

Listening to Mothers in California

Survey Methodology

SEPTEMBER 2018

Listening to Mothers in California joins a series of national *Listening to Mothers* surveys carried out since 2002 to better understand experiences and perspectives of childbearing women. The state-level survey provided an opportunity for a sample drawn systematically from state birth certificates allowing us to identify a specific response rate for the survey. Other *Listening to Mothers* innovations for the California survey include availability of questionnaire and outreach materials in Spanish as well as English; outreach via mail and text message in addition to email and telephone; option of participating via smartphone and tablet as well as laptop, desktop and telephone interview; investigator access to survey participant birth certificate information; abstraction and merging of additional variables from the Medi-Cal (California's Medicaid program) claims database; and data weighting using the 2016 Birth Statistic Master File.

Listening to Mothers investigators at the National Partnership for Women & Families and the Boston University School of Public Health collaborated with investigators at the University of California, San Francisco (UCSF) Center on Social Disparities in Health and the Quantum Market Research, Inc. survey research firm to develop and carry out *Listening to Mothers in California*. The California Health Care Foundation and the Yellow Chair Foundation funded the survey.

Institutional Review Board (IRB) and Related Approvals

The Committee for the Protection of Human Subjects (CPHS) of California's Office of Statewide Health Planning and Development is the IRB of record. CPHS designated the project as low risk to human subjects, and approved it and subsequent protocol amendments. The UCSF IRB also approved the project. The California Department of Public Health (CDPH) Vital Statistics Advisory Committee (VSAC) approved access to birth certificate data for sampling, for contacting sampled women, for weighting the data, and for conducting analyses. The CDPH Health Information and Research Section provided the requested items. The CDPH California Biobank Program approved and provided access to supplementary contact information for sampled women from the Genetic Disease Screening Program.

The Data and Research Committee of the Department of Health Care Services approved and provided access to supplementary contact information for sampled women in the Management Information System/Decision Support System (MIS/DSS) Warehouse, identified Medi-Cal beneficiaries as sampled women with paid claims for their 2016 childbirths and provided several additional analysis variables for Medi-Cal beneficiaries.

Survey Questionnaire and Outreach Materials

The survey questionnaire included some new items and many continuing items from earlier *Listening to Mothers* surveys, including items that were condensed and adapted for mobile-first display on smartphones. Topics covered the prenatal through postpartum and infant periods, with a focus on maternity care experiences and perspectives and women's postpartum outcomes. Multiple items were included to investigate particular funders' interests: medicalization including overuse of cesarean birth, midwifery care, and maternal mental health, with examination of experiences and views across racial/ethnic groupings, source of childbirth payment (Medi-Cal, private) and other breakdowns. Three open-ended questions were asked of all survey participants to obtain complementary experiences and views in the women's own words. The final questionnaire was trimmed to take approximately 30 minutes when completed with a telephone interviewer in English.

Participants were recruited using up to four invitation and reminder mailings, which included distinctive envelopes and two inserts: invitation cover letters incorporating elements of informed consent and cards providing information about how to access the survey online via any device using a unique code that was provided. The card also indicated how to reach a telephone interviewer and learn more about the project. Investigators offered sampled women gift cards to a choice of retail stores to thank them for completing the survey.

Using a variety of potentially engaging photographs of women and babies, the questionnaire and outreach materials were pilot-tested and refined through a series of one-on-one interviews and focus groups in various locations around the state with women from diverse backgrounds who had recently given birth.

A sociologist and bilingual native speaker of Spanish translated the questionnaire and outreach materials from English into Spanish. A maternal and child health consultant, also a bilingual native speaker of Spanish, then back translated the questionnaire from Spanish to English independent of the original English to help identify issues in need of reconciliation. The project team repeated the processes of pilot testing and refinement of the Spanish-language project materials with Spanish-speaking women who had recently given birth. The questionnaire is available in both languages, along with other project materials, at NationalPartnership.org/LTMCA and chcf.org/listening-to-mothers-CA.

The survey was programmed using Qualtrics survey research software. Upon entry via a dedicated URL, online respondents could choose to participate in English or Spanish, and were required to provide the unique code included in the mailing insert card. A brief initial screener further verified eligibility.

Eligibility Criteria

Eligible participants were women 18 years or older; with a residential address in California (excluding suspected birth tourism addresses used temporarily by women from other countries); who gave birth in a California hospital to a singleton baby between September 1, 2016 and December 15, 2016; whose babies were living with them at the time of the first survey contact; who were not incarcerated, mentally incapable of taking the survey, or in a rehabilitation facility; who were living in the United States at the time of the first survey mailing; and who could complete the survey in English or Spanish.

The rationale for these exclusions was as follows: ethical concerns about surveying minors or women whose babies were deceased, in foster care, etc.; ability to reach and survey sampled women; exclusion of distinctive populations with too few survey participants to produce meaningful results (multiples, out-of-hospital births and various reasons for women not residing with their babies); logistical challenges of questionnaire development and programming for these special cases; and lack of resources for extending to other languages.

Determination of eligibility occurred at two separate points: prior to sampling (eliminating birth certificates of known ineligible participants) and at the beginning of the questionnaire during a brief eligibility screen. The eligibility of individual women who could not be reached or who declined participation is unknown.

Sample Design and Birth Certificate Sample

Our sampling design reflected eligibility criteria to the extent available through birth certificate items and included strata based on birth certificate information for region of the state based on residential zip code, race/ethnicity, mode of birth and attendant at birth.

We limited the California birth certificate file for sampling to include only women with a birth from September 1, 2016 through December 15, 2016 (with plans to weight our data to all 12 months of 2016). The following situations indicating ineligibility for the survey were detectable from the birth certificates, and these birth certificates were removed prior to sampling.

- ▶ Mothers less than 18 years old.
- ▶ Women who were not residents of California at the time of birth, according to residential address on birth certificate. Births to suspected birth tourism addresses (where residents of other countries are known to temporarily stay for the purpose of giving birth in the United States) and a small number of births where the maternal address was unavailable were also excluded (a usable address was necessary for mailing survey invitation letters).
- ▶ Women whose births occurred out of hospital (primarily home births or births in freestanding birth centers).
- ▶ Women with birth certificates indicating the infant had died.
- ▶ Women who had a twin, triplet, or higher-order birth.

A stratified random sample was drawn from the pool of eligible births to women defined by the following strata: Black women with vaginal births after previous cesarean (VBACs), all other women with VBACs, women in Northern California who had a midwife as a birth attendant, women in Northern California who did not have a midwife, women in Southern California who had a midwife, and women in Southern California who did not have a midwife. Black women, women who had a midwife as their birth attendant, and women who had a VBAC were oversampled to increase the confidence in any conclusions about these relatively small groups in data analysis and reporting. The final sample of women we aimed to reach consisted of 4,796 women.

Online and Phone Interviewing

The field period ranged from February 22, 2017 through August 15, 2017. Invitational mailings were sent during the initial field weeks to addresses obtained from birth certificates, with two follow-up reminder mailings to non-respondents. Respondents could complete the questionnaire in English or Spanish, either online or on the phone with an interviewer. They could work through the questionnaire in one or more sessions and switch between modes and devices. Most women who responded to the mailings chose to participate online, versus with an interviewer. As online responses to mailings tapered off, interviewers attempted to contact both non-respondents and those who had partially completed the survey online, using information from birth certificates and other supplementary sources, such as the Genetic Disease Screening Program, the MIS/DSS Warehouse and various online search engines.

The process of contacting sampled women included up to four mailings, as well as many phone calls, emails and text messages to the extent these methods of contact were available. To encourage non-respondents to participate over time and recognize the scarcity of women's discretionary time due to care of their baby, any other children, return to paid work, or other responsibilities, the value of offered thank-you gift cards increased from \$15 to \$30 to \$50 to – via a fourth and final mailing – \$75 over the course of the field period. We experienced some delays in receipt of supplementary contact information, and some batches of contact information were only available near the end of our field period when many potential participants had presumably resumed or started paid work, had moved, or were otherwise lost to follow up.

A total of 2,539 women completed the survey: 34% on their own with a device, 28% by phone with an interviewer and 39% hybrid, generally by starting on a device and finishing with an interviewer. About 4 in 5 (81%) elected to use the English version and 1 in 5 (19%) chose the Spanish version.

Response Rate

Our response rate calculation was based on methods of the American Association of Public Opinion Research (AAPOR). Using their “Response Rate 2” methods, which exclude sampled participants found to be ineligible during the field period, our response rate was 54%. Examples of ineligibility discovered during the field period were as follows: baby not living mother or respondent not living in the United States at time of outreach, and respondent unable to participate in English or Spanish.

Using AAPOR’s “Response Rate 4,” which further estimates the proportion of sampled women of unknown eligibility who were eligible, our response rate was 55%. (Full calculation details are available on request.)

Medi-Cal Data Linkage, Abstraction and Merge

The Data and Research Committee (DRC) of the Department of Health Care Services approved our request for analysis variables from the MIS/DSS Warehouse, which contains Medi-Cal claims data. In light of the many options for insurance coverage in California in 2016, including many employer-based options, Covered California plans, Medi-Cal managed care plans and fee-for-service Medi-Cal, we decided that the gold standard for Medi-Cal beneficiary was a claim covered by Medi-Cal for her 2016 vaginal or cesarean birth. For further analysis, the DRC also provided Aid Code and Aid Code Category identifying the basis for eligibility and the Program/Plan Code identifying the mode of Medi-Cal participation, whether through fee for service or a managed care plan. In February 2018, the DRC identified Medi-Cal covered 2016 childbirth claims for 1,231 women who had completed our survey, for a Medi-Cal coverage rate of 48% (47% weighted). Medi-Cal beneficiary status and other analysis variables provided for Medi-Cal beneficiaries were merged into our dataset. The present report includes no analyses using the additional variables relating to eligibility and type of participation. Further analyses are planned with that information.

Data Processing

Quantum Market Research, Inc. provided survey data without respondents’ personal information to investigators at UCSF for processing. Data were cleaned, formatted, labeled, and merged with birth certificate data for the sampled women using a unique ID. Variables with write-in response options were recoded, as needed. Constructed variables were created from some survey items for variables such as family income in relation to poverty, insurance, and race/ethnicity.

The open-ended items asked of all survey participants were de-identified (e.g., all names of hospitals, clinicians and towns were removed) and the maternal and child health consultant who participated in questionnaire translation translated the open-ended Spanish responses into English. These translated responses were merged into the file of open-ended responses.

Weighting

To make the survey results as representative as possible of California women meeting inclusion criteria who gave birth to live-born infants during the 12 months of 2016, responses of the women in the survey were weighted to reflect the distribution of eligible women with live births in 2016. Each woman who responded to the survey was assigned a weight, which stands for the number of mothers in California like herself that she represents. Weights were calculated using birth certificate records for sampled women and the final 2016 California birth data (Birth Statistical Master File), excluding births to women who would have been excluded from the sampling frame: those under age 18, those who were not residents of California, and the small number who had twins or other multiples or out-of-hospital births.

Sampling weights were created to account for the stratified sample design, oversampling of specific groups, non-response among the women who were sampled, and non-coverage of women who could not be sampled because their births were not in the sampling frame (births from September 2016 through December 15, 2016). Although the survey data were weighted to the entire birthing population, minus these few exclusions, the survey was only administered in English and Spanish and results may not be generalizable to women who speak other languages.

Birth certificates do not allow us to know the exact proportion of women ineligible for our study for reasons that are not tracked through birth certificate items, including those unable to participate in English or Spanish. Despite our exclusions, our weighted results are remarkably similar to statewide results in the 2016 Birth Statistical Master File on a broad range of variables, as shown in a table in Appendix B of the full survey report.

Please direct inquiries about the survey to info@nationalpartnership.org.



YELLOW CHAIR FOUNDATION

The National Partnership for Women & Families is a nonprofit, nonpartisan advocacy group dedicated to promoting access to quality health care, reproductive health and rights, fairness in the workplace and policies that help women and men meet the dual demands of work and family. More information is available at NationalPartnership.org.



This work is licensed under a Creative Commons Attribution-NonCommercial NoDerivatives 4.0 International License.