

The Sampling Plan for the Hurricane Katrina Community Advisory Group

The goal in developing the sampling plan for the Advisory Group was to obtain two separate representative samples, each including 1000 adults (ages 18 and older) who lived in the counties or parishes defined by FEMA as eligible for individual assistance after Hurricane Katrina. The first target sample was of people whose residence was in the New Orleans metropolitan area at the time of the hurricane. The second target sample was of people whose residence was in any of the other eligible counties or parishes at the time of the hurricane. This definition includes residents who were physically absent from the affected areas at the time of the hurricane (e.g., residents of the affected areas who evacuated) and excludes non-residents who were physically present at the time of the hurricane (e.g., tourists who failed to evacuate). For reasons of practicality, the target sample was also constrained to people who can speak either English or Spanish, who are physically and mentally capable of participating in interviews, and who can be accessed by telephone. These constraints of the target sample, which are typical of telephone surveys, exclude 6-8% of the population from the sample frame.

I. The multiple-frame sampling design

A multiple-frame sample design was used to recruit the Advisory Group. A multi-frame design is one in which more than one frame is used to select respondents and all respondents sampled from any of the frames are asked to provide information that allows the researcher to estimate the probability of selecting the respondent from any of the frames. In our case, five frames were used to select the sample:

1. Safe lists: The American Red Cross, MSNBC, and a number of other organizations created “safe lists” after the hurricane to allow survivors and their relative to get in touch with each other by providing information about their whereabouts. We downloaded all these lists from the internet, consolidated the information in all these lists, which consisted of more than 400,000 entries, and selected a probability sample from this consolidated list to include in the Advisory Group.
2. American Red Cross relief list: More than 1,300,000 families contacted the ARC for relief after Hurricane Katrina. We were fortunate enough to develop a collaboration with the ARC that allowed us to include a probability sample from this list in the Advisory Group.
3. Hotels: At the time the Advisory Group was recruited, in mid-January, 2006, the vast majority of people displaced by Hurricane Katrina had long since left hotels and shelters. However, a residual group of approximately 30,000 still resided in hotels. As a result, we selected a probability sample of hotels in the communities reported by FEMA to be those in which Katrina refugees were housed in hotels and we screened hotel rooms to obtain a probability sample of these individuals.
4. Random digit dialing in the affected areas: We also used a conventional random digit dial (RDD) sample of randomly generated phone numbers in the affected counties and

parishes based on telephone banks in these areas that had at least one listed number prior to the hurricane. The usefulness of this sample was increased dramatically by the fact that Bell South maintained the land line phone number of people who were displaced by the hurricane and provided forwarding numbers for all individuals who provided such numbers to the telephone company. This made it possible for us to contact a large proportion of the people who were displaced by the hurricane simply by calling their old phone numbers and being transferred directly to them in California, Illinois, Pennsylvania, or wherever they might be throughout the country.

5. Random digit dialing outside the affected areas: We also used RDD to screen for people displaced by the hurricane who lived outside the affected area. This was done by calling a random sample of phone numbers based on the same sampling scheme as in the affected areas, but this time including numbers throughout the United States. In order to increase the efficiency of this screening effort, a digitally recorded message was used to calls thousands of phone numbers each day throughout the recruitment period asking for people living in households with eligible people to indicate this fact either with a recorded voice response or a touch-tone phone response that indicated to us that a live interviewer should contact the household.

II. Weighting

As noted above, weighting was used to adjust for differential probability of selection depending on the number of sampling frames in which each person in the population was represented.

An Additional weight was used to adjust for the fact that we only selected one respondent in each sample household to participate in the Advisory Group no matter the number of eligible people living in that household. In special cases of group quarters – for example, where several different families were living together – we allowed two people to be selected for Advisory Group participation in order to truncate the within-household probability of selection weight.

A final post-stratification weight was also used to adjust for residual discrepancies between the sample and data obtained from the US Bureau of the Census on the characteristics of people who lived in the affected areas at the time of the year 2000 Census. All the information on the Census long form was aggregated to the Census Tract level and Advisory Group members were weighted to approximate the distribution of the cross-classification of these variables at that level of geographic aggregation.