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2005 LOS ANGELES COUNTY HEALTH SURVEY

SUMMARY OF SURVEY METHODOLOGY

- conducted for the -

Los Angeles County Department of Health Services

(amended July 3, 2007)

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Introduction

The 2005 Los Angeles County Health Survey (LACHS) was commissioned by the Los Angeles County Department of Health Services and conducted by Field Research Corporation (Field), an independent opinion research organization.

The survey expanded upon three previous LACHS studies conducted for the County by Field in 1997, 1999-2000 and 2002-2003. The objectives of each survey were to provide the County with accurate and reliable measurements tracking the health status, access to care, health conditions and health risk behaviors of the populations of Los Angeles County adults and children. In addition, the survey provides the County with a vehicle for collecting information on a wide range of other health and health policy topics to provide health planners, policymakers, community leaders and ultimately the public itself with information about the health and health care needs of Los Angeles County residents.

The results of each LACHS are projectable countywide, within the County's twenty-six health districts (HDs) and its eight service planning areas (SPAs), as well as across a wide array of demographic characteristics, including race/ethnicity, age, gender, education, and income, as well as numerous other subgroups of the countywide population.

Field Research Corporation has conducted each LACHS since its inception in 1997. Founded in 1945 by Mervin Field, Field is one of the oldest and largest full-service opinion research firms with headquarters in the Western United States. It conducts public opinion surveys, including the syndicated *Field Poll*, and other social, public policy and consumer research for a wide range of clients in both the public and private sectors.

This methodological report provides a summary of the survey procedures used by Field in carrying out the 2005 LACHS.

Populations of Interest

Since its inception, each LACHS has been structured to examine two separate and distinct survey populations within Los Angeles County through the administration of two large-scale surveys. The specifications of the 2005 LACHS for these two populations were as follows:

- Los Angeles County Adults: The 2005 LACHS was conducted among a projectable countywide sample of adults age 18 or older. Interviews were conducted with one randomly selected adult per household by telephone. The 2005 survey included interviews with a total sample of 8,648 adults age 18 or older living in Los Angeles County. This included 7,964 adults interviewed as part of a random cross-section sampling of all adults in the County implemented using an unrestricted random digit dial sampling of County households. An additional 684 adults were interviewed as part of an augmented sample of adults living in the County's geographically large but sparsely populated Antelope Valley SPA. Interviews in 2005 were completed in seven languages – English, Spanish, Cantonese, Mandarin, Korean, Vietnamese and Armenian.

- Los Angeles County Children: The 2005 LACHS also included a countywide random sample of 6,032 parents who were interviewed with regard to one randomly selected child under age 18 living in their household. Interviews were completed by telephone with the child's mother, or when no mother resides in the household, his/her primary caregiver. Sampling was divided into two phases. Phase One included interviews with mothers/primary caregivers living within households who participated in the 2005 Adult Survey where a child under age 18 was found to be residing. Phase Two included interviews with an augmented sample of mothers/primary caregivers from a random sampling of Los Angeles County households screened for the presence of a child under age 18. Similar to the Adult Survey, interviews for the Child Survey were conducted in seven languages – English, Spanish, Cantonese, Mandarin, Korean, Vietnamese and Armenian.

Sampling

Random samples of Los Angeles County landline telephone households were generated using a random digit dial (RDD) sampling methodology. Samples of RDD listings for Los Angeles County were purchased from Survey Sampling, Inc. (SSI), a leading supplier of telephone sampling frames to the survey research industry. As was done in each prior LACHS, the specific sampling product purchased for the 2005 LACHS's Adult Survey, as well as the augmented

sample of parents interviewed as part of the Child Survey, was SSI's "Random A" sample for Los Angeles County.

Survey Sampling's "Random A" methodology is essentially a single-stage, equal probability sample systematically selected from all eligible 10-digit telephone numbers assigned to the county. A sampling interval is calculated by dividing the number of eligible units by the desired number of sample units. A random number between zero and one is generated and multiplied by the sampling interval to calculate a random starting point between one and the sampling interval. A cumulative count of elements (10-digit telephone numbers) is calculated. When accumulation reaches the random starting point, the unique 10-digit telephone number represented by that sampling point is selected. The next sampling point is then determined, and accumulation continues until that sampling point is reached. Unique Primary Sampling Units are systematically selected in this fashion until the required number of sampling units have been selected.

Antelope Valley Sample Augment

Additional interviews for both the Adult Survey and the Child Survey were conducted in the Antelope Valley, the County's least populated Service Planning Area (SPA), to lend greater precision to survey estimates in that region. RDD sample listings for the Antelope Valley were purchased from Survey Sampling, Inc. The same "Random A" sampling procedures were used in selecting sample listings for the Antelope Valley as those developed for the countywide sample. The only difference was the definition of the survey area, which for the Antelope Valley constituted all zip codes serving this SPA.

Threats to RDD Sampling Representativeness

A. Unlisted telephone households

Sampling households by means of an RDD methodology avoids one of the major threats to sampling frame accuracy, the threat of systematically excluding that portion of the population with unlisted telephone numbers. The size of the bias inherent in directory or other list-based samples is directly related to the extent to which the telephone numbers of households within a jurisdiction cannot be found in current directories. In Los Angeles County, this problem is particularly acute because an estimated two-thirds of all households currently are not listed in available directories.

An RDD sampling approach avoids this potential bias altogether, since it is developed using random digits from all possible 10-digit telephone numbers within operating area codes, exchanges and telephone blocks within the County.

B. Non-telephone households

The findings from any survey conducted by telephone are also limited, by definition, to the population of persons living in households with telephones. According to the Census Bureau, while about 98% of all households in Los Angeles County had a telephone in the 2000 census, about 2% did not.

Field has conducted four recent large-scale surveys attempting to measure the characteristics of the non-telephone household population in California for the state's Public Utilities Commission, each of which included large sub-samples in Los Angeles County. What these surveys have consistently found is that the portion of the population without residential telephones in Los Angeles County, is not fixed, but highly dynamic, with three in four of all non-telephone households reportedly having had some residential telephone service for a time during the previous three years.

To account for the bias associated with the exclusion of households currently without telephone service, the 2005 LACHS added a question toward the end of both the adult and the Child Survey asking respondents whether their household had gone without telephone service for one month or more at any time in the past three years. These households, referred to as recent non-telephone households, were used as surrogates for other households currently without telephone service at the time the survey was conducted. After the completion of interviewing, survey results from recent non-telephone households were given a slightly greater weight in an attempt to account for the exclusion of households that did not have telephone service at the time of the survey.

C. Cell phone-only households

Another threat to the representativeness of telephone surveys relates to the fact that RDD samples systematically exclude all telephone prefixes and blocks of numbers assigned exclusively to cell phones. The reasons for their exclusion are many and varied. First, federal laws prohibit making calls to cell phones using "predictive dialer" devices, employed by many

survey organizations, although Field does not. Second, liability issues present themselves with regard to the possibility of traffic accidents caused by drivers while talking on cell phones during a survey. In addition, a sizable segment of cell phones are used exclusively by teens and pre-teens, who are not a part of the sampling frame of most surveys of the general public. Also, the cell phone billing structure acts as a deterrent to participation in telephone surveys. Under some calling plans the cost of the call (e.g., roaming and other area related charges) is charged to the person receiving the call, inhibiting participation in research surveys.

Samples of cell phone numbers also differ from landline phones in that they constitute more of a population-based sample rather than a household-based sample, complicating selection probabilities. For example, including cell phone numbers into an RDD sample would give cell phone users who also have a landline phone a greater chance of being included in an RDD survey than non-cell phone users, since they could be contacted through either their cell phone number or their landline number. Geography is also not always attached to a cell phone number, contaminating the sample frames of county-level surveys. Also, because cell phones are battery-powered personal-use devices, they are often only intermittently turned on, greatly restricting potential contact with such users.

For these reasons, Field, like virtually every other survey organization in the U.S., chooses not to include cell phone listings in its RDD samples, and whenever such a number is inadvertently encountered, Field does not attempt to administer an interview with a respondent on their cell phone.

Although the proportion of telephone numbers allocated to cell phone numbers in the U.S. is large, their exclusion does not seriously jeopardize household coverage as long as cell phone users can also be reached through a household landline phone. At the time of the 2005 LACHS, according to recent estimates of the 2004 National Health Interview Survey conducted for the Centers for Disease Control, greater than nine in ten of all households in the Western United States had a residential landline phone. However, the proportion of households that are cell phone-only is growing*.

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* *According to the National Health Interview Survey, administered through a door-to-door interview approach, the proportion of U.S. households that are cell phone-only households was 6.1% in 2004, up from 3.6% in 2003.*

As part of a survey of Californians having to do with the affordability of (landline) telephone service conducted in 2004 for the California Public Utility Commission, Field identified and attempted to characterize that portion of landline telephone households in California that had gone without landline service for at least one month or more in the previous three years, but possessed cell phone service during their service interruption ("recent cell phone-only households").

Results from the study show that the demographic characteristics of recent cell phone-only households in California in 2004 closely mirrored the demographic characteristics of cell phone-only households reported in the 2004 National Health Interview Survey.[**]

Because of these similarities, when conducting the 2005 LACHS, questions were included at the end of both the Adult and Child Surveys asking survey participants whether their household had gone without landline telephone service for at least one month within the past three years, and if so, whether or not their household had access to a cell phone during that period. Those households identified as recent cell phone-only households by the survey were then used as surrogates for the population of current cell phone-only households excluded from the RDD samples. Similar to the adjustments made to account for non-telephone households, after the completion of interviewing statistical weights were introduced to give the results from these households a somewhat greater weight to reduce the bias associated with the exclusion of households that were currently without landline telephones at the time the survey was conducted.

D. Households with multiple (landline) telephone numbers

Other threats to sampling representativeness in RDD surveys involve households that have multiple residential landlines (with different phone numbers) coming into their home. This creates a potential bias in RDD-based telephone surveys since households with more than one residential landline number have a greater chance of being contacted than those having only one telephone number. To attend to this bias, a question was included at the end of both the adult and Child Surveys asking respondents how many different telephone lines they had coming into their residence through which they could have been reached by voice contact. (This question specifically asks respondents to exclude cell phones, as well as residential telephone numbers

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** *A paper reporting the results from the Field survey of recent cell phone-only households in California has been prepared by Field's President/CEO Dr. E. Deborah Jay and Senior Vice President Mark DiCamillo is available upon requested, and was presented at the Pacific Chapter of the American Association for Public Opinion Research annual conference on December 16, 2005 in San Francisco.*

devoted exclusively to fax machines, computer modems or pagers.) After the completion of interviewing, statistical weights were introduced to give somewhat less weight to responses from households with multiple residential telephone numbers, since they had a somewhat greater chance of being included in the original sample frame. This adjustment reduces the biases associated with multiple residential landline telephone households in RDD samples.

E. Institutionalized individuals

Also not represented in RDD surveys of households are the population of people who do not live in a residential household at the time of the survey. This includes institutionalized individuals such as adults residing in nursing homes, university housing, prisons, military barracks or hospitals, as well as the homeless. Previous studies of the homeless have found that most people who have been homeless report that during their period of homelessness they resided in the household of a friend or relation rather than living on the street, in a park, a motor vehicle, homeless shelter or other non-household setting. Thus, only a portion of the homeless population at any one time does not actually reside in a household, reducing somewhat their lack of representation in a telephone survey. Nevertheless, surveys of household populations, by definition, exclude that portion of the County population not residing in residential households during the data collection period.

F. Individuals who do not speak English

Because of the heavily multi-ethnic makeup of Los Angeles County and the relatively high proportion of residents who speak little or no English, omissions of the non-English-speaking population would pose a serious threat to the projectability of a survey of adults or children.

Field sought to minimize this threat by translating and implementing the 2005 LACHS in seven languages – English, Spanish, Cantonese, Mandarin, Korean, Vietnamese and Armenian. After the English-language questionnaires from the adult and the Child Surveys were finalized, they were translated into Spanish, Cantonese, Mandarin, Korean, Vietnamese and Armenian. Whenever possible, questions based on identical questions from previous LACHS studies used the earlier translations to maintain direct comparability. All new or revised survey questions were translated into each non-English language by professional translators and then thoroughly reviewed by a second professional translator. Discrepancies between translators were resolved on a case-by-case basis in a conference call between the translators.

Sample Management

A critical task throughout survey administration was to monitor the performance of interviewers and assess the efficiency of the RDD sample listings in reaching households and identifying and interviewing eligible respondents. Field employed its sophisticated Sample Management System (SMS) for this purpose. Field's SMS system produces daily reports of all interviewing attempts and outcomes during telephone interviewing. These reports allow the project team to continuously monitor interviewing progress, identify potential problem areas and provide ongoing feedback to the interviewing staff and the project team. They were used by the Project Coordinator and Deputy Coordinator to effectively manage the RDD sample and, after the completion of interviewing, provide the necessary metrics for summarizing the disposition of all interview attempts. These dispositions are reported in a subsequent section of this methodological report.

Questionnaire Development

Two questionnaires were developed for the 2005 LACHS, one for the Adult Survey and a second for the Child Survey. Many of the questions used in these surveys were taken verbatim from previous LACHS studies and from other established state and national surveys to permit direct comparisons and trend assessments over time. Throughout the questionnaire development period, Field's overriding objective was to maintain an internal structure and coherence to the questioning to facilitate easy administration by telephone, to enhance respondent cooperation, and to ensure the meaningfulness and validity of survey responses. Many iterations of the instrument were exchanged between the County and Field before a penultimate survey instrument was deemed ready for preliminary testing.

Structure and Content of the Adult Survey Questionnaire

The 2005 LACHS Adult Survey included both a household screener to identify adults eligible for the survey, and a main survey questionnaire to be administered to each eligible adult.

Survey Screener

In the initial dialing of RDD telephone numbers, the interviewer first sought to ascertain whether the number dialed was in fact a household. Once a household was identified, the interviewer introduces him or herself to the household spokesperson, describes the overall purposes of the

call and its sponsor. The survey screener then instructs the interviewer to obtain the following essential pieces of information to determine the eligibility of the household for the Adult Survey:

1. to verify that the household was located within Los Angeles County
2. to ascertain whether one or more adults age 18 or older lived in the household
3. to randomly select one adult age 18 or older to interview for the survey
4. to determine the preferred language of approach to that adult

If the randomly selected adult was someone other than the household spokesperson initially contacted, the interviewer re-introduces himself or herself to this individual once this adult was on the line, reviewing once again the overall purposes of the call and its sponsor. Other pertinent information about the survey was also provided at this time, including the average amount of amount of time required to complete the survey, background information about Field, the telephone number of a Field spokesperson who can be called to obtain more detailed information about the study, as well as the telephone number of an individual within the County Health Department whom they could call to verify the authenticity of the survey or seek additional information.

LACHS Adult Survey Questionnaire

Once a randomly selected adult had been identified, the main questionnaire was then administered. The Adult Survey instrument consisted of a core set of about 180–200 questions and covered the following survey topics:

1. Overall health status: An initial series of questions sought to determine the respondent's overall health and general physical and mental well being.

2. Nutrition, body mass and diet: Several questions asked about the respondent's weight and height, their self-perceived weight status, and their fruit and vegetable intake.

3. Antibiotics: A short question series examined the respondent's knowledge of the proper use of antibiotics, and their use of them when prescribed by their health care provider.

4. Health conditions: This section of questions asked about the prevalence of various health conditions applicable to the respondent, including arthritis, heart conditions, diabetes, high blood pressure, asthma, high blood cholesterol, chronic respiratory conditions, and depressive disorders.

5. Mental health: Several questions then sought to determine whether the respondent reported having any symptoms of mental or emotional disorders.

6. Employment and daily activities: These items asked about the respondent's employment status, and the extent to which he or she had engaged in vigorous or moderate exercises or activities during a usual week.

7. Other health risks/safety precautions: Various questions in this section asked respondents how well they knew their neighbors, their perceptions of the safety of their neighborhood and whether they had taken any precautions to prepare for a disaster such as an earthquake or terrorist attack.

8. Health insurance: This section of the survey ascertained whether the respondent was covered by health insurance or any kind of health care plan, and if so, what type of coverage.

9. Barriers to accessing health care: A number of questions in this section sought to identify impediments to respondents receiving medical care when they needed it, their last visit to a health care provider, their usual source of care and whether they had gone to a hospital emergency room in the past 12 months.

10. Preventive health care: These questions asked about the respondent's last time they had various preventive health care tests, such as having their blood pressure or cholesterol levels checked, a pap spear, hysterectomy or mammogram (among women), and sigmoidoscopy, colonoscopy or blood stool test (among adults age 50 or older).

11. Tobacco use and exposure: This section explored the extent of past and present tobacco use by the respondent, efforts to quit smoking (among smokers), and their exposure to another's smoking (among non-smokers).

12. Alcohol use: Those who reported having consumer alcohol in the past month were asked about the extent of their alcohol use, while all respondents were asked whether they had recently ridden in a motor vehicle when the driver had too much to drink.

13. Use of illegal drugs: Several questions asked respondents whether they had used marijuana, cocaine, methamphetamines, or used needles to inject drugs not prescribed by a doctor.

14. AIDS/HIV risk: In order to ascertain AIDS/HIV risk, respondents were asked a number of questions about their sexual practices and whether they had been tested for HIV in the past two years and if so the circumstances surrounding this test.

15. Demographic Questions: This section contained basic demographic questions about the respondent and his/her household, including age, sex, race/ethnicity, education, income, place of birth, fluency in English, sexual orientation, education level, marital status, household size and composition, language spoken most in the household, city of residence, zip code and closest intersections to their home.

16. Food insecurity and public aid assistance: For households with income levels under 300% of the federal poverty level or whose household income was undetermined at the time of the interview, an additional series explored the extent to which their household had gone without food, skipped or ate less or went hungry because they couldn't afford food, and whether they currently were receiving public assistance from a federal, state or county agency.

Additional Adult Survey Questions

In addition to the topics included above, the adult sample was subdivided into eight random sub-samples, with respondents within each subsample asked one additional series of questions on seven specific policy-related topics of interest to the County Health Department. The County developed seven policy-related question sets, with six question sets administered across six of the random sub-samples, and one set administered across two of the random sub-samples. This yielded survey information from random sub-samples of approximately 1,000 adults for six of the policy topics and 2,000 adults for the seventh topic area.

The topics covered by each of the random sub-samples included:

1. Environment/food-borne illnesses: This section asked respondents their level of concern about exposures to different types of environmental pollution. *(administered to approximately one-eighth of the countywide adult sample)*

2. Health department effectiveness/nutrition and diet: This section asked respondents about their perceptions of the effectiveness of different types of public health programs and services that the county health department provides, their awareness and the importance of good nutrition in their diet, as well as their exposure to food poisoning, non-pasteurized milk, and concerns about food irradiation. *(administered to approximately one-eighth of the countywide adult sample)*

3. Tobacco policy: Respondents were asked about their degree of concern about tobacco use, second-hand smoke, cigarette use by minors and second-hand smoke as public health issues, as well as a series of questions about possible tobacco-related policies that could be implemented in the county, including venues in which smoking should be restricted and their support for increasing cigarette taxes to fund public health programs. *(administered to approximately one-eighth of the countywide adult sample)*

4. AIDS/HIV policy: Respondents in this subsample were asked about their perceptions of the seriousness of HIV/AIDS as a health issue in their community, their knowledge of HIV/AIDS related issues, personal knowledge of HIV positive individuals, and preferred setting for being tested for HIV. *(administered to approximately one-eighth of the countywide adult sample)*

5. Alcohol policy: This section included questions about whether alcohol or illegal drug use was a problem in their family as well as various public policies relating to the use of alcohol, including places in which alcohol should be sold, restrictions on the sale of alcohol to minors, and their exposure to alcohol-related advertising. *(administered to approximately one-eighth of the countywide adult sample)*

6. Flu shots/public health response/bio-terrorism: Respondents in this sub-sample were asked about the likelihood of their getting flu shot, and any perceived adverse health effects from receiving such shots, their confidence in the county's public health system to

respond effectively, fairly and honestly to protect their health, and likelihood of a terrorist attack including bio-terrorism affecting either the county or their families. *(administered to approximately one-fourth of the countywide adult sample, as well as all adults interviewed as part of the Antelope Valley sample augment)*

7. Child care policies: This sub-sample of respondents was asked to assess their community on various child care dimensions, their opinions about public policies relating to the care and education of young children and their awareness of First Five L.A. *(administered to approximately one-eighth of the countywide adult sample)*

Structure and Content of the Child Survey Questionnaire

The 2005 LACHS Child Survey also included a household screener and a main survey questionnaire. As stated previously, interviewing for the Child Survey was divided into two phases. Phase One of the Child Survey included interviews with the mother or primary caregiver of a child under age 18 within households included as part of the Adult Survey sample who reported having a child under age 18 in residence. Phase Two of the Child Survey involved screening a random sample of Los Angeles County households for the presence of children under age 18, and then seeking to interview the mother or primary caregiver of a randomly selected child living within the household.

RDD samples for this portion of the Child Survey were purchased from Survey Sampling, Inc. using the same countywide "Random A" sampling procedures as developed for the adult sample.

Survey Screener

During Phase One, if the mother/primary caregiver was not the respondent to the Adult Survey, the respondent was asked to transfer the call to the mother/primary caregiver of the child or children living in that household. In these instances, the interviewer then re-introduced himself or herself to the mother/primary caregiver, describing the overall purposes of the call and the survey's sponsor.

During Phase Two, the survey screener sought to obtain the following pieces of information from the household spokesperson to determine the eligibility of the household for the Child Survey:

1. to confirm that the household was located within Los Angeles County
2. to ascertain whether a child under age 18 lived in the household
3. to ask to speak to the mother or primary caregiver of the child or children living in the household
4. to determine the preferred language of the mother/primary caregiver

As in Phase One, the interviewer first introduced himself or herself to the mother/primary caregiver and described the overall purposes of the call and the survey's sponsor. Other pertinent information about the survey was also provided at this time, upon request, including the average amount of amount of time required to complete the survey, background information about Field, the telephone number of a Field spokesperson who could be called to obtain more detailed information about the study, as well as a telephone number that the mother could call within the County Health Department to verify the authenticity of the survey or seek additional information.

Child Survey Questionnaire

The mother/primary caregiver was then administered the main Child Survey questionnaire. The interview length of the Child Survey included between 100 and 160 questions depending upon the age of the referent child and whether or not the survey was derived from a follow-up interview with the mother/caregiver living in a household previously included as part of the Adult Survey or part of the augmented sample of Child Survey interviews.

Somewhat longer interviews were conducted with parents whose child is age 0–5, while shorter interviews were conducted among parents with children age 6–17. In addition, because some of the demographic characteristics of households included in the Child Survey were included as a part of the Adult Survey and were already retrieved during that survey, follow-up interviews were shorter on average than those completed as part of the augmented sample.

The 2005 Child Survey questionnaire was structured to include the following sections and topics:

1. Child selection and background questions: The survey obtained information about only one child under age 18 in each household. In households where only one child resided, the mother or primary caregiver was asked questions about that child. In households where multiple children resided, the mother/caregiver was asked to select one of their

children using the "most recent birthday" method, and the survey was conducted in relation to that child only. Once this child was selected, basic background information about the child was obtained, including the child's gender, age and whether the respondent was that child's biological mother.

2. Infant questions: This section of questions was administered to mothers/caregivers whose randomly selected child was an infant age 0-5. It included items about breast-feeding practices, the mother's reasons for following these practices, sleeping positions of infants under six months, employment of the mother during the child's early years, as well as other topics.

3. Daily activities and family interactions: Parents were asked questions having to do with the typical eating practices of their child, the child's participation in organized sports activities, their child's television watching habits and general assessments of the amount of time the parent spent with their child.

4. Special needs and disabilities: This section included questions about the use of prescription medicines by the child, the need for more than usual amounts of medical, mental health or educational services for the child, and any emotional, developmental or behavioral problems requiring the child to receive treatment or counseling.

5. Asthma: Parents were asked whether a doctor or health professional had ever told them that their child had asthma, and if so, the extent to which asthma limited the child's physical activities, as well as the medicines taken by the child to control the asthma.

6. Childcare: Parents with children under age six were asked a series of questions about the childcare arrangements they used for their children, and any difficulties they had in finding or paying for such care. Measures were also obtained as to the parent's awareness and specific knowledge of the organization, First 5 L.A.

7. Health insurance: Parents were asked whether their child was currently covered by health insurance or any other kind of health care plan, and if so, what type of coverage they had.

8. Barriers to accessing health care: A number of questions in this section sought to identify impediments to the child receiving medical care when they needed it and their reasons for this, their last visit to a health care provider, their usual source of care and the parent's degree of satisfaction with the child's health care provider.

9. Parental support: Various questions in this section asked parents about their access to people who could provide them with advice when they had problems in raising their child and the extent to which they knew or could rely on their neighbors to assist them when needed.

10. Parent's mental health and health risk behaviors: A number of questions in this section sought to determine general symptoms of mental or emotional disorders among parents, as well as specific health risk behaviors, including smoking.

11. Smoking and Second Hand Smoke: Questions in this section probed whether the mother's/primary caregiver smoked, the exposure of their child to other smokers in the home and the rules of the house regarding where and when smoking is allowed.

12. Child Demographics: This section contained various demographic questions about the child not asked previously in the survey, including race/ethnicity and place of birth.

13. Parent Demographics: This section included questions pertaining to the demographic characteristics of the parent and the household itself, including education, income, marital status, employment status of the respondent and her spouse, language used most in the home, place of birth, household size and composition, city of residence, zip code and street address or closest intersections to their home.

Questionnaire Programming

The English and Spanish language versions of the survey questionnaire were then programmed onto Field's computer-assisted telephone interviewing (CATI). The Mandarin, Cantonese, Korean, Vietnamese and Armenian language versions were programmed onto Field's web-based counterpart, MR Interviewer.

Both the CATI and MR Interviewer systems control the telephone scripts read to individual respondents by displaying the appropriate questionnaire items one at a time on computer screens

at each interviewer's booth. The interviewer then reads each question aloud to the respondent from the screen and enters the pre-coded answer category through the keyboard directly to a computer disk. All answers are automatically stored in computer memory. This allows for greater consistency in interviewing by controlling skip patterns, branches, randomization of items in a battery, "refer backs," and other control features during the call. It also affords somewhat greater opportunities for internal control, since the development and programming of the questionnaires remain under the direct control and supervision of the project coordinator.

These systems also enable the questionnaires to be personalized, as needed. For example, for the Child Survey questionnaire, the system has the capability of inserting the name of the randomly selected child, about which the survey centered, into each survey question applicable to that child. (e.g., What is <NAME's> age?) This frees the interviewer to concentrate on his or her interviewing technique and insured a clear and unambiguous questioning process. In addition to sequencing and personalizing questions, the system performs various quality control functions, including on-line editing. One such function rejects ineligible codes entered by an interviewer to all pre-coded questions. For example, if there are only two eligible codes to a question (e.g., Yes = 1 and No = 2), if an interviewer attempts to enter a "0" or other inappropriate number, it is rejected. For items that did not have pre-coded categories, the system rejected data falling outside acceptable ranges. For example, when asking about a child's age, any number greater than 17 was rejected. In such instances, the interviewer would then recheck the child's exact age with the respondent before proceeding to the next question. The capability to incorporate sequencing and logic checks was crucial to the interview, thereby tailoring each survey to each respondent's unique situation through this questionnaire sequencing process.

Once the programming was completed, the script from each questionnaire in each language was reviewed on-line by Field staffpersons fluent in that language to check all questions, response alternatives, and skip patterns.

Field's Telephone Interviewing Facilities

A Field strength is the size of its California-based telephone interviewing facilities. Field maintains two central location telephone interviewing facilities, one in San Francisco and another in San Diego, which include approximately 100 interviewing stations. In these facilities Field completes approximately 300,000 CATI-based telephone interviews annually using our own

professionally trained interviewer staff, working under the full-time supervision of Field's interviewing supervisors and Data Collection Director. Each of Field's installations offers remote as well as on-site monitoring capabilities, where staff supervisors, the project team and clients can listen in to monitor and evaluate the progress of the interviewing in-progress. Field's CATI and MR Interviewer systems both offer full capabilities for monitoring the progress of each interview.

Interviewer Training and Practices

Field is fully cognizant of the role of the interviewer in obtaining accurate and reliable survey data and recognizes the critical importance of not allowing the interview experience itself to potentially bias the results. As such, all of the interviewing conducted by Field meets or exceeds the best practices standards for survey research established by the industry's leading professional association, the American Association for Public Opinion Research. In addition, all of Field's full-time staff has undergone HIPAA training as part of past health-related survey research projects to ensure that proper confidentiality procedures are followed.

The following is a discussion of the measures employed by Field to assure high quality and uniform telephone interviewing practices during the conduct of the 2005 LACHS:

1. All interviewers were required to complete an interviewer training course, which provides both general and specific interviewing instructions, refresher reviews and on-line monitoring of telephone interviewing. During the training course, interviewers were provided with an interviewer training manual. The training course and manual includes an introduction to survey research, a description of interviewer roles and responsibilities, general interviewing techniques and record keeping, refusal conversion techniques, and confidentiality procedures. In addition, procedures were reviewed for the proper management of non-English speaking households.

2. At the conclusion of their training, interviewers conducted mock interviews, and Field's professional interviewing supervisors evaluated their performance.

3. Before the start of data collection, all interviewers working on the study were required to attend personal briefing sessions where specific calling procedures are described in detail by the Project Coordinator or Deputy Coordinator. These sessions provided both interviewers and supervisors with an overview of the study and will include a question-

by-question review of all items in the survey. The sessions discussed recommended best-practice approaches for dealing with different interviewing situations, specifics on how to document the results of each contact attempt, the scheduling of callbacks, and confidentiality requirements.

4. De-briefings and re-training sessions were held as necessary to ensure that all interviewers were following consistent procedures. The performance of each member of the interviewing team was closely monitored and evaluated, especially during the first few days of interviewing. In addition, from time to time interviewers were asked to meet together as a group to discuss their interviewing experiences on the project.

5. As questions about the survey arose during data collection, written responses were prepared and distributed to all interviewing staff to ensure uniform, standardized interviewing practices.

6. Throughout the interviewing period "data correction sheets" were available to all interviewers to note interviewer errors or respondent changes to answers after the initial recording of a response during the interview.

Over the course of the data collection period, the Project Coordinator and Deputy Coordinator provided representatives of the County with regular progress reports as to the status of data collection.

Techniques Used to Maximize Survey Response

Over its many years of experience in completing large-scale telephone surveys, Field has continually strived to implement proven interviewing strategies to maximize survey response and respondent cooperation. To this end, Field employed the following specific procedures to maximize survey participation and response when conducting the 2005 LACHS:

1. At the initial point of contact with potential respondents, interviewers were trained to take extra time with respondents to explain the importance of the study, as well as trying to alleviate any fears or concerns they had about the confidentiality of their responses. All survey respondents were told at the beginning of the interview that the study was being sponsored by the Los Angeles County Department of Health Services. Providing this

information greatly helps to validate the purpose of the survey, increasing the importance of the survey in the respondent's mind. Respondents who requested some verification of the survey auspices were provided with the name and telephone number of a supervisor at Field and/or the Los Angeles County Health Department whom they could call to verify the authenticity of the study. In addition, respondents were assured that their survey answers would remain confidential and that no personal information that they gave during any part of the survey would be individually identified with them after the survey was completed.

2. For the Adult Survey, up to 12 attempts were made at each residential sample listing to interview eligible respondents for the survey. Similarly, for the augmented sample portion of the Child Survey, up to 12 attempts were made to reach and screen mothers/primary caregivers in households where children under age 18 resided. Even greater efforts were made when attempting to implement follow-up interviews with the mother/primary caregiver of a child from households that had participated in the Adult Survey. For these households up to 24 call attempts were made to reach and complete an interview with this designated mother/caregiver.

   Initial telephone contact attempts were made during the early evening hours on weekdays and throughout the day on weekends to maximize the chances of including both working and non-working adults. Callbacks were made at different times and on different days to increase the probability of finding qualified adults available for the interview. Where possible, appointments were made at a specified date and time to maximize cooperation rates. Callback appointments were scheduled throughout the interviewing period seven days a week as requested by the respondent.

3. For telephone listings that repeatedly encounter answering machines, messages were left on the answer machine explaining the purpose of the call and our desire to include that household or respondent into the survey. Messages are typically left after the fourth or fifth attempt at reaching the household and on the final attempt.

4. When making the final calling attempt to a household, a message was left referencing the availability of a toll-free 800 number where respondents can call to contact Field to participate in the survey. For quality control purposes, telephone numbers eligible for such 800 number callbacks were stored in memory to confirm that the party phoning back is indeed among those phone listings eligible for inclusion into their respective samples.

5. When interviewers encountered a refusal, they were trained to employ one of several possible protocols, depending on the respondent's initial response or reason for not participating. Thus, interviewers read slightly different scripts to refusers who appear initially uninterested or diffident than for refusers who are hesitant or simply lack confidence. This procedure, coupled with our continuing training and re-training program, has proven effective in holding down the refusal rate.

   After a refusal occurs and the potential respondent hangs up, interviewers were instructed to record their impressions of the respondent's reason for refusing and any other information that may be relevant in helping a subsequent interview attempt to the household to complete the interview.

6. Field called back initial refusers (except those who are adamant about not being called again) several weeks to one month after the initial refusal occurred. Under this approach, the callback attempt was made as if the initial refusal had never occurred. These calls were made at different times of day and on different days of the week than when the initial refusal occurred.

7. For those households that continued to refuse, or for those where a respondent began the survey but broke off (but again excluding those adamant about not being called again), a specially trained team of refusal conversion interviewers re-approached the household, using a "call with concern" procedure. In these calls interviewers consulted all previous details about the prior refusals that might be useful in helping them convert refusals.

Respondent Selection Procedures – Adult Survey

In an attempt to improve the representativeness of the adults selected for the Adult Survey, Field employed a relatively new, fully probabilistic respondent selection procedure that both minimizes the use of intrusive questions, while producing improved distributions of men and women in RDD

surveys. This method takes advantage of the fact that an estimated 80%-85% of all County households have two or fewer adults in residence. In households where only one adult resides, no respondent selection procedure is required and interviews were attempted with that adult. In households where two adults reside, it was a relatively straightforward procedure to randomly select either the adult being screened or the household's other adult, with random selection of the appropriate adult determined by the CATI system.

In households where more than two adults reside, the method proceeded in the following fashion. CATI first determined whether the adult being screened would be the randomly selected respondent. If the adult being screened was not randomly selected by the CATI system, then the "most recent birthday" method was used to identify which of the other household adults would be the selected respondent. Once an adult was selected, repeated attempts were then made to reach and complete an interview with that individual.

This method has a number of advantages over alternative approaches. First, it limits the number of questions that must be asked to identify which adult in the household to interview. And, in only a very small proportion of households does the procedure require asking any additional screening questions other than the number of adults in the household. We also favor the procedure because of its simplicity, and its avoidance of having to ask respondents intrusive questions that can hinder other approaches, such as the Trodahl-Carter grid or Kish enumeration methods. In addition, it is a probabilistic approach that avoids the potential for self-selection bias, which may be operative in other approaches, such as the most recent birthday respondent selection procedure.

Respondent and Child Selection Procedures – Child Survey

The 2005 LACHS followed the same procedures used in previous Child Surveys with regard to the identification and recruitment of mothers/primary caregivers of children under age 18 for the Child Survey. In Phase One of the Child Survey sampling, respondents from households in the Adult Survey identified as having one or more children were asked a series of questions at the conclusion of that interview designed to identify the mother or primary caregiver of one or more of the children residing in the household. In instances where multiple families reside, a random selection procedure ("most recent birthday" method) was employed for selecting which mother/primary caregiver to interview. Similar respondent selection procedures were followed for identifying

mothers/caregivers in Phase Two of the Child Survey sampling, once a household was identified and screened for the presence of a child under age 18.

One other selection procedure that was integral to the Child Survey was the random selection of which child within multiple children households the mother/primary caregiver would be discussing in regard to the survey's key child health indices. Similar to the procedures followed in prior LACHS Child Surveys, the 2005 LACHS Child Surveys utilized the "most recent birthday" method for randomly selecting an appropriate child in such households. This method has proven to be highly successful in producing a distribution of children by age and sex that closely matches the County's overall population of children.

Pilot Testing

The CATI script for the Adult Survey was prepared for an initial telephone pre-test among a relatively small sample of about 20 Los Angeles County adults to assess general ease of administration, refine item wording and provide us with an initial assessment of its average length of administration. Following this initial pre-test, changes were made to the questionnaire, as appropriate, and incorporated into the CATI script in preparation for a more formal pilot test. Following this, a series of three pilot tests were conducted among about 100 County households using the Adult Survey and Child Survey questionnaires, and employing the same survey procedures proposed for conducting the full-scale telephone survey. The overall purpose of the pilot tests was to test all survey assumptions and data collection protocols, to identify possible problems in survey administration, and to report back to the County our final estimate of the average interview length of the questionnaire. County representatives participated in the pilot testing process by monitoring interviews remotely. Field also conducted a number of debriefing sessions with pilot test interviewers and supervisors who, along with County representatives, provided feedback on the survey instruments. Changes resulting from the pilot tests and debriefings were incorporated into each survey questionnaire, as appropriate.

Interviewing Dates

All interviewing for the 2005 LACHS Adult Survey was completed January 14 – July 31, 2005. Interviewing for the two phases of the 2005 LACHS Child Survey spanned the period January 14 – August 14, 2005.

Disposition of Interview Attempts – Adult Survey

The following is a summary of the final disposition of telephone interview attempts from the 2005 LACHS Adult Survey:

Total listings dialed	89,068
Completed screening question/ineligible for survey*	942
Completed Adult Survey interview	8,648
English	6,455
Spanish	1,802
Korean	189
Mandarin	81
Cantonese	65
Vietnamese	40
Armenian	16
Refusals/break-offs	9,907
Initial household refusal prior to screening	4,925
Reportedly on "do not call" list – refused further call attempts to household	1,219
Refused after household screening	2,978
Terminated by respondent during interview	785
Not a residential (landline) phone	36,757
Not working/disconnected/changed number	20,645
Fax/modem/pager	5,900
Cell phone	461
Business/institutional/other non-residence	9,751
Non-contacts	16,068
Answering machine/other non-contact on final attempt	15,114
Respondent unavailable/callback	742
Blocked number	212
Unknown household eligibility	16,438
Repeated no answer/busy signal**	15,094
Language, communications barrier	1,344
All other	312
AAPOR Cooperation Rate 3	46.6%
AAPOR Response Rate 3	22.8%

** includes non-adult households and those living outside the survey area*
*** for response rate calculations, 20% of these listings were estimated to be households*

Cooperation and Response Rate Calculations for the Adult Survey

A cooperation rate describes the ratio of completed interviews to all eligible units ever contacted. Household level cooperation rates are based on contacts made with a household member and are the most widely cited cooperation rates in RDD surveys. Cooperation rates for the LACHS were calculated using the Cooperation Rate 3 (COOP3) definitions as described in the 2004 American Association for Public Opinion Research's Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys manual.

Applying the COOP3 formula yields a 46.6% cooperation rate for the Adult Survey, as calculated by the following formula:

$$\text{COOP3} = \frac{\text{completes}}{\text{completes + partials + refusals}} = \frac{8{,}648}{8{,}586 + 3{,}763 + 6{,}144} = 46.6\%$$

A response rate is a broader measure of sample implementation and is defined as the ratio of completed interviews to the total number of eligible reporting units. Response rates for the LACHS were calculated using AAPOR's Response Rate 3 (RR3) definition, also described in its Standard Definitions manual.

Applying the RR3 formula to the Adult Survey yields a 22.8% response rate, calculated by the following formula:

$$\text{RR3} = \frac{\text{completes}}{\text{completes + partials + refusals + non-contacts + other + (.2) unknown eligibility}}$$

$$\frac{8648}{8648 + 3763 + 6144 + 16068 + 312 + (.2)\ 15094} = 22.8\%$$

Disposition of Interview Attempts – Child Survey

The following is a summary of the final disposition of telephone interview attempts from the 2005 LACHS Child Survey:

	Total	Follow-up to Adult Survey	Augmented Sample
Total listings dialed	83,766	3,766	80,000
Completed screening questions/ineligible for survey*	18,753	--	18,753
Completed Child Survey interview	6,032	2,267	3,765
English	3,521	1,346	2,175
Spanish	2,246	829	1,417
Korean	132	44	88
Mandarin	48	19	29
Cantonese	34	12	22
Vietnamese	41	16	25
Armenian	10	1	9
Refusals/break-offs	6,888	674	6,214
Initial household refusal prior to screening	2,991	---	2,991
Reportedly on "do not call" list – refused further call attempts to household	397	23	374
Refusal after household screening	3,060	622	2,438
Terminated by parent during interview	440	29	411
Not a residential (landline) phone	32,756	209	32,547
Not working/disconnected/changed number	19,522	189	19,333
Fax/modem/pager	4,857	4	4,853
Cell phone	152	5	147
Business/institutional/other non-residence	8,225	11	8,214
Non-contacts	8,067	591	7,476
Answering machine/other non-contact on final attempt	6,771	374	6,397
Respondent unavailable/callback	981	205	776
Blocked numbers	315	12	303
Unknown household eligibility	11,169	--	11,162
Repeated no answer/busy signal**	10,582	--	10,582
Language, communications barrier	580	--	580
All other	108	25	83
AAPOR Cooperation Rate 3	46.7%		
AAPOR Response Rate 3	26.0%		

** includes non-adult households, households with no children in residence and those living outside the survey area*
*** for response rate calculations, 20% of these listings were estimated to be households*

Cooperation and Response Rate Calculations for the Child Survey

Data collection for the Child Survey was derived from interviews made to two different samples of households — (1) follow-up interviews within households interviewed from the Adult Survey who reported having children under the age of 18, and (2) households screened for the presence of children under age 18 screened through an augmented RDD sampling of county households. Thus, the overall cooperation and response rates applicable to the Child Survey combines both elements.

Applying AAPOR's Cooperation Rate 3 (COOP3) to the combined results of interview attempts for the Child Survey yields a 46.7% cooperation rate, calculated from the following formula:

$$\text{COOP3} = \frac{\text{completes}}{\text{completes + partials + refusals}} = \frac{6032}{6032 + 3500 + 3388} = 46.7\%$$

Applying AAPOR's Response Rate 3 (RR3) to the combined results from the Child Survey yields a 26.0% response rate, derived as follows:

$$\text{RR3} = \frac{\text{completes}}{\text{completes + partials + refusals + non-contacts + other + (.2) unknown eligibility}}$$

$$\frac{6032}{6032 + 3500 + 3388 + 8067 + 108 + (.2)\ 10582} = 26.0\%$$

Data Processing

After the completion of interviewing, all survey information was processed from Field's data processing center located within its San Francisco headquarters. This allows for direct supervision and control over all processing functions by the Project Coordinator and Field's MIS and programming managers.

The following is a description of the procedures employed by Field to complete the data processing tasks for the LACHS.

1. Data File Preparation: After all survey information derived from each of the survey components were input into our computer, all information were systematically formatted in preparation for data cleaning and processing.

2. Post-Interview Coding Tasks: Survey questions which permitted short verbatim replies if the established pre-coded response categories did not clearly fit respondent replies were coded and key-entered, as appropriate, into each respondent's data file by Field's coding staff. In addition, replies not clearly fitting into established categories were placed onto "other lists," which were used to accommodate the new information, and this new information was also key-entered into each respondent's data file.

3. Data "Cleaning" and File Checking: Because CATI itself provides for the direct data entry of responses by the interviewer and does not permit ineligible or invalid data entries, the data file resulting from all CATI interviewing is itself virtually error-free. However, because interviewers manually fill out error correction sheets when they have incorrectly entered a respondent's answer or when a respondent changes his or her response after it has been entered, the survey data required additional data "cleaning." All data correction sheets were reviewed and interview information corrected, as necessary, by Field's professional coding staff. Following this, an additional series of checks was performed by means of a specially designed cleaning program that scrutinizes each questionnaire for internally inconsistent information. At the conclusion of data processing, respondent telephone numbers and any other identifying information obtained during the course of the interview were purged from the data file and replaced with case identification numbers. During data collection and processing access to all project files were carefully controlled and access to data files were restricted internally at Field through a system of passwords.

4. Address and cross-street geo-codings: During the interviews, respondents were asked to specify either their residential address or the two cross-streets nearest their residence. After the completion of interviewing, this information was turned over to health department staff, along with other geographic information about the residence, including the respondent's zip code, and city of residence. The health department staff reviewed these answers and, on a case-by-case basis, attempted to place that respondent's household into an identifiable census tract.

5. Database Construction and File Preparation: At the conclusion of this process, two data files were created – one applicable to the Adult Survey and another for the Child Survey. These data sets were prepared in standard ASCII format and delivered to the county. Each file was accompanied by all necessary documentation including the card and column locations of each variable, and all response category alternatives applicable to each variable.

Sample Weighting

In weighting the adult and child data files, a series of sequential steps were taken to arrive at the Stage 1 household weight and then a Stage 2 population weight. The data files were also projected to household and population estimates relating to county estimates of the number of residential housing units and the total number of non-institutionalized adults and children residing in the County (Stage 3). These weighting procedures are described in the following sections. This document does not present the statistical formulae associated with each procedure, but instead describes the approaches, steps, and data used to construct the weights.

Stage 1

Base Weight

A base weight is calculated that takes into account household size (for the Adult Survey), and the number of children in the household (for the Child Survey), as well as the number of dedicated landline telephone lines entering the home, landline only/cell phone only/non-telephone household status, and health district distribution of county households for both surveys.

Step 1: Household size weighting.

As part of the Adult Survey, the number of eligible adults had been enumerated so that one adult could be randomly selected to be interviewed. Since the probability of selection is inversely proportional to the number adults residing in the household, an adjustment is necessary so that households of all sizes are proportionally represented as they exist in the county. Using countywide 2004 Population Estimation and Projection System (PEPS) data for household size (number of adults per household), each respondent was weighted so that the total sample reflected the 2004 estimated county-wide proportions for one-adult, two-adult, three-adult, four-adult and five-or-more-adult households.

For the Child Survey the number of children in the household was enumerated. Using 2004 Current Population Survey estimates for Los Angeles County, weights were applied so that the total Child Survey sample reflected the 2004 county-wide proportions of one-child, two-child, three-child and four or more child households.

Step 2: Health District distribution of households weighting

A Health District (HD) weight was constructed so that each survey's sample of county households was correctly apportioned across the county's 26 districts. Those HD household proportions for the Adult Survey were also based on the 2004 PEPS data, while the HD estimates of child households for the Child Survey were based on the 2000 Census.

Step 3: Number of residential telephone lines weighting

Respondents in both the Adult and Child Surveys were asked how many telephone lines were in the household for non-business use and were not dedicated data lines. Households with two or more such lines would have a greater probability of selection in the RDD sample. Households with two or more such telephone lines were down wieghted by applying a weight of 0.5; i.e., half the weight of households with a single line.

Step 4: Non-telephone/Cell phone-only adjustment weighting

The adjustment for cell phone-only households is an extension of the non-telephone household adjustment developed by Keeter[1] and based on *recent cell phone-only* research described by Jay and DiCamillo[2]. In this approach, respondents who did not have continuous telephone service over the previous 36 months and who either had a) no cell phone service or b) had cell phone service during that time, are weighted upward to compensate for a) non-telephone households, and b) cell-phone only households that are outside the survey's RDD sample frame and thus missed. Using 2000 Census data for California, it was estimated that 1.5% of households are

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[1] *Keeter, S. (1995), Estimating telephone noncoverage bias from a phone survey.* Public Opinion Quarterly*, 59, 196-217.*

[2] *Jay, E. D. and DiCamillo, M. Identifying recent cell phone-only households in RDD surveys. Paper presented at the 2nd International Conference on Telephone Survey Methodology. Miami, 2006.*

non-telephone households. Based on data from the 2004 National Health Interview Survey, it was estimated that 6.1% of households are cell phone-only households[3].

Weights were then developed using a straightforward adjustment where the observed 2.2% of "non-continuous/no cell phone" households in the sample (after Step 1 and Step 2 weights are applied) has 1.5% added to it (representing the non-telephone households missed), so that they then comprise 3.7% of the weighted sample after this adjustment is applied. And, at the same time, the observed 3.2% of the "non-continuous/cell phone" households in the weighted sample has 6.1% added to it (representing the cell phone-only households missed) so that they then make up 9.8% of the weighted sample after this adjustment is applied. Finally, households that had continuous telephone service in the sample are weighted downward so that they result in being 87.0% of the households after adjustment instead of their observed 94.6%.

The multiplicative result of the weights developed in Steps 1 through 4 made up the household's base weight.

Stage 2

Post-stratification and Raking

Stage 2 weighting then adjusted the Adult and Child Surveys to population-based estimates of the actual adult and child populations in Los Angeles County.

The data source for the control totals for the post-stratification and raking procedure was the PEPS 2004. The Quantum (SPSS) v5e Rim Weighting process was used. For the Adult Survey, control totals were defined for four dimensions: Race/ethnicity (5 levels), Gender (2 levels), Age (6 levels), and Health District (26 levels). For the Child Survey, control totals were defined for dimensions: Race/ethnicity (5 levels), Gender (2 levels), Age (5 levels) and Health District (26 levels). The target proportions for these dimensions are the input data for this procedure run on the respondent data after the base weight is applied.

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[3] *Blumberg, S.J. et al. The Prevalence and Impact of Wireless Substitution: Updated Data from the 2004 National Health Interview Survey. Paper presented at the Annual Meeting of the American Association for Public Opinion Research. Miami, 2005.*

Stage 3

Population Projections

At the conclusion of the weighting process, the Adult Survey data file was projected to both household and population estimates relating to the total number of residential housing units and total number of non-institutionalized adults and children residing in the County. Similarly, the Child Survey data file was projected to both household and population estimates of the total number of residences with children and the total number of children residing in the County. Estimates of residential housing units for Los Angeles County were based on 2004 California Department of Finance estimates. The population estimates for the Adult Survey were based on the 2004 PEPS for Los Angeles County after subtracting census estimates of the number of adults living in institutional or group quarters. Estimates of the number of households with children were based on 2004 Current Population Survey, while estimates of the total population of children under age 18 living in Los Angeles County came from PEPS 2004.

These population projections add considerably to the utility of the survey results in data analysis, since once the data are projected, each survey estimate can be reported as projections of the actual number of adults and children possessing each characteristic.