Appendix A: Methodology and Technical Notes

Survey Methodology

The 2010 California Parent Survey was commissioned by the Lucile Packard Foundation for Children's Health. The data collection for the 2010 California Parent Survey was conducted by the Henne Group and took place from March 5, 2010 through May 18, 2010. Independent Review Consulting, Inc. served as the Institutional Review Board and approved data collection and reporting procedures for the survey. This section provides a brief description of the survey methodology.

Data Collection

Qualified respondents for this survey are adults who are parents or guardians of children under the age of 18 who live in California. The child in the household with the most recent birthday was designated as the subject of the interview.

The questionnaire was programmed into the Henne Group's Computer-Assisted Telephone Interviewing (CATI) system. This system allows for automatic response-based routing. The survey was conducted predominantly in English, but if the household was not proficient enough in English, the interview was conducted in Spanish, Mandarin, Cantonese, or Vietnamese, depending on the preference of the qualified respondent. On average, the survey took 25 minutes to complete. Each respondent who completed the survey was sent a $5 Starbuck's gift card to thank them for participating.

Once the survey was programmed and tested, all interviewers working on the project were trained by supervisory staff. Interviewers were trained on the administration of each question, made familiar with calling procedures, and with the qualifications of eligible respondents. Once interviewing began, up to 20 percent of each interviewer's calls were monitored to assure that all data collection procedures were being followed and to guide follow-up training in areas where improvements were needed.

Calling was conducted at different times and on different days to increase the probability of reaching a household spokesperson. Interviewing hours for this survey were 3:00–9:00 p.m. weekdays, 10:00 a.m.–3:00 p.m. Saturdays, and 3:00–9:00 p.m. Sundays (all Pacific Time). In addition, respondents had the option to schedule a call-back for outside of these calling hours. Up to six attempts were made to reach and interview a qualified respondent at each number drawn for the sample.

Interviews were completed with parents or guardians of 1,685 children.

Sample Design

The sample was selected using list-assisted Random-Digit-Dialing (RDD) methods and augmented with randomly selected listed numbers and wireless RDD. The first stage of sampling for the survey was the selection of a sample of telephone numbers, with telephone numbers in areas with high percentages of Latino/Hispanic, Black, and Asian/Pacific Islander households sampled at higher rates than those in areas with low percentages of Latino/Hispanic, Black, and Asian/Pacific Islander households. When RDD

telephone samples did not produce the necessary number of completed interviews, randomly selected listed telephone samples from areas with high percentages of Latino/Hispanic, Black, and Asian/Pacific Islanders were used in order to ensure obtaining the necessary completed interviews within the time constraints. The survey team also augmented the sample with Wireless RDD to ensure that wireless-only households were not excluded from our sample. Survey Sampling International, Inc. (SSI) conducted the sampling and provided the resulting lists of telephone numbers. For the purposes of this survey, three main regions were identified and telephone numbers were selected within these regions: (1) the San Francisco Bay Area, which includes Alameda, Contra Costa, Marin, San Francisco, San Mateo, and Santa Clara counties; (2) Los Angeles County; and (3) other areas of California including all remaining counties.

The survey sample targeted completed interviews with qualifying households by regions within California and also by race/ethnicity. The race/ethnicity was determined by the reported racial/ethnic group of the child in the household who was the subject of the interview. The racial/ethnic groups identified in the survey were White, Latino/Hispanic, Black, Asian/Pacific Islander, and other.[i]

The composition of the resulting sample of completed interviews by region and race/ethnicity is included in Table A-1.

Table A-1. Sample composition of completed interviews by region and race/ethnicity of children

Child's race/ethnicity	Los Angeles County	San Francisco Bay Area	Other Areas of California	Total
White, non-Hispanic	231	213	100	544
Latino/Hispanic	230	184	51	465
Asian/Pacific Islander, non-Hispanic	170	214	11	395
Black, non-Hispanic	134	115	4	253
Other, non-Hispanic	5	5	18	28
Total	770	731	184	1,685

Data Reliability and Validity

Estimates produced using data from the survey are subject to two types of error, sampling and nonsampling errors.

Nonsampling Errors

Nonsampling error is the term used to describe variations in the estimates that may be caused by population coverage limitations and by data collection, processing, and reporting procedures. The sources of nonsampling errors are typically problems such as unit and item nonresponse, the differences in respondents' interpretations of the meaning of the questions, response differences related to the particular time the survey was conducted, and mistakes in data preparation.

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[i] The race/ethnic designation was reported by the parent for the child. If a child was described as "Hispanic" he or she was included in that group regardless of other race designations.

For the 2010 California Parent Survey, several efforts were made to minimize nonsampling error. First, a validity study of the survey instrument was conducted, using cognitive interview methodology, by the Public Research Institute at San Francisco State University. Pilot testing, post-interview data edits, and weighting adjustments were also used to minimize the potential effects of nonsampling error.

An important source of nonsampling error for a telephone survey is the failure to include persons who live in households without telephones. This is particularly problematic in RDD surveys because so little is known about the sampled telephone numbers with which contact has not been made. Weighting adjustments help to reduce the bias in the estimates associated with excluding children who live in households without telephones.

Another potential source of nonsampling error is respondent bias. Respondent bias occurs when respondents systematically misreport (intentionally or unintentionally) information in a study. There are many different forms of respondent bias. One of the best known is social desirability, which occurs when respondents give what they believe is the socially desirable response. For example, surveys that ask whether respondents voted in the most recent election typically obtain a higher estimate of the number of people who voted than do voting records. For the 2010 California Parent Survey efforts were made to minimize social desirability bias by using validated and widely accepted best practices for question-wording of sensitive questions or questions that are known to increase the likelihood of socially desirable responses. Nonetheless, this type of systematic bias is expected in survey research, and moreover is common when asking questions about risky behavior or other questions of a personal nature even when efforts are made to use question wording that minimizes the risk of social desirability bias.[ii]

Response Rates

Interviews were completed with 1,685 respondents, for a response rate of 3.65 percent. Table A-2 shows the disposition or result of all phone calls made.

Table A-2. Disposition of phone calls or telephone numbers dialed for the survey

Disposition Type	Number of Records
Non-Working Number	9,239
Business, Fax, Data	4,944
Not Eligible	13,891
Communication Barrier	713
No Answer	30,120
Call Back	1,790
Refused	12,596
Complete	1,685
Total	74,978

[ii] Tourangeau, R. & Yan, T. (2007). Sensitive Questions in Surveys. *Psychological Bulletin*, 133, 859-883.

Item nonresponse (i.e., the failure to complete some items in an otherwise completed interview) was very low for most items in the survey. The item nonresponse rate for most variables included in this report was 3 percent or lower.

Sampling Errors

The sample of telephone households selected for the 2010 California Parent Survey is just one of many possible samples that could have been selected. Therefore, estimates produced from this sample may differ from estimates that would have been produced from other samples. This type of variability is called *sampling error* because it arises from using only some (a sample) of the households with telephones, rather than having surveyed all households with telephones. Sampling error is the calculated statistical imprecision that is due to interviewing a random sample instead of the entire population.

The *margin of error* is a measure of the variability that is due to sampling when estimating a statistic. Margins of error can be used to measure the precision expected from a particular sample. The margin of error provides an estimate of how much the results of this sample may differ when compared to what would have been found if the entire population was interviewed. The margin of error also indicates the upper and lower bounds of this difference. The size of the sample is the primary factor affecting the size of the margin of error, although it is not the only factor.

Margins of error for all of the estimates are presented in the tables. These margins of error can be used to produce *confidence intervals*. For example, an estimated 39 percent of school-age children have at least some form of after school child care. This figure has an estimated margin of error of 1.18 percent. Therefore, the estimated 95 percent confidence interval for this statistic is approximately 38 to 40 percent (that is, 39 +/-1.18). A 95 percent confidence interval means that if the process of selecting a sample, collecting the data, and constructing the confidence interval were repeated, it would be expected that the confidence interval would contain the true participation rate for this population in 95 out of 100 samples from this population.

Weighting

In order to produce population estimates from the 2010 California Parent Survey that are representative of both the California population and the regions of Los Angeles County and San Francisco Bay Area, the sample data need to be weighted. In order to compensate for under- or over-representation of certain subgroups in the sample, a weight was created that adjusts the sample distribution for race/ethnicity within each county to make it conform to the population distribution of children in California. In adjusting the sample distribution to make it similar to the population distribution, the weight also adjusts for unequal selection probabilities at the child level and unit nonresponse.

Statistical Procedures

Comparisons made in the text were tested for statistical significance to ensure that the differences are larger than might be expected due to sampling variation. When comparing estimates between

categorical groups (e.g., race/ethnicity), t statistics were calculated. The formula used to compute the t statistic was:

$$t = Est1 - Est2/SQRT\,[(se1)^2 + (se2)^2]$$

Est1 and Est2 are the estimates being compared and se1 and se2 are their corresponding standard errors. All differences reported are significant at the p<.05 level, unless otherwise described.

In addition to t-test comparisons, logistic regression analyses were conducted in many sections of this report in order to describe the relationship between key outcome variables related to children's physical and emotional health and selected child and family variables. Independent variables were entered simultaneously for each regression analysis. White children served as the reference racial\ethnic group; Los Angeles served as the reference region group; households earning greater than $125,000 served as the reference household income group; less than a high school diploma or equivalent served as the reference group for parent's educational attainment; and private insurance served as the reference group for the type of health coverage. The same significance criteria used in the bivariate analyses (p-value of 0.05 or less) was applied for the regression coefficients.