Variance Estimation for CHIS 2001

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.

This report describes how data were collected for CHIS 2001. It was a telephone survey using a random digit dialing (RDD) sample, as well as list samples from different sources to augment the

yield for certain racial and ethnic groups, and a computer-assisted telephone interviewing (CATI) system. The purposes of this report are:

- To serve as a reference for researchers using CHIS 2001 data;
- To document data collection procedures so that future iterations of CHIS, or other similar surveys, can replicate those procedures if desired;
- To describe lessons learned from the data collection experience and make recommendations for improving future surveys; and
- To evaluate the level-of-effort required for the various kinds of data collection undertaken.

Activities included under "data collection" for purposes of this report include Westat involvement in developing and programming the survey instruments, recruiting and training interviewers to administer the survey in seven languages, planning and implementing a strategy for release of the sample in the CATI automated scheduler, contacting respondents and conducting interviews, and implementing quality assurance procedures. Special analyses using administrative data from the CATI system inform the purposes above at the RDD stratum and individual supplemental sample levels.

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1. CHIS 2001 DESIGN AND METHODOLOGY SUMMARY

1.1 Overview

The 2001 California Health Interview Survey (CHIS 2001) is a collaborative project of the UCLA Center for Health Policy Research, the California Department of Health Services, and the Public Health Institute. The focus of the survey is on a variety of public health topics, including access to health care and health insurance coverage. CHIS 2001 is the largest state health survey ever undertaken in the United States. It is a random digit dialing (RDD) telephone survey of California households designed to produce reliable estimates for the whole state, for large- and medium-sized population counties in the state, and for groups of the smallest population counties. Three California cities that have their own health departments were also sampled as part of CHIS 2001.

The survey design supports study of California's major race and ethnic groups, and a number of smaller ethnic groups within the state. Adults, parents of children below age 12, and adolescents (ages 12-17) residing in California households are the eligible respondents to the survey. CHIS 2001 collected data between November 2000 and October 2001. The plans are to conduct independent cross-sectional surveys of the California population on a biannual basis to monitor important health-related indicators and potentially track changes over time. CHIS 2001 is the first of these planned surveys.

CHIS 2001 collected information on if, where, and how people get health care in California. The goal is to provide health planners, policymakers, state, county, and city health agencies, and community organizations with information on the health and health care needs facing California's diverse population. For example, the number and characteristics of adults, children, and adolescents without access to care and lacking health insurance can be estimated from the data collected in CHIS 2001. Other key estimates on the prevalence of cancer screening, diabetes, asthma, and other health conditions can also be produced. The survey includes major content areas, such as health status and conditions, health-related behaviors, access to health care services, and health insurance coverage.

1.2 Sample Design Objectives

The CHIS 2001 sample is designed to meet two objectives: (1) provide local-level estimates for counties and groupings of counties with populations of 100,000 or more; and (2) provide statewide estimates for California's overall population and its larger race/ethnic groups, as well as for several smaller ethnic groups. To address these objectives, the sample was allocated by county and aggregates of smaller counties, with supplemental samples of selected populations and cities. Table 1-1 shows the sampling strata (i.e., counties and groups of counties that were identified in the sample design as domains for which separate estimates would be produced). A sufficient amount of sample was allocated to each of these domains to support the first sample design objective.

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

1. Los Angeles	15. San Joaquin	29. El Dorado
2. San Diego	16. Sonoma	30. Imperial
3. Orange	17. Stanislaus	31. Napa
4. Santa Clara	18. Santa Barbara	32. Kings
5. San Bernardino	19. Solano	33. Madera
6. Riverside	20. Tulare	34. Monterey, San Benito
7. Alameda	21. Santa Cruz	35. Del Norte, Humboldt
8. Sacramento	22. Marin	36. Lassen, Modoc, Siskiyou, Trinity
9. Contra Costa	23. San Luis Obispo	37. Lake, Mendocino
10. Fresno	24. Placer	38. Colusa, Glen, Tehama
11. San Francisco	25. Merced	39. Sutter, Yuba
12. Ventura	26. Butte	40. Plumas, Nevada, Sierra
13. San Mateo	27. Shasta	41. Alpine, Amador, Calaveras, Inyo,
14. Kern	28. Yolo	Mariposa, Mono, Tuolumne

Source: UCLA Center for Health Policy Research, 2001 California Health Interview Survey.

Samples were also drawn from each of the three California cities that have their own local health department. In addition, supplemental samples were developed for three counties that contracted for additional sample to enhance their overall estimates. These city and supplemental county samples were in the following locations:

- The cities of Berkeley, Long Beach, and Pasadena; and
- The counties of San Francisco, Santa Barbara, and Solano.

The three city samples and the Solano county supplemental sample were implemented with and incorporated in the original statewide RDD sample. The separate San Francisco and Santa Barbara supplemental samples were subsequently added to the statewide RDD sample prior to constructing the sample weights and are part of the final CHIS 2001 RDD sample file.

To accomplish the second objective, larger sample sizes were allocated to the more urban counties where a significant portion of the state's African American and Asian ethnic populations reside. Additionally, supplemental samples were used to improve the sample size and precision of the estimates for specific ethnic groups. The supplemental ethnic group samples in CHIS 2001 were as follows:

- South Asian, Cambodian, Japanese, Korean, and Vietnamese;
- American Indian/Alaska Natives in urban and rural areas; and
- Latinos residing in Shasta County (a sample requested by the local health department).

1.3 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 Khmer (Cambodian). These languages were chosen based on research that identified these as the languages that would cover the largest number of Californians in the CHIS sample design that either did not speak English or did not speak English well enough to otherwise participate.

Westat, a private firm that specializes in statistical research and large-scale sample surveys, conducted the CHIS 2001 data collection for the CHIS project. Westat staff interviewed one randomly selected adult in each sampled household. In those households with children (under age 12) or adolescents (ages 12-17), one child and one adolescent were randomly sampled, so up to three interviews could have been completed in each sampled household. The sampled adult was interviewed, and the parent or guardian who knew the most about the health and care of the sampled child was interviewed. The sampled adolescents responded for themselves, but only after a parent or guardian gave permission for the interview. Since adolescents were not reliable sources concerning their own health insurance coverage, the parents of sampled adolescents were interviewed about this topic separately.

One criterion for the adolescent and child to be selected for the survey is that they had to be "associated" with the selected adult. This meant that in most cases the interviewed adult had to be either the parent or guardian. The CHIS 2001 sample weights adjust for this selection criterion so as not to bias estimates based on the adolescent and child surveys. Table 1-2 shows the number of completed adult, child, adolescent, and adolescents' health insurance interviews in CHIS 2001, by the type of sample (RDD or supplemental sample).

Table 1-2. Number of completed interviews by type of sample, instrument

Type of sample	Adult	Child	Adolescent	Adolescent insurance
Total RDD + supplemental cases	57,848	13,276	6,058	8,302
RDD (includes 3 cities + Solano county supplemental cases)	54,122	12,392	5,733	7,809
Santa Barbara supplemental cases	206	49	22	31
San Francisco supplemental cases	1,100	151	46	79
Total CHIS 2001 RDD file	*55,428*	*12,592*	*5,801*	*7,919*
Other supplemental samples:				
South Asian	443	158	39	65
Cambodian	126	44	37	44
Japanese	330	51	18	33
Korean	326	95	30	44
Vietnamese	540	124	34	60
American Indian/Alaska Native	351	106	51	71
Shasta Latinos	304	106	48	66

Source: UCLA Center for Health Policy Research, 2001 California Health Interview Survey.

The interviews done in English were administered using Westat's computer-assisted telephone interviewing (CATI) system. Spanish and Vietnamese language interviews were also conducted entirely in CATI, while interviews conducted in Cantonese, Mandarin, Korean, and Khmer used English CATI screens and paper translations in tandem. The average adult interview took around 32 minutes to complete. The average child and adolescent interviews took 14 minutes and 19 minutes, respectively. Interviews in the non-English languages generally averaged longer to complete. Approximately 12 percent of the adult interviews were completed in a language other than English, as were 21 percent of all child (parent proxy) interviews and 9 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. Survey topic areas by instrument

Adult interview	Child interview	Adolescent interview
Age, sex, race, ethnicity	Age, sex, race, ethnicity	Age, sex, race, ethnicity
Physical activity		Physical activity
	Bike helmet use	Bike helmet, seatbelt use
	Recent serious injury	Recent serious injury
Health status	Health status	Health status
Women's health	Child care	
Chronic health conditions	Asthma, ADD	Asthma, diabetes
Cancer history, screening		
Skin cancer prevention	Skin cancer prevention	Skin cancer prevention
Health care use and access	Health care use and access	Health care use and access
Alcohol, tobacco use		Alcohol, tobacco, drug use
Mental health		Mental health
Health insurance	Health insurance	Health insurance
Diet (fruit-vegetable intake)	General diet	General diet
Dental health	Dental health	Dental health
Employment		Employment
Gun access, training		Gun access, violence
Income		
	Family interaction	Parental involvement
	Video games, computer use	Video games, computer use
Sexual orientation		Sexual behavior, orientation
		Future plans

Source: UCLA Center for Health Policy Research, 2001 California Health Interview Survey.

1.4 Response Rate

The overall response rate for CHIS 2001 is a composite of the screener completion rate (i.e., success in introducing the survey to a household in order to select a respondent), and the extended interview completion rate (i.e., success in getting the selected respondent to complete the full interview). For the adult survey, the screener completion rate was 59.2 percent and the extended interview completion rate was 63.7 percent. This gives an overall response rate of 37.7 percent. To maximize the survey's response rate, an advance letter (in five languages) was mailed to all sampled telephone numbers for which an address could be obtained from reverse directory services. Approximately 66 percent of the sample was mailed an advance letter. Response rates varied by sampling stratum and were slightly higher in households that received an advance letter.

To assist in achieving sample size goals, respondents that completed 80 percent of the questionnaire (i.e., through Section I on health insurance) after all followup attempts were exhausted to complete the full questionnaire were counted as "complete." This resulted in 397 "partial completes" being included in the final adult survey data. Employment and income information as well as potential public program eligibility and food insecurity information would be missing from these cases.

Proxy interviews were allowed for frail and ill persons over the age of 65. The reason is that health estimates made for elderly persons could be biased if this is not allowed. Eligible selected persons were recontacted and offered a proxy option and 316 had a proxy interview completed by either a spouse/partner or adult child. Only a subset of questions identified as appropriate for a proxy respondent were administered.

1.5 Weighting the Random Digit Dial Sample

To produce correct population estimates for the RDD CHIS results, weights are applied to the sample data to compensate for a variety of factors, some directly resulting from the design and administration of the survey. Sample weighting was carried out in CHIS 2001 to accomplish the following objectives:

- Compensate for differential probabilities of selection for households and persons (Note: households with listed addresses and thus eligible for an advance letter were assigned a probability of selection of 1.25 over unlisted households);
- 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 for the RDD samples (each stratum is an independent sample), a household weight was created for all households that completed the screener interview. This household weight is the "base weight" computed as the inverse of the probability of selection of the sample telephone number adjusted for each of the following:

- Subsampling for listed address/advance letter status;
- Unknown residential status;
- Screener interview nonresponse;
- Multiple telephone numbers; and
- Household poststratification.

A "poststratified household weight" was then used to compute a person-level weight. This person-level weight incorporates the within-household probability of selection of the sampled person and adjusts for nonresponse, plus an adjustment resulting from raking the data to person-level control totals. Each of these adjustments corresponds to a multiplicative weighting factor.

Raking can be thought of as a multidimensional poststratification procedure because the weights are basically poststratified to one set of control totals (a dimension), then these adjusted weights are poststratified to another dimension. After all dimensions were adjusted, the process was iterated until the control totals for all the dimensions were simultaneously satisfied (within a specified tolerance).

There are 11 dimensions used in CHIS 2001. The first 10 dimensions are created by combining demographic variables (age, sex, race, and ethnicity) and different geographic areas (city, county, group of counties, and state). The 11th dimension is created to adjust the weights for households without a telephone number.

The control totals used in the raking were derived from the *Census 2000 Summary File 1* (SF1). Population items in SF1 include sex, age, race, ethnicity (Latino/non-Latino), household relationships, and group quarters. The race classification in SF1 include six groups: White, African American, American Indian/Alaska Native, Asian, Native Hawaiian/Pacific Islander, and a category of Other Race. Since a person could report multiple races, the SF1 provided counts for each of 63 possible race combinations a person could report.

One of the limitations of using the SF1 for the control totals is the inability to produce counts that exclude the fraction of the population living in "group quarters" (e.g., nursing homes, prisons) for some dimensions used in CHIS 2001. The group quarter population represented 2.4 percent of the total population in California. As a result, the number of persons living in group quarters was estimated for some of the raking dimensions, and the SF1 totals were reduced by these estimated amounts prior to raking.

1.6 Imputation Methods

Three different imputation procedures were used in CHIS 2001 to fill in missing responses that were essential for weighting the data or for such basic descriptive purposes as income categories. The first imputation technique is deterministic or non-stochastic in nature. Deterministic imputation was used to fill in the missing items for self-reported county of residence (item AH42). These imputations required no randomization because other geographic data are available that can be used to determine the respondent's county of residence with a relatively high level of probability of being correct although not with 100 percent certainty in all cases.

The second imputation technique is a completely random selection from the observed distribution. This method is used only when a very small percentage of the items are missing. For example, when imputing the missing values for self-reported age, the distributions of the responses for age by type of interview (adult, child, or adolescent) were used to randomly assign an age using probabilities associated with these distributions.

The third technique is hotdeck imputation. Hotdeck imputation was used to impute race, ethnicity, and household income in CHIS 2001. The hotdeck approach is probably the most commonly used method for assigning values for missing responses in large-scale household surveys.

With a hotdeck, a value reported by a respondent for a particular item is assigned or donated to a "similar" person who did not respond to that item. To carry out hotdeck imputation for CHIS 2001, the respondents to an item form a pool of donors, while the nonrespondents are a group of recipients. A recipient is matched to the subset pool of donors, with the same household structure. The recipient is then randomly imputed the same household income, ethnicity/race (depending on the items that need to be imputed) from one of the donors in the pool. Once a donor is used, it is removed from the pool of donors.

Imputation flags are used in the data file to identify all imputed values.

1.7 Methodology Report Series

A series of five methodology reports are available with more detail about the methods used in CHIS 2001:

- Report 1 – Sample Design
- Report 2 – Data Collection Methods
- Report 3 – Data Processing Procedures
- Report 4 – Response Rates
- 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 www.CHIS.ucla.edu or contact CHIS at CHIS@ucla.edu.

2. SCREENING INTERVIEW AND CATI INSTRUMENT STRUCTURE

The 2001 CHIS could include, for a given household, up to four substantive questionnaire sections: the adult, child, and adolescent extended questionnaires, and the adolescent insurance questionnaire. Besides the substantive survey content, there was also a need for the CATI instruments to perform 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. All of these functions were programmed into the CATI instrument; they are described in this chapter.

2.1 Basic Initial Screening Interview

The CHIS 2001 sample was composed of telephone numbers selected as described in Report 1: Sample Design. On first contact with a sampled telephone number, interviewers needed to:

- Identify a household member 18 years of age or older to act as informant;
- Determine whether the telephone number was associated with a residence; and
- List all persons 18 years of age or older in the household so that one adult could be randomly selected for the extended interview.

These basic elements were scripted into the initial screening interview for each sample (RDD and list). Note that the initial screener does not include a full household enumeration (i.e., adolescents and children are not listed) even though they would be eligible for part of the sample. Westat and UCLA agreed that the enumeration of children as part of the initial screener would negatively affect response rates. As discussed below, this enumeration became part of the adult extended interview.

Other elements were also included in the initial screener to assist in developing survey weights:

- The number of children under 12 years of age living in the household;
- The number of adolescents between 12 and 17 years if age living in the household; and,

- The number and use (home, business) of telephone numbers ringing into the household.

2.2 Initial Screening Interview for Supplemental Samples

As described in Report 1, CHIS 2001 included both ethnic and geographic supplemental samples. For telephone numbers selected for either kind of supplemental sample, the initial screening interview included one or more additional questions to determine whether a household included one or more individuals meeting the supplemental sample criteria. For the county-specific supplemental samples (San Francisco, Santa Barbara, and Shasta), one additional question was asked of the screener informant:

Do you live in (COUNTY NAME)?

For the ethnic supplemental samples (American Indian/Alaska Native, Cambodian, Chinese, Hispanic/Latino in Shasta County, Japanese, Korean, South Asian, Vietnamese), one question was added after the enumeration of adults in the household, generally of the form:

Do any of these adults who live in your household consider themselves to be (ETHNICITY) or of (ETHNICITY) descent?

For the Shasta Latino supplemental sample, the phrase "such as Mexican, Chicano, or Salvadoran" was added to the end of the question. For the South Asian supplemental sample, the question was somewhat different:

Do any of these adults who live in your household consider their ancestry to be Pakistani, Indian, Bangladeshi, Sri Lankan, or Bhutanese descent?

If the answer to the ethnic screening question was "yes," then the interviewer asked whether each adult was of that ethnic background. Only adults of the appropriate ethnic background were eligible to be selected for the extended interview. In Section A of the extended interview, sampled adults were asked about their racial and ethnic background. Those responding that they were something other than the supplemental sample category were also considered ineligible and the interview was terminated.

There were two exceptions to these ethnic-screening procedures that arose during the field period. Fairly early on, the CHIS staff learned that Cambodians were very suspicious of telephone calls from strangers because of activities relating to political rivalries originating in Cambodia. The ethnic

screening question was considered likely to put Cambodians on guard, and either refuse to respond to the survey or to answer untruthfully. The question was dropped for the Cambodian supplemental sample, and the screening took place in the extended interview.

After the events of September 11, interviewers observed a similar phenomenon among the South Asian community. On September 18, the ethnic screening question was dropped for the South Asian subsample. As with the Cambodian sample, the ethnicity questions in the extended interview served to distinguish eligible adults.

2.3 Overall Structure of CHIS 2001 Questionnaire

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

- The screener respondent;
- A sampled adult;
- An adult who could give permission for the adolescent interview;
- An adult to answer the Adolescent Insurance Questionnaire;
- A sampled adolescent; and
- A "most knowledgeable adult" (MKA) to answer the Child Questionnaire.

In practice, of course, one adult usually filled multiple roles in households with adolescents and/or children. However, the possibilities of multiple respondents required the design staff to establish rules for the order of instruments and of the various administrative activities (e.g., selecting sample persons, identifying and contacting respondents), and CATI tools for navigating through the administrative and questionnaire screens. The default sequence of questionnaire and navigation sections is presented in Figure 2-1. A basic principle of the interview flow as shown in Figure 2-1 is that once the sampled adult is on the telephone, the interviewer should attempt to complete as many different parts of the interview as possible with that person. Once that has happened, the system goes to the HHSELECT screen. If there are remaining parts of the interview, the interviewer selects another individual (e.g., the MKA for the Child Questionnaire), and completes as much as possible with that respondent, and so on.

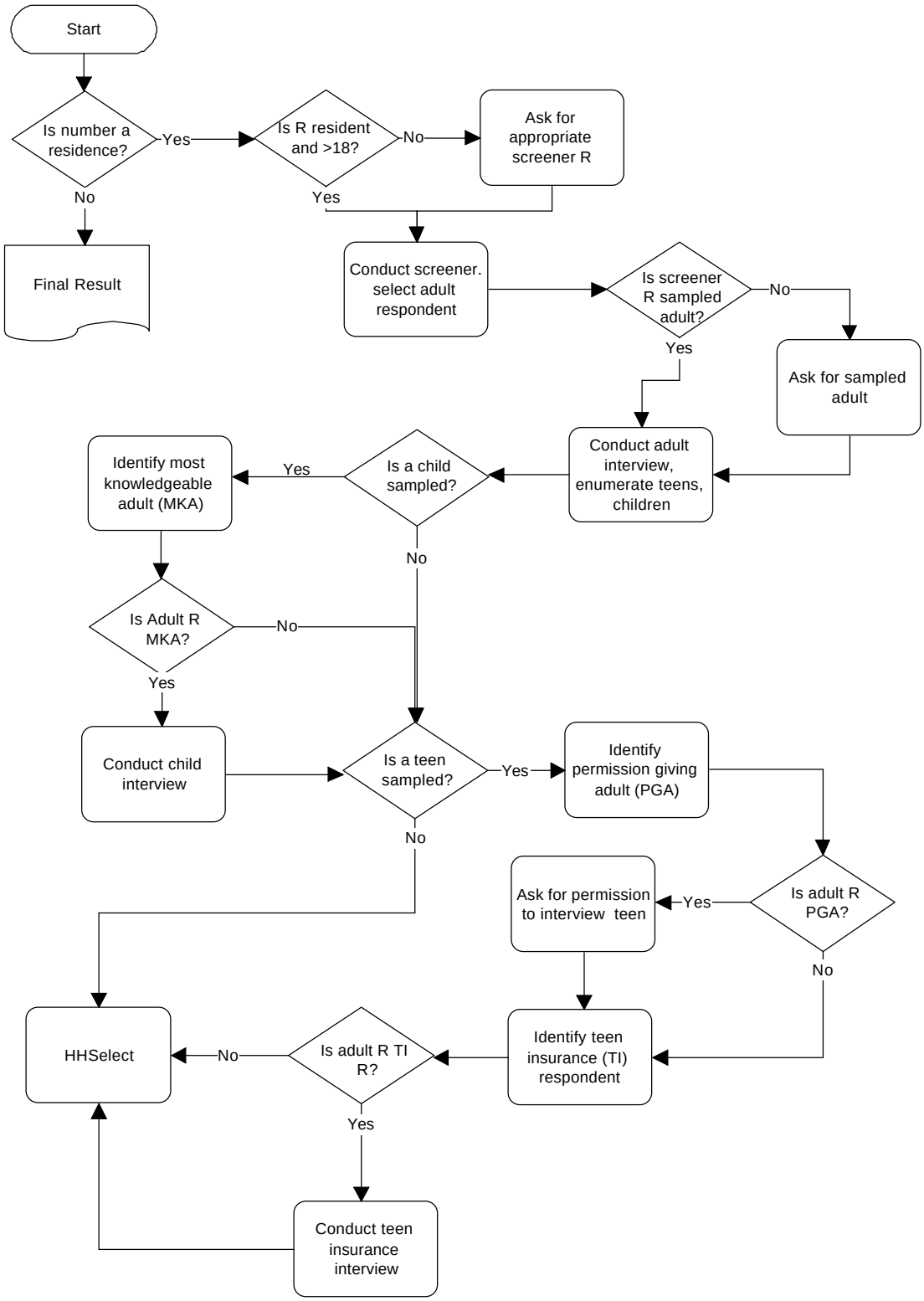

Figure 2-1. CHIS 2001 Interview Flow

The screening interview resumes in the middle of Section H of the Adult Extended Questionnaire, with the following items:

- Identification of adult respondent's spouse among enumerated adults;
- Enumeration of adolescents and children in the household; and
- Assigning adolescents and children to the adult(s) in the household responsible for them.

This information is used by the CATI program to select one adolescent and one child, if any are eligible, from among those associated with the sampled adult. "Associated with" means that the adult is a parent or guardian, or is designated as the one responsible for the adolescent or child within the household.

Because sampling children and adolescents is part of the adult interview, the adult interview must be completed before other components are begun. The other basic principles of the CATI system flow once the adult interview is completed include:

- Attempt to complete as many components as possible with the adult respondent before asking for someone else;
- Attempt the child interview before asking permission for the adolescent (teen) interview; and
- Attempt to get permission for the adolescent interview before conducting the adolescent insurance interview.

After the adult interview is completed, if there are associated adolescents and children the sampled adult is asked:

- To identify the MKA in the household to serve as respondent for the Child Extended Questionnaire;
- To identify the person who can give permission for the selected adolescent to be interviewed; and
- To identify a person who can answer questions about the selected adolescent's health insurance coverage.

Each of these tasks also includes reporting the relationship between the designated respondent and the sampled child or adolescent. These tasks are structurally outside of the interviews they

are associated with. If the sampled adult is the appropriate respondent for one or more additional interviews, the interviewer will attempt to complete those in the order shown in Figure 2-1.

Once all possible components have been attempted with the adult respondent, the CATI program displays a master navigation screen called HHSelect. A sample HHSelect screen is presented as Exhibit 2-1. HHSelect displays all interviews scheduled for a household, the name of the respondent, and whether the interview has been completed. The interviewer selects one of the outstanding interviews from HHSelect, and is routed to the appropriate introductory screens for that interview. HHSelect reappears after each component is completed, or attempted and not completed. It also appears when an interviewer first enters a case that has been started by another interviewer.

Exhibit 2-1. CHIS 2001 HHSelect CATI screen

```
0.0020  HHSELECT              900009990201 – (301) 215-1500 – 08:26

     [ASK FOR PEOPLE WITH RESULT THAT IS NOT FINAL. ENTER NUMBER FOR CHOSEN
     PERSON. ENTER 0 TO LEAVE THIS CASE.]

                                      (  )
                                          AT
                                          THIS           APPOINTMENT
#     RESPONDENT     TYPE    SUBJECT      PHONE   RSLT   DATE/TIME
1     MARY/30/F      ADLT                   Y     CA

2-SR  ALFRED/32/M    CHLD    WILL/8/M       Y
```

3. EXTENDED INTERVIEWS

CHIS 2001 includes three "extended interviews": adult, child, and adolescent, as well as a separate interview about sampled adolescents' health insurance coverage. This chapter describes Westat's involvement in the development of these questionnaires, the content of each, pretesting of the questionnaires, translation of the questionnaires from English into five other languages, changes in the questionnaires during data collection, and how proxy interviews were conducted.

3.1 Questionnaire Development Process

The CHIS questionnaire design was driven by the research needs of UCLA, sponsoring agencies, and a variety of governmental, academic, and other partners, as well as by concerns about respondent burden, response rates, and costs. The target was an adult questionnaire that would not normally exceed 40 minutes in administration time, and child and adolescent questionnaires that would not exceed 20 minutes each.

Early in 2000, UCLA began sharing drafts of the adult, adolescent, and child questionnaires with Westat staff. These drafts were developed by UCLA and its partners to cover a wide variety of health-related research topics. Westat reviewed the drafts and provided comments on the selection of question items, wording and sequence, and on the estimated length of the draft instruments. There were many iterations of draft instruments before complete instruments of reasonable length were ready for pretesting.

3.2 Questionnaire Content

The Adult Extended Questionnaire is divided into 13 sections:

A. **Demographics –** Age and race and ethnicity.

B. **Health Status –** Physical and mental health status, functioning, and presence of chronic conditions.

C. **Firearms –** Ownership, safety training, and whether a victim.

D. **Women's Health –** Pregnancy status, history, and reproductive health and cancer screening tests.

E. **Diet, Exercise, and Health Habits –** Food and alcohol consumption, cigarette smoking, height and weight, exercise, and flu shots.

F. **Cancer History, Prevention, and Screening –** Personal and family presence of cancer, protection against skin cancer, and screening tests.

G. **Dental Health –** Most recent visit to a dentist and dental insurance coverage.

H. **Use of and Access to Services, Child Care, Demographics –** Usual source of care, most recent physician visit, use of other health care providers, emergency room use, inpatient care, barriers to treatment or prescription drugs, seeking care outside the United States, perception of discrimination in receiving care, country of origin, languages spoken at home, English proficiency, immigration status, living arrangements, child care, sexual orientation, education, and whether employed.

I. **Health Insurance Coverage –** Current coverage by public or private plans, source of coverage, benefits of plan, duration of coverage, and whether any uncovered period in past year.

J. **Mental Health –** Need for and use of services and barriers to obtaining service.

K. **Employment and Income –** Current employment status, details of main job, own and spouse's earnings, and household income.

L. **Social Service Programs –** Enrollment in state and Federal programs, presence of disabling impairments, and assets and other sources of income.

M. **Food Security, Closing –** Whether ever short of food, interruptions in telephone service, location of residence, and whether interested in a followup.

The Child Extended Questionnaire comprises 8 sections:

A. **Health Status –** Age, height and weight, activity limitations, and health and behavioral conditions.

B. **Injuries and Prevention –** Injuries in past 12 months, bicycle helmet, food supplements, and protection from sun.

C. **Dental Health and Diet –** Dental hygiene, most recent visit to a dentist, dental insurance, and food consumption.

D. **Use of and Access to Services –** Usual source of care, most recent physician visit, immunizations, seeking care outside the United States, and use of non-physician providers.

E. **Barriers to Care –** Barriers to treatment or prescription drugs, perception of discrimination in receiving care, and public program participation.

F. **Health Insurance Coverage –** Current coverage by public or private plans, source of coverage, benefits of plan, duration of coverage, and whether any uncovered period in past year.

G. **Child Care and Activities –** Child care arrangements, use of computers and television, getting together with others, and reading to child.

H. **Demographics –** Race and ethnicity, citizenship/immigration status of child and parents, respondent's English speaking ability, and respondents' and other responsible adult's level of education.

Finally, the Adolescent Extended Questionnaire comprises 9 sections:

A. **Background –** Age, height and weight, school attendance, and employment,.

B. **Health Status –** Self-reported health status, missing school, and health conditions.

C. **Injuries and Prevention –** Injuries in past 12 months, bicycle helmet and seat belt use, and exposure to and use of firearms.

D. **Mental Health –** Mental health status over past 4 weeks.

E. **Health Habits, Activities, and Sexuality –** Food consumption, (was something missing or deleted?) use of food supplements, exercise, computer and television use, cigarette smoking, use of alcohol, and sexual orientation and practices.

F. **Use of and Access to Services –** Usual source of care, most recent physician visit, emergency room use, seeking care outside the United States, barriers to care, and dental care.

G. **Physical Violence –** Exposure to violence and threats of violence.

H. **Parents –** Living arrangements and how much parents know about adolescent.

I. **Demographics –** Race and ethnicity, citizenship and immigration status, English proficiency, and future plans.

3.3 Translation of Questionnaires

The original plan was for UCLA to provide translated versions of the CHIS questionnaires to Westat for review and implementation. Westat would enter the Spanish and Vietnamese translations into the CATI system and produce paper copies of the other Asian-language translations for interviewers to

read from as they entered the answers into CATI. That process started as planned with the Spanish translation and was modified along the way.

Spanish Translation

Letters. Westat translated the pre-notification letter and sent it to UCLA for revisions. The revised letters were sent back to Westat in October, 2000. Westat submitted translations of the refusal letters and UCLA revised and finalized both of these by February 12, 2001. The teen permission refusal letter was translated by Westat on June 7, 2001.

Questionnaires. Initial translations were done by a UCLA contractor. Westat sent a formatted text file of English CATI screens to the contractor. UCLA sent translations of sections of the questionnaire to Westat between January 4 and January 21, 2001. There were formatting difficulties with the translated screens, and Westat reviewers had many comments on the use and consistency of language used. The problems with language ranged from literal dictionary translations of words making them contextually inappropriate to use of colloquial phrases, and that the same English word was frequently translated in different ways. The work done to correct the language from UCLA amounted to a re-translation of the CHIS questionnaire, which was completed in CATI on February 25, 2001. Several minor wording changes were made to the Spanish CATI instrument in response to issues that arose during the first week of interviewing in Spanish from February 27 to March 6, 2001. Further changes were made to the instrument as a result of comments from the Spanish-speaking interviewers during a debriefing in early April.

For the Asian translations, UCLA sent Westat the initial versions for review. UCLA then sent the review to a third party for adjudication.

Chinese Translation

Letters. The pre-notification letter was translated by UCLA and sent to Westat in hard copy as part of the multiple language pre-notification letter that Westat mailed to the sample. Westat translated the screener and extended refusal conversion letters and sent those to UCLA for approval on April 16,

2001. Feedback from interviewer training resulted in a final round of changes to the instrument on June 26, 2001.

Questionnaires. Westat received the translated questionnaire on March 15, 2001 and sent it out for review which was completed on March 29, 2001. UCLA approved the final version and this was prepared for interviewer use by April 15, 2001. Feedback from interviewer training resulted in a final round of changes to the instrument on April 18, 2001. An adjusted screener for the Chinese surname supplemental sample was completed by Westat's contracted translator on May 22, 2001.

Khmer Translation

Letters. Westat's contracted translator completed translations of all the letters on June 8, 2001.

Questionnaires. Westat received the translated questionnaire on February 22, 2001 and sent it out for review which was completed on April 2, 2001. The review indicated the need for substantial changes. UCLA reviewed this document and returned it to Westat in hard copy with handwritten changes on May 23, 2001. Westat's contracted translator incorporated those changes into the document and an adjusted screener for the Cambodian surname supplemental sample by June 14, 2001. Final modifications to the instrument were made after interviewer training on June 26, 2001.

Korean Translation

Letters. The pre-notification letter was translated by UCLA and sent to Westat in hard copy as part of the multiple language pre-notification letter that Westat mailed to the sample. Westat translated the screener and extended refusal conversion letters and sent to those to UCLA for approval.

Questionnaires. Westat received the translated questionnaire on February 22, 2001 and sent it out for review which was completed on March 9, 2001. An internal review was performed and changes recommended. These changes were completed by Westat's contracted translator on April 2, 2001. In the interim, Westat began work on creating the hard-copy documents necessary to accompany the English CATI screens. UCLA reviewed Westat's work and sent a final version of the translation on April 25,

2001. Westat found that a few screens were missing from the final translation and UCLA instructed Westat to translate those screens. Feedback from interviewer training resulted in a final round of changes to the instrument on May 10, 2001 and final approval of the translation was received from UCLA on May 18, 2001. An adjusted screener for the Korean surname supplemental sample was completed by Westat's contracted translator on May 22, 2001.

Vietnamese Translation

Letters. The pre-notification letter was translated by UCLA and sent to Westat in hard copy as part of the multiple language pre-notification letter that Westat mailed to the sample. Westat created an electronic version of the Vietnamese pre-notification letter for mailing to the Vietnamese surname supplemental sample. Westat translated the screener and extended refusal conversion letters and sent to those to UCLA for approval.

Questionnaires. Translated questionnaires were received by Westat on February 15, 2001. The first review by the Westat contracted translator was completed on March 13, 2001. Initial review by a Westat programmer analyst was completed on March 20, 2001. Comments included following: translation was not of current version; programming and interviewer instructions were translated; instrument rules for capitalization were not followed; for some items/questions a simple word-for-word replacement from English to Vietnamese occurred—ignoring the intent of the question. The questionnaire was sent back to UCLA for revision. The translated questionnaire was returned to UCLA with comments and revisions. Westat began entering the Vietnamese questionnaire into CATI with the expectation that changes would be made in accordance with any further changes from UCLA. UCLA recognized that substantial revision was needed and subsequently requested that Westat translators and reviewers join a conference call to discuss the translation. That call took place on April 10, 2001, and a decision was made that UCLA would finish the translation and that Westat would then enter that translation into CATI making changes only where the translation conflicted with technical requirements of the program. Following another conference call, Westat received the translation with handwritten changes throughout on April 23, 2001. Those changes were incorporated and an exchange with UCLA regarding technical issues that were presented mainly in the first few pages of the translation resulted in a final document that was programmed in CATI and completed on April 27, 2001. Feedback from interviewer training resulted in a final round of changes to the CATI instrument on May 14, 2001.

In addition to the translations of the letters and questionnaires, Westat provided translated version of the "Frequently Asked Questions" pages that are used to help interviewers answer respondents' questions about the survey and overcome any objections that the respondent may have.

3.4 Pretests and Pilot Test

Westat conducted two small pretests of sections of the draft English questionnaires, using paper-and-pencil administration. In each case, pretest respondents were recruited by another contractor according to specifications provided by UCLA. The pretest interviews were conducted by experienced interviewers in Westat's Frederick Telephone Research Center (TRC). They were monitored by Westat and Public Health Institute (PHI) staff, and were tape recorded. Following the interviews, PHI staff "debriefed" the respondents.

Each pretest focused on the length of the adult, adolescent, and child interview sections, and on respondents' ability to answer the questions as worded. After each pretest, items were cut from each questionnaire, and the CHIS team made other modifications to make the intent of the remaining questions clearer.

The pilot test, also held in the Frederick TRC, from September 25 through October 1, 2000, 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 followup with language problem cases. The pilot test sample used a RDD approach, using telephone exchanges expected to have a high yield of adolescents and children. Table 3-1 presents the results of the pilot test.

Table 3-1. Number of completed interviews and refusals and cooperation rates in the CHIS 2001 pilot test

Instrument	Completed interviews	Refusals	Cooperation rate
Screener	611	651	48.4
Adult interview	174	131	57.0
Child interview	61	4	93.8
Teen interview	30	7	81.1
Teen insurance	54	4	93.1

Source: UCLA Center for Health Policy Research, 2001 California Health Interview Survey.

The screener and adult extended cooperation rates were disappointingly low. Westat and UCLA staff worked on the introductions to the screener and to the adult interview to reduce the amount of time needed to read them and to convey information required by the institutional review board reviews without alarming potential respondents about the level of burden they were assuming.

The adult extended interview averaged just over 34 minutes to administer, the child interview about 14 minutes, and the adolescent interview about 22 minutes. The screening interview averaged 2.5 minutes, the adolescent insurance interview about 2 minutes, and getting permission to interview adolescents about a 1.5 minutes. While these times were not far from the targets, the adult and adolescent interviews were cut further between the pilot test and the start of the main study.

Westat staff conducted a form of behavior coding while monitoring pilot test interviews to provide information on how well individual question items were working. Team leaders and others who listened to interviews coded each question according to whether or not the respondent gave a codeable response without further assistance from the interviewer. The instructions and coding form are presented as Exhibits 3-1 and 3-2, respectively.

Westat also conducted a debriefing of pilot test interviewers and team leaders after the conclusion of data collection. Results of the debriefing and behavioral coding 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

As Westat, UCLA, and PHI staff monitored interviews during the data collection period, as interviewer debriefing sessions were conducted, and as Westat data preparation staff reviewed marginal comments entered by interviewers, a number of issues with question items arose, some of which suggested that a change in the question wording or answer categories would be beneficial. Most of these issues were noted with an eye toward the next CHIS administration, but some led to changes in the CATI instrument during the field period. Table 3-2 presents all of the changes to the CATI instruments after the

Exhibit 3-1. CHIS Behavioral Coding Reference Sheet, Westat

Code a question "1" (respondent gave a codeable response) if:

- The response exactly matches one of the categories in a "CODE ONE" question;
- The response exactly matches one or more of the categories in a "CODE ALL THAT APPLY" question;
- The response does not match exactly, but corresponds unambiguously to one (or more, if "code all") of the categories, *providing that the interviewer records the response correctly and without probing,* whether or not the interviewer confirms the response before recording it;
- The response is clearly an "Other" when an "Other" category is listed;
- The respondent pauses, says "don't know," or gives a range or other uncodeable response and proceeds without prompting to give a codeable response as described above.

Code a question "0" (respondent did not give a codeable response) if:

- The respondent doesn't know the answer or refuses to give a response, even if he/she gives a single codeable response after the interviewer clarifies or probes;
- The respondent gives more than one codeable response when only one is allowed, even if he/she gives a single codeable response after the interviewer clarifies or probes;
- The respondent asks for clarification or indicates that he/she does not understand the question, even if he/she gives a codeable response after the interviewer clarifies or probes;
- The response does not match exactly, but corresponds unambiguously to one (or more, if "code all") of the categories, *and the interviewer records the response incorrectly*;
- The response does not match exactly, but corresponds unambiguously to one (or more, if "code all") of the categories, *and the interviewer probes to clarify the response (other than simply confirming it)*;
- The response is irrelevant to the question, even if a codeable response is given after the interviewer clarifies or probes;
- The response is relevant to the question, but does not unambiguously fit one of the available categories (including "Other"), even if a codeable response is given after the interviewer clarifies or probes;
- The response is given as a range, when an exact response is requested, even if a codeable response is given after the interviewer clarifies or probes;
- The response is incomplete, even if a complete and codeable response is given after the interviewer clarifies or probes.

If you miss a question or are in doubt about how to code a question, leave the sheet blank for that item.

If you make a mistake, cross out (do not erase) the incorrect entry.

Only one case to a sheet, please. It's o.k. to code only part of an interview.

Remember, we are not evaluating interviewer behavior. If an uncodeable response occurs because an interviewer makes a mistake, it's still an uncodeable response.

Exhibit 3-2. Behavioral coding

California Health Interview Survey
Behavioral Coding – Adult Interview

Westat
732005

Screener		AB22		AD27A		AF12		AH15B		AH45		AK4	
SINTRO_1		AB23		AD28		AF13		AH15C		AH47		AK5	
S3A		AB24		AD29		AF14		AH15D		AH48		AK6	
SINTRO_3		AB25		AD30		AF16		AH16				AK7	
SC6A		AB26		AD31		AF17		AH17		AI1		AK8	
SC61		AB27				AF15		AH17A		AI2		AK9	
SC6B		AB28		AE1		AF18		AH17B		AI3		AK10	
SC6C		AB29		AE2		AF19		AH17C		AI4		AK10A	
SC7		AB30		AE3		AF20		AH17D		AI5		AK11	
SC8		AB31		AE4		AF21		AH18		AI6		AK12	
SC9		AB32		AE5		AF22		AH19		AI7		AK13	
SC10		AB33		AE6		AF24		AH20		AI8		AK14	
INTRO1		AB34		AE7		AF25		AH20A		AI9		AK15	
S8A		AB35		AE8		AF23		AH20B		AI10		AK16	
S8B		AB36		AE9		AF26		AH20C		AI11		AK17	
		AB37		AE10		AF27		AH20D		AI12		AK18	
Adult		AB38		AE11		AF28		AH21		AI13		AK18A	
AA1				AE12		AF29		AH22		AI14			
AA2		AC1		AE13		AF30		AH23		AI15		AL1	
AA2A		AC2		AE14		AF31		AH23A		AI16		AL2	
AA3		AC3		AE15		AF33		AH23B		AI17		AL3	
AA4		AC4		AE15A		AF34		AH23C		AI18		AL4	
AA5		AC5		AE16		AF32		AH23D		AI19		AL5	
AA5A				AE17		AF35		AH24		AI20		AL6	
AA5B		AD1		AE18		AF36		AH25		AI21		AL7	
AA5C		AD2		AE19				AH26		AI22		AL8	
AA5D		AD3		AE20		AG1		AH28		AI23		AL9	
AA5E		AD4		AE21		AG2		AH29		AI25		AL15	
AA5E1		AD5		AE21A		AG3		AH30		AI26		AL16	
AA5F		AD6		AE22				AH31		AI31		AL17	
		AD7		AE23		AH1		AH32		AI32		AL18	
AB1		AD8		AE24		AH2		AH33		AI33		AL18A	
AB2		AD9		AE25		AH3		AH34		AI34		AL18B	
AB3		AD10		AE25A		AH3A		AH35		AI35		AL19	
AB4		AD11		AE26		AH3B		AH36		AI36			
AB5		AD12		AE27		AH4		AH37		AI24		AM1	
AB6		AD12A		AE27A		AH5		AH38		AI27		AM2	
AB7		AD13		AE28		AH7		AH39		AI28		AM3	
AB8		AD14		AE29		AH6		AH40		AI29		AM3A	
AB9		AD15		AE30		AH8		AH41		AI30		AM4	
AB10		AD16				AH9		AH43				AM5	
AB11		AD17		AF1		AH10		AH43A		AJ1		AM6	
AB12		AD18		AF2		AH11		AH44		AJ2		AM7	
AB13		AD19		AF3		AH12				AJ3		AH42	
AB14		AD20		AF4		AH13		SC11		AJ4		AM8	
AB15		AD21		AF5		AH13A		SC12		AJ5		AM9	
AB16		AD22		AF6		AH13B		SC13A		AJ6		AM10	
AB17		AD23		AF7		AH13C		SC13		AJ7		AM11	
AB18		AD24		AF8		AH13D		SC14A					
AB19		AD25		AF9		AH14		SC14B		AK1			
AB20		AD26		AF10		AH15		SC15		AK2			
AB21		AD27		AF11		AH15A		SC15A		AK3			

Case ID: _____ Completed by: _____

Interviewer: _____ Date: _____

Exhibit 3-2. Behavioral coding (continued)

California Health Interview Survey
Behavioral Coding – Child Interview

Westat
732005

Screener		CC1		CE4		CG6	
SC16		CC2		CE5		CG7	
SC17		CC3		CE5A-Q		CG8	
SC17A		CC4		CE6		CG9	
SC18		CC5		CE7		CG10	
SC19		CC6		CE8		CG11	
SC22		CC7A		CE8A-Q		CG12	
SC23		CC7B		CE9			
SC23A		CC8		CE10		CH1	
SC24		CC9A		CE10A		CH2	
SC25		CC9B		CE11		CH3	
SC20		CC10		CE11A		CH4	
SC21		CC11		CE11C		CH5	
		CC12				CH6	
Child		CC13		CF1		CH6A	
CIN1		CC14		CF2		CH7	
CIN3		CC15		CF3		CH7A	
				CF4		CH8	
CA1		CD1		CF4A		CH9	
CA2		CD2		CF5		CH10	
CA3		CD3		CF5A		CH11	
CA4		CD3A		CF6		CH12	
CA5		CD3B		CF8		CH13	
CA6		CD4		CF9		CH14	
CA7		CD5		CF10		CH15	
CA8		CD6		CF10A		CH16	
CA9		CD7		CF11		CH17	
CA10		CD8		CF12		CH18	
CA10A		CD9		CF13		CH19	
CA10B		CD10		CF14		CH22	
CA11		CD11		CF15		CH24	
CA11A		CD12		CF18		CH25	
CA11B		CD13		CF20		CH26	
CA11C		CD13A-Q		CF21		CH27	
CA12		CD14		CF22		CH28	
CA12A		CD15		CF23		CH29	
CA12B		CD15A-Q		CF24			
CA12C		CD16		CF25			
		CD17		CF26			
CB1		CD18A		CF27			
CB2		CD18B		CF29			
CB3		CD18C					
CB3A		CD18D		CG1			
CB3B		CD19		CG2			
CB4		CD20		CG3A			
CB5		CD22		CG3B			
CB6		CD23		CG3C			
CB7				CG3D			
CB8		CE1		CG3E			
CB9		CE2		CG3F			
		CE2A-Q		CG4			
		CE3		CG5			

Case ID: _____ Completed by: _____

Interviewer: _____ Date: _____

Exhibit 3-2. Behavioral coding (continued)

California Health Interview Survey
Behavioral Coding – Teen and Teen Insurance Interview

Westat
732005

Teen Insur.		**Teen**		TC14C		TE10		TF8B		TI2E	
		TIN1		TC14D		TE10A		TF8C		TI3	
IAP1		TIN2		TC14E		TE11		TF8D		TI4	
IAP2		TIN3		TC14F		TE12		TF8E		TI5	
IA1		TIN4		TC14G		TE13		TF8F		TI6	
IA2		TIN5		TC15		TE14		TF8G		TI7	
IA3		TIN6		TC15A		TE15		TF6		TI7A	
IA4		TA1		TC16		TE16		TF6A		TI7B	
IA4A		TA2		TC16A		TE17		TF6B1		TI8	
IA5		TA3		TC17		TE18		TF6B2			
IA5A		TB2		TC18		TE19		TF7			
IA6		TB3		TC19		TE20		TF7A			
IA8		TA4		TC20		TE21		TF9			
IA9		TA5		TC21		TE22		TF9A			
IA10		TA5A		TC21A		TE23		TF9B			
IA10A		TA5B		TC22		TE24		TF9C			
IA11				TC23		TE25		TF10			
IA12		TB1		TC23A		TE26		TF11			
IA13		TB4		TC24		TE27		TF12			
IA14		TB5		TC24A		TE28		TF13			
IA15		TB6				TE29		TF14			
IA18		TB7		TD1		TE30		TF15			
IA20		TB8		TD2		TE30A					
IA21		TB9		TD3		TE31		TG1			
IA22		TB10		TD4		TE32		TG2			
IA23		TB11		TD5		TE33		TG3			
IA24		TB12		TD6		TE34		TG4			
IA25		TB13		TD7		TE35		TG5			
IA26		TB14		TD8		TE36		TG6			
IA27		TB15		TD9		TE37		TG7			
IA29				TD10		TE38					
IA30		TC1		TD11		TE39		TH1			
		TC2		TD12		TE40		TH2			
		TC3		TD13		TE41		TH3			
		TC3A		TD14		TE42		TH4			
		TC3B		TD15		TE43		TH5			
		TC4		TD16		TE44		TH6A			
		TC5		TD17		TE45		TH6B			
		TC5A		TD18				TH6C			
		TC5B		TD19		TF1		TH6D			
		TC6				TF2		TH6E			
		TC6A		TE1		TF3		TH6F			
		TC7		TE2		TF3A		TH7			
		TC13		TE3		TF3B					
		TC13A		TE4		TF3C		TI1			
		TC13B		TE5		TF4		TI1A			
		TC13C		TE6		TF4A		TI2			
		TC13C1		TE7		TF4B		TI2A			
		TC13D		TE8		TF4C		TI2B			
		TC13E		TE8A		TF5		TI2C			
		TC14A		TE9		TF8		TI2D			
		TC14B		TE9A		TF8A		TI2D1			

Case ID: _____ Completed by: _____

Interviewer: _____ Date: _____

Table 3-2. Changes in CHIS 2001 questionnaire after start of data collection

Date	Changes
11/27/00	Production begins
11/29/00	Change items TE12-TE15 from discrete categories to number of hours Change lower range limit from 1 to 0 for AK10, AK10A, AK18 Text emphasis changes on CG8-CG11 Added {his/her} display that was mistakenly missed on CF23
11/30/00	Added item SC19A (PGA's relationship to TEEN)
12/4/00	Allow changes of PGA/TIA to MKA Previously, SC16 was asked of all MKA interviews; now SC16A is always initially asked of ADULTID for an MKA interview Added "90. THERE IS NO ONE" to SC19; 90 sets MAINRSLT = CG Remainder of child and teen ranges entered; some of these ranges required increasing variable lengths-CD6,CG2,TC13A,B,C1 TIN3 display ", and sexual behavior" only if AGE > 13.
12/5/00	Implement production help file
12/7/00	Screen WHATOV Language Problem other specify moved down 1 line New version of CG13 with derived var CG13SUB for 9 display versions
12/8/00	AM8 was asked only of LA county; now include San Diego county too AK10 will now also be asked when okmiss(AK3) AK10A will now not be asked of all AH43=1 but the subset AH44=1
12/20/00	Gender entry verification screens added for all 3 extended interviews (1) Changed lower limit of range for AD16 from 1-99 to 0-99 CE1 replace "medicine" with "prescription" CE2 drop the word "medicine" CF1 replace "TRADITIONAL" with "ORIGINAL" CF23 replace "some other type of coverage" with "some other plan" CF29 code 6 change CAN'T to COULDN'T CF29 code 11 change PAYS to PAID CF29 code 12 change GETS to GOT CG11 change "And still thinking about Saturday and Sunday, on a typical…" to "About how many hours on a typical Saturday or Sunday…" CH1 – Add intro text sentence, which includes the child's name display. CH13/CH13X – Add "About" to beginning of question AI5,AI12,CF5,IA5 – change "deductions" to deductibles" CD20 and AH8 – change end of question to "or some other clinic or office" CD22 – change "talk to" to "see or talk to" CF6 – Add VA CF9 – Add VA to response category 7 CH4 – Add intro text and CODE ALL THAT APPLY instruction AL6 – change "SSI or Supplemental" to "SSI or Social"

Table 3-2 Changes in CHIS 2001 questionnaire after start of data collection (continued)

Date	Changes

12/22/00	CG8-CG11 & TE12-TE15; new response 94 – > 0 but < 1 hour per day
	PN IA2 and CF2 now match;
	Condition for asking CF2 used to be IF CF1 ^= 1; now it's
	if (CF1 = 2 & POVERTY inset(1,2,3,5)) | okmiss(CF1)
	Condition for asking IA2 used to be IF IA1 ^= 1; now it's
	if (IA1 = 2 & POVERTY inset(1,2,3,5)) | okmiss(IA1)
	TC15 – correct typo in FRIENDS in response code 93
	TE8A – change that to this
	TE15 – change SATURDAY AND SUNDAY to SATURDAY OR SUNDAY
	Make IA9 just like AI19; insert "HEALTH" into 92; add [NOTE: … text
	IA18 – insert "why" after ONE MAIN reason
	IA24 – insert an extra "12" just after ALL
	IA32,IA32X, IA35, IA35X – Add "About" to beginning of sentence
	AH43A – insert "of" between either and your
	AH44 – replace the word "now" with "also"
	AK17 – insert the word "living" between "how many people" and "in your"
	AE1 – remove "only" from 1st sentence;
	replace "Over the PAST MONTH, how often" with "How often"
	AH2 – response 1 change GETS to GET; response 6 change LIKES to LIKE

1/8/01	Text adjusted on TIN2 to match 12/14/00 1:33 email Removed the word "Interview" from TIN1
1/12/01	Replace AM6 with AM12/AM13 (interruptions in telephone service)
2/1/01	Spanish translation display fields & customized screens for Spanish
2/7/01	MAINRSLT='CG' (complete permission questionnaire) will now be split between 3 result codes: CG = Complete permission given (SC24 = 1) CN = Complete there is no one to give permission (SC19 = 90) CD = Complete permission denied (SC24 ^= -1 & SC24 ^= 1)
2/16/01	Skip error involving adult K9-10 now fixed; code now matches specs
2/20/01	New DD formats for birth year and year first came to US change year from 2000 to 2001
2/26/01	Spanish version
2/28/01	Spanish screen text corrections; Production Spanish interviewing began evening of 2/27/01
3/1/01	Spanish screen text corrections

Table 3-2. Changes in CHIS 2001 questionnaire after start of data collection (continued)

Date	Changes
3/6/01	AA5A – If 1 Native Hawaiian is entered as the first response, message "YOU HAVE ENTERED NATIVE HAWAIIAN (2) CH3 – same as above TI2 – same as above Condition for asking AD28 changed from "if AD13 ^= 1" to "if AD13 ^= 1 & (AAGE >= 40 | missing(AAGE)) Condition block for AF30 changed from "if AA3 = 1 & (missing(AAGE) | AAGE >= 40)" to "if AA3 = 1"
3/7/01	Spanish screen IAP1 was missing the YES NO answer categories (Spanish screen library only)
4/11/01	Insert new response category into AB9-AB12 and TD1-TD5; set new variable AB9FLAG to 1 for new version, and new variable TD1FLAG to 1 for new version; shift existing DB values (add 1 to shift 1 to 2, 2, to 3, …) Also, extension of ENGLSPAN = 3 for Vietnamese goes in with this version, even though it's not being used yet
4/18/01	New screen ASIAN to collect what language L4-L9 work class questionnaires were completed in
4/27/01	SC11 is now shown even when the R is the only adult enumerated in the screener; also, insert "d" into Mendocino county
5/1/01	Latest version of Vietnamese screen library
5/23/01	Ask SC6A1 and SC6A2 for SURNAME cases and restrict subsampling Added BASE variables SURFNAM, SURMINIT, SURLNAM for surname sample first, middle initial, and last names
5/30/01	New Vietnamese screen library only; AB9-AB12 and TD1-TD5 changes were missed, but are now in Vietnamese
6/11/01	Adjustments to AA5… race series to accommodate surname samples (3)
6/26/01	CH1_23.ALI; correct skip for CH17, CH18, and CH19 so they are skipped if MKA=Adult R & MKA is also the parent/guardian of the child from the child roster (RESPAR=1)
6/29/01	New version of SC24; SC24R adds qualified Yes options 3, 4, 5 (4) Add skips to teen questionnaire to skip questions on drugs/sex based on SC24 Add new work class RP = REFUSAL_PERMISSION for converting selected permission questionnaires Spanish version of SC14A now has a display for {padre/madre} based on adult R's sex
7/11/01	Proxy variables and skips added for adult questionnaire proxy interviews (5)

Table 3-2. Changes in CHIS 2001 questionnaire after start of data collection (continued)

Date	Changes
7/13/01	Added AI=American Indian/Alaska Native surname sample items and new AMERICAN_INDIAN work class (3)
7/27/01	Set SCRNRSLT = IS instead of IN for Shasta county screener ineligibles (3)
8/2/01	SC4 displays for Santa Barbara County and San Francisco supplemental samples (3)
8/6/01	Turn off screener IS code for surname = Cambodian (6);
9/5/01	Implement partial complete code (CP) assignment (7)
9/18/01	Turn off screener IS code for surname = Asian/Indian (6)

Source: UCLA Center for Health Policy Research, 2001 California Health Interview Survey.

start of the data collection period. Some notable changes, marked (1) – (7) in the table, are discussed in the remainder of this section.

1. Sex entry verification screens were added to all questionnaires, since an interviewer mis-key would lead to incorrect skip patterns. After entering the sample person's sex, the interviewer was shown a reverse video message with the sex entered. Pressing "Enter" again would allow the interviewer to proceed to the next question.

2. Early review of frequencies for race and ethnicity revealed an unexpectedly large number of persons reporting themselves as "Native Hawaiian," code "1" in CHIS 2001. Since many other Westat studies have "White" as code "1," staff felt that some number of the apparent Native Hawaiians had actually reported themselves to be white. The CATI change was to display a reverse video message, "YOU ENTERED 'NATIVE HAWAIIAN'. PRESS ENTER TO CONFIRM." For those coded as Native Hawaiian before the change was made, Westat interviewers re-contacted the respondents and re-administered the race/ethnicity series. See Report 3: Data Processing Procedures for results of this recontact.

3. As described in Chapter 2, the screening interview was modified for the geographic and ethnic supplemental samples, adding questions to determine whether any adult in the household met the eligibility criteria for the particular sample. The adult interview was also changed for the ethnic supplemental samples; if the respondent's self-report of race and ethnicity did not match what the screener respondent said, the interview was terminated after Section A.

4. As part of the effort to convert refusals to give permission for the adolescent interview, the study team decided to give the permission-giving adult the option of saying "Yes, but . . ." and opting out of the sections on sex and/or drugs.

5. See Section 6.7 for a discussion of proxy interviewing.

6. As described in Chapter 2, the ethnic screening question proved problematic for the Cambodian and South Asian samples at different points in the data collection period. The question was dropped, along with the corresponding screener ineligible result code, when the difficulties were discovered.

7. Toward the end of the data collection period, UCLA decided to count adult interviews that had finished Section K but not the entire interview as "partial completes," to be included in the data file for weighting and analysis. Some 432 cases wound up being coded as "partial completes" across all samples.

4. INTERVIEWER RECRUITING AND TRAINING

4.1 Organization of the Telephone Research Centers

Westat's major Telephone Research Centers (TRCs) are located in Rockville and Frederick, Maryland. As they have for many years, they support Westat's broad range of projects with their experienced staff of interviewers and supervisors. Overall direction of telephone survey operations is from the TRC central office at the Rockville headquarters.

To meet the needs of an increased telephone interviewing workload, Westat had added five additional interviewing locations, and added a sixth in Citrus Heights, California, at the time CHIS data collection was to begin. In addition to Rockville, Frederick, and Citrus Heights, Westat conducted CHIS interviews in Toms River, New Jersey; Chambersburg, Pennsylvania; and Greeley, Colorado. The Citrus Heights and Greeley centers in the Pacific and Mountain Time zones were particularly useful for scheduling of evening interviewing in California.

Westat's computing systems and telephony capabilities enable the networked combination of geographically diverse locations to operate as a single "virtual" TRC managed from the home office location at Rockville. All interviewing and supervisory stations at all locations are interconnected on a high-speed data communications network that provides a single integrated database and a single call scheduling and reporting capability. Integrated voice and data monitoring is available for supervisors at each center and at a central facility at the Rockville home office.

Each center has an administrative director and a group of team leaders who schedule and supervise the center's interviewing staff. For the Citrus Heights center, an experienced center director and several experienced team leaders moved to the area from other centers to set up operations. Other team leaders were locally recruited and trained extensively both before and after center operations commenced.

The Frederick TRC was the pilot test and pretest site, and functioned as the "home" center for CHIS. The Deputy Operations Manager was in the Frederick office. All centers conducted RDD interviewing in English, as well as interviewing of the county supplemental samples, and the Japanese and South Asian surname samples. Spanish bilingual interviewers were present in all sites except

Chambersburg. All of the Asian bilingual interviewers were in the Rockville office. Work on the American Indian/Alaska Native supplemental sample was done in Citrus Heights.

4.2 Pretest and Pilot Test Recruiting and Training

Westat selected three very experienced interviewers from the Frederick TRC for the two pretests. These interviewers were trained informally on paper-and-pencil versions of sections of the CHIS 2001 draft questionnaire. Training was conducted by members of the CHIS team from PHI who had helped develop the questionnaires. Since the pretest respondents were recruited by a California market research firm, there was no need to train the pretest interviewers on contacting and callback procedures.

The pilot test was also conducted out of the Frederick TRC; Westat recruited 24 experienced interviewers, of whom 23 completed training and worked on the pilot test. The training program was developed and implemented by the TRC Operations Director, and anticipated the training for the main study. Exhibit 4-1 presents the agenda for the pilot test training.

4.3 Recruiting and Training for English-Language Random-Digit-Dial Sample

The field period for CHIS 2001 was originally intended to begin in the summer of 2000, and run for 9 months. Westat's data collection plan was to recruit and train a large number of interviewers at the beginning of the field period, so that peak production would be reached within the first two months of the study. Bilingual Spanish-speaking interviewers were to be trained along with English-only interviewers at the very beginning, conduct interviews in English for a few weeks to become familiar with the survey, and then be trained in and use the Spanish-language instrument. Asian bilingual interviewers were to be added within two months.

Since questionnaire development took considerably longer than anticipated, the start of the field period was slipped, and ultimately began at the end of November 2000. Because other large studies were already in Westat's telephone centers, and because the first 2 months of the field period included the Christmas/New Year's holiday season, Westat ramped up the interviewing force more slowly than planned with the earlier field period.

Exhibit 4-1. Agenda for pilot test interviewer training, CHIS 2001

Session	Length	Topic	Interviewer/Trainee Materials
SATURDAY, 9/23			
1	30 minutes	Introduction	Agenda and Interviewer Manual
2	30 minutes	Demonstration interview	
3	15 minutes	Overview of Extended Interview	
4	2 hours	Interactive 1: Adult Extended Interview (includes a 15-minute break)	Personal computer
5	30 minutes	Review of commonly-asked questions	Commonly-asked questions
	1 hour	LUNCH	
6	1 hour, 15 minutes	Interactive 2: Child Extended Interview	Personal computer
7	30 minutes	Strategies for gaining respondent cooperation	
	15 minute	BREAK	
8	1 hour, 45 minutes	Interactive 3: Adolescent Extended Interview	Personal computer
9	30 minutes	Pathways	Personal computer
SUNDAY, 9/24			
10	2 hours	Screener interactive	Personal computer
	15 minutes	BREAK	
11	2 hours	Contact procedures	Personal computer
	1 hour	LUNCH	
12	15 minutes	Sensitivity issues	
13	15 minutes	Review of commonly-asked questions	Commonly-asked questions
14	3 hours	Role plays: contact and full role plays (includes a 15-minute break)	Personal computer Role plays

The study also experienced higher-than-anticipated interviewer attrition during the first few months of the field period, increasing the need for recruitment. Finally, the questionnaire translations were delayed, so interviewing in Spanish and in the Asian languages did not begin until February and April, respectively. All of these factors combined to extend the interviewer training program well into the field period.

4.3.1 Recruiting Telephone Interviewers

The CHIS 2001 interviewing force was a combination of Westat-experienced and newly-hired interviewers. In the Citrus Heights TRC, all of the interviewers were new to Westat. In other centers, some experienced interviewers were available at the beginning of the field period, and others became available as two other large studies wound down in December and February.

Generally, Westat recruits new interviewers by placing advertisements in local newspapers. Applicants call a toll-free number that rings in the Rockville office, and they undergo a screening interview over the telephone. Those considered potentially good candidates are invited to open houses at the local TRC, where they hear about the details of the job. Finally, they are interviewed in person at the local TRC, and a hiring decision is made. Successful applicants are invited to the next available training in general interviewing techniques (see Section 4.3.4). Applicants must complete this general training, training in Westat's CATI system, and project-specific training before they actually become Westat employees.

4.3.2 Overview of Training Plan

In order to produce a high-quality training, Westat started by developing 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 so that all trainers could follow the format and deliver a consistent training program across groups.

Training sessions were also organized according to standardized Westat procedures. Training teams were organized with staff who had distinct responsibilities (e.g., a lead trainer who delivered the training script, a group leader who evaluated trainees, runners who helped trainees during

interactives and role plays, etc.) so that training sessions flowed smoothly. The TRC Operations Director led development of the training materials, served as one of the lead trainers, and trained the other lead trainers directly.

Initial training was provided to all interviewers in general interviewing techniques and the use of the computer system. The interviewers then received a project-specific training that focused on the CHIS 2001 screener and extended interviews.

The first training for the main survey was conducted in Frederick November 27, 2001, for pretest interviewers. Training for other interviewers began the following weekend, and continued almost throughout the data collection period. Trainings were held at six centers: Frederick and Rockville, Maryland; Citrus Heights, California; Greeley, Colorado; Toms River, New Jersey; and Chambersburg, Pennsylvania.

As a final stage in the training process, interviewers conducted practice interviews until they reached the desired level of proficiency. Interviewers who were not proficient enough received coaching sessions and were monitored until proficiency was achieved or until they were released from the study.

After all interviewers started production, they received supplemental training about specific questionnaire issues that were new since training. They also received more training in gaining respondent cooperation. Monitoring of interviewers continued throughout data collection as a method of quality control.

Some interviewers also received training in how to handle special procedures. These included interviews with proxy respondents and interviews with persons who had refused to participate during an earlier call to the household. These cases were placed in a special queue so that only interviewers who were trained to handle the cases would be given them.

4.3.2 Development of Training Materials

Prior to training, key members of the study area staff, the TRC operations manager, and senior TRC staff developed training materials. Guided by an outline of all the concepts relevant to the

study, a complete set of training materials that complemented one another was produced. These materials included the following items.

- **A Training Program Agenda.** The agenda identified the format of the sessions (lecture, interactive, dyad role play, etc.), the topics to be covered (overview of questionnaire, particular questionnaire sections, etc.), and the length of time the session was scheduled to take (see Exhibit 4-2). This document was used during training by the lead trainer and others assisting in training to see what materials were used by the lead trainer as well as the interviewer during each session. An abbreviated agenda was produced for the interviewers that showed the sessions but not the lead trainer materials.

- **Interviewer Training Manual for CATI Interviewing.** Westat created a CHIS Interviewer Manual to serve as a training tool and a reference source during data collection. The manual included an introduction to the study, contact procedures, and specifications for each question asked in the extended interviews.

- **Lead Trainer's Manual.** This manual contained all material presented by the lead trainer. They included interactive scripts and exercises that were designed to develop and fully test the level of an interviewer's comprehension of survey materials and procedures.

- **Dyad Role-Play Scripts.** Role plays were produced that focused on contact procedures and provided practice on administration of the extended interview.

4.3.3 Training Teams

The training team for each group consisted of a lead trainer, a data display operator, a group leader, and two runners. The roles and responsibilities of the team members follow.

Lead Trainer. Lead trainers were responsible for the overall presentation and the pace of training. All lead trainers for CHIS 2001 had several years of training experience and were well-versed in training techniques and group control. It was the role of the lead trainers to concentrate on delivery of the material; trainee evaluation was the responsibility of the group leader.

Data Display Operator. The data display operator was responsible for following the lead trainer script and making entries in the master terminal that displayed the CATI interview on large screens in the front of the training room. The data display operator was familiar with the CATI program and entered responses given by the lead trainer.

Exhibit 4-2. Agenda for English-Language interviewer training, CHIS 2001

Session	Length	Topic	Interviewer/Trainee Materials
SATURDAY			
1	30 minutes	Introduction	Agenda and Interviewer Manual
2	30 minutes	Demonstration interview and preparing to interview	Commonly-asked questions
3	2 hours	Screener interactive (includes a 15-minute break)	Personal computer Key screener concepts Revised introduction
4	30 minutes	Review or commonly-asked questions	Commonly-asked questions
	1 hours	LUNCH	
5	2 hours	Contact procedures	Personal computer Telephone company recording/NR coding card
	15 minutes	BREAK	
6	30 minutes	Exercise on contract procedures	Exercise on contact procedures
7	1 hour, 30 minutes	Problem/update sheets/contact role plays	Personal computer Problem sheet Contact role plays
8	15 minutes	Review	
SUNDAY			
9	15 minutes	Overview of Extended Interview	Example of HHSelect Order of interviews
10	2 hours, 15 minutes	Interactive 1: Adult Extended Interview (includes a 15-minute break)	Personal computer
11	1 hour, 30 minutes	Interactive 2: Child Extended Interview	Personal computer
	1 hour	LUNCH	

Exhibit 4-2. Agenda for English-Language interviewer training, CHIS 2001 (continued)

Session	Length	Topic	Interviewer/Trainee Materials
12	30 minutes	Sensitivity issues	Distressed teen respondents handout American Indian/Alaska Native handout List of tribal entities in U.S.
13	1 hour, 30 minutes	Interactive 3: Adolescent Extended Interview (includes a 15-minute break)	Personal computer
	15 minutes	BREAK	
14	15 minutes	Screens/pathways	Personal computer
15	45 minutes	Strategies for graining respondent cooperation	Commonly-asked questions
16	45 minutes	Discussion/questions and answer session	
MONDAY			
17	4 hours	Role plays (includes a 15-minute break)	Personal computer Role plays

Group Leader. The group leader was responsible for taking attendance, coordinating trainee evaluations, troubleshooting, and making certain that all materials were available when needed. That person was responsible for pairing trainees for role plays and for making sure that each person was sufficiently monitored in role-play situations to evaluate performance. Most importantly, the group leader was responsible for coordinating an evaluation of each trainee. Information from each member of the training team was compiled and used to determine if a trainee was ready for live interviewing. If not, a remedial training program was implemented or the person was released. Remedial training typically involved more role play. If the additional role play did not result in sufficient performance improvement, the person was released. Once interviewing began, the group leader was responsible for assuring that each of the trainees was adequately monitored and provided feedback. The role of group leader was filled by shift supervisors with many years of experience working with interviewers.

Runners. As the name implies, runners moved around the training room making sure each trainee kept up with the script and assisted trainees who made entry errors that put them in an inappropriate place in the interview. Two runners were assigned to each group. Runners were team leaders and senior interviewers who had direct experience working with interviewers in a one-to-one setting.

Prior to interviewer training, data display operators, group leaders, and runners attended a meeting during which roles and responsibilities of each position were discussed. The work of the training teams was coordinated and closely supervised by the operations manager, as well as by the project director and the director of the TRC.

4.3.4 Stages of Interviewer Training

Interviewers were trained in three stages. The first two stages are standard for all CATI interviewers, and the last stage is specific to the project. The stages are General Interviewing Techniques (GIT), Teltrain (CATI training), and project-specific training.

General Interviewing Techniques

Every new interviewer participated in a 4-hour GIT session; this training was supported by Westat and was not charged to the project. In GIT training, interviewers were introduced to Westat and to survey research, shown samples of types of survey questions and recording conventions, and taught basic ways to obtain accurate data through listening and probing. They learned confidentiality procedures and methods for gaining respondent cooperation. The format included a video presentation that was interspersed with exercises, interactive lectures, role plays, a question-and-answer period, and practice exercises. Each interviewer received a manual (the Westat General Interviewer Training Interviewer's Manual (Westat, 1997e) that documented the material presented in the session. This session also allows staff to identify those interviewers whose reading and speaking skills were inappropriate for the study.

CATI Training with Teltrain

Before specific project training, each trainee participated in a 2- to 3-hour training session on the use of the CATI system. This session used an interactive, computer-assisted training program that was supervised, but self-administered, and took each participant through the procedures for conducting interviews using CATI. The session instructed interviewers on the use of the computers, all Westat CATI recording functions, and special CATI commands. The script included practice with logging on to the computer and using the keyboard (particularly the keys that control the flow of the CATI interview). This training also served as an opportunity to identify trainees who could not use a keyboard skillfully. Those who could not learn to use a keyboard were released from the CHIS 2001 training program.

CHIS Project Training

After interviewers were trained in GIT and the use of the CATI system, they participated in a training session devoted to the specific procedures and the administration of the CHIS CATI questionnaire.

Because of the multiple skills interviewers need, training focused on the techniques designed to cultivate these skills. This involved the active participation of all trainees by simulating the actual

conditions of the interview. This approach required trainees to use the same procedures and data collection instruments they used to conduct the survey. This approach is summarized below.

Interactive Lectures. Interactive lectures were used to familiarize interviewers with the questionnaire. They were conducted as mock interviews in which the trainer acted as the respondent and the interviewers asked the questions using the computer to read the question text. In addition, the trainer took time to explain or define concepts pertinent to the CHIS interviews, or to ask the interviewer to read a definition or procedure from the interviewer's manual.

The scripts used for interactive training were prepared using the Cheshire Automated Training Scripts (CATS) system. CATS is a series of macros created in MS Word for Windows for study area and TRC staff to develop scripted training materials. With this program, CHIS training staff created and saved training scripts. Standards of style have been developed so that each training script looks uniform regardless of the author, and all training groups hear the same information, regardless of which trainer presented the material.

Dyad Role Plays. In dyad role plays, one trainee took the role of interviewer using the computer while the other played the respondent, both using a prepared script that was produced using the CATS system. Interviewers reversed roles after the end of each role play. Each interviewer participated in several dyads. Group leaders and other training team members monitored the role plays.

Written Exercises. In addition, written exercises were given to the interviewers during training to reinforce what was learned during the interactive interviewing sessions. These exercises dealt with contact procedures, defining household membership, and gaining respondent cooperation.

For the extended interview, trainers conducted intensive review of the question-by-question (QxQ) of several sections of the questionnaire. These QxQs were used to teach interviewers about such questions as those on health care coverage, employment and earnings, family income, program participation, and industry and occupation. Exercises were included to reinforce concepts presented. Interviewers were given time to complete the exercises independently, and then each question was reviewed by the group as a whole. The lead trainer used an answer key so that all interviewers heard consistent answers across training groups.

Practice Answering Commonly-Asked Questions. Commonly-asked questions and answers were discussed and reviewed frequently throughout training. In CHIS training, card stock copies were given to each interviewer during the training and made available on the interviewing floor. The questions dealt with both general interviewing issues and CHIS project-specific issues.

4.3.5 Schedule and Number of Interviewers Trained

Table 4-1 shows the timing of project-specific interviewer training sessions for CHIS 2001. The first session was held in Frederick, Maryland and included only interviewers who had worked on the pilot test. This was essentially a "refresher" training, highlighting changes to the instruments and procedures between the pilot test and the main study.

Later into the field period, Westat scheduled two abbreviated training sessions to accelerate production and improve response rates. The first, in the Rockville TRC, trained interviewers experienced with RDD studies only on the screener. Besides the mechanics of the interview, these interviewers also received special training in refusal avoidance in a game show format. The purpose of this training was to work through the remaining cases that had not been screened and to attempt to improve the screener response rate. A subset of these interviewers were subsequently trained on the extended interview and assigned to work as converters for screener refusals.

The second specialized training, for new interviewers only, was held in Citrus Heights. These interviewers were trained only in the extended interview, and only worked cases that other interviewers had screened. The reason for holding this kind of a training was to increase the work force with minimal interruption to production interviewing at the site. Citrus Heights was the only center at that time that had both available slots during prime evening and weekend hours and a backlog of interviewer applicants. Training in Citrus Heights, as in all of the centers outside of Maryland, used production CATI stations, so constituted an interruption in regularly scheduled work. Training on the extended interview only cut the interruption time in half.

Table 4-1. CHIS 2001 English-language interviewer training dates, sites, and number of interviewers trained

Training dates	Site	Lead trainer	Interviewers completing training
2000			
11/27 (Refresher)	Frederick	P. Warren	17
12/2-12/4	Greeley	P. Warren	21
	Frederick	K. Engle	31
	Toms River	P. Corp	14
12/9-12/11	Greeley	P. Corp	15
	Frederick	K. Engle	16
12/16-12/18	Sacramento	P. Warren	28
2001			
1/6-1/8	Sacramento	P. Warren	22
1/13-1/15	Sacramento	P. Corp	24
1/20-1/22	Greeley	P. Corp	22
1/27-1/29	Sacramento	P. Warren	12
2/3-2/5	Sacramento	P. Warren	17
2/17-2/19	Sacramento	P. Corp	25
	12 Oaks	P. Warren	31
3/3-3/5	Chambersburg	P. Warren	30
3/24-3/26	Sacramento	P. Corp	35
	Greeley	R. Dixon	20
3/25-3/28	12 Oaks	P. Warren	35
3/31-4/2	Toms River	P. Warren	12
	Greeley	P. Corp	22
4/3-4/4[1]	12 Oaks	P. Warren	18
4/21-4/22	12 Oaks	P. Warren	4
4/28-4/30	Sacramento	P. Corp	18
5/2-5/4	12 Oaks	P. Warren	7
6/13-6/15[2]	Sacramento	M. Sena	19
8/6-8/8	12 Oaks	P. Warren	6
9/29-9/30	12 Oaks	P. Warren	12
Total Interviewers completing training			533

Source: UCLA Center for Health Policy Research, 2001 California Health Interview Survey.

[1] Experienced interviewers trained on screener only

[2] New interviewers trained on extended interview only

4.3.6 Refusal Avoidance and Conversion

During the regular project training, all interviewers received instruction in refusal avoidance methods. Further strategies were reviewed at all sites in special refusal avoidance meetings. Included in the effort to improve respondent cooperation were special coaching sessions by supervisors assigned to small groups of interviewers. In these meetings, the emphasis was on the review of good interviewing techniques by direct observation and intervention. In addition, supervisors selected experienced interviewers with higher-than-average cooperation rates in either the screener, the extended interview, or both for refusal conversion activities.

Refusal conversion focuses on attempts to persuade respondents who have previously refused to participate or to complete an interview. Interviewers received special training in recontacting and encouraging participation by those respondents who had originally declined. The refusal conversion training sessions lasted between one to two hours and covered specific conversion strategies. They explored common reasons for refusals, reasons specific to CHIS 2001, and the importance of addressing respondent concerns with appropriate responses.

4.3.7 Interviewer Performance

Interviewer performance was evaluated through examination of cooperation rates and monitoring of skills needed for interviewing effectively.

Criteria to Continue Interviewing

After interviewers began working on the production account, their work was closely monitored through monitoring and review of various reports. Interviewers whose performance fell below acceptable levels attended additional coaching sessions with an emphasis on gaining respondent cooperation and answering respondent questions. Approximately 10 percent of the total number of interviewers who completed training fell into this category. This required an additional 1.5 to 2 hours per interviewer. Performance was monitored closely by a coaching coordinator to determine if minimal performance levels had been reached or surpassed.

In addition to cooperation rates, interviewers were monitored by TRC 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. These skills were evaluated through the life of the study.

Supplemental Training

Approximately 1 week after screener training began, interviewers were provided with printed materials designed to provide additional information to assist in answering respondent questions. Initially, this consisted of a broader statement of the purpose of the study and a brief description of the topics covered in the extended instrument. Interviewer memorandums were also distributed to the staff to clarify and reinforce issues as well as to inform staff of procedural changes. A total of six memoranda were distributed to interviewers.

Gaining Respondent Cooperation

Approximately 2 weeks after each training session, interviewers began attending sessions designed to maximize respondent cooperation. Two types of training sessions were conducted: (1) a "monitoring" session designed to accommodate a small group of interviewers, and (2) an interactive session with a larger number of interviewers. The small group sessions involved monitoring interviewers identified as highly effective with discussion of the techniques used to gain and retain cooperation. These sessions ranged from 1.5 to 2 hours in length. The larger group sessions included reinforcement of concepts introduced in project training, techniques observed during monitoring sessions, and discussion and practice addressing specific objections or questions. The large group sessions also ranged from 1.5 to 2 hours in length. All interviewers attended the small and large group sessions.

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

- The operations manager sent a daily priority list to shift coordinators. It included lists of interviewers by name and/or category (practice, Spanish, etc.) targeted for heavy monitoring because of recent change in status, such as role play to practice, practice to

production, special assignment; cooperation rates lower than average; and evaluation for specialized tasks, refusal conversion, and manual queue. The issues that were to be focused on during monitoring were also provided, such as the interviewer's ability to answer respondent questions/concerns quickly and accurately, and read all screens (in particular the screener introduction) at the appropriate pace and tempo for the respondent; read screens verbatim; and probe neutrally and appropriately. For refusal interviewers, the emphasis was on the ability to engage respondents and use appropriate techniques.

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

- Shift coordinators sent daily reports regarding interviewer performance to the operations manager. Reports identified strengths and weaknesses as reported in monitoring sheets. They also provided input on interviewers recommended for special tasks.

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

Interviewer Meetings

Meetings were held with the interviewing and supervisory staff to reinforce procedures, review points of emphasis, provide updates on procedures, and inform staff of study progress.

4.4 Training for Random-Digit-Dial Spanish-language Interviewing

All Spanish bilingual interviewers were trained according to the protocol described in Section 4.3.4, in sessions that included both English-only and bilingual interviewers. After completing the English-language CHIS-specific training, most Spanish bilingual interviewers went to work in English. (Some, trained later in the field period, moved directly to training on the Spanish instrument.) Once the Spanish-language instrument was ready, bilingual interviewers were given practice using it before proceeding to live interviewing in Spanish. The training was monitored by Spanish-speaking team leaders in each site. Since the English and Spanish instruments were so similar, there were few substantive or operational issues to work through during training.

Once the interviewers began interviewing in Spanish, they were monitored closely by Spanish-speaking team leaders as described earlier. The first priority in CATI for Spanish bilingual interviewers was cases from the work class identified as speaking Spanish. Since there was a considerable backlog in this work class by the time the Spanish instruments were ready, bilingual interviewers worked almost exclusively in the Spanish work class for most of the rest of the field period.

4.5 Training for Random-Digit-Dial Asian-language Interviewing

Multilingual staff was hired to conduct the CHIS interviews in Vietnamese, Mandarin, Cantonese, Korean, and Cambodian. The training for Asian-language interviewers was conducted in multiple stages. The first three stages followed the training protocol used for English language interviewers. The remaining stages were designed to prepare interviewers for a data collection that would combine a paper-based scheduling procedure, a hard-copy questionnaire in Mandarin, Cantonese, Korean, or Cambodian, and a CATI instrument into which all responses would be entered. The Vietnamese questionnaire, without accent marks, was in CATI; interviewers could refer to a paper copy for accent marks. The training stages for the Asian-language interviewers were as follows:

- GIT;
- Teltrain;
- CHIS training in English;
- Scheduling and documenting call attempts on paper;
- CHIS project work (non-Asian-language interviewing);
- Vietnamese, Mandarin, Cantonese, Korean, and Cambodian Questionnaire review;
- Dyad role plays;
- Review of, and feedback on, Asian-language questionnaires;
- Live interviewing; and
- Peer monitoring.

GIT, Teltrain, and CHIS Training in English. Following the standard training protocol established for CHIS, the Asian-language interviewers completed GIT, Teltrain, and the entire English

language CHIS project training. Each of these training steps was conducted in English, but open exclusively to the interviewers hired to conduct interviews in Vietnamese, Mandarin, Cantonese, Korean, and Cambodian. Because some of the Asian-language interviewers had weak English language skills, trainers spent additional time defining terms, explaining concepts, and providing instruction on telephone interviewing and the CHIS instruments. On average each training segment took 15 percent longer to complete with the Asian-language interviewers than with average English-speaking only groups.

Initially the TRC training team had some difficulty communicating with a few interviewers whose English was limited. As training progressed, comprehension and communication improved. Despite the fact that some of the TRC training and supervisory staff were multilingual, there was a barrier posed by interviewers who were unable to communicate effectively in English.

Scheduling and Documenting Call Attempts on Paper. The CHIS sample contained relatively few Asian-language cases, therefore, it was determined that these cases would be removed from the CATI automated scheduler, and worked from paper-call records. Paper-call records contained key contact information for a case, and provided fields for the interviewer to record information regarding call attempts to the household. In order to use paper-call records efficiently, the Asian-language interviewers were given training in scheduling and documenting call attempts on paper (paper training). During a 4-hour paper training session, interviewers learned how and when to record information on call records, how the call records are stored, and how to draw work using the call record system.

CHIS Project Work. Once Asian-language interviewers had completed the initial stages of training, they were assigned to a variety of tasks on the CHIS project. Tasks were designed to set up the framework for Asian-language interviewing while giving interviewers an opportunity to call households and gain telephone interviewing experience. Those interviewers who were fluent in English, were assigned to English language interviewing on CHIS. This group represented approximately 10 percent of the Asian-language interviewers. The remaining staff worked on preparing the Asian-language cases for administration in Vietnamese, Mandarin, Cantonese, Korean, and Cambodian. All cases marked Asian-speaking households by English-speaking interviewing staff, were reviewed for indication of the specific language spoken. Cases were divided among languages and assigned to appropriate multilingual interviewers. Interviewers called the cases, spoke to household members and determined the language in which the interview should be conducted. Cases were then resorted by language spoken and set aside for data collection.

Vietnamese, Mandarin, Cantonese, Korean, and Cambodian Questionnaire Review. Trainers who spoke Vietnamese, Mandarin, Cantonese, Korean, and Cambodian were drawn from various areas of the Westat organization. The operations manager worked with each of the trainers to help him gain the skills necessary to conduct effective interviewer training. Together the operations manager and the Vietnamese, Mandarin, Cantonese, Korean, or Cambodian trainer worked with the groups of interviewers. Specific training in each of the Asian languages began with an interactive QxQ review. As in the English language interactive sessions, the trainer called on trainees to read portions of the questionnaire aloud. The trainer pointed out questions that were difficult to administer and worked with the trainees to help them become comfortable with the questionnaire. Those trainees who did not possess strong reading skills were given additional opportunities to practice. Interviewers who, despite additional practice, could not read fluidly were released from the study.

While the multilingual trainer focused on helping the trainees to become familiar with the instrument, the operations manager instructed the interviewers on the technical and data entry aspects of using CATI for non-English language interviews. In this segment of training, interviewers were taught to use CATI to find the question number. The question number would be used to locate the corresponding question in the Vietnamese, Mandarin, Cantonese, Korean, or Cambodian interviewing manual. Once the question had been read, and a response was given, the interviewers were instructed to enter the numeric code corresponding to the response given into the CATI system.

Table 4-2 shows the dates of Asian-language questionnaire training and the groups trained.

Table 4-2. CHIS 2001 Asian-language interviewer training dates

Dates (All 2001)	Group (All at Rockville TRC)
	Asian Language
April 17	Cantonese and Mandarin
April 30	Vietnamese
May 7	Korean
June 26	Cambodian
August 8	Vietnamese
October 1	Vietnamese

Source: UCLA Center for Health Policy Research, 2001 California Health Interview Survey.

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 interviewer would use

his questionnaire manual along with the CATI instrument to administer the CHIS questionnaire in Vietnamese, Mandarin, Cantonese, Korean, or Cambodian. The trainee acting the part of the respondent would use the scripted role play book to respond to the interviewer's questions. The role play books were scripted in English which required that the respondent trainee translate the responses as he answered the interviewer's questions. For additional practice, the pairs of trainees continued to role play with the respondent trainee making up his own answers to the CHIS questionnaire. Role plays were monitored by multilingual trainers. Feedback was given to trainees on interviewing performance and technique.

At first, the interviewers found the interviewing process somewhat cumbersome. The questionnaire manuals while tabbed and well organized, were quite large. Additionally, the CATI program, containing the many CHIS skips patterns necessitated rapid flipping of manual pages in order to locate appropriate questions. After many practice sessions, interviewers developed a level of proficiency and comfort with the interviewing technique.

Review of, and Feedback on, Asian-language Questionnaires. In the period between the conclusion of Asian-language training and the ethnic supplemental sample cases becoming available, interviewers reviewed and provided feedback on the Asian-language questionnaires. The feedback was specific and aimed at improving the questionnaire wording and instrument flow. This exercise served to further familiarize the interviewers with the instruments while also providing constructive feedback to CHIS on the Asian-language questionnaires. With the intent of the question in mind, interviewers noted the wording of questions they believed to be problematic, and provided suggestions for alternate question wording. All questionnaire feedback was provided to CHIS for review.

Live Interviewing. After a lengthy period of training, practice, and questionnaire review, the interviewers began interviewing in Vietnamese, Mandarin, Cantonese, Korean, and Cambodian. While interviewing was successfully accomplished with a hard-copy translation of the CATI questionnaire, it was noted that a CATI instrument with Mandarin, Cantonese, Korean, Cambodian, and Vietnamese translations, including diacritical marks, would provide a streamlined and greatly simplified interviewing process. In contrast, the paper-call records were regarded as being effective at recording call attempts and tracking scheduled appointments for individual cases.

Peer Monitoring. Peer monitoring was used to teach interviewing techniques, to measure interviewing quality, and to provide feedback to individual interviewers. As data collection began in each of the Asian languages, multilingual interviewers were taught to monitor one another. Specific monitoring

forms and guidelines describing what to look and listen for were provided to help in peer monitoring session. After an interviewer had completed a monitoring session, the TRC supervisor would join the interviewer in a review of the monitoring sheets completed. The supervisor would discuss with the interviewer what he had monitored and would initiate a dialogue about the appropriate and inappropriate techniques that had been observed. The monitor would then return to interviewing having learned or reinforced good interviewing techniques. The monitoring information would further be used to followup with the interviewer who had been monitored and review strengths and weaknesses exhibited.

4.6 Training for Interviewing Supplemental Samples

Several different kinds of supplemental samples were added to CHIS 2001 during the data collection period. These samples, grouped by type and how they were handled administratively, included:

- County supplemental samples in San Francisco and Santa Barbara;
- Rural and urban American Indian/Alaska Native list samples compiled from different sources;
- Samples of telephone numbers associated with Cambodian, Korean, and Vietnamese surnames;
- Samples of telephone numbers associated with South Asian and Japanese surnames;
- Samples of telephone numbers associated with Latino surnames in Shasta County.

The San Francisco, Santa Barbara, South Asian, Japanese, and Shasta Latino samples were all (initially) handled the same way administratively and in training. Groups of interviewers in Citrus Heights, Greeley, Toms River, and Rockville were shown the differences between the RDD interview and the interview for these samples, that is, that one or more screening questions were added to determine whether the household met the criteria for the particular sample for which it was selected. Households not meeting the criteria were considered ineligible. In the extended interview for the surname samples, if the selected adult did not consider him/herself to be of the particular ethnicity, the interview was terminated after Section A. Training for these samples was brief, as the differences from the RDD procedures were slight.

Bilingual interviewers who spoke Khmer, Korean, and Vietnamese were trained in a similar fashion for those surname samples after they had worked on the “language problem” cases in RDD for

some time. Initially, only bilingual interviewers worked these samples. However, as the low hit rates for the Cambodian and Korean samples became apparent, English-speaking interviewers were assigned to screening for these samples.

Finally, interviewers in Citrus Heights selected for the American Indian/Alaska Native supplemental sample were trained in the same way about the differences in the instruments. In addition, they received training in the conversational norms of persons raised in Indian cultures from members of the CHIS team. This training focused on issues such as not interrupting the respondent and pausing after questions to allow time for consideration of the response.

4.7 Training for Proxy Interviews

For cases where a sampled adult was 65 or older and unable to be interviewed for physical or mental health reasons, the interviewer attempted to identify an appropriate proxy respondent. The proxy had to be an adult member of the household who knew about the sampled adult's health and health care. The CATI questionnaire was modified as described in Chapter 2 to accommodate proxy interviews.

Interviewers in the Frederick TRC were trained to conduct the proxy interviews. Training comprised discussion of how to contact the households identified as candidates for proxy interviews, determine whether a proxy would be appropriate, and identify a respondent, a review of the changes to the questionnaire for proxy interviews, and several practice interviews in CATI.

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, purging the sample of nonworking and business numbers, mailing prenotification letters, and handling inbound calls to Westat's CHIS 1-800 number. Data collection began November 27, 2000.

5.1 Preparation and Release of Samples

Both the RDD and supplemental samples were released incrementally, in order to (1) assess sample yields against targets, (2) maintain an appropriate mix of new work and callbacks throughout the data collection period, and (3) mitigate the possibility of seasonal bias. All samples were divided into "release groups"; each release group was essentially a replicate of the overall sample of which it was a part.

5.1.1 Random-Digit-Dial Sample

A total of 295,314 telephone numbers were selected for the RDD sample (see Report 1: Sample Design). Of these, almost one-quarter were removed prior to turning them over to interviewers for screening. About 5 percent (16,349) were eliminated because they were listed only in the Yellow Pages, and almost 19 percent (55,410) were eliminated by a computer system that dials numbers to eliminate nonworking numbers. This computer can detect the tritone signal for a nonworking number very quickly, usually without an audible ring of any telephone number that is tested. (See Section 5.3, Table 5-3, for more detailed information on the exclusion of telephone numbers.)

The remaining 223,555 telephone numbers were sent to a reverse directory service for addresses. From this service, addresses were obtained for almost two-thirds (147,065).

Table 5-1 presents the schedule for release of the RDD sample into the CATI scheduler. As described in Report 1: Sample Design, the RDD sample was released in two major groups, or waves, the first in November 2000, the second in April 2001. Sample yields from the first release were used to fine tune the allocation of telephone numbers for the second release. Additional fine tuning was done after the second release with the release of reserve samples in some strata. Within each wave, the sample was divided into replicate release groups to control the flow of work in the CATI system. Advance letters to those numbers with matched addresses were mailed about a week before the sample was released in CATI. Nonaddress cases were typically released earlier (about the time of the advance letter mailing). All of the reverse sample was released in wave 1; in wave 2, the reserve sample was released only for those strata that would not reach the target completion total without it.

Table 5-1. CATI release dates for the CHIS 2001 RDD Sample

	Release group	Approximate release date	Number of Cases		
			Address	NB/NT*	No address
Wave 1	1	11/27	35,267	18,389	18,519
	2	12/4	2,173	1,151	1,188
	3	12/11	2,188	1,151	1,173
	4	12/18	2,207	1,151	1,154
	5	1/2	2,158	1,149	1,200
	6 (Reserve)	1/15	11,400	5,564	5,930
	Total Wave 1		55,393	28,555	29,164
Wave 2	1	3/20-4/12/01	19,624	8,596	10,125
	2	4/13-4/21/01	19,515	8,484	10,021
	3	5/2-5/20/01	15,608	6,783	8,012
	4	5/15-5/26/01	15,608	6,783	8,012
	5	6/13	3,885	1,681	1,986
	6	6/27	3,885	1,681	1,986
	7 (Reserve)	7/5-7/13/02	13,547	5,574	7,184
	Total Wave 2		91,672	39,582	47,326
	Grand Total		147,065	68,137	76,490

Source: UCLA Center for Health Policy Research, 2001 California Health Interview Survey.

* NB/NT are non-working and business numbers

5.1.2 Supplemental Samples

Two kinds of supplemental samples were fielded for CHIS 2001: county supplemental RDD samples and ethnic supplemental samples based on surname lists and published telephone numbers, except for the Native American supplemental sample that was based on a list of Native Americans generated from other sources, primarily IHS (see Report 1: Sample Design). One of the county supplemental samples (Solano) was incorporated into the RDD design and released on the same schedule as the rest of the RDD sample. The Santa Barbara and San Francisco samples were fielded later. The ethnic supplemental samples were fielded on a staggered schedule, dependent on when the sample lists were approved, the questionnaire translations completed, and the interviewers recruited and trained. Table 5-2 presents the schedule for release of the county and ethnic supplemental samples.

Note that early supplemental sample release groups were not checked for business and nonworking (NB/NT) numbers. When it became apparent that these samples included many NB/NT numbers, later released groups were cleaned. The final two supplemental sample release groups, for the South Asian and San Francisco samples, were released without address matching or purge of business and nonworking numbers.

The ethnic supplemental samples were initially not screened to remove probable businesses and nonworking numbers before fielding, since they were ostensibly drawn from listed, working numbers. However, initial calls to these samples resulted in unexpectedly high rates of nonworking and business numbers, so subsequent samples were screened like the RDD samples.

5.2 Work Class Definitions

Within the CATI system, active and completed cases were allocated into work classes, which are divisions of the sample into groups that are to be worked by interviewers with special training or skills. Westat's CATI scheduler treats each work class as an independent sample. Work classes were given priority order for delivery of work to qualified interviewers. For example, a refusal converter would

Table 5-2. CATI release dates for the CHIS 2001 Supplemental Sample

Sample	Release group	Approximate release date	Number of Cases		
			Address	NB/NT*	No address
South Asian	1	6/13	121		17
	2	6/27	123		15
	3	7/23	129		9
	4	7/16	124		14
	5	8/7	461		74
	6	8/27	976	504	614
	7	10/26		492**	
	Total		1,934	504	1,235
Cambodian	1	6/27	286		39
	2	7/16	294		31
	3	7/16	283		42
	4	7/16	289		36
	5	8/6	1100		167
	Total		2,252		315
Japanese	1	5/30	182		31
	2	6/27	188		25
	3	7/11	192		21
	4	7/16	190		23
	5	8/7	745		90
	6	9/28	378	118	282
	Total		1,875	118	472
Korean	1	5/30	313		37
	2	7/16	315		35
	3	7/16	314		36
	4	7/16	307		43
	5	8/6	1,228		137
	6	9/11	598	183	93
	Total		3,075	183	381
Vietnamese	1	5/30	340		35
	2	6/27	339		36
	3	7/11	343		32
	4	8/29	331		44
	5	9/19	1,378		106
	Total		2,731		253

* NB/NT are non-working and business numbers

** Final supplemental sample groups were not matched for addresses.

Table 5-2. CATI release dates for the CHIS 2001 Supplemental Sample (continued)

Sample	Release group	Approximate release date	Number of Cases		
			Address	NB/NT*	No address
American Indian/ Alaska Native	1	7/26	943		117
	2	8/8	231		33
	3	8/27	798		117
	4	9/21	239		69
	5	10/16	250		156
	Total		2,461		492
Shasta	1	7/26	963	408	179
	2	10/1	162	73	121
	Total		1,125	481	300
Santa Barbara	1	8/2	462	159	276
San Francisco	1	8/9	3,439	2,621	2,885
	2	9/11	887	432	407
	3	10/25		1,585**	
	Total		4,326	3,053	4,877

Source: UCLA Center for Health Policy Research, 2001 California Health Interview Survey.

* NB/NT are non-working and business numbers

** Final supplemental sample groups were not matched for addresses.

always be delivered a refusal work class case of one was available before being given a case from the default work class. The CHIS 2001 work classes were defined as follows:

- **Default.** All RDD and county supplemental sample cases on initial release, and continuing RDD and county supplemental sample cases that had not been moved to another work class; available to all interviewers. There were three different default work classes, one for screeners, one for extended interviews, and one for adolescent extended interviews, since throughout the field period there were a few interviewers who were not cleared for one or more of these kinds of cases.

- **Refusal.** Any RDD or county supplemental 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. There were five different refusal work classes: screener initial refusal, extended refusal (other than adolescent and adolescent permission), adolescent refusal, adolescent permission refusal, and second refusals of any type.

- **Hearing/Speech.** Any RDD or county supplemental sample case where a respondent was determined to have difficulty communicating because of hearing or speech impairment.

- **Language (Spanish).** Any case determined or suspected to require a Spanish bilingual interviewer to re-contact; available only to the appropriate bilingual interviewers.

- **Language (Chinese, Vietnamese, Cambodian, and Korean).** All RDD cases determined or suspected to require a Mandarin, Cantonese, Vietnamese, Korean, or Khmer bilingual interviewer to re-contact; available only to the appropriate bilingual interviewers.

- **Language (Other).** Any RDD or county supplemental sample case determined or suspected to require contact in a language other than Spanish, Mandarin, Cantonese, Korean, Khmer, or Vietnamese; available to bilingual interviewers for verification of language spoken by the respondent.

- **Ethnic Supplemental Samples (Vietnamese, Cambodian, and Korean).** Each of these supplemental samples was loaded in its own work class, available to bilingual interviewers, and for the Cambodian and Korean samples, to English-only interviewers trained to screen these samples.

- **Ethnic Supplemental Samples (American Indian/Alaska Native, South Asian, and Japanese).** All cases in the ethnic supplemental samples worked only by English-speaking (non-bilingual) interviewers, available to interviewers trained for these samples—three separate work classes.

Besides automated partition of the sample into work classes within the scheduler, there were also occasions where "manual" queues were used for special activities by small groups of interviewers. In

such instances, interviewers would call up cases by ID number rather than having them delivered through the scheduler. Interviewers and team leaders monitored appointments and other callbacks through paper records. Examples of manual work during CHIS 2001 were the proxy interviews and work in specific strata with low response rates near the end of the field period.

5.3 Advance Mailing and Sample Purging

An advance letter from the CHIS project director was sent for all sampled telephone numbers for which an address was available from reverse directory services. The advance letter (Appendix 1) used for the RDD and county supplemental samples was printed in English, Spanish, Chinese, Korean, and Vietnamese. For the Shasta Latino and American Indian/Alaska Native samples, the advance letter included only the English and Spanish versions. For the Cambodian, Korean, and Vietnamese supplemental samples, the letter was printed in English and the appropriate language. English-only letters were sent to the Japanese and South Asian supplemental samples.

The second procedure implemented prior to releasing the cases for interviewing was purging out-of-scope telephone numbers. Table 5-3 shows the number and proportion of sampled telephone numbers excluded because they were identified as nonworking or business numbers, by RDD stratum and supplemental sample. See Report 1: Sample Design for more details on these procedures. Overall, about 5.5 percent of sampled numbers were purged as businesses. All numbers in the surname samples were listed as residences by definition, and the American Indian/Alaska Native sample was not submitted for the business/nonworking purge. Within the RDD sample, the proportion of numbers purged as business ranged from a low of 4.0 percent in Long Beach and Solano County to a high of 7.7 percent in Butte County. Another almost 19 percent of numbers were identified as nonworking by automated dialing and detection of a tri-tone sound. The low is 13.2 percent in Butte County and the high is 38.4 percent in Tulare County. Surprisingly, the surname samples had rates of nonworking numbers almost as high as those for the RDD sample.

Table 5-3. Number and percentage of telephone numbers removed from sample before calling by reason, and number and proportion of numbers called for which addresses were obtained

Strata	Description	Sampled	Removed—Business		Removed—Non-Working		Total Called	Called, w/Address	
			Number	Percentage	Number	Percentage		Number	Percentage
1.1	Long Beach	4,860	192	4.0%	925	19.0%	3,743	2,485	66.4%
1.2	Pasadena	5,389	266	4.9%	1,016	18.9%	4,107	2,643	64.4%
1.3	Remainder of Los Angeles	65,249	3,662	5.6%	10,038	15.4%	51,549	33,738	65.4%
2	San Diego	14,027	899	6.4%	2,001	14.3%	11,127	7,739	69.6%
3	Orange	15,767	902	5.7%	2,664	16.9%	12,201	7,579	62.1%
4	Santa Clara	9,520	498	5.2%	1,647	17.3%	7,375	4,527	61.4%
5	San Bernardino	7,644	405	5.3%	1,321	17.3%	5,918	3,932	66.4%
6	Riverside	6,902	360	5.2%	1,074	15.6%	5,468	3,583	65.5%
7.1	Berkeley	4,590	226	4.9%	638	13.9%	3,726	2,265	60.8%
7.2	Remainder of Alameda	6,974	373	5.3%	1,392	20.0%	5,209	3,398	65.2%
8	Sacramento	6,255	342	5.5%	1,074	17.2%	4,839	3,240	67.0%
9	Contra Costa	6,601	352	5.3%	1,168	17.7%	5,081	3,532	69.5%
10	Fresno	6,304	313	5.0%	1,746	27.7%	4,245	2,793	65.8%
11	San Francisco	7,068	394	5.6%	1,438	20.3%	5,236	3,208	61.3%
12	Ventura	5,135	317	6.2%	752	14.6%	4,066	2,693	66.2%
13	San Mateo	6,063	360	5.9%	1,150	19.0%	4,553	3,030	66.5%
14	Kern	5,457	273	5.0%	1,488	27.3%	3,696	2,498	67.6%
15	San Joaquin	4,894	293	6.0%	919	18.8%	3,682	2,505	68.0%
16	Sonoma	3,588	220	6.1%	522	14.5%	2,846	1,919	67.4%
17	Stanislaus	3,576	198	5.5%	686	19.2%	2,692	1,916	71.2%
18	Santa Barbara	3,832	224	5.8%	569	14.8%	3,039	1,975	65.0%
19	Solano	7,130	286	4.0%	977	13.7%	5,867	4,171	71.1%
20	Tulare	4,585	212	4.6%	1,761	38.4%	2,612	1,749	67.0%
21	Santa Cruz	4,242	225	5.3%	803	18.9%	3,214	2,033	63.3%
22	Marin	4,397	270	6.1%	739	16.8%	3,388	2,181	64.4%
23	San Luis Obispo	3,725	228	6.1%	654	17.6%	2,843	1,933	68.0%
24	Placer	3,770	207	5.5%	508	13.5%	3,055	1,877	61.4%
25	Merced	3,715	187	5.0%	763	20.5%	2,765	1,963	71.0%
26	Butte	3,178	245	7.7%	420	13.2%	2,513	1,783	71.0%
27	Shasta	3,452	245	7.1%	575	16.7%	2,632	1,721	65.4%

Table 5-3. Number and percentage of telephone numbers removed from sample before calling by reason, and number and proportion of numbers called for which addresses were obtained (continued)

Strata	Description	Sampled	Removed—Business		Removed—Non-Working		Total Called	Called, w/Address	
			Number	Percentage	Number	Percentage		Number	Percentage
28	Yolo	3,409	207	6.1%	637	18.7%	2,565	1,748	68.1%
29	El Dorado	4,002	175	4.4%	878	21.9%	2,949	1,971	66.8%
30	Imperial	3,533	247	7.0%	561	15.9%	2,725	1,945	71.4%
31	Napa	4,036	263	6.5%	603	14.9%	3,170	2,074	65.4%
32	Kings	3,839	214	5.6%	857	22.3%	2,768	1,902	68.7%
33	Madera	3,682	208	5.6%	770	20.9%	2,704	1,672	61.8%
34	Monterey, San Benito	4,739	244	5.1%	1,202	25.4%	3,293	2,121	64.4%
35	Del Norte, Humboldt	4,637	248	5.3%	1,640	35.4%	2,749	1,840	66.9%
36	Lassen, Modoc, Siskiyou, Trinity	4,852	205	4.2%	1,832	37.8%	2,815	1,796	63.8%
37	Lake, Mendocino	4,208	262	6.2%	1,031	24.5%	2,915	1,973	67.7%
38	Colusa, Glen, Tehama	3,766	247	6.6%	883	23.4%	2,636	1,716	65.1%
39	Sutter, Yuba	4,011	192	4.8%	1,071	26.7%	2,748	1,845	67.1%
40	Plumas, Nevada, Sierra	4,066	233	5.7%	732	18.0%	3,101	1,946	62.8%
41	Alpine, Amador, Calaveras, Inyo, Mariposa, Mono, Tuolumne	4,645	230	5.0%	1,285	27.7%	3,130	1,907	60.9%
	Total RDD	295,314	16,349	5.5%	55,410	18.8%	223,555	147,065	65.8%
	San Francisco	12,811	715	5.6%	2,893	22.6%	9,203	4,326	56.8%[1]
	Santa Barbara	986	76	7.7%	172	17.4%	738	462	62.6%
	South Asian	3,673	0	0.0%	676	18.4%	2,997	1,798	60.0%
	Cambodian	2,567	0	0.0%	534	20.8%	2,033	1,838	90.4%
	Japanese	2,465	0	0.0%	321	13.0%	2,144	1,708	79.7%
	Korean	3,639	0	0.0%	691	19.0%	2,948	2,657	90.1%
	Vietnamese	2,984	0	0.0%	477	16.0%	2,507	2,328	92.9%
	American Indian/Alaska Native	2,953	0	0.0%	0	0.0%	2,953	2,461	83.3%
	Shasta Latino	1,906	0	0.0%	481	25.2%	1,425	1,125	78.9%
	Total Sampled	329,298	17,140	5.2%	61,655	18.7%	250,503	165,768	66.2%

Source: UCLA Center for Health Policy Research, 2001 California Health Interview Survey.

[1] The last 1,585 cases for San Francisco were not subjected to matching, and have been removed from the denominator.

Table 5-3 also shows the proportion of nonpurged numbers (those called by Westat interviewers) for which addresses were obtained in reverse directory matches. Overall, almost two-thirds of numbers yielded addresses in the matches performed with multiple vendors. There was not much variability by RDD stratum—Imperial Valley County had the highest address rate at 71.4 percent, and Berkeley the lowest at 60.8 percent. Except for the South Asian list, the surname samples had very high address rates, not surprising given that these lists were from published telephone numbers.

5.4 Inbound Toll-Free Calls

Westat maintained a toll-free number for respondents to call with questions about the survey or what they were being asked to do. The number was included in the advance letter, and was given out by interviewers as needed. During the course of the field period, Westat received many calls to the toll-free number, with a variety of questions and complaints. Many respondents just wanted information, or to verify that the survey was legitimate. Others were calling to complain about the survey procedures in particular or about surveys and other intrusions into their lives in general. When a respondent called to say that they did not want to participate in the survey, the operator would call up the person's telephone number and code the case as a refusal.

UCLA also maintained a toll-free number during the field period, which was available on the CHIS web site. Westat interviewers provided the UCLA number to respondents who specifically wanted to talk with someone there, and in other cases to help persuade the person to do the interview. There was continual back-and-forth between UCLA and Westat in response to these calls, as some threatened legal action or complained particularly bitterly. Westat followed up on any calls complaining about an interviewer's behavior by identifying the interviewer and reviewing the case with her or him.

6. DATA COLLECTION RESULTS

This chapter describes the results of CHIS 2001 data collection, first presenting detailed tables of outcomes at each interview level, and then discussing procedures to increase response once various interim outcomes were encountered. The chapter discusses separately strategies for answering machines, "ring no answers," callbacks, language problems, and refusals.

6.1 Detailed Results by Outcome

Interviewers assign a result code to each attempt to reach a sampled telephone number. The codes are divided into interim (numeric) and final (alpha) codes. During data collection, each case is tracked according to its most recent result code. Cases with interim codes are typically managed automatically by the scheduler according to preset parameters, such as how to work through "time slices" (see Section 6.3) and how long to wait before re-contacting an initial refusal. Problem cases (result codes beginning with 8) require manual intervention before they are re-fielded.

Cases assigned certain final result codes are often re-fielded, but these actions require specific decisions and return of cases to the active scheduler. For example, cases with no contact after seven calls were given a final status of "NA"; if the only contact over seven calls was an answering matching, the code "NM" was assigned. Groups of NA and NM cases were periodically re-fielded for an additional set of seven calls each. Once a case resulted in some human contact, it was no longer eligible for a final NA or NM code.

Initial refusals (interim codes beginning with "2") were moved to the refusal work class and not contacted for 2 weeks. Initial refusals that were considered hostile or abusive received a final result code of RB. If a case received a second refusal, it was also coded as RB. Some RBs were re-fielded for a third attempt.

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 codes beginning with "M" (maximum calls), with the actual designation depending on what else had happened during their call history.

Tables 6-1 through 6-5 present the complete final result code dispositions, by sample, for the screener, adult, child, adolescent, and adolescent insurance interviews, respectively. The following sections discuss these results by instrument.

6.1.1 Screening Interview

As shown in Table 6-1, nearly half (47.6 percent) of the sampled RDD telephone numbers were determined to be out of scope, either because they were nonresidential or nonworking. About half of the out of scope cases were identified before the sample was fielded (NB and NT results, see Table 5-3) and the other half through interviewer calls (NR and NW results). As one would expect, the surname samples had considerably lower rates of out-of-scope cases, ranging from 22.0 percent for the Japanese sample to 30.7 percent for the Shasta Latino sample. The San Francisco and Santa Barbara supplemental samples were similar to the overall RDD. The American Indian/Alaska Native sample had as high a rate of nonworking numbers as the RDD, and a somewhat lower rate of business numbers, indicating that the AIAN lists were somewhat out of date.

Eligibility criteria for the RDD sample were quite limited; only two cases were determined to be ineligible during the screener, because more than nine unrelated adults lived in the household. For the ethnic supplemental samples, households were eligible if one or more adults were of the target ethnicity. For the geographic supplements, households had to be within the target county. The Shasta Latino sample incorporated both of these eligibility criteria. The eligibility rates (completed screeners with eligible households divided by completed screeners with both eligible and ineligible households) for the ethnic supplemental samples ranged from 39.3 percent for the Korean sample to 91.9 percent for the Vietnamese sample. The screener eligibility rates for the South Asian and Cambodian samples are somewhat misleading, since the eligibility questions were dropped for these samples during the field period. For the Cambodian, Korean, and Vietnamese samples, it is likely that the language problem cases are also ineligible, since interviewers speaking Khmer, Korean, and Vietnamese were working their respective samples. If the language problem cases are considered ineligible, the eligibility rates drop between about 10 and 23 percentage points.

Table 6-1. Detailed results of CHIS 2001 data collection, screening interview, by sample

	RDD			AMERICAN INDIAN/ALASKA NATIVE			CAMBODIAN			SOUTH ASIAN		
		Percentage			Percentage			Percentage			Percentage	
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
CS – COMPLETED SCREENER (C)	82,009		27.8%	626		21.2%	585		22.8%	1,120		30.5%
Ineligible(I)												
IF – INELIGIBLE SCREENER; >9 UNRELATED ADULTS	2	100.0%		0	0.0%		0	0.0%		0	0.0%	
IS – INELIGIBLE SCREENER; NO ELIGIBLE ADULTS	0	0.0%		458	100.0%		213	100.0%		206	100.0%	
Total Ineligible	2		0.0%	458		15.5%	213		8.3%	206		5.6%
Out of Scope												
NB – NON-RESIDENTIAL, BUSINESS PURGE	16,349	11.6%		0	0.0%		0	0.0%		0	0.0%	
NR – NON-RESIDENTIAL PHONE NUMBER	22,786	16.2%		250	19.8%		47	6.4%		75	7.0%	
NT – NON-WORKING, TRITONE MATCH	55,410	39.4%		0	0.0%		534	72.6%		676	63.2%	
NW – NON-WORKING PHONE NUMBER	46,126	32.8%		1,013	80.2%		155	21.1%		318	29.7%	
OD – DUPLICATE TELEPHONE NUMBER	3	0.0%		0	0.0%		0	0.0%		0	0.0%	
OO – OTHER OUT OF SCOPE	1	0.0%		0	0.0%		0	0.0%		0	0.0%	
Total Out of Scope	140,675		47.6%	1,263		42.8%	736		28.7%	1,069		29.1%
Noncontact												
NA – NO CONTACT MADE AFTER TIME SLICES FILLED	23,306	76.3%		109	59.2%		64	43.8%		118	50.2%	
NM – NO CONTACT – REACHED ANSWERING MACHINE	7,242	23.7%		75	40.8%		82	56.2%		117	49.8%	
Total Noncontact	30,548		10.3%	184		6.2%	146		5.7%	235		6.4%
Refusal (R)												
R3 – FINAL REFUSAL – RECEIVED 3 OR MORE 2S	8,307	25.7%		1	0.3%		2	0.4%		0	0.0%	
RB – FINAL REFUSAL	14,429	44.7%		277	84.2%		351	78.3%		502	72.1%	
RM – REFUSAL REACHED MAXIMUM CALL LIMIT	6,835	21.2%		51	15.5%		95	21.2%		194	27.9%	
RX – RE-RELEASED RB REACHED MAX CALL LIMIT	2,724	8.4%		0	0.0%		0	0.0%		0	0.0%	
Total Refusal	32,295		10.9%	329		11.1%	448		17.5%	696		18.9%
Other Nonresponse												
LH – FINAL SCRNRSLT HEARING AND SPEECH PROBLEM	224	2.3%		2	2.2%		1	0.2%		0	0.0%	
LM – SCRNRSLT PROBLEM REACHED MAX CALLS	2,194	22.4%		4	4.3%		49	11.2%		23	6.6%	
LP – FINAL SCRNRSLT PROBLEM	1,737	17.8%		28	30.1%		311	70.8%		158	45.5%	
MC – MAXIMUM CALLS	5,244	53.6%		45	48.4%		77	17.5%		158	45.5%	
ML – MAXIMUM CALLS – SCRNRSLT PROB IN HH	61	0.6%		10	10.8%		0	0.0%		0	0.0%	
MR – MAXIMUM CALLS – REFUSAL IN HH	3	0.0%		0	0.0%		0	0.0%		0	0.0%	
NO – OTHER NON-RESPONSE	322	3.3%		4	4.3%		1	0.2%		8	2.3%	
Total Other Nonresponse	9,785		3.3%	93		3.1%	439		17.1%	347		9.4%
TOTAL	295,314		100.0%	2,953		100.0%	2,567		100.0%	3,673		100.0%
ELIGIBILITY RATE (C / (C+I))			100.0%			57.7%	50.5% (with language)		73.3%			84.5%
COOPERATION RATE ((C+I) / (C+I+R))			71.7%			76.7%			64.0%			65.6%

Table 6-1. Detailed results of CHIS 2001 data collection, screening interview, by sample (continued)

	JAPANESE			KOREAN			SANTA BARBARA			SAN FRANCISCO		
		Percentage			Percentage			Percentage			Percentage	
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
CS – COMPLETED SCREENER (C)	604		24.5%	516		14.2%	296		30.0%	1,745		13.6%
Ineligible(I)												
IF – INELIGIBLE SCREENER; >9 UNRELATED ADULTS	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
IS – INELIGIBLE SCREENER; NO ELIGIBLE ADULTS	283	100.0%		797	100.0%		28	100.0%		532	100.0%	
Total Ineligible	283		11.5%	797		21.9%	28		2.8%	532		4.2%
Out of Scope												
NB – NON-RESIDENTIAL, BUSINESS PURGE	0	0.0%		0	0.0%		76	16.5%		715	10.5%	
NR – NON-RESIDENTIAL PHONE NUMBER	40	7.4%		69	6.6%		96	20.8%		1,110	16.3%	
NT – NON-WORKING, TRITONE MATCH	321	59.1%		691	66.0%		172	37.3%		2,893	42.4%	
NW – NON-WORKING PHONE NUMBER	182	33.5%		287	27.4%		117	25.4%		2,110	30.9%	
OD – DUPLICATE TELEPHONE NUMBER	0	0.0%		0	0.0%		0	0.0%		1	0.0%	
OO – OTHER OUT OF SCOPE	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
Total Out of Scope	543		22.0%	1,047		28.8%	461		46.8%	6,829		53.3%
Noncontact												
NA – NO CONTACT MADE AFTER TIME SLICES FILLED	69	35.9%		105	46.5%		60	82.2%		1,378	76.7%	
NM – NO CONTACT – REACHED ANSWERING MACHINE	123	64.1%		121	53.5%		13	17.8%		419	23.3%	
Total Noncontact	192		7.8%	226		6.2%	73		7.4%	1,797		14.0%
Refusal (R)												
R3 – FINAL REFUSAL – RECEIVED 3 OR MORE 2S	4	0.8%		6	1.3%		0	0.0%		4	0.3%	
RB – FINAL REFUSAL	337	68.2%		320	70.2%		68	68.7%		967	75.4%	
RM – REFUSAL REACHED MAXIMUM CALL LIMIT	153	31.0%		129	28.3%		31	31.3%		311	24.3%	
RX – RE-RELEASED RB REACHED MAX CALL LIMIT	0	0.0%		1	0.2%		0	0.0%		0	0.0%	
Total Refusal	494		20.0%	456		12.5%	99		10.0%	1,282		10.0%
Other Nonresponse												
LH – FINAL SCRNRSLT HEARING AND SPEECH PROBLEM	4	1.1%		3	0.5%		0	0.0%		3	0.5%	
LM – SCRNRSLT PROBLEM REACHED MAX CALLS	32	9.2%		68	11.4%		6	20.7%		56	8.9%	
LP – FINAL SCRNRSLT PROBLEM	159	45.6%		343	57.5%		4	13.8%		228	36.4%	
MC – MAXIMUM CALLS	149	42.7%		168	28.1%		17	58.6%		320	51.1%	
ML – MAXIMUM CALLS – SCRNRSLT PROB IN HH	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
MR – MAXIMUM CALLS – REFUSAL IN HH	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
NO – OTHER NON-RESPONSE	5	1.4%		15	2.5%		2	6.9%		19	3.0%	
Total Other Nonresponse	349		14.2%	597		16.4%	29		2.9%	626		4.9%
TOTAL	2,465		100.0%	3,639		100.0%	986		100.0%	12,811		100.0%
ELIGIBILITY RATE (C / (C+I))			68.1%	29.9% (with language)		39.3%			91.4%			76.6%
COOPERATION RATE ((C+I) / (C+I+R))			64.2%			74.2%			76.6%			64.0%

Table 6-1. Detailed results of CHIS 2001 data collection, screening interview, by sample (continued)

	SHASTA LATINO			VIETNAMESE			TOTAL ALL SAMPLES		
		Percentage			Percentage			Percentage	
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
CS – COMPLETED SCREENER (C)	447		23.5%	973		32.6%	88,921		27.0%
Ineligible(I)									
IF – INELIGIBLE SCREENER; >9 UNRELATED ADULTS	0	0.0%		0	0.0%		2	0.1%	
IS – INELIGIBLE SCREENER; NO ELIGIBLE ADULTS	461	100.0%		86	100.0%		3,064	99.9%	
Total Ineligible	461		24.2%	86		2.9%	3,066		0.9%
Out of Scope									
NB – NON-RESIDENTIAL, BUSINESS PURGE	0	0.0%		0	0.0%		17,140	11.1%	
NR – NON-RESIDENTIAL PHONE NUMBER	33	5.6%		70	8.0%		24,576	16.0%	
NT – NON-WORKING, TRITONE MATCH	481	82.1%		477	54.8%		61,655	40.0%	
NW – NON-WORKING PHONE NUMBER	71	12.1%		323	37.1%		50,702	32.9%	
OD – DUPLICATE TELEPHONE NUMBER	1	0.2%		0	0.0%		5	0.0%	
OO – OTHER OUT OF SCOPE	0	0.0%		0	0.0%		1	0.0%	
Total Out of Scope	586		30.7%	870		29.2%	154,079		46.8%
Noncontact									
NA – NO CONTACT MADE AFTER TIME SLICES FILLED	72	63.7%		87	50.6%		25,368	75.3%	
NM – NO CONTACT – REACHED ANSWERING MACHINE	41	36.3%		85	49.4%		8,318	24.7%	
Total Noncontact	113		5.9%	172		5.8%	33,686		10.2%
Refusal (R)									
R3 – FINAL REFUSAL – RECEIVED 3 OR MORE 2S	0	0.0%		1	0.2%		8,325	22.6%	
RB – FINAL REFUSAL	204	79.1%		238	51.3%		17,693	48.1%	
RM – REFUSAL REACHED MAXIMUM CALL LIMIT	54	20.9%		225	48.5%		8,078	21.9%	
RX – RE-RELEASED RB REACHED MAX CALL LIMIT	0	0.0%		0	0.0%		2,725	7.4%	
Total Refusal	258		13.5%	464		15.5%	36,821		11.2%
Other Nonresponse									
LH – FINAL SCRNRSLT HEARING AND SPEECH PROBLEM	0	0.0%		0	0.0%		237	1.9%	
LM – SCRNRSLT PROBLEM REACHED MAX CALLS	7	17.1%		85	20.3%		2,524	19.8%	
LP – FINAL SCRNRSLT PROBLEM	0	0.0%		134	32.0%		3,102	24.4%	
MC – MAXIMUM CALLS	29	70.7%		192	45.8%		6,399	50.3%	
ML – MAXIMUM CALLS – SCRNRSLT PROB IN HH	0	0.0%		0	0.0%		71	0.6%	
MR – MAXIMUM CALLS – REFUSAL IN HH	0	0.0%		0	0.0%		3	0.0%	
NO – OTHER NON-RESPONSE	5	12.2%		8	1.9%		389	3.1%	
Total Other Nonresponse	41		2.2%	419		14.0%	12,725		3.9%
TOTAL	1,906		100.0%	2,984		100.0%	329,298		100.0%
ELIGIBILITY RATE (C / (C+I))			49.2%	76.1% (with language)		91.9%			96.7%
COOPERATION RATE ((C+I) / (C+I+R))			77.9%			69.5%			71.4%

Source: UCLA Center for Health Policy Research, 2001 California Health Interview Survey.

During the data collection period, Westat reported on completion and cooperation rates, rather than response rates. The completion rate, or sample yield, is simply the ratio of completed screeners for eligible households to the total sample. Since the denominator includes out-of-scope and ineligible cases, it is considerably lower than the response rate (see Report 4: Response Rates), but is useful because it shows what sample size is needed to achieve a particular number of completed cases. The overall completion rate (top right-hand corner of each sample's columns) of 27.0 percent was largely driven by the RDD sample. The lowest completion rate at the screener level was for the San Francisco supplemental sample, at 13.6 percent, while the highest was for the Vietnamese surname sample, at 32.6 percent. Among the ethnic supplemental samples, only the Vietnamese sample had a completion rate higher than that of the RDD sample. (Again, as mentioned above, the Cambodian and South Asian sample numbers for the screener are somewhat misleading.)

The cooperation rate is the number of completed screeners (eligible and ineligible) divided by the number of completed screeners plus final refusals. The final cooperation rate is higher than the response rate because it does not include nonresponse other than refusals, and does not include any allocation of nonresponse from the noncontact cases. The highest cooperation rates were in the Shasta Latino (77.9 percent), AIAN (76.7 percent), and Santa Barbara supplemental samples. The lowest were in the San Francisco (64.0 percent), Cambodian (64.0 percent), and Japanese (64.2 percent) supplemental samples.

6.1.2 Adult Extended Interview

The number of completed (eligible) screeners becomes the total number of cases available for the adult extended interview. The results of data collection efforts for the adult extended interview are shown in Table 6-2.

The CHIS team decided that it would use data from partially completed adult interviews, so long as the interview went at least through Section K. Less than 1 percent of all adult interviews counted as complete were only partially done (CP). Together, cases coded CA and CP accounted for 66 percent of RDD sample adults. Similar yields resulted from the county supplemental samples (including Shasta), and the Korean surname sample, in part because virtually all of the sampled adults proved to be eligible.

Table 6-2. Detailed results of CHIS 2001 data collection, adult extended interview, by sample

	RDD			AMERICAN INDIAN/ALASKA NATIVE			CAMBODIAN			SOUTH ASIAN		
		Percentage			Percentage			Percentage			Percentage	
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
Completed Interviews												
CA – COMPLETED ADULT EXTENDED	53,735	99.3%		351	100.0%		124	98.4%		437	98.6%	
CP – ADULT PARTIAL COMPLETE – FINISHED	387	0.7%		0	0.0%		2	1.6%		6	1.4%	
Total Completed Interviews	54,122		66.0%	351		56.1%	126		21.5%	443		39.6%
Ineligible												
IA – INELIGIBLE AGE FOR ADULT EXTENDED	34	100.0%		0	0.0%		0	0.0%		1	0.4%	
IN – INELIGIBLE ADULT RACE FOR SURNAME SAMPLE	0	0.0%		70	100.0%		260	100.0%		222	99.6%	
Total Ineligible	34		0.0%	70		11.2%	260		44.4%	223		19.9%
Out of Scope												
OE – OUT OF SCOPE ENUMERATION ERROR	985	99.8%		4	100.0%		7	100.0%		16	100.0%	
OO – OTHER OUT OF SCOPE	2	0.2%		0	0.0%		0	0.0%		0	0.0%	
Total Out of Scope	987		1.2%	4		0.6%	7		1.2%	16		1.4%
Refusal												
R3 – FINAL REFUSAL RECEIVED 3 OR MORE 2S	1,415	9.6%		0	0.0%		0	0.0%		1	0.6%	
RB – FINAL REFUSAL	8,947	60.8%		67	67.0%		60	78.9%		107	68.6%	
RM – REFUSAL REACHED MAXIMUM CALL LIMIT	3,484	23.7%		33	33.0%		16	21.1%		48	30.8%	
RX – RE-RELEASED RB REACHED MAX CALL LIMIT	874	5.9%		0	0.0%		0	0.0%		0	0.0%	
Total Refusal	14,720		17.9%	100		16.0%	76		13.0%	156		13.9%
Other Nonresponse												
LH – FINAL SCRNRSLT HEARING AND SPEECH PROBLEM	144	1.2%		7	6.9%		1	0.9%		1	0.4%	
LM – SCRNRSLT PROBLEM REACHED MAX CALLS	635	5.2%		1	1.0%		11	9.5%		10	3.5%	
LP – FINAL SCRNRSLT PROBLEM	409	3.4%		0	0.0%		49	42.2%		72	25.5%	
MC – MAXIMUM CALLS	3,616	29.8%		41	40.6%		27	23.3%		125	44.3%	
ML – MAXIMUM CALLS – SCRNRSLT PROB IN HH	2,508	20.6%		1	1.0%		4	3.4%		9	3.2%	
MR – MAXIMUM CALLS – REFUSAL IN HH	1,558	12.8%		16	15.8%		4	3.4%		22	7.8%	
MT – MAXIMUM NUMBER OF CALL ATTEMPTS	349	2.9%		1	1.0%		0	0.0%		9	3.2%	
ND – RESPONDENT DECEASED	78	0.6%		0	0.0%		0	0.0%		0	0.0%	
NF – RESPONDENT NOT FOUND AT CALL BACK	254	2.1%		2	2.0%		1	0.9%		5	1.8%	
NO – OTHER NON-RESPONSE	669	5.5%		13	12.9%		9	7.8%		24	8.5%	
NR – NON-RESIDENTIAL PHONE NUMBER	159	1.3%		1	1.0%		1	0.9%		1	0.4%	
NS – SUBJECT SICK/INCAPACITATED	448	3.7%		11	10.9%		4	3.4%		1	0.4%	
NU – UNKNOWN TELEPHONE NUMBER	395	3.3%		0	0.0%		0	0.0%		0	0.0%	
NW – NON-WORKING PHONE NUMBER	924	7.6%		7	6.9%		5	4.3%		3	1.1%	
Total Other Nonresponse	12,146		14.8%	101		16.1%	116		19.8%	282		25.2%
TOTAL	82,009		100.0%	626		100.0%	585		100.0%	1,120		100.0%
ELIGIBILITY RATE			99.9%			83.4%	28.3% (with language)		32.6%			66.5%
COOPERATION RATE			78.6%			80.8%			83.5%			81.0%

Table 6-2. Detailed results of CHIS 2001 data collection, adult extended interview, by sample (continued)

	JAPANESE			KOREAN			SANTA BARBARA			SAN FRANCISCO		
		Percentage			Percentage			Percentage			Percentage	
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
Completed Interviews												
CA – COMPLETED ADULT EXTENDED	329	99.7%		324	99.4%		206	100.0%		1,090	99.1%	
CP – ADULT PARTIAL COMPLETE – FINISHED	1	0.3%		2	0.6%		0	0.0%		10	0.9%	
Total Completed Interviews	330		54.6%	326		63.2%	206		69.6%	1,100		63.0%
Ineligible												
IA – INELIGIBLE AGE FOR ADULT EXTENDED	0	0.0%		0	0.0%		0	N/A		1	100.0%	
IN – INELIGIBLE ADULT RACE FOR SURNAME SAMPLE	20	100.0%		7	100.0%		0	N/A		0	0.0%	
Total Ineligible	20		3.3%	7		1.4%	0		0.0%	1		0.1%
Out of Scope												
OE – OUT OF SCOPE ENUMERATION ERROR	3	100.0%		8	100.0%		2	100.0%		34	100.0%	
OO – OTHER OUT OF SCOPE	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
Total Out of Scope	3		0.5%	8		1.6%	2		0.7%	34		1.9%
Refusal												
R3 – FINAL REFUSAL RECEIVED 3 OR MORE 2S	0	0.0%		0	0.0%		0	0.0%		2	0.7%	
RB – FINAL REFUSAL	52	46.8%		52	85.2%		26	60.5%		220	73.8%	
RM – REFUSAL REACHED MAXIMUM CALL LIMIT	59	53.2%		9	14.8%		17	39.5%		76	25.5%	
RX – RE-RELEASED RB REACHED MAX CALL LIMIT	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
Total Refusal	111		18.4%	61		11.8%	43		14.5%	298		17.1%
Other Nonresponse												
LH – FINAL SCRNRSLT HEARING AND SPEECH PROBLEM	4	2.9%		0	0.0%		0	0.0%		5	1.6%	
LM – SCRNRSLT PROBLEM REACHED MAX CALLS	11	7.9%		15	13.2%		2	4.4%		11	3.5%	
LP – FINAL SCRNRSLT PROBLEM	15	10.7%		5	4.4%		2	4.4%		38	12.2%	
MC – MAXIMUM CALLS	73	52.1%		51	44.7%		15	33.3%		122	39.1%	
ML – MAXIMUM CALLS – SCRNRSLT PROB IN HH	5	3.6%		6	5.3%		11	24.4%		23	7.4%	
MR – MAXIMUM CALLS – REFUSAL IN HH	21	15.0%		10	8.8%		8	17.8%		31	9.9%	
MT – MAXIMUM NUMBER OF CALL ATTEMPTS	0	0.0%		0	0.0%		0	0.0%		21	6.7%	
ND – RESPONDENT DECEASED	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
NF – RESPONDENT NOT FOUND AT CALL BACK	2	1.4%		5	4.4%		2	4.4%		5	1.6%	
NO – OTHER NON-RESPONSE	5	3.6%		12	10.5%		2	4.4%		29	9.3%	
NR – NON-RESIDENTIAL PHONE NUMBER	0	0.0%		1	0.9%		0	0.0%		3	1.0%	
NS – SUBJECT SICK/INCAPACITATED	3	2.1%		3	2.6%		2	4.4%		11	3.5%	
NU – UNKNOWN TELEPHONE NUMBER	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
NW – NON-WORKING PHONE NUMBER	1	0.7%		6	5.3%		1	2.2%		13	4.2%	
Total Other Nonresponse	140		23.2%	114		22.1%	45		15.2%	312		17.9%
TOTAL	604		100.0%	516		100.0%	296		100.0%	1,745		100.0%
ELIGIBILITY RATE			94.3%	92.4% (with language)		97.9%			100.0%			99.9%
COOPERATION RATE			75.9%			84.5%			82.7%			78.7%

Table 6-2. Detailed results of CHIS 2001 data collection, adult extended interview, by sample (continued)

	SHASTA LATINO			VIETNAMESE			TOTAL ALL SAMPLES		
		Percentage			Percentage			Percentage	
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
Completed Interviews									
CA – COMPLETED ADULT EXTENDED	300	98.7%		520	96.3%		57,416	99.3%	
CP – ADULT PARTIAL COMPLETE – FINISHED	4	1.3%		20	3.7%		432	0.7%	
Total Completed Interviews	304		68.0%	540		55.5%	57,848		65.1%
Ineligible									
IA – INELIGIBLE AGE FOR ADULT EXTENDED	0	0.0%		1	3.4%		37	5.7%	
IN – INELIGIBLE ADULT RACE FOR SURNAME SAMPLE	6	100.0%		28	96.6%		613	94.3%	
Total Ineligible	6		1.3%	29		3.0%	650		0.7%
Out of Scope									
OE – OUT OF SCOPE ENUMERATION ERROR	2	100.0%		8	100.0%		1,069	99.8%	
OO – OTHER OUT OF SCOPE	0	0.0%		0	0.0%		2	0.2%	
Total Out of Scope	2		0.4%	8		0.8%	1,071		1.2%
Refusal									
R3 – FINAL REFUSAL RECEIVED 3 OR MORE 2S	0	0.0%		1	0.6%		1,419	9.0%	
RB – FINAL REFUSAL	51	75.0%		74	47.7%		9,656	61.2%	
RM – REFUSAL REACHED MAXIMUM CALL LIMIT	17	25.0%		80	51.6%		3,839	24.3%	
RX – RE-RELEASED RB REACHED MAX CALL LIMIT	0	0.0%		0	0.0%		874	5.5%	
Total Refusal	68		15.2%	155		15.9%	15,788		17.8%
Other Nonresponse									
LH – FINAL SCRNRSLT HEARING AND SPEECH PROBLEM	3	4.5%		6	2.5%		171	1.3%	
LM – SCRNRSLT PROBLEM REACHED MAX CALLS	15	22.4%		3	1.2%		714	5.3%	
LP – FINAL SCRNRSLT PROBLEM	0	0.0%		4	1.7%		594	4.4%	
MC – MAXIMUM CALLS	19	28.4%		174	72.2%		4,263	31.4%	
ML – MAXIMUM CALLS – SCRNRSLT PROB IN HH	4	6.0%		3	1.2%		2,574	19.0%	
MR – MAXIMUM CALLS – REFUSAL IN HH	9	13.4%		19	7.9%		1,698	12.5%	
MT – MAXIMUM NUMBER OF CALL ATTEMPTS	0	0.0%		0	0.0%		380	2.8%	
ND – RESPONDENT DECEASED	0	0.0%		0	0.0%		78	0.6%	
NF – RESPONDENT NOT FOUND AT CALL BACK	0	0.0%		1	0.4%		277	2.0%	
NO – OTHER NON-RESPONSE	7	10.4%		20	8.3%		790	5.8%	
NR – NON-RESIDENTIAL PHONE NUMBER	1	1.5%		1	0.4%		168	1.2%	
NS – SUBJECT SICK/INCAPACITATED	5	7.5%		6	2.5%		494	3.6%	
NU – UNKNOWN TELEPHONE NUMBER	0	0.0%		0	0.0%		395	2.9%	
NW – NON-WORKING PHONE NUMBER	4	6.0%		4	1.7%		968	7.1%	
Total Other Nonresponse	67		15.0%	241		24.8%	13,564		15.3%
TOTAL	447		100.0%	973		100.0%	88,921		100.0%
ELIGIBILITY RATE			98.1%	93.8% (with language)		94.9%			98.9%
COOPERATION RATE			82.0%			78.6%			78.7%

Source: UCLA Center for Health Policy Research, 2001 California Health Interview Survey.

The other ethnic supplemental samples had lower eligibility rates, because of individuals nominated as eligible by the screener respondent who said in Section A of the adult interview that they were not primarily of the target ethnicity. Eligibility rates ranged from 94.9 percent for the Vietnamese sample to 83.4 percent for the AIAN sample. The South Asian (66.5 percent) and Cambodian (32.6 percent) eligibility rates were much lower because the screening was done in the adult questionnaire for part of the field period. Again, including language problems as ineligible for the Cambodian, Korean, and Vietnamese samples reduces their eligibility rates somewhat, but not as much as at the screener level.

There was less variability in cooperation rates than in completion and eligibility rates across the samples. The Korean (84.5 percent) and Cambodian (83.5 percent) samples had the highest cooperation rates, while the Japanese sample (75.9 percent) had the only cooperation rate lower than that for the overall RDD sample (78.6 percent). Interestingly, nonresponse other than refusals tended to be more of an issue for the ethnic supplemental samples than for the RDD.

Thus far the discussion has considered both cooperation and completion, or yield, rates for the screener and adult interviews separately. In fact, it is the combination of these two sets of rates that is most instructive in judging the performance of the sample. Table 6-3 presents the combined cooperation, eligibility, and completion rates for each sample. The combined cooperation rates for the Japanese and San Francisco supplemental samples were more than five points below that for the RDD, while those for the AIAN, Korean, Santa Barbara, and Shasta Latino supplemental samples were all more than five points higher than that for the RDD. The combined eligibility rates vary considerably across the samples, with the highest rates among supplemental samples for Santa Barbara (91.4 percent) and the Vietnamese supplement (87.2 percent), and the lowest rates for Cambodian (23.9 percent, 14.3 percent if including language problems as ineligible) and Korean (38.5 percent, 27.6 percent including language problems). The eligibility rates among the supplemental samples were generally lower than expected.

The combined completion (yield) rate provides a basic statistic for sample performance: how many sampled telephone numbers does it take to yield one completed adult interview? Note that the completion rate is a function of the cooperation and eligibility rates, and also includes residency and other nonresponse components. The main RDD sample had a combined yield rate of 18.3 percent, or about 5.5 sampled telephone numbers per adult completed interview. The Santa Barbara geographic supplemental sample (also RDD) had a slightly higher yield rate, but that for San Francisco was less than half the rate of the main RDD, due to a combination of some ineligibility and low cooperation and residency rates.

Table 6-3. CHIS 2001 cooperation, eligibility, and completion rates combined across screening and adult interviews

	Cooperation rate			Eligibility rate			Completion (yield) rate		
	Screener	Adult extended	Combined	Screener	Adult extended	Combined	Screener	Adult extended	Combined
RDD	71.7%	78.6%	56.4%	100.0%	99.9%	99.9%	27.8%	66.0%	18.3%
American Indian/ Alaska Native	76.7%	80.8%	62.0%	57.7%	83.4%	48.1%	21.2%	56.1%	11.9%
Cambodian	64.0%	83.5%	53.5%	73.3%	32.6%	23.9%	22.8%	21.5%	4.9%
Cambodian (with language ineligible)				50.5%	28.3%	14.3%			
South Asian	65.6%	81.0%	53.1%	84.5%	66.5%	56.2%	30.5%	39.6%	12.1%
Japanese	64.2%	75.9%	48.8%	68.1%	94.3%	64.2%	24.5%	54.6%	13.4%
Korean	74.2%	84.5%	62.7%	39.3%	97.9%	38.5%	14.2%	63.2%	9.0%
Korean (with language ineligible)				29.9%	92.4%	27.6%			
Santa Barbara	76.6%	82.7%	63.4%	91.4%	100.0%	91.4%	30.0%	69.6%	20.9%
San Francisco	64.0%	78.7%	50.4%	76.6%	99.9%	76.6%	13.6%	63.0%	8.6%
Shasta Latino	77.9%	82.0%	63.9%	49.2%	98.1%	48.3%	23.5%	68.0%	15.9%
Vietnamese	69.5%	78.6%	54.6%	91.9%	94.9%	87.2%	32.6%	55.5%	18.1%
Vietnamese (with language ineligible)				76.1%	93.8%	71.4%			
Total All Samples	71.4%	78.7%	56.2%	96.7%	98.9%	95.6%	27.0%	65.1%	17.6%

Source: UCLA Center for Health Policy Research, 2001 California Health Interview Survey.

None of the ethnic supplemental samples had as high a yield rate as the RDD, with the Vietnamese sample the highest at 18.1 percent, and the Cambodian sample the lowest at 4.9 percent, or more than 20 sampled telephone numbers for each completed adult interview. The variation in eligibility rates was the driving factor in the range of yield rates.

Section 6.9 discusses the implications of the differences in yield rates, as well as in other factors, on the relative level-of-effort required for different samples.

6.1.3 Child Extended Interview

Completion rates for the child interview (Table 6-5) approached or exceeded 90 percent for the RDD and several of the supplemental samples. The exceptions were the South Asian (84.0 percent), Japanese (79.7 percent), and Vietnamese (75.2 percent) samples. These rates may reflect cultural differences in being protective of children. Virtually all of the not completed cases were due to nonresponse rather than problems contacting the sampled persons, about equally divided between refusal and other nonresponse.

6.1.4 Adolescent Extended Interview

Table 6-5 presents data collection results for the adolescent interviews by type of sample. All of the numbers and percentages in the upper portion of the table refer to sampled adolescents for whom permission to interview was obtained from a responsible adult. The bottom three rows add the permission dimension.

Completion rates among adolescents in the supplemental samples did not differ substantially from that for the RDD sample (83.2 percent), except for the San Francisco (70.8 percent) and Vietnamese (59.6 percent) samples. The highest completion rates were in the Santa Barbara (88.0 percent) and Shasta Latino (87.3 percent) samples. The sample sizes in the supplemental samples are relatively small.

Table 6-4. Detailed results of CHIS 2001 data collection, child extended interview, by sample

	RDD			AMERICAN INDIAN/ALASKA NATIVE			CAMBODIAN			SOUTH ASIAN		
		Percentage			Percentage			Percentage			Percentage	
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
Completed Interviews												
CC – COMPLETED CHILD EXTENDED	12,392		89.3%	106		93.0%	44		93.6%	158		84.0%
Ineligible												
IC – INELIGIBLE AGE FOR CHILD EXTENDED	60		0.4%	0		0.0%	0		0.0%	2		1.1%
Out of Scope												
OE – OUT OF SCOPE ENUMERATION ERROR	15	100.0%		0	N/A		0	N/A		1	100.0%	
OO – OTHER OUT OF SCOPE	0	0.0%		0	N/A		0	N/A		0	0.0%	
Total Out of Scope	15		0.1%	0		0.0%	0		0.0%	1		0.5%
Refusal												
R3 – FINAL REFUSAL – RECEIVED 3 OR MORE 2S	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
RB – FINAL REFUSAL	560	80.7%		2	40.0%		2	100.0%		12	75.0%	
RM – REFUSAL REACHED MAXIMUM CALL LIMIT	134	19.3%		3	60.0%		0	0.0%		4	25.0%	
RX – RE-RELEASED RB REACHED MAX CALL LIMIT	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
Total Refusal	694		5.0%	5		4.4%	2		4.3%	16		8.5%
Other Nonresponse												
LH – FINAL SCRNRSLT HEARING AND SPEECH PROBLEM	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
LM – SCRNRSLT PROBLEM REACHED MAX CALLS	24	3.3%		0	0.0%		0	0.0%		0	0.0%	
LP – FINAL SCRNRSLT PROBLEM	4	0.6%		0	0.0%		0	0.0%		0	0.0%	
MC – MAXIMUM CALLS	216	30.0%		1	33.3%		0	0.0%		7	63.6%	
ML – MAXIMUM CALLS – SCRNRSLT PROB IN HH	242	33.6%		0	0.0%		0	0.0%		0	0.0%	
MR – MAXIMUM CALLS – REFUSAL IN HH	110	15.3%		1	33.3%		0	0.0%		1	9.1%	
MT – MAXIMUM NUMBER OF CALL ATTEMPTS	4	0.6%		0	0.0%		0	0.0%		1	9.1%	
ND – RESPONDENT DECEASED	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
NF – RESPONDENT NOT FOUND AT CALL BACK	13	1.8%		0	0.0%		0	0.0%		0	0.0%	
NO – OTHER NON-RESPONSE	21	2.9%		1	33.3%		1	100.0%		2	18.2%	
NR – NON-RESIDENTIAL PHONE NUMBER	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
NS – SUBJECT SICK/INCAPACITATED	1	0.1%		0	0.0%		0	0.0%		0	0.0%	
NU – UNKNOWN TELEPHONE NUMBER	14	1.9%		0	0.0%		0	0.0%		0	0.0%	
NW – NON-WORKING PHONE NUMBER	72	10.0%		0	0.0%		0	0.0%		0	0.0%	
Total Other Nonresponse	721		5.2%	3		2.6%	1		2.1%	11		5.9%
TOTAL	13,882		100.0%	114		100.0%	47		100.0%	188		100.0%
COOPERATION RATE			94.7%			95.5%			95.7%			90.8%

Table 6-4. Detailed results of CHIS 2001 data collection, child extended interview, by sample (continued)

	JAPANESE			KOREAN			SANTA BARBARA			SAN FRANCISCO		
		Percentage			Percentage			Percentage			Percentage	
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
Completed Interviews												
CC – COMPLETED CHILD EXTENDED	51		79.7%	95		89.6%	49		92.5%	151		91.0%
Ineligible												
IC – INELIGIBLE AGE FOR CHILD EXTENDED	0		0.0%	0		0.0%	0		0.0%	1		0.6%
Out of Scope												
OE – OUT OF SCOPE ENUMERATION ERROR	0	N/A		0	N/A		0	N/A		0	N/A	
OO – OTHER OUT OF SCOPE	0	N/A		0	N/A		0	N/A		0	N/A	
Total Out of Scope	0		0.0%	0		0.0%	0		0.0%	0		0.0%
Refusal												
R3 – FINAL REFUSAL – RECEIVED 3 OR MORE 2S	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
RB – FINAL REFUSAL	6	75.0%		5	71.4%		1	50.0%		3	75.0%	
RM – REFUSAL REACHED MAXIMUM CALL LIMIT	2	25.0%		2	28.6%		1	50.0%		1	25.0%	
RX – RE-RELEASED RB REACHED MAX CALL LIMIT	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
Total Refusal	8		12.5%	7		6.6%	2		3.8%	4		2.4%
Other Nonresponse												
LH – FINAL SCRNRSLT HEARING AND SPEECH PROBLEM	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
LM – SCRNRSLT PROBLEM REACHED MAX CALLS	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
LP – FINAL SCRNRSLT PROBLEM	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
MC – MAXIMUM CALLS	4	80.0%		1	25.0%		0	0.0%		4	40.0%	
ML – MAXIMUM CALLS – SCRNRSLT PROB IN HH	0	0.0%		0	0.0%		1	50.0%		2	20.0%	
MR – MAXIMUM CALLS – REFUSAL IN HH	1	20.0%		1	25.0%		0	0.0%		1	10.0%	
MT – MAXIMUM NUMBER OF CALL ATTEMPTS	0	0.0%		0	0.0%		0	0.0%		1	10.0%	
ND – RESPONDENT DECEASED	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
NF – RESPONDENT NOT FOUND AT CALL BACK	0	0.0%		0	0.0%		1	50.0%		0	0.0%	
NO – OTHER NON-RESPONSE	0	0.0%		2	50.0%		0	0.0%		2	20.0%	
NR – NON-RESIDENTIAL PHONE NUMBER	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
NS – SUBJECT SICK/INCAPACITATED	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
NU – UNKNOWN TELEPHONE NUMBER	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
NW – NON-WORKING PHONE NUMBER	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
Total Other Nonresponse	5		7.8%	4		3.8%	2		3.8%	10		6.0%
TOTAL	64		100.0%	106		100.0%	53		100.0%	166		100.0%
COOPERATION RATE			86.4%			93.1%			96.1%			97.4%

Table 6-4. Detailed results of CHIS 2001 data collection, child extended interview, by sample (continued)

	SHASTA LATINO			VIETNAMESE			TOTAL ALL SAMPLES		
		Percentage			Percentage			Percentage	
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
Completed Interviews									
CC – COMPLETED CHILD EXTENDED	106		89.8%	124		75.2%	13,276		89.1%
Ineligible									
IC – INELIGIBLE AGE FOR CHILD EXTENDED	0		0.0%	0		0.0%	63		0.4%
Out of Scope									
OE – OUT OF SCOPE ENUMERATION ERROR	2	100.0%		0	N/A		18	100.0%	
OO – OTHER OUT OF SCOPE	0	0.0%		0	N/A		0	0.0%	
Total Out of Scope	2		1.7%	0		0.0%	18		0.1%
Refusal									
R3 – FINAL REFUSAL – RECEIVED 3 OR MORE 2S	0	0.0%		0	0.0%		0	0.0%	
RB – FINAL REFUSAL	3	75.0%		5	26.3%		599	78.7%	
RM – REFUSAL REACHED MAXIMUM CALL LIMIT	1	25.0%		14	73.7%		162	21.3%	
RX – RE-RELEASED RB REACHED MAX CALL LIMIT	0	0.0%		0	0.0%		0	0.0%	
Total Refusal	4		3.4%	19		11.5%	761		5.1%
Other Nonresponse									
LH – FINAL SCRNRSLT HEARING AND SPEECH PROBLEM	0	0.0%		0	0.0%		0	0.0%	
LM – SCRNRSLT PROBLEM REACHED MAX CALLS	1	16.7%		0	0.0%		25	3.2%	
LP – FINAL SCRNRSLT PROBLEM	0	0.0%		0	0.0%		4	0.5%	
MC – MAXIMUM CALLS	3	50.0%		19	86.4%		255	32.5%	
ML – MAXIMUM CALLS – SCRNRSLT PROB IN HH	2	33.3%		0	0.0%		247	31.5%	
MR – MAXIMUM CALLS – REFUSAL IN HH	0	0.0%		2	9.1%		117	14.9%	
MT – MAXIMUM NUMBER OF CALL ATTEMPTS	0	0.0%		0	0.0%		6	0.8%	
ND – RESPONDENT DECEASED	0	0.0%		0	0.0%		0	0.0%	
NF – RESPONDENT NOT FOUND AT CALL BACK	0	0.0%		0	0.0%		14	1.8%	
NO – OTHER NON-RESPONSE	0	0.0%		1	4.5%		30	3.8%	
NR – NON-RESIDENTIAL PHONE NUMBER	0	0.0%		0	0.0%		0	0.0%	
NS – SUBJECT SICK/INCAPACITATED	0	0.0%		0	0.0%		1	0.1%	
NU – UNKNOWN TELEPHONE NUMBER	0	0.0%		0	0.0%		14	1.8%	
NW – NON-WORKING PHONE NUMBER	0	0.0%		0	0.0%		72	9.2%	
Total Other Nonresponse	6		5.1%	22		13.3%	785		5.3%
TOTAL	118		100.0%	165		100.0%	14,903		100.0%
COOPERATION RATE			96.4%			86.7%			94.6%

Source: UCLA Center for Health Policy Research, 2001 California Health Interview Survey.

Table 6-5. Detailed results of CHIS 2001 data collection by sample, adolescent extended interview

	RDD			AMERICAN INDIAN/ALASKA NATIVE			CAMBODIAN			SOUTH ASIAN		
		Percentage			Percentage			Percentage			Percentage	
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
Completed Interviews												
CT – COMPLETED ADOLESCENT EXTENDED	5,733		83.2%	51		78.5%	37		84.1%	39		79.6%
Ineligible												
IT – INELIGIBLE AGE FOR TEEN EXTENDED	123		1.8%	0		0.0%	2		4.5%	1		2.0%
Out of Scope												
OE – OUT OF SCOPE ENUMERATION ERROR	8	100.0%		1	100.0%		1	100.0%		0	N/A	
OO – OTHER OUT OF SCOPE	0	0.0%		0	0.0%		0	0.0%		0	N/A	
Total Out of Scope	8		0.1%	1		1.5%	1		2.3%	0		0.0%
Refusal												
R3 – FINAL REFUSAL – RECEIVED 3 OR MORE 2S	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
RB – FINAL REFUSAL	413	80.2%		4	66.7%		1	100.0%		4	66.7%	
RM – REFUSAL REACHED MAXIMUM CALL LIMIT	102	19.8%		2	33.3%		0	0.0%		2	33.3%	
RX – RE-RELEASED RB REACHED MAX CALL LIMIT	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
Total Refusal	515		7.5%	6		9.2%	1		2.3%	6		12.2%
Other Nonresponse												
LH – FINAL SCRNRSLT HEARING AND SPEECH PROBLEM	6	1.2%		0	0.0%		0	0.0%		0	0.0%	
LM – SCRNRSLT PROBLEM REACHED MAX CALLS	3	0.6%		0	0.0%		0	0.0%		0	0.0%	
LP – FINAL SCRNRSLT PROBLEM	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
MC – MAXIMUM CALLS	150	29.2%		3	42.9%		1	33.3%		3	100.0%	
ML – MAXIMUM CALLS – SCRNRSLT PROB IN HH	137	26.7%		0	0.0%		0	0.0%		0	0.0%	
MR – MAXIMUM CALLS – REFUSAL IN HH	79	15.4%		2	28.6%		1	33.3%		0	0.0%	
MT – MAXIMUM NUMBER OF CALL ATTEMPTS	1	0.2%		0	0.0%		0	0.0%		0	0.0%	
ND – RESPONDENT DECEASED	1	0.2%		0	0.0%		0	0.0%		0	0.0%	
NF – RESPONDENT NOT FOUND AT CALL BACK	19	3.7%		0	0.0%		0	0.0%		0	0.0%	
NO – OTHER NON-RESPONSE	15	2.9%		2	28.6%		0	0.0%		0	0.0%	
NR – NON-RESIDENTIAL PHONE NUMBER	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
NS – SUBJECT SICK/INCAPACITATED	17	3.3%		0	0.0%		0	0.0%		0	0.0%	
NU – UNKNOWN TELEPHONE NUMBER	33	6.4%		0	0.0%		0	0.0%		0	0.0%	
NW – NON-WORKING PHONE NUMBER	53	10.3%		0	0.0%		1	33.3%		0	0.0%	
Total Other Nonresponse	514		7.5%	7		10.8%	3		6.8%	3		6.1%
TOTAL	6,893		100.0%	65		100.0%	44		100.0%	49		100.0%
COOPERATION RATE			91.8%			89.5%			97.4%			86.7%
ADOLESCENTS SAMPLED	8,971			77			47			78		
PERMISSION NOT RECEIVED	2,078		23.2%	12		15.6%	3		6.4%	29		37.2%
COMBINED COMPLETION RATE			63.9%			66.2%			78.7%			50.0%

Table 6-5. Detailed results of CHIS 2001 data collection by sample, adolescent extended interview (continued)

	JAPANESE			KOREAN			SANTA BARBARA			SAN FRANCISCO		
		Percentage			Percentage			Percentage			Percentage	
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
Completed Interviews												
CT – COMPLETED ADOLESCENT EXTENDED	18		81.8%	30		81.1%	22		88.0%	46		70.8%
Ineligible												
IT – INELIGIBLE AGE FOR TEEN EXTENDED	1		4.5%	1		2.7%	0		0.0%	2		3.1%
Out of Scope												
OE – OUT OF SCOPE ENUMERATION ERROR	0	N/A		0	N/A		0	N/A		0	N/A	
OO – OTHER OUT OF SCOPE	0	N/A		0	N/A		0	N/A		0	N/A	
Total Out of Scope	0		0.0%	0		0.0%	0		0.0%	0		0.0%
Refusal												
R3 – FINAL REFUSAL – RECEIVED 3 OR MORE 2S	0	#DIV/0!		0	0.0%		0	0.0%		0	0.0%	
RB – FINAL REFUSAL	0	#DIV/0!		1	33.3%		1	100.0%		6	75.0%	
RM – REFUSAL REACHED MAXIMUM CALL LIMIT	0	#DIV/0!		2	66.7%		0	0.0%		2	25.0%	
RX – RE-RELEASED RB REACHED MAX CALL LIMIT	0	#DIV/0!		0	0.0%		0	0.0%		0	0.0%	
Total Refusal	0		0.0%	3		8.1%	1		4.0%	8		12.3%
Other Nonresponse												
LH – FINAL SCRNRSLT HEARING AND SPEECH PROBLEM	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
LM – SCRNRSLT PROBLEM REACHED MAX CALLS	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
LP – FINAL SCRNRSLT PROBLEM	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
MC – MAXIMUM CALLS	3	100.0%		3	100.0%		1	50.0%		5	55.6%	
ML – MAXIMUM CALLS – SCRNRSLT PROB IN HH	0	0.0%		0	0.0%		1	50.0%		2	22.2%	
MR – MAXIMUM CALLS – REFUSAL IN HH	0	0.0%		0	0.0%		0	0.0%		2	22.2%	
MT – MAXIMUM NUMBER OF CALL ATTEMPTS	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
ND – RESPONDENT DECEASED	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
NF – RESPONDENT NOT FOUND AT CALL BACK	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
NO – OTHER NON-RESPONSE	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
NR – NON-RESIDENTIAL PHONE NUMBER	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
NS – SUBJECT SICK/INCAPACITATED	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
NU – UNKNOWN TELEPHONE NUMBER	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
NW – NON-WORKING PHONE NUMBER	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
Total Other Nonresponse	3		13.6%	3		8.1%	2		8.0%	9		13.8%
TOTAL	22		100.0%	37		100.0%	25		100.0%	65		100.0%
COOPERATION RATE			100.0%			90.9%			95.7%			85.2%
ADOLESCENTS SAMPLED	41			51			33			88		
PERMISSION NOT RECEIVED	19		46.3%	14		27.5%	8		24.2%	23		26.1%
COMBINED COMPLETION RATE			43.9%			58.8%			66.7%			52.3%

Table 6-5. Detailed results of CHIS 2001 data collection by sample, adolescent extended interview (continued)

	SHASTA LATINO			VIETNAMESE			TOTAL ALL SAMPLES		
		Percentage			Percentage			Percentage	
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
Completed Interviews									
CT – COMPLETED ADOLESCENT EXTENDED	48		87.3%	34		59.6%	6,058		82.9%
Ineligible									
IT – INELIGIBLE AGE FOR TEEN EXTENDED	1		1.8%	2		3.5%	133		1.8%
Out of Scope									
OE – OUT OF SCOPE ENUMERATION ERROR	0	N/A		0	N/A		10	100.0%	
OO – OTHER OUT OF SCOPE	0	N/A		0	N/A		0	0.0%	
Total Out of Scope	0		0.0%	0		0.0%	10		0.1%
Refusal									
R3 – FINAL REFUSAL – RECEIVED 3 OR MORE 2S	0	0.0%		0	0.0%		0	0.0%	
RB – FINAL REFUSAL	3	100.0%		4	36.4%		437	78.9%	
RM – REFUSAL REACHED MAXIMUM CALL LIMIT	0	0.0%		7	63.6%		117	21.1%	
RX – RE-RELEASED RB REACHED MAX CALL LIMIT	0	0.0%		0	0.0%		0	0.0%	
Total Refusal	3		5.5%	11		19.3%	554		7.6%
Other Nonresponse									
LH – FINAL SCRNRSLT HEARING AND SPEECH PROBLEM	0	0.0%		0	0.0%		6	1.1%	
LM – SCRNRSLT PROBLEM REACHED MAX CALLS	0	0.0%		0	0.0%		3	0.5%	
LP – FINAL SCRNRSLT PROBLEM	0	0.0%		0	0.0%		0	0.0%	
MC – MAXIMUM CALLS	1	33.3%		6	60.0%		176	31.6%	
ML – MAXIMUM CALLS – SCRNRSLT PROB IN HH	0	0.0%		0	0.0%		140	25.1%	
MR – MAXIMUM CALLS – REFUSAL IN HH	0	0.0%		3	30.0%		87	15.6%	
MT – MAXIMUM NUMBER OF CALL ATTEMPTS	1	33.3%		0	0.0%		2	0.4%	
ND – RESPONDENT DECEASED	0	0.0%		0	0.0%		1	0.2%	
NF – RESPONDENT NOT FOUND AT CALL BACK	0	0.0%		0	0.0%		19	3.4%	
NO – OTHER NON-RESPONSE	0	0.0%		1	10.0%		18	3.2%	
NR – NON-RESIDENTIAL PHONE NUMBER	0	0.0%		0	0.0%		0	0.0%	
NS – SUBJECT SICK/INCAPACITATED	0	0.0%		0	0.0%		17	3.1%	
NU – UNKNOWN TELEPHONE NUMBER	0	0.0%		0	0.0%		33	5.9%	
NW – NON-WORKING PHONE NUMBER	1	33.3%		0	0.0%		55	9.9%	
Total Other Nonresponse	3		5.5%	10		17.5%	557		7.6%
TOTAL	55		100.0%	57		100.0%	7,312		100.0%
COOPERATION RATE			94.1%			75.6%			91.6%
ADOLESCENTS SAMPLED	70			92			9,548		
PERMISSION NOT RECEIVED	15		21.4%	35		38.0%	2,236		23.4%
COMBINED COMPLETION RATE			68.6%			37.0%			63.4%

Source: UCLA Center for Health Policy Research, 2001 California Health Interview Survey.

Permission rates followed a similar pattern to completion rates for the child extended interview, with the South Asian (37.2 percent not giving permission), Japanese (46.3 percent), and Vietnamese (38.0 percent) sample members being much more reluctant to have their adolescent children interviewed than participants in the RDD sample (23.2 percent) or the other supplemental samples.

6.1.5 Adolescent Insurance Interview

Results for the adolescent insurance interview, completed by a knowledgeable adult, are presented in Table 6-6. As with the adolescent interview itself, the Vietnamese (59.6 percent completion rate) and San Francisco (70.8 percent) samples were substantially less cooperative than the RDD (83.2 percent). The other supplemental samples had roughly equivalent or somewhat higher completion rates than the RDD sample. Across the samples, nonresponse was equally divided between refusals and other types of nonresponse.

6.2 Answering machines

Studies indicate that leaving a message on an answering machine seems to increase cooperation rates (e.g., Xu et al., 1993). Apparently the message acts as an advance letter in that it legitimizes the study, allows the respondent time to make an informed decision, and distinguishes the "survey telephone call" from telemarketing calls. Because of this finding in the literature, the message below was left the **first time** an answering machine was encountered at a telephone number.

> "Hello, I'm calling for the California Health Interview Study. This study is about the health of the people of California and about health care. I am not asking for money – this is a study being done for the University of California at Los Angeles.
>
> We will call you back in the next few days."

Table 6-6. Detailed results of CHIS 2001 data collection by sample, adolescent insurance interview

	RDD			AMERICAN INDIAN/ALASKA NATIVE			CAMBODIAN			SOUTH ASIAN		
		Percentage			Percentage			Percentage			Percentage	
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
Completed Interviews												
CI – COMPLETED ADOLESCENT INSURANCE EXTENDED	7,809			71			44			65		83.3%
Out of Scope												
OE – OUT OF SCOPE ENUMERATION ERROR	23	95.8%		0	N/A		0	N/A		0	N/A	
OO – OTHER OUT OF SCOPE	1	4.2%		0	N/A		0	N/A		0	N/A	
Total Out of Scope	24		0.3%	0		0.0%	0		0.0%	0		0.0%
Refusal												
R3 – FINAL REFUSAL – RECEIVED 3 OR MORE 2S	3	0.4%		0	0.0%		0	0.0%		0	0.0%	
RB – FINAL REFUSAL	555	82.1%		1	50.0%		2	100.0%		9	90.0%	
RM – REFUSAL REACHED MAXIMUM CALL LIMIT	118	17.5%		1	50.0%		0	0.0%		1	10.0%	
RX – RE-RELEASED RB REACHED MAX CALL LIMIT	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
Total Refusal	676		7.5%	2		2.6%	2		4.3%	10		12.8%
Other Nonresponse												
LH – FINAL SCRNRSLT HEARING AND SPEECH PROBLEM	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
LM – SCRNRSLT PROBLEM REACHED MAX CALLS	11	2.4%		0	0.0%		0	0.0%		0	0.0%	
LP – FINAL SCRNRSLT PROBLEM	2	0.4%		0	0.0%		0	0.0%		0	0.0%	
MC – MAXIMUM CALLS	107	23.2%		3	75.0%		0	0.0%		1	33.3%	
ML – MAXIMUM CALLS – SCRNRSLT PROB IN HH	190	41.1%		0	0.0%		0	0.0%		0	0.0%	
MR – MAXIMUM CALLS – REFUSAL IN HH	67	14.5%		0	0.0%		1	100.0%		2	66.7%	
MT – MAXIMUM NUMBER OF CALL ATTEMPTS	2	0.4%		0	0.0%		0	0.0%		0	0.0%	
ND – RESPONDENT DECEASED	1	0.2%		0	0.0%		0	0.0%		0	0.0%	
NF – RESPONDENT NOT FOUND AT CALL BACK	12	2.6%		0	0.0%		0	0.0%		0	0.0%	
NO – OTHER NON-RESPONSE	21	4.5%		1	25.0%		0	0.0%		0	0.0%	
NR – NON-RESIDENTIAL PHONE NUMBER	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
NS – SUBJECT SICK/INCAPACITATED	10	2.2%		0	0.0%		0	0.0%		0	0.0%	
NU – UNKNOWN TELEPHONE NUMBER	9	1.9%		0	0.0%		0	0.0%		0	0.0%	
NW – NON-WORKING PHONE NUMBER	30	6.5%		0	0.0%		0	0.0%		0	0.0%	
Total Other Nonresponse	462		5.1%	4		5.2%	1		2.1%	3		3.8%
TOTAL	8,971		100.0%	77		100.0%	47		100.0%	78		100.0%
COOPERATION RATE			92.0%			97.3%			95.7%			86.7%

Table 6-6. Detailed results of CHIS 2001 data collection by sample, adolescent insurance interview (continued)

	JAPANESE			KOREAN			SANTA BARBARA			SAN FRANCISCO		
		Percentage			Percentage			Percentage			Percentage	
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
Completed Interviews												
CI – COMPLETED ADOLESCENT INSURANCE EXTENDED	33		80.5%	44		86.3%	31		93.9%	79		89.8%
Out of Scope												
OE – OUT OF SCOPE ENUMERATION ERROR	0	N/A		0	N/A		1	100.0%		0	N/A	
OO – OTHER OUT OF SCOPE	0	N/A		0	N/A		0	0.0%		0	N/A	
Total Out of Scope	0		0.0%	0		0.0%	1		3.0%	0		0.0%
Refusal												
R3 – FINAL REFUSAL – RECEIVED 3 OR MORE 2S	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
RB – FINAL REFUSAL	5	100.0%		4	66.7%		1	100.0%		4	80.0%	
RM – REFUSAL REACHED MAXIMUM CALL LIMIT	0	0.0%		2	33.3%		0	0.0%		1	20.0%	
RX – RE-RELEASED RB REACHED MAX CALL LIMIT	0	0.0%		0	0.0%		0	0.0%		0	0.0%	
Total Refusal	5		12.2%	6		11.8%	1		3.0%	5		5.7%
Other Nonresponse												
LH – FINAL SCRNRSLT HEARING AND SPEECH PROBLEM	0	0.0%		0	0.0%		0	N/A		0	0.0%	
LM – SCRNRSLT PROBLEM REACHED MAX CALLS	0	0.0%		0	0.0%		0	N/A		0	0.0%	
LP – FINAL SCRNRSLT PROBLEM	0	0.0%		0	0.0%		0	N/A		0	0.0%	
MC – MAXIMUM CALLS	2	66.7%		1	100.0%		0	N/A		1	25.0%	
ML – MAXIMUM CALLS – SCRNRSLT PROB IN HH	0	0.0%		0	0.0%		0	N/A		2	50.0%	
MR – MAXIMUM CALLS – REFUSAL IN HH	1	33.3%		0	0.0%		0	N/A		1	25.0%	
MT – MAXIMUM NUMBER OF CALL ATTEMPTS	0	0.0%		0	0.0%		0	N/A		0	0.0%	
ND – RESPONDENT DECEASED	0	0.0%		0	0.0%		0	N/A		0	0.0%	
NF – RESPONDENT NOT FOUND AT CALL BACK	0	0.0%		0	0.0%		0	N/A		0	0.0%	
NO – OTHER NON-RESPONSE	0	0.0%		0	0.0%		0	N/A		0	0.0%	
NR – NON-RESIDENTIAL PHONE NUMBER	0	0.0%		0	0.0%		0	N/A		0	0.0%	
NS – SUBJECT SICK/INCAPACITATED	0	0.0%		0	0.0%		0	N/A		0	0.0%	
NU – UNKNOWN TELEPHONE NUMBER	0	0.0%		0	0.0%		0	N/A		0	0.0%	
NW – NON-WORKING PHONE NUMBER	0	0.0%		0	0.0%		0	N/A		0	0.0%	
Total Other Nonresponse	3		7.3%	1		2.0%	0		0.0%	4		4.5%
TOTAL	41		100.0%	51		100.0%	33		100.0%	88		100.0%
COOPERATION RATE			86.8%			88.0%			96.9%			94.0%

Table 6-6. Detailed results of CHIS 2001 data collection by sample, adolescent insurance interview (continued)

	SHASTA LATINO			VIETNAMESE			TOTAL ALL SAMPLES		
		Percentage			Percentage			Percentage	
	Number	Within category	of Total	Number	Within category	of Total	Number	Within category	of Total
Completed Interviews									
CI – COMPLETED ADOLESCENT INSURANCE EXTENDED	66		94.3%	60		65.2%	8,302		87.0%
Out of Scope									
OE – OUT OF SCOPE ENUMERATION ERROR	0	N/A		0	N/A		24	96.0%	
OO – OTHER OUT OF SCOPE	0	N/A		0	N/A		1	4.0%	
Total Out of Scope	0		0.0%	0		0.0%	25		0.3%
Refusal									
R3 – FINAL REFUSAL – RECEIVED 3 OR MORE 2S	0	0.0%		0	0.0%		3	0.4%	
RB – FINAL REFUSAL	2	100.0%		5	31.3%		588	81.1%	
RM – REFUSAL REACHED MAXIMUM CALL LIMIT	0	0.0%		11	68.8%		134	18.5%	
RX – RE-RELEASED RB REACHED MAX CALL LIMIT	0	0.0%		0	0.0%		0	0.0%	
Total Refusal	2		2.9%	16		17.4%	725		7.6%
Other Nonresponse									
LH – FINAL SCRNRSLT HEARING AND SPEECH PROBLEM	0	0.0%		0	0.0%		0	0.0%	
LM – SCRNRSLT PROBLEM REACHED MAX CALLS	0	0.0%		0	0.0%		11	2.2%	
LP – FINAL SCRNRSLT PROBLEM	0	0.0%		0	0.0%		2	0.4%	
MC – MAXIMUM CALLS	1	50.0%		15	93.8%		131	26.4%	
ML – MAXIMUM CALLS – SCRNRSLT PROB IN HH	1	50.0%		0	0.0%		193	38.9%	
MR – MAXIMUM CALLS – REFUSAL IN HH	0	0.0%		1	6.3%		73	14.7%	
MT – MAXIMUM NUMBER OF CALL ATTEMPTS	0	0.0%		0	0.0%		2	0.4%	
ND – RESPONDENT DECEASED	0	0.0%		0	0.0%		1	0.2%	
NF – RESPONDENT NOT FOUND AT CALL BACK	0	0.0%		0	0.0%		12	2.4%	
NO – OTHER NON-RESPONSE	0	0.0%		0	0.0%		22	4.4%	
NR – NON-RESIDENTIAL PHONE NUMBER	0	0.0%		0	0.0%		0	0.0%	
NS – SUBJECT SICK/INCAPACITATED	0	0.0%		0	0.0%		10	2.0%	
NU – UNKNOWN TELEPHONE NUMBER	0	0.0%		0	0.0%		9	1.8%	
NW – NON-WORKING PHONE NUMBER	0	0.0%		0	0.0%		30	6.0%	
Total Other Nonresponse	2		2.9%	16		17.4%	496		5.2%
TOTAL	70		100.0%	92		100.0%	9,548		100.0%
COOPERATION RATE			97.1%			78.9%			92.0%

Source: UCLA Center for Health Policy Research, 2001 California Health Interview Survey.

Table 6-7 shows the proportion of the sample with at least one answering machine contact at the screener and adult extended level. Overall, more than one-third of all cases attempted at each level had at least one call reach an answering machine. At the low end of the RDD is Imperial Valley, with about one-quarter of all cases at each level having an answering machine contact; at the high end is Marin County, with more than 43 percent at each level. Among the supplemental samples, the rates at the screener level are very high for the surname samples, because these samples had a higher percentage of households than the RDD. At the adult extended level, the rates were relatively low for the Cambodian, Vietnamese, Korean, and Shasta Latino samples, where non-English-speaking respondents were most common, and for Santa Barbara.

6.3 Time Slice Strategy

If the initial call attempt resulted in "no answer," a busy signal, or an answering machine, the automatic call scheduler would place the telephone number into time slice queues so that additional calls would be made over several days at several different times of day. The goal here was to find a time when someone would answer the telephone (Brick et al., 1996; Sebold, 1988).

The time slices were defined as Saturday, 10 am. to 6 p.m.; Sunday, 2 p.m. to 9 p.m.; weekdays, 9 a.m. to 2 p.m., 2 p.m. to 6 p.m., 6 p.m. to 7:30 p.m., 7:30 p.m. to 9 p.m., and 6 p.m. to 9 p.m. If, after seven calls, there was still no answer, the telephone number was temporarily retired by coding it a NA or NM.

All the NA and NM cases were retired for 2 weeks, at which point they were re-released for 7 additional calls within the time slices for a total of 14 attempts. After 14 calls the telephone number was coded a result of NA or NM. At the end of the survey, there were 25,368 NAs across all samples, 7.7 percent of the 329,298 sampled telephone numbers. About 2.5 percent (8,318) of the sampled telephone numbers ended up as NM (see Table 6-1).

Table 6-7. Proportion of numbers called at screener and adult extended level with at least one answering machine contact

Strata	Description	Percentage Of Cases With At Least One Answering Machine Contact	
		Screener	Adult Extended
1.1	Long Beach	40.6%	36.5%
1.2	Pasadena	39.7%	38.1%
1.3	Remainder of Los Angeles	38.8%	37.4%
2	San Diego	40.9%	40.0%
3	Orange	39.3%	40.4%
4	Santa Clara	38.1%	41.2%
5	San Bernardino	38.2%	36.5%
6	Riverside	37.8%	37.3%
7.1	Berkeley	40.6%	39.6%
7.2	Remainder of Alameda	41.6%	37.2%
8	Sacramento	38.2%	36.3%
9	Contra Costa	42.1%	38.8%
10	Fresno	29.9%	31.5%
11	San Francisco	41.7%	43.5%
12	Ventura	40.2%	38.6%
13	San Mateo	41.6%	40.1%
14	Kern	29.5%	29.0%
15	San Joaquin	35.2%	33.3%
16	Sonoma	40.8%	38.4%
17	Stanislaus	34.7%	33.1%
18	Santa Barbara	40.0%	38.1%
19	Solano	42.0%	40.4%
20	Tulare	30.4%	26.9%
21	Santa Cruz	40.1%	37.2%
22	Marin	45.1%	43.2%
23	San Luis Obispo	38.3%	35.0%
24	Placer	39.4%	39.2%
25	Merced	29.5%	28.3%
26	Butte	35.1%	34.8%
27	Shasta	34.0%	30.9%
28	Yolo	40.5%	35.4%
29	El Dorado	38.9%	36.2%
30	Imperial	24.6%	24.8%
31	Napa	38.9%	34.3%
32	Kings	30.8%	26.8%
33	Madera	30.1%	30.5%
34	Monterey, San Benito	34.8%	34.6%
35	Del Norte, Humboldt	36.3%	30.0%
36	Lassen, Modoc, Siskiyou, Trinity	29.5%	30.1%
37	Lake, Mendocino	33.3%	26.2%

Table 6-7. Proportion of numbers called at screener and adult extended level with at least one answering machine contact (continued)

Strata	Description	Percentage Of Cases With At Least One Answering Machine Contact	
		Screener	Adult Extended
38	Colusa, Glen, Tehama	28.8%	27.4%
39	Sutter, Yuba	32.3%	31.3%
40	Plumas, Nevada, Sierra	37.7%	34.0%
41	Alpine, Amador, Calaveras, Inyo, Mariposa, Mono, Tuolumne	35.0%	32.8%
	RDD Total	37.8%	36.0%
	San Francisco	39.5%	43.7%
	Santa Barbara	33.3%	28.0%
	South Asian	51.4%	40.9%
	Cambodian	43.0%	26.0%
	Japanese	56.7%	39.2%
	Korean	47.4%	29.7%
	Vietnamese	40.0%	23.4%
	American Indian/Alaska Native	34.0%	35.1%
	Shasta Latino	48.4%	32.7%
	Total	38.4%	34.2%

Source: UCLA Center for Health Policy Research, 2001 California Health Interview Survey.

6.4 Maximum Call Limits

When a person answered the telephone, the telephone number was removed from the time slice strategy described above. Once contact was made, all subsequent calls were based upon the respondent's assessment of the best time to call or it was left to the discrimination of the interviewer to suggest the best time. This was generally in terms of an exact appointment or a general "best time" to call (e.g., day, evening, or weekend). The maximum call counter for these cases for both the screener and the extended interview was set at 50 each. This high limit was set to allow enough calls for two refusal conversion efforts and calls in Spanish. As a result, less than 2 percent of the calls ended as "maximum calls" (MC) at both the screener and extended levels. (See Section 9.2 of Report 4: Response Rates for more detail on the number of calls made.)

6.5 Language Strategy

An important capability for CHIS 2001 was conducting interviews in a variety of languages, including English, Spanish, Mandarin, Cantonese, Khmer, Korean, and Vietnamese. Section 3.3 describes the process by which the questionnaires were translated and prepared for use, and Sections 4.4 and 4.5 describe the recruitment and training of Spanish- and Asian-language bilingual interviewers, respectively. This section describes how the non-English interviews were managed in the CATI system and the TRCs where they were conducted.

6.5.1 RDD Strategy

All sampled telephone numbers for the general RDD sample were loaded into the default CATI work class, which meant that they were available to any interviewer working the RDD sample. (See Section 5.2 for a complete description of the CHIS 2001 work classes.) Before the non-English questionnaires were in use, whenever an interviewer encountered a respondent who did not speak English in attempting to complete the screener or an extended interview, he or she would indicate that it was a "language problem," and what language (if it could be determined) the respondent was speaking. The first sort was into Spanish, Asian-language, and other or not determined language.

Cases determined to require a Spanish bilingual interviewer were put into the Spanish-language work class, and became available to bilingual interviewers after the Spanish translations were finalized in CATI.

Cases where the respondent was thought to be speaking an Asian language or where the language was not determined were manually reviewed by a group of bilingual interviewers. Often respondents were able to tell interviewers what language they spoke, and the interviewers would record the exact language. In other cases where it was not clear, the Asian bilingual interviewers would call the number back and attempt to determine what language was spoken. The Asian-language RDD cases were then sorted into queues by language. Cases requiring a language other than the seven for which translations were available were finalized as language problem nonresponse.

Once the individual Asian-language translations became available and the bilingual interviewers were trained in their use, the interviewers began calling back the cases in the various language queues. The bilingual interviewers typically continued with these cases until completion, even if one or more respondents preferred to be interviewed in English.

6.5.2 Supplemental Sample Strategy

The AIAN, South Asian, and Japanese supplemental samples were worked by English-only interviewers. The San Francisco and Santa Barbara supplemental samples were worked in the same way as the main RDD sample.

Initially, the Shasta Latino, Korean, and Cambodian supplemental samples were worked by bilingual interviewers only. However, it quickly became clear that this restriction was not necessary. The "hit rate" for the Korean and Cambodian was low enough that it was more efficient to have English-only interviewers do much of the screening, and turn the cases over to the bilingual staff as needed. A similar phenomenon occurred in Shasta, where many of the Latino respondents did the survey in English. Only the Vietnamese supplemental sample was worked exclusively by bilingual interviewers throughout the field period.

6.5.3 Completed Interviews by Language

Table 6-8 shows the number of adult extended interviews completed in each of the seven CHIS 2001 languages, by sample and RDD stratum.

Overall, some 5,116 adult interviews were conducted in Spanish, about 8.8 percent of the total. The highest percentage of adult interviews completed in Spanish was in Imperial County (37.0 percent), more than twice that of any other RDD stratum. Only 19.1 percent of interviews with the Shasta Latino surname sample were conducted in Spanish.

Overall, 1,690 adult interviews were completed in one of the five Asian languages used in CHIS 2001, or about 3 percent of all interviews. In the general RDD sample, there were 811 adult interviews conducted in an Asian language, or about 1.5 percent of the total. The highest RDD proportions of Mandarin (5.7 percent) and Asian in total (8.0 percent) were in the San Francisco stratum, of Cantonese (1.7 percent) in Alameda, of Khmer (1.1 percent) in Long Beach, of Korean (1.2 percent) in Orange, and of Vietnamese (1.8 percent) in Orange and Santa Clara. In the Cambodian, Korean, and Vietnamese supplemental samples, a large majority of the adult interviews were conducted in the Asian language.

See Table 9.4 in Report 4: Response Rates in CHIS 2001, for more on numbers of interviews conducted by language.

6.6 Refusal Conversion

At each stage of the interview process, Westat conducted extensive conversion efforts for refusals that were not judged to be hostile or abusive. These procedures and the results are described in Report 4: Response Rates in CHIS 2001. That report contains the initial and conversion cooperation rates by type of interview.

Table 6-8. Number of adult interviews completed by language and sample/RDD sample stratum

Strata	Sampling Stratum	Completes	English	Spanish	Cantonese	Mandarin	Khmer	Korean	Vietnamese	English (Asian)	Other
1.1	Long Beach	819	683	114	3	0	9	1	7	0	2
1.2	Pasadena	814	738	63	0	8	0	3	1	0	1
1.3	Remainder of Los Angeles	10,582	8,569	1,654	66	96	6	133	26	16	16
2	San Diego	2,666	2,416	222	8	4	1	6	8	1	0
3	Orange	2,495	2,165	236	3	9	1	29	45	3	4
4	Santa Clara	1,514	1,350	92	10	19	1	11	27	3	1
5	San Bernardino	1,547	1,404	133	0	0	0	4	3	2	1
6	Riverside	1,386	1,237	145	1	1	0	2	0	0	0
7.1	Berkeley	794	759	18	3	11	0	2	0	1	0
7.2	Remainder of Alameda	1,191	1,069	60	23	23	1	4	7	3	1
8	Sacramento	1,238	1,187	28	12	2	0	3	5	1	0
9	Contra Costa	1,199	1,129	62	1	2	0	3	0	2	0
10	Fresno	1,041	931	105	1	1	0	1	0	1	1
11	San Francisco	893	773	46	53	13	0	3	2	3	0
12	Ventura	971	895	72	0	1	0	1	0	2	0
13	San Mateo	925	859	47	6	9	0	1	0	1	2
14	Kern	1,096	957	139	0	0	0	0	0	0	0
15	San Joaquin	1,052	953	84	4	1	6	0	2	1	1
16	Sonoma	771	739	32	0	0	0	0	0	0	0
17	Stanislaus	819	738	74	1	2	2	1	0	1	0
18	Santa Barbara	798	729	65	0	1	0	0	1	1	1
19	Solano	1,587	1,489	85	2	3	0	2	4	2	0
20	Tulare	827	706	121	0	0	0	0	0	0	0
21	Santa Cruz	793	722	68	1	1	0	1	0	0	0
22	Marin	750	724	24	0	0	0	0	2	0	0
23	San Luis Obispo	799	775	24	0	0	0	0	0	0	0
24	Placer	784	779	5	0	0	0	0	0	0	0
25	Merced	832	722	107	1	0	0	1	0	0	1
26	Butte	825	808	16	1	0	0	0	0	0	0
27	Shasta	826	821	4	0	1	0	0	0	0	0
28	Yolo	834	759	66	0	7	0	1	0	1	0
29	El Dorado	780	757	22	0	1	0	0	0	0	0
30	Imperial	798	500	295	0	0	0	3	0	0	0
31	Napa	806	743	63	0	0	0	0	0	0	0

Table 6-8. Number of adult interviews completed by language and sample/RDD sample stratum (continued)

Strata	Sampling Stratum	Completes	English	Spanish	Cantonese	Mandarin	Khmer	Korean	Vietnamese	English (Asian)	Other
32	Kings	843	713	128	2	0	0	0	0	0	0
33	Madera	824	711	112	0	0	0	1	0	0	0
34	Monterey, San Benito	790	657	129	0	0	0	4	0	0	0
35	Del Norte, Humboldt	861	847	14	0	0	0	0	0	0	0
36	Lassen, Modoc, Siskiyou, Trinity	846	831	12	1	1	1	0	0	0	0
37	Lake, Mendocino	813	781	31	0	0	0	1	0	0	0
38	Colusa, Glen, Tehama	839	758	80	0	0	0	0	0	0	1
39	Sutter, Yuba	822	769	50	0	0	0	0	0	2	1
40	Plumas, Nevada, Sierra	814	807	6	0	0	0	1	0	0	0
41	Alpine, Amador, Calaveras, Inyo, Mariposa, Mono, Tuolumne	818	812	6	0	0	0	0	0	0	0
	TOTAL	54,122	48,271	4,959	203	217	28	223	140	47	34
	San Francisco	1,100	982	63	29	12	0	2	5	6	1
	Santa Barbara	206	170	36	0	0	0	0	0	0	0
	South Asian	443	443	0	0	0	0	0	0	0	0
	Cambodian	126	0	0	0	0	95	0	0	28	3
	Japanese	330	330	0	0	0	0	0	0	0	0
	Korean	326	0	0	0	0	0	231	0	93	2
	Vietnamese	540	0	0	0	0	0	0	505	15	20
	American Indian/Alaska Native	351	351	0	0	0	0	0	0	0	0
	Shasta Latino	304	246	58	0	0	0	0	0	0	0
	TOTAL	57,848	50,793	5,116	232	229	123	456	650	189	60

Source: UCLA Center for Health Policy Research, 2001 California Health Interview Survey.

6.7 Proxy Interviews

UCLA decided to allow proxy reporting for sample persons over 65 who were unable to respond for themselves because of physical, mental, or emotional limitations. Proxy respondents had to be adult members of the household knowledgeable about the sampled adult's health. Some 542 candidates for proxy interviews were identified based upon interviewers' notes; of these, 241 interviews were completed with proxies, and another 24 were completed with the sampled adults themselves.

Interviewers who conducted the proxy interviews were trained to substitute the name of the sampled adult wherever "you" appeared in the question text; in cases where "you" referred specifically to the respondent (as, "You said earlier . . ."), the word "you" was put in reverse video for the proxy interviews.

6.8 Closing Out Strata And Supplemental Samples

As the end of the data collection period neared, some RDD sample strata and supplemental sample approached their targets more rapidly than others. As the targets were reached, work was stopped (except for appointments and outstanding adolescent and child interviews) in RDD strata and individual supplemental samples, so that more resources could be allocated to those strata and samples that were lagging.

In the strata farthest from their targets, Westat adopted a variety of strategies to close them out. First, the callback rules were relaxed so that cases were attempted more frequently. Second, Westat continued to re-field cases that had been retired because they reached the call limits. Third, in several strata, the entire pending sample was moved out of the scheduler onto manual call sheets, and assigned these cases to groups of interviewers within one center. This tactic allowed more intensive review and tailoring of follow-up calls, and typically resulted in a 1 to 2 percent boost in the achieved sample over leaving the cases in the scheduler.

The RDD sample was planned to be closed out September 2, 2001, but was continued through September 10 for all strata that had not yet reached their goals. Work on the supplemental samples continued well into October 2001, following the same pattern as for the RDD strata.

6.9 Level-of-effort By Sample And Stratum

In order to support costing of various types of samples, Westat estimated the level-of-effort required to complete data collection by component. The key figure in this estimate was the number of interviewer hours, on average, that required to complete all of the instruments associated with one household for households where an adult interview was conducted. This estimate includes time spent interviewing, contacting respondents, and gaining cooperation for a particular case, as well as an amortization of time spent on nonresponse, ineligible, and out of scope cases. The estimate also includes an amortization of interviewer administrative time associated with project activities. Table 6-9 presents the initial estimate of adult interviews to be completed, average interviewer time per case, and total interviewer hours. It also presents these figures for the actual survey administration.

Table 6-9. Estimated and actual number of adult interviews, hours per case, and total interviewer hours

	Initial estimate	Actual results
Number of adult interviews	55,000	57,461
Hours per case	2.17	2.33
Total interviewer hours	119,589	133,586

Source: UCLA Center for Health Policy Research, 2001 California Health Interview Survey.

The initial estimate of 55,000 interviews included the RDD sample and the Asian supplemental samples, but not the AIAN supplemental sample or the four county supplemental samples. The primary reason for the difference between the estimate and the actual hours per complete was the unexpectedly low yields from the list samples, as discussed below.

These overall numbers mask considerable variation in the level-of-effort per case for different samples and for different strata within the RDD sample. The primary reasons for these differences include:

- Large differences in interview administration time across languages;
- Differences across samples and strata in sample yield (proportion of telephone numbers resulting in completed adult interviews);

- Differences in the mean number of calls needed to complete a case, whether an interview, nonresponse, ineligible, or out of scope; and
- Differences across samples and strata in the proportion of households with sampled children and adolescents.

The remainder of this section will discuss each of these factors, and then present a summary of estimated level-of-effort by type of sample and RDD stratum.

6.9.1 Interview Administration Time by Language

As described in Chapter 2, CHIS was conducted in seven languages: English, Spanish, and Vietnamese where the question text appeared on the CATI screen, and Cantonese, Mandarin, Korean, and Khmer where the question text was on paper and interviewers entered responses onto the corresponding English CATI screen. Typically, Spanish interviews take longer than those conducted in English because more words are needed to convey the appropriate concepts. One would also expect the Asian-language interviews using both paper and CATI to take longer than English interviews using CATI only.

Table 6-10 presents mean administration times for the various questionnaires by language. As expected, Spanish language administration was about 25 percent longer than the overall mean, fairly consistently across type of interview. Cantonese, Korean, and Vietnamese interviews were all about the same length on average, and somewhat shorter than Spanish. Interviews conducted in Mandarin and Khmer were the longest, more than 50 percent longer than the overall mean on average.

The “Sum” row simply adds the times for each instrument; the “weighted sum” row weights the child, adolescent, and adolescent insurance interview times by the proportion of adult interviews for which they were completed overall. Thus, the weighted sum represents the expected administration time for a given case, assuming that the proportion of child and adolescent interviews is the same across languages. This assumption is not correct, the difference is adjusted for separately. The weighted sum also ignores the many cases where the adult interview was conducted in a language other than English and one or more of the others, typically the adolescent, was conducted in English.

Table 6-10. Mean administration times (in minutes), relative times, and sample sizes for all CHIS 2001 instruments by language of administration

Instrument	Statistic	All Languages	English	Spanish	Cantonese	Mandarin	Khmer	Korean	Vietnamese	English (Asian)	Other
Screener	Mean admin	2.72	2.60	3.45	3.60	3.96	6.13	3.89	3.85	3.24	2.8
	Ratio to All		0.96	1.27	1.32	1.46	2.25	1.43	1.42	1.19	1.03
	N		77,695	8,000	308	295	144	585	1,143	692	59
Adult	Mean admin	32.95	31.76	42.53	38.67	49.83	59.43	36.82	36.36	32.65	35.94
	Ratio to All		0.96	1.29	1.17	1.51	1.80	1.12	1.10	0.99	1.09
	N		50,514	5,008	230	229	123	456	650	189	17
Child	Mean admin	14.47	13.66	17.89	16.15	22.12	19.64	14.66	12.69	14.53	11.73
	Ratio to All		0.94	1.24	1.12	1.53	1.36	1.01	0.88	1.00	0.81
	N		10,432	2,358	55	42	40	126	168	51	4
Adolescent	Mean admin	20.12	19.62	24.27	25.59	30.89	25.84	23.82	25.01	22.94	17.92
	Ratio to All		0.98	1.21	1.27	1.54	1.28	1.18	1.24	1.14	0.89
	N		5,395	454	3	10	22	16	32	125	1
Adolescent Insurance	Mean admin	2.10	1.88	3.26	1.91	5.11	2.98	2.19	2.21	2.14	1.78
	Ratio to All		0.89	1.55	0.91	2.43	1.42	1.04	1.05	1.02	0.85
	N		6,806	1,203	30	24	48	69	97	24	1
Sum	Mean admin	72.36	69.52	91.40	85.92	111.91	114.02	81.38	80.12	75.50	70.17
	Ratio to All		0.96	1.26	1.19	1.55	1.58	1.12	1.11	1.04	0.97
Weighted sum	Mean admin	43.15	41.50	55.23	51.07	65.56	75.48	48.87	48.06	43.86	45.08
	Ratio to All		0.96	1.28	1.18	1.52	1.75	1.13	1.11	1.02	1.04

Source: UCLA Center for Health Policy Research, 2001 California Health Interview Survey.

It is not immediately clear exactly how differences in administration time translate into overall differences in hours per case. One approach would be to say that the mean of non-questionnaire time is constant across languages, another would be to say that the same differential holds for non-questionnaire as for questionnaire administration time. Table 6-11 presents these two approaches.

The weighted mean administration time in Table 6-11 is taken from Table 6-10. "Mean minutes per case" is the total number of interviewer hours divided by the number of completed adult interviews (see Table 6-9). About 31 percent of total interviewer time is accounted for by the weighted sum of administration times (43.15/139.8 = 0.309). The "high estimate" of total interviewer time by language is calculated as the "ratio to all" for the weighted sum times the overall mean time per case. The "low estimate" simply takes the overall mean non-administration time per case (97 minutes) and adds it to the weighted mean administration time. Since it is likely that the truth is somewhere between these two estimates, the analysis uses the mean of the high and low estimates for incrementing interviewer time by language. These range from a low of minus 3.5 minutes for English to a high of 68.5 minutes for interviews conducted in Khmer.

Table 6-12 implements these language increments by sample and RDD stratum. For each stratum and supplemental sample, the table presents the proportion of interviews conducted in each language. The "adjusted time per case" column is the overall mean time per case plus the sum of all the proportions times the corresponding language increments. For example, if 100 percent of the interviews in a row were conducted in English (e.g., American Indian/Alaska Native supplemental sample), the overall mean time of 139.8 minutes would be adjusted by the full English increment of –3.5 minutes. There is relatively little variation among the RDD strata in the adjusted time per case, from a low of 136.5 minutes (Shasta) to a high of 147.1 minutes (Imperial). There was more variation among the supplemental samples, with the American Indian/Alaska Native, South Asian, and Japanese samples all at 136.3 minutes and the Cambodian sample at 190.6 minutes.

6.9.2 Differences in Sample Yield and Calls per Case

As described in Section 6.1, there is considerable variation in sample yield across samples and RDD sample strata. "Sample yield" is the number of completed adult interviews divided by the number of telephone numbers sampled. Sample yield is affected by non-residential and nonworking numbers, numbers associated with businesses, noncontacts, nonresponse, and ineligible households

Table 6-11. Estimates of mean interviewer time in minutes per case by language of interview (See discussion in Section 6.9.1)

Statistic	All Languages	English	Spanish	Cantonese	Mandarin	Khmer	Korean	Vietnamese	English (Asian)	Other
Weighted sum of administration times	43.15	41.50	55.23	51.07	65.56	75.48	48.87	48.06	43.86	45.08
Ratio to All Languages		0.96**	1.28	1.18	1.52	1.75	1.13	1.11	1.02	1.04
Mean minutes/case	139.8									
High estimate of mean interviewer time per case		134.5***	178.9	165.5	212.4	244.6	158.3	155.7	142.1	146.1
Non-interview time	96.65*									
Low estimate of mean interviewer time per case		138.2	151.9	147.7	162.2	172.1	145.5	144.7	140.5	141.7
Mean estimate of mean interviewer time per case		136.3	165.4	156.6	187.3	208.3	151.9	150.2	141.3	143.9
Language increment		-3.5	25.6	16.8	47.5	68.5	12.1	10.4	1.5	4.1

Source: UCLA Center for Health Policy Research, 2001 California Health Interview Survey.

* 139.8-43.15=96.65
** 41.5/43.19=0.96
*** This computes to a low value because the English language time ratio is less than 1.

Table 6-12. Proportion of adult interviews conducted by language in RDD strata and supplemental samples, and language-adjusted time per case

Strata	Language/statistic	N	English	Spanish	Cantonese	Mandarin	Khmer	Korean	Vietnamese	English (Asian)	Other	Adjusted time/case
	Addition factor (minutes)		-3.49	25.62	16.78	47.51	68.54	12.13	10.42	1.51	4.10	
1.1	Long Beach	819	83.4%	13.9%	0.4%	0.0%	1.1%	0.1%	0.9%	0.0%	0.2%	141.4
1.2	Pasadena	814	90.7%	7.7%	0.0%	1.0%	0.0%	0.4%	0.1%	0.0%	0.1%	139.1
1.3	Remainder of Los Angeles	10582	81.0%	15.6%	0.6%	0.9%	0.1%	1.3%	0.2%	0.2%	0.2%	141.7
2	San Diego	2666	90.6%	8.3%	0.3%	0.2%	0.0%	0.2%	0.3%	0.0%	0.0%	139.0
3	Orange	2495	86.8%	9.5%	0.1%	0.4%	0.0%	1.2%	1.8%	0.1%	0.2%	139.7
4	Santa Clara	1514	89.2%	6.1%	0.7%	1.3%	0.1%	0.7%	1.8%	0.2%	0.1%	139.3
5	San Bernardino	1547	90.8%	8.6%	0.0%	0.0%	0.0%	0.3%	0.2%	0.1%	0.1%	138.9
6	Riverside	1386	89.2%	10.5%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	139.4
7.1	Berkeley	794	95.6%	2.3%	0.4%	1.4%	0.0%	0.3%	0.0%	0.1%	0.0%	137.8
7.2	Remainder of Alameda	1191	89.8%	5.0%	1.9%	1.9%	0.1%	0.3%	0.6%	0.3%	0.1%	139.4
8	Sacramento	1238	95.9%	2.3%	1.0%	0.2%	0.0%	0.2%	0.4%	0.1%	0.0%	137.3
9	Contra Costa	1199	94.2%	5.2%	0.1%	0.2%	0.0%	0.3%	0.0%	0.2%	0.0%	138.0
10	Fresno	1041	89.4%	10.1%	0.1%	0.1%	0.0%	0.1%	0.0%	0.1%	0.1%	139.3
11	San Francisco	893	86.6%	5.2%	5.9%	1.5%	0.0%	0.3%	0.2%	0.3%	0.0%	139.8
12	Ventura	971	92.2%	7.4%	0.0%	0.1%	0.0%	0.1%	0.0%	0.2%	0.0%	138.5
13	San Mateo	925	92.9%	5.1%	0.6%	1.0%	0.0%	0.1%	0.0%	0.1%	0.2%	138.4
14	Kern	1096	87.3%	12.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	140.0
15	San Joaquin	1052	90.6%	8.0%	0.4%	0.1%	0.6%	0.0%	0.2%	0.1%	0.1%	139.2
16	Sonoma	771	95.8%	4.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	137.5
17	Stanislaus	819	90.1%	9.0%	0.1%	0.2%	0.2%	0.1%	0.0%	0.1%	0.0%	139.3
18	Santa Barbara	798	91.4%	8.1%	0.0%	0.1%	0.0%	0.0%	0.1%	0.1%	0.1%	138.8
19	Solano	1587	93.8%	5.4%	0.1%	0.2%	0.0%	0.1%	0.3%	0.1%	0.0%	138.0
20	Tulare	827	85.4%	14.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	140.6
21	Santa Cruz	793	91.0%	8.6%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	138.9
22	Marin	750	96.5%	3.2%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	137.3
23	San Luis Obispo	799	97.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	137.2
24	Placer	784	99.4%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	136.5
25	Merced	832	86.8%	12.9%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	140.1
26	Butte	825	97.9%	1.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	136.9
27	Shasta	826	99.4%	0.5%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	136.5
28	Yolo	834	91.0%	7.9%	0.0%	0.8%	0.0%	0.1%	0.0%	0.1%	0.0%	139.1
29	El Dorado	780	97.1%	2.8%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	137.2

Table 6-12. Proportion of adult interviews conducted by language in RDD strata and supplemental samples, and language-adjusted time per case (continued)

Strata	Language/statistic	N	English	Spanish	Cantonese	Mandarin	Khmer	Korean	Vietnamese	English (Asian)	Other	Adjusted time/case
30	Imperial	798	62.7%	37.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	147.1
31	NAPA	806	92.2%	7.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	138.6
32	Kings	843	84.6%	15.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	140.8
33	Madera	824	86.3%	13.6%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	140.3
34	Monterey, San Benito	790	83.2%	16.3%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	141.1
35	Del Norte, Humboldt	861	98.4%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	136.8
36	Lassen, Modoc, Siskiyou, Trinity	846	98.2%	1.4%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	136.9
37	Lake, Mendocino	813	96.1%	3.8%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	137.4
38	Colusa, Glen, Tehama	839	90.3%	9.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	139.1
39	Sutter, Yuba	822	93.6%	6.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.1%	138.1
40	Plumas, Nevada, Sierra	814	99.1%	0.7%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	136.5
41	Alpine, Amador, Calaveras, Inyo, Mariposa, Mono, Tuolumne	818	99.3%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	136.5
	TOTAL RDD	54122	89.2%	9.2%	0.4%	0.4%	0.1%	0.4%	0.3%	0.1%	0.1%	139.4
	San Francisco	1100	89.3%	5.7%	2.6%	1.1%	0.0%	0.2%	0.5%	0.5%	0.1%	139.2
	Santa Barbara	206	82.5%	17.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	141.4
	South Asian	443	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	136.3
	Cambodian	126	0.0%	0.0%	0.0%	0.0%	75.4%	0.0%	0.0%	22.2%	2.4%	190.6
	Japanese	330	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	136.3
	Korean	326	0.0%	0.0%	0.0%	0.0%	0.0%	70.9%	0.0%	28.5%	0.6%	147.4
	Vietnamese	540	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	93.5%	2.8%	3.7%	149.3
	American Indian/Alaska Native	351	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	136.3
	Shasta Latino	304	80.9%	19.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	141.9
	TOTAL ALL SAMPLES	57848	87.8%	8.8%	0.4%	0.4%	0.2%	0.8%	1.1%	0.3%	0.1%	139.8

Source: UCLA Center for Health Policy Research, 2001 California Health Interview Survey.

(these "ineligibles" are primarily in the ethnic supplemental samples). These rates all vary by type of sample and stratum. Level-of-effort for data collection is inversely proportional to the sample yield.

Another factor in level-of-effort per case is the mean number of calls it takes to complete a case, which also varies by sample and stratum. Since this phase of the analysis considers level-of-effort for completed adult interviews, it examines the number of calls associated with screening interviews and adult interviews. In all, there were about 1.5 million calls associated with screener and adult interview attempts, resulting in 57,848 completed adult interviews, for an average of about 26.2 attempts per completed adult interview, one of which resulted in the actual interview. Note that this calculation incorporates sample yield, since it includes all attempts, including those for noncontacts, nonresponse, etc. As shown in Table 6-11, on average just under 97 minutes of interviewer time per case was not associated with actually conducting an interview. Dividing 96.65 minutes per case by 26.2 – 1 call per case (subtracting the call resulting in the interview) yields about 3.83 minutes of interviewer time per call that did not result in an interview.

Table 6-13 presents data on the distribution of calls by sample and RDD stratum. There is considerable variation in the number of calls associated with an adult completed interview, most of it due to variation in the sample yield. Within the RDD sample, the mean number of calls ranges from a low of 14.5 in Lassen to a high of 38.4 in San Francisco.

These data and the calculations in the preceding paragraph allow us to estimate the effect of number of calls per case on level-of-effort per case by type of sample and stratum. Starting with the language-adjusted mean hours per case from Table 6-12 adds an increment to reflect the differential in total calls per completed adult interview. The increment is calculated as 3.83 minutes per call times the difference between the sample or stratum mean number of calls and the overall mean number of calls. The range of increments is between -45 minutes for the Lassen, Modoc, Siskiyou, and Trinity county stratum and 46.5 minutes for San Francisco county within the RDD sample, and between -31.7 minutes for the Santa Barbara supplemental sample and 425.4 minutes for the Cambodian supplemental sample.

Table 6-13. Sample yield, total calls per completed adult interview, and calls increment for interviewer time per case, by sample and RDD stratum

Strata	Description	Sampled numbers	Adult completes	Adult yield	Total calls	Calls per complete	Calls increment (minutes)
1.1	Long Beach	4,860	819	0.169	23,374	28.5	8.82
1.2	Pasadena	5,389	814	0.151	25,322	31.1	18.65
1.3	Remainder of Los Angeles	65,249	10,582	0.162	363,482	34.3	31.07
2	San Diego	14,996	2,666	0.178	67,754	25.4	-3.15
3	Orange	15,767	2,495	0.158	72,561	29.1	10.90
4	Santa Clara	9,593	1,514	0.158	41,150	27.2	3.61
5	San Bernardino	8,056	1,547	0.192	35,987	23.3	-11.39
6	Riverside	7,353	1,386	0.188	32,059	23.1	-11.90
7.1	Berkeley	5,234	794	0.152	19,966	25.1	-4.18
7.2	Remainder of Alameda	7,401	1,191	0.161	30,441	25.6	-2.60
8	Sacramento	6,428	1,238	0.193	26,295	21.2	-19.14
9	Contra Costa	6,972	1,199	0.172	29,501	24.6	-6.25
10	Fresno	6,459	1,041	0.161	22,822	21.9	-16.52
11	San Francisco	7,068	893	0.126	34,274	38.4	46.51
12	Ventura	5,217	971	0.186	24,439	25.2	-4.09
13	San Mateo	6,063	925	0.153	30,150	32.6	24.35
14	Kern	5,962	1,096	0.184	19,941	18.2	-30.80
15	San Joaquin	5,469	1,052	0.192	21,907	20.8	-20.73
16	Sonoma	3,908	771	0.197	17,208	22.3	-15.01
17	Stanislaus	3,880	819	0.211	17,323	21.2	-19.48
18	Santa Barbara	3,884	798	0.205	16,975	21.3	-19.02
19	Solano	7,130	1,587	0.223	40,973	25.8	-1.61
20	Tulare	4,983	827	0.166	16,396	19.8	-24.55
21	Santa Cruz	4,283	793	0.185	17,403	21.9	-16.43
22	Marin	4,397	750	0.171	19,396	25.9	-1.44
23	San Luis Obispo	3,900	799	0.205	15,005	18.8	-28.56
24	Placer	3,770	784	0.208	16,026	20.4	-22.20
25	Merced	3,993	832	0.208	17,140	20.6	-21.58
26	Butte	3,554	825	0.232	13,707	16.6	-36.85
27	Shasta	3,890	826	0.212	12,955	15.7	-40.42
28	Yolo	3,751	834	0.222	15,223	18.3	-30.58
29	El Dorado	4,345	780	0.180	15,765	20.2	-23.08
30	Imperial	3,680	798	0.217	18,987	23.8	-9.36
31	Napa	4,036	806	0.200	17,860	22.2	-15.62
32	Kings	3,980	843	0.212	15,280	18.1	-31.06
33	Madera	4,063	824	0.203	15,290	18.6	-29.42
34	Monterey, San Benito	4,739	790	0.167	18,585	23.5	-10.39
35	Del Norte, Humboldt	5,079	861	0.170	13,773	16.0	-39.22
36	Lassen, Modoc, Siskiyou, Trinity	5,312	846	0.159	12,262	14.5	-44.97
37	Lake, Mendocino	4,364	813	0.186	13,874	17.1	-35.13

Table 6-13. Sample yield, total calls per completed adult interview, and calls increment for interviewer time per case, by sample and RDD stratum (continued)

Strata	Description	Sampled numbers	Adult completes	Adult yield	Total calls	Calls per complete	Calls increment (minutes)
38	Colusa, Glen, Tehama	4,198	839	0.200	13,336	15.9	-39.61
39	Sutter, Yuba	4,442	822	0.185	14,693	17.9	-32.03
40	Plumas, Nevada, Sierra	4,278	814	0.190	15,200	18.7	-28.97
41	Alpine, Amador, Calaveras, Inyo, Mariposa, Mono, Tuolumne	4,949	818	0.165	14,585	17.8	-32.20
	TOTAL RDD	306,324	54,122	0.177	1,356,645	25.1	-4.48
	San Francisco	12,811	1,100	0.086	46,040	41.9	59.81
	Santa Barbara	986	206	0.209	3,699	18.0	-31.71
	South Asian	3,673	443	0.121	24,089	54.4	107.77
	Cambodian		126	0.049	17,302	137.3	425.40
	Japanese	2,465	330	0.134	14,576	44.2	68.68
	Korean	3,639	326	0.090	21,381	65.6	150.69
	Vietnamese	2,984	540	0.181	12,501	23.2	-11.82
	American Indian/Alaska Native	2,953	351	0.119	12,399	35.3	34.80
	Shasta Latinos	1,906	304	0.159	9,138	30.1	14.64
	TOTAL	340,308	57,848	0.170	1,517,770	26.2	0.00

Source: UCLA Center for Health Policy Research, 2001 California Health Interview Survey.

6.9.3 Differences in the Number of Children and Adolescents

The final adjustment for level-of-effort is to consider differences by type of sample and stratum in the number of child and adolescent interviews conducted, relative to the number of adult interviews. Table 6-14 presents the proportion of adult interviews with child and adolescent interviews by sample and stratum, and calculates a level-of-effort increment to adjust for differences by sample and stratum in these proportions. The increment assumes a total time of 20 minutes for child interviews and 30 minutes for adolescent interviews. The child component of the increment is then the proportion of child completed interviews in the stratum or sample minus the overall proportion times 20 minutes. The adolescent component is calculated similarly, and the two components summed to estimate the total increment.

The child/adolescent increments are small compared with those for language and number of calls. The RDD increments range from -3.66 minutes for Berkeley to 3.42 minutes for Kings County. For the supplemental samples, the range is from -3.10 minutes for San Francisco to 6.17 minutes for the Cambodian supplemental sample.

6.9.4 Combined Effects of Language, Yield, Calls, and Child/Adolescent Rates

Table 6-15 presents estimates of interviewer time per completed adult interview by type of sample and RDD stratum, taking into account each of the increments discussed in the preceding sections. Overall, the "number of calls" increment, which is strongly influenced by the proportion of sampled telephone numbers yielding an adult completed interview, has the largest effect on the estimates. Within the RDD sample, San Francisco cases required about 36 percent more interviewer time than the overall RDD mean, and Los Angeles cases about 26 percent more. A number of rural counties were well below the overall mean, with Lassen et al. at about 32 percent below. Among the supplemental samples, the Cambodian supplemental sample required about four and half times as much interviewer time per completed adult interview as the RDD mean. While the language increment was substantial, by far the largest effect was from the very low sample yield. The Korean sample required more than twice as much effort as the RDD mean, again mostly due to the low sample yield. Estimates of level-of-effort for both the Japanese and South Asian samples are higher than for any of the RDD strata, again mostly attributable to low sample yield.

Table 6-14. Child and adolescent completed interviews as a proportion of adult interviews, with adjustment factors for level-of-effort, by sample and RDD stratum

Sample/stratum	Sampled telephone numbers	Adult complete	Child complete	per Adult	Increment	Adolescent complete	per Adult	Increment	Total increment
Los Angeles	75,498	12,215	2,823	0.231	0.033	1,123	0.092	-0.256	-0.223
Long Beach	4,860	819	202	0.247	0.343	62	0.076	-0.580	-0.237
Pasadena	5,389	814	168	0.206	-0.462	54	0.066	-0.768	-1.230
Remainder of Los Angeles	65,249	10,582	2,453	0.232	0.047	1,007	0.095	-0.191	-0.145
San Diego	14,996	2,666	584	0.219	-0.209	271	0.102	-0.061	-0.270
Orange	15,767	2,495	619	0.248	0.372	217	0.087	-0.355	0.017
Santa Clara	9,593	1,514	353	0.233	0.074	138	0.091	-0.271	-0.198
San Bernardino	8,056	1,547	442	0.286	1.125	210	0.136	0.620	1.745
Riverside	7,353	1,386	376	0.271	0.836	157	0.113	0.171	1.007
Alameda	12,635	1,985	355	0.179	-1.013	134	0.068	-0.744	-1.757
Berkeley	5,234	794	90	0.113	-2.323	30	0.038	-1.339	-3.661
Remainder	7,401	1,191	265	0.223	-0.140	104	0.087	-0.348	-0.488
Sacramento	6,428	1,238	302	0.244	0.289	143	0.116	0.216	0.505
Contra Costa	6,972	1,199	263	0.219	-0.203	128	0.107	0.041	-0.162
Fresno	6,459	1,041	270	0.259	0.598	138	0.133	0.557	1.155
San Francisco	7,068	893	124	0.139	-1.812	36	0.040	-1.288	-3.101
Ventura	5,217	971	225	0.232	0.045	106	0.109	0.089	0.134
San Mateo	6,063	925	154	0.166	-1.260	79	0.085	-0.386	-1.646
Kern	5,962	1,096	323	0.295	1.305	149	0.136	0.625	1.929
San Joaquin	5,469	1,052	282	0.268	0.772	133	0.126	0.434	1.206
Sonoma	3,908	771	161	0.209	-0.413	90	0.117	0.240	-0.173
Stanislaus	3,880	819	198	0.242	0.246	95	0.116	0.225	0.471
Santa Barbara	3,884	798	174	0.218	-0.229	71	0.089	-0.315	-0.544
Solano	7,130	1,587	403	0.254	0.489	174	0.110	0.098	0.588
Tulare	4,983	827	223	0.270	0.803	107	0.129	0.493	1.297
Santa Cruz	4,283	793	175	0.221	-0.176	104	0.131	0.528	0.353
Marin	4,397	750	133	0.177	-1.043	67	0.089	-0.308	-1.351
San Luis Obispo	3,900	799	152	0.190	-0.785	67	0.084	-0.417	-1.202

Table 6-14. Child and adolescent completed interviews as a proportion of adult interviews, with adjustment factors for level-of-effort, by sample and RDD stratum (continued)

	Sampled telephone numbers	Adult complete	Child complete	per Adult	Increment	Adolescent complete	per Adult	Increment	Total increment
Placer	3,770	784	179	0.228	-0.023	88	0.112	0.150	0.127
Merced	3,993	832	228	0.274	0.891	115	0.138	0.670	1.561
Butte	3,554	825	169	0.205	-0.493	71	0.086	-0.373	-0.866
Shasta	3,890	826	163	0.197	-0.643	87	0.105	0.012	-0.631
Yolo	3,751	834	198	0.237	0.159	91	0.109	0.088	0.246
El Dorado	4,345	780	167	0.214	-0.308	96	0.123	0.367	0.060
Imperial	3,680	798	226	0.283	1.075	154	0.193	1.765	2.840
Napa	4,036	806	164	0.203	-0.520	85	0.105	0.015	-0.505
Kings	3,980	843	276	0.327	1.958	150	0.178	1.464	3.423
Madera	4,063	824	185	0.225	-0.099	104	0.126	0.430	0.330
Monterey, San Benito	4,739	790	210	0.266	0.727	100	0.127	0.437	1.164
Del Norte, Humboldt	5,079	861	171	0.199	-0.617	109	0.127	0.437	-0.180
Lassen, Modoc, Siskiyou, Trinity	5,312	846	151	0.178	-1.020	82	0.097	-0.156	-1.176
Lake, Mendocino	4,364	813	140	0.172	-1.146	82	0.101	-0.077	-1.223
Colusa, Glen, Tehama	4,198	839	196	0.234	0.083	108	0.129	0.480	0.563
Sutter, Yuba	4,442	822	179	0.218	-0.234	81	0.099	-0.124	-0.358
Plumas, Nevada, Sierra	4,278	814	149	0.183	-0.929	92	0.113	0.166	-0.763
Alpine, Amador, Calaveras, Inyo, Mariposa, Mono, Tuolumne	4,949	818	126	0.154	-1.509	101	0.123	0.375	-1.134
All Strata	306,324	54,122	12,391	0.229	-0.011	5,733	0.106	0.024	
Cambodian	2567	126	44	0.349	2.395	37	0.294	3.779	6.173
South Asian	3673	443	158	0.357	2.544	39	0.088	-0.334	2.210
Japanese	2465	330	51	0.155	-1.499	18	0.055	-1.004	-2.502
Korean	3639	326	95	0.291	1.239	30	0.092	-0.254	0.985
Vietnamese	2984	540	124	0.230	0.003	34	0.063	-0.835	-0.832
AIAN Urban	2211	251	69	0.275	0.908	33	0.131	0.535	1.443
AIAN Rural	742	100	37	0.370	2.810	18	0.180	1.506	4.316
San Francisco	12811	1100	151	0.137	-1.844	46	0.042	-1.258	-3.102
Santa Barbara	986	206	49	0.238	0.168	22	0.107	0.041	0.209
Shasta	1906	304	106	0.349	2.384	48	0.158	1.063	3.448
Total	340,308	57,848	13,275	0.229		6,058	0.105		

Source: UCLA Center for Health Policy Research, 2001 California Health Interview Survey.

Table 6-15. Adult sample yield and interviewer time per adult complete by sample and RDD stratum

Strata	Description	Adult completes	Adult yield	Language increment	Calls increment	Child/adol. increment	Est. time per adult	% Difference from RDD total
1.1	Long Beach	819	16.9%	1.59	8.82	-0.28	149.92	11.1%
1.2	Pasadena	814	15.1%	-0.65	18.65	-1.28	156.53	16.0%
1.3	Remainder of Los Angeles	10,582	16.2%	1.94	31.07	-0.19	172.62	27.9%
2	San Diego	2,666	17.8%	-0.82	-3.15	-0.32	135.51	0.4%
3	Orange	2,495	15.8%	-0.05	10.90	-0.03	150.62	11.6%
4	Santa Clara	1,514	15.8%	-0.52	3.61	-0.24	142.65	5.7%
5	San Bernardino	1,547	19.2%	-0.91	-11.39	1.70	129.20	-4.2%
6	Riverside	1,386	18.8%	-0.37	-11.90	0.96	128.50	-4.8%
7.1	Berkeley	794	15.2%	-2.00	-4.18	-3.71	129.92	-3.7%
7.2	Remainder of Alameda	1,191	16.1%	-0.43	-2.60	-0.53	136.24	1.0%
8	Sacramento	1,238	19.3%	-2.45	-19.14	0.46	118.67	-12.0%
9	Contra Costa	1,199	17.2%	-1.83	-6.25	-0.21	131.51	-2.5%
10	Fresno	1,041	16.1%	-0.46	-16.52	1.11	123.93	-8.1%
11	San Francisco	893	12.6%	0.06	46.51	-3.15	183.22	35.8%
12	Ventura	971	18.6%	-1.25	-4.09	0.09	134.55	-0.3%
13	San Mateo	925	15.3%	-1.34	24.35	-1.69	161.11	19.4%
14	Kern	1,096	18.4%	0.20	-30.80	1.88	111.09	-17.7%
15	San Joaquin	1,052	19.2%	-0.59	-20.73	1.16	119.64	-11.3%
16	Sonoma	771	19.7%	-2.28	-15.01	-0.22	122.30	-9.4%
17	Stanislaus	819	21.1%	-0.51	-19.48	0.43	120.24	-10.9%
18	Santa Barbara	798	20.5%	-1.02	-19.02	-0.59	119.18	-11.7%
19	Solano	1,587	22.3%	-1.74	-1.61	0.54	136.99	1.5%
20	Tulare	827	16.6%	0.77	-24.55	1.25	117.27	-13.1%
21	Santa Cruz	793	18.5%	-0.88	-16.43	0.31	122.79	-9.0%
22	Marin	750	17.1%	-2.52	-1.44	-1.40	134.45	-0.4%
23	San Luis Obispo	799	20.5%	-2.61	-28.56	-1.25	107.38	-20.4%
24	Placer	784	20.8%	-3.30	-22.20	0.08	114.38	-15.2%
25	Merced	832	20.8%	0.31	-21.58	1.52	120.04	-11.0%
26	Butte	825	23.2%	-2.90	-36.85	-0.91	99.14	-26.5%
27	Shasta	826	21.2%	-3.28	-40.42	-0.68	95.43	-29.3%
28	Yolo	834	22.2%	-0.73	-30.58	0.20	108.69	-19.4%
29	El Dorado	780	18.0%	-2.60	-23.08	0.01	114.14	-15.4%
30	Imperial	798	21.7%	7.33	-9.36	2.79	140.57	4.2%
31	Napa	806	20.0%	-1.21	-15.62	-0.55	122.42	-9.3%
32	Kings	843	21.2%	0.98	-31.06	3.38	113.09	-16.2%
33	Madera	824	20.3%	0.49	-29.42	0.28	111.16	-17.6%
34	Monterey, San Benito	790	16.7%	1.35	-10.39	1.12	131.88	-2.3%
35	Del Norte, Humboldt	861	17.0%	-3.01	-39.22	-0.23	97.34	-27.9%
36	Lassen, Modoc, Siskiyou, Trinity	846	15.9%	-2.90	-44.97	-1.22	90.70	-32.8%
37	Lake, Mendocino	813	18.6%	-2.36	-35.13	-1.27	101.05	-25.1%

Table 6-15. Adult sample yield and interviewer time per adult complete by sample and RDD stratum (continued)

Strata	Description	Adult completes	Adult yield	Language increment	Calls increment	Child/adol. increment	Est. time per adult	% Difference from RDD total
38	Colusa, Glen, Tehama	839	20.0%	-0.70	-39.61	0.52	100.01	-25.9%
39	Sutter, Yuba	822	18.5%	-1.69	-32.03	-0.40	105.68	-21.7%
40	Plumas, Nevada, Sierra	814	19.0%	-3.25	-28.97	-0.81	106.77	-20.9%
41	Alpine, Amador, Calaveras, Inyo, Mariposa, Mono, Tuolumne	818	16.5%	-3.27	-32.20	-1.18	103.15	-23.5%
	Total	54,122	17.7%	-0.39	-4.48	0.00	134.92	0.0%
	San Francisco	1,100	8.6%	-0.60	59.81	-3.15	195.86	45.2%
	Santa Barbara	206	20.9%	1.60	-31.71	0.16	109.85	-18.6%
	South Asian	443	12.1%	-3.49	107.77	2.16	246.24	82.5%
	Cambodian	126	4.9%	52.11	425.40	6.13	623.44	362.1%
	Japanese	330	13.4%	-3.49	68.68	-2.55	202.44	50.0%
	Korean	326	9.0%	9.05	150.69	0.94	300.48	122.7%
	Vietnamese	540	18.1%	9.93	-11.82	-0.88	137.03	1.6%
	American Indian/Alaska Native	351	11.9%	-3.49	34.80	2.22	173.33	28.5%
	Shasta Latino	304	15.9%	2.07	14.64	3.40	159.91	18.5%
	Total	57,848	17.0%				139.80	3.6%

Source: UCLA Center for Health Policy Research, 2001 California Health Interview Survey.

The results of this analysis should be used with caution. The model makes many simplifying assumptions and ignores some interactions among explanatory variables. It is also not a complete proxy for cost per case, since other factors, including interviewer pay rates and amortization of training costs, are important cost considerations. Generally speaking, these cost factors would increase the relative cost of cases in the ethnic Asian samples requiring bilingual interviewers. They would also effect a modest increase in the costs for the Los Angeles stratum.

7. QUALITY CONTROL

Westat's quality control procedures were in place throughout the study. Some of them, such as CATI testing and training, were used before data collection began as preventive quality controls. Others, such as supplemental interviewer training, monitoring, and comment and problem sheet review were used during data collection to respond to issues with interviewers or to make adjustments to the questionnaire. Each quality control method 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. Westat's automated management system for CATI specifications tracked question text, sequencing, response categories, the appropriate use of "fills" within questions based upon previously recorded information, and range and logic checks. The specification document, published both in pdf and Microsoft Word format, provided the guide for project staff and programmers as to what the CATI instrument should include. The system tracked each change to the specifications and the reason for that change, whether it originated from UCLA, Westat project staff, or the programming team.

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 questionnaire was programmed, as was the database that was to store the captured responses. This testing included review by project staff, TRC staff (including interviewers), data preparation staff, the statistical staff and programmers, and by staff at UCLA and PHI.

After the pilot test and then again during the first few weeks 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.

7.2 On-Line Range and Logic Checking

Another method of quality control involved the use of edits in the CATI system. Specifically, on-line range checks were programmed for several sections of the questionnaire to catch unlikely or impossible responses and also to catch errors that might result from typographical errors by interviewers. Each check had defined ranges with minimum and maximum values. For example, there were checks to ensure that a child's reported height and weight were within appropriate ranges for the units (metric or English/avoirdupois) the interviewer had specified. Some edits were added during the field period to reduce potential entry errors, such as the reverse video message displayed to an interviewer who had entered "Native Hawaiian" for a respondent's race.

Some questions had both soft and hard ranges. "Hard range" checks do not allow the interviewer to continue without entering an answer within the range programmed, while "soft range" checks merely require an interviewer to confirm an unlikely entry. For example, one question asked about the number of times per day, week, or month the adult respondent ate fresh, frozen, or canned fruit. The soft range for a monthly amount was 0 to 149. The hard range was 0 to 210. An answer above 149 could be entered after confirmation, but an answer greater than 210 was not allowed. (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 Training

A good training program is another important quality control measure. Westat has found that a thorough and intense training yields the best results in the collection of high-quality data. Training was standardized across sessions so that all interviewers received the same information. Also, team leaders attended the same project-specific training sessions as the interviewers so that they would be well prepared to handle their duties. Team leaders were also prepared because of their previous experience. Many TRC supervisory staff occupy permanent positions at Westat, have worked on many RDD surveys,

and are very familiar with the kinds of questions asked by interviewers and respondents and the common problems that occur in an RDD study.

7.4 Supplemental Training

In addition, about 2 weeks after each training session interviewers began attending sessions designed to maximize respondent cooperation. Following this training, interviewers were monitored further and feedback was provided about how well they were doing and what they might do to improve their performance.

7.5 Interviewer Memorandums

As discussed in Chapter 4, interviewer memorandums were given to the staff to clarify and reinforce issues, as well as to inform staff of procedural changes. A total of six memoranda were distributed to interviewers.

7.6 Interviewer Meetings

Interviewer meetings were also held as a quality control procedure. These were conducted as necessary with the interviewing and supervisory staff to reinforce procedures, review points of emphasis, provide updates on procedures, and inform staff of study progress. These were important to the interviewing process whenever minor changes were made during data collection.

7.7 Interviewer Monitoring

Westat monitored telephone interviewer performance throughout the field period. Monitoring forms for each interviewer were reviewed weekly, and any interviewers who were identified as in need of additional monitoring were monitored more heavily in the following week. Team leaders also performed additional monitoring if there was concern about an interviewer's performance

Westat's capacity to monitor telephone interviewers is based on an investment in highly sophisticated equipment and electronic linkages. From a remote location, team leaders and monitors intercepted calls and silently listened to both the interviewer and the respondent. At the same time, the team leader could see what appeared on the interviewer's computer screen and the responses that the interviewer enters. Team leaders simultaneously checked on interviewing technique and the interviewer's ability to correctly capture data.

Westat team leaders and monitors selected 15-minute intervals of each interviewer's working time to monitor. 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.

7.8 Triage

Interviewing during all hours of TRC operation is supported by a specially trained "triage" team leader. The triage team leader was called whenever a problem interfered with the ability to conduct CATI interviewing. When the triage team leader 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 telephones or beeper numbers. The appropriate support personnel were able to respond to problems within minutes of a problem report, regardless of the time.

7.9 Using Comments and Problem Sheets to Find Problems

Interviewers made comments within the CATI questionnaire whenever a response did not fit a category and/or when they perceived a problem with a question. With input from UCLA and PHI, some of these comments were used to update data. Data updates and other data preparation issues are discussed in detail in Report 3: Data Processing Procedures in this methodology series.

Comments were also used as indicators of difficulties with the questionnaire. If there were many comments about a particular item, it potentially indicated that a question needed to be changed or reinforced with an interviewer memorandum or a meeting.

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.

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