



2004 Washington State Population Survey Technical Report 1: Sample Disposition and Response Rates

THIS REPORT is one of several technical appendices prepared by the Office of Financial Management to supplement the 2004 Washington State Population Survey (SPS). The survey was funded by the Legislature to provide social, demographic, and economic information about Washington residents biennially.

Responses to the survey were obtained from telephone interviews with 7,097 households that represent the state population as a whole. The survey was designed by OFM and conducted by the Gilmore Research Group in the Spring 2004.

Sample Disposition and Response Rates

A stratified sample by region was selected from all households in state of Washington with an activated telephone line, either listed or unlisted. A target of 750 households was planned for each of the eight regions with the exception of King County where a target of 1,800 households was planned. More households were selected in King County to insure sufficient information on racial minority groups for statistical analyses. Households were selected in each of the regions using random digit dialing (RDD) technique.

Table 1
Complete Sample Disposition for the General Population Sample

| Sample disposition | General Population Sample |
|--|----------------------------------|
| CM: Completed Interview | 7,097 |
| PC: Partial complete | 0 |
| PB: Partial complete | 384 |
| CP: Pretest completion (Included in CM) | 23 |
| R2: Soft refusal | 283 |
| R3: Hostile refusal | 1,016 |
| R5: Refusal on conversion attempt | 1,847 |
| RN: Refusal for respondent not available | 0 |
| R6: Put on "Never Call" list | 652 |
| R70: Letter refusal | 38 |
| R63: Refusal of # of HH members | 30 |
| GB: General callback | 1,264 |
| BZ: Busy signal | 643 |
| NA: No answer | 2,562 |
| AM: Answering machine | 2,867 |
| LM: Answering machine, left message | 0 |
| DF: Deaf respondent | 265 |
| HC: Handicapped respondent | 133 |
| LG: Language problem | 288 |
| DD: Respondent deceased | 17 |
| RG: Respondent gone | 175 |
| IE: Ineligible, respondent too young | 35 |
| I2: Ineligible, respondent not minority | 0 |
| IEE: Ineligible estimate respondent not minority | 0 |
| BG: Business or government | 2,876 |
| DS: Disconnected | 8,087 |
| ED: Electronic device | 1,786 |
| BC: Blocked call | 234 |
| WR: Wrong number | 8 |
| DP: Duplicate number | 74 |
| NQ: Not a WA state resident | 101 |
| OT: Other misc. | 0 |
| SA: Spanish no answer | 90 |
| SB: Spanish answering machine | 47 |
| SG: Spanish general callback | 123 |
| SZ: Spanish busy signal | 14 |
| PN: Purged nonworking numbers | 5,429 |
| OQ: Over quota | 8 |
| Total Sample | 38,473 |

Calculating response rates for a survey requires first a complete account of the disposition of all sample cases regarding the outcome of the interview attempt. Table 1 presents the complete sample. The first column is a description of the dispositions. The second column contains the disposition figures for the sample.

Sample Disposition Summary

Table 2 contains a summary of the sample disposition details. It shows a total of 38,473 cases were released for the sample. Of the 38,473 cases released, 7,097 resulted in completion (CM), 4,425 in refusal (RF1 and RF2), 8,296 in no contact (NA1, NA2, and SNA), and 18,655 in ineligible (IEH and IEO).

TABLE 2
Sample Disposition Summary

| Sample disposition Summary | General Population Sample |
|---|----------------------------------|
| CM = (CM,CP) | 7,097 |
| RF1 = (PC,PB) | 384 |
| RF2 = (R1,R2,R3,R5,RN,RP,R70,R63,R6 RG) | 4,041 |
| NA1 = (CB,GB,BZ,AM,LM,DF,HC,LG, TR) | 5,460 |
| NA2 = (NA) | 2,562 |
| SNA = (SA,SB,SG,SM,SZ) | 274 |
| IEH = (DD,IE) | 52 |
| IEO = (BG,DS,ED,BC,OT,UP,PN, WR, DD NQ, OQ) | 18,603 |
| Total | 38,473 |

Note 1: Disposition codes in parentheses refer to those in Table 1.

Response Rates

Table 3 contains four different response rates. The reason for inclusion of different response rates is that different organizations may have varying needs for presenting information and some response rates are more appropriate than others. A total of four response rates are calculated. These rates are based on definitions of response rates set by the CASRO.

The first two rows of Table 3 are two adjustment factors. The first adjustment factor (ADJ1) represents the percent of contacted households that are ineligible for the survey because of death or age. The adjustment is 0.007 percent for the sample. The second adjustment factor (ADJ2) represents the percent of telephone numbers that are excluded from the sample because they are not residential households.

Table 3
Response Rate Calculations

| Response Rate Calculations | General Population Sample |
|---|--|
| $ADJ1 = \%INELIGIBLE = (IEH + IEE) / (CM + RF1 + IEH + IEE)$ | .007% |
| $ADJ2 = \%OUT\ OF\ SAMPLE = IEO / TOTAL$ | 48.35% |
| $RR1 = CM / (CM + RF1 + RF2)$ | 61.60% |
| $RR2 = CM / (CM + RF1 + (1 - ADJ1) * RF2)$ | 61.74% |
| $RR3 = CM / (CM + RF1 + RF2 + NA1 + SNA + NA2)$ | 35.81% |
| $RR4 = CM / ((CM + RF1 + (1 - ADJ1) * (RF2 + NA1 + SNA)) + (1 - ADJ2) * NA2)$ | 38.34% |

* IEE removed from both the numerator and the denominator.

Note 1: Disposition codes on right-hand side of the equation refer to those in Table 2.

The four response rates displayed in the next four rows differ only in what is included in the denominator. The first rate (RR1) is a crude rate. It is the ratio of completes over the sum of completes (CM) and refusals (RF1 and RF2). RF1 in the denominator refers to refusals after the identifying information is collected. RF2 refers to refusals before the identifying information is collected. This rate can be considered as a crude cooperation rate, i.e. the proportion of all successfully contacted cases that completed the interview. For the sample this rate is 61.6 percent.

The second rate (RR2) is very similar to RR1 except that in RR2, RF2 is adjusted for death and young age of the intended respondents (ADJ1). This rate is a refined cooperation rate. For the sample, it increases from 61.6 to 61.7 percent.

The third rate (RR3) takes into account those households that are never successfully contacted during the survey period. They are included in the denominator of the ratio. The denominator for this ratio includes: completed and partially completed interviews (CM), refusals (RF1 and RF2), call-backs (NA1), no-answers (NA2), and Spanish call-backs (SNA). By including the no-contact households without adjusting for ineligible, this rate is the most conservative of the four rates presented in Table 3. For the sample, this rate is about 35.8 percent.

The fourth rate (RR4) is similar to the RR3, but it takes into account adjustment for death and young age among the Spanish call-back cases (SNA), other call-back cases (NA1), and contacted cases from which no identifying information was collected (RF2). In addition, this rate is adjusted for ineligible (ADJ2) among the no-answer cases (NA2). For the sample this leads to an adjusted rate of 38.3 percent.

RR2 and RR4 are the two most often quoted rates with the former being generally referred to as the cooperation rate and latter referred to as the response rate.