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*Locating and Surveying Medicaid and AFDC
Beneficiaries: CAHPS Field Test Experience to
Date*

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DRU-1664-AHCPR

July 1997

Prepared for Agency for Health Care Policy and Research

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ABSTRACT

As part of the field testing effort for the Consumer Assessment of Health Plan Study (or CAHPS), RAND tested both telephone and mixed mode (mail followed by telephone) methods to locate and survey adult and child Medicaid and AFDC beneficiaries. As expected, the mixed mode approach was more successful in locating sampled individuals (67% of the sample was located) and yielded the best response rate (56% of the sample completed a survey). In addition, study results indicate that directory assistance, criss-cross directories, and CD-ROM sources of phone numbers provide some limited additional information beyond the sample list provided by a Medicaid health insurance plan.

DESCRIPTION OF CONSUMER ASSESSMENT OF HEALTH PLAN SATISFACTION STUDY (CAHPS)

The Consumer Assessment of Health Plan Satisfaction (or CAHPS) Study, funded by the Agency for Health Care Policy Research (AHCPR), represents a collaborative effort across a consortium that includes Harvard, RAND, and the Research Triangle Institute (RTI). CAHPS' goal is to produce a "tool kit" of survey questions and report formats that health insurance plans and employers can use to assess and report consumer satisfaction across a broad range of populations. As a member of the CAHPS consortium, RAND is charged with the development and testing of survey items (and reports) targeted toward Medicaid and AFDC beneficiaries. The Medicaid-targeted items were developed from a review of the published literature, previously used consumer satisfaction surveys, and the results of 3 focus groups and over 50 cognitive interviews conducted with Medicaid beneficiaries (in either English or Spanish) for CAHPS. Version 1.0 of CAHPS instruments and user manuals were released in May 1997 to demonstration sites and data collection is in progress in multiple demonstration sites as part of continued testing of the CAHPS instruments and consumer reports.

RAND'S FIELD TEST EXPERIENCE

A total of 630 adult and child Medicaid and AFDC recipients were sampled. The sample was drawn from membership files provided by a southern California HMO and the State of Oklahoma. Of the selected sample, 60 percent were adults, 40% children. For the child sample, our initial target respondent was the mother of the child. If it was determined the mother did not have physical custody of the child, the target respondent became the custodial caregiver (defined as the person who cared for the child most often and knew the most about his or her health care). The sample was randomly assigned to one of two data collection modes: telephone, or mixed mode (mail/telephone).

Telephone Mode

A total of 317 cases were assigned to the telephone mode (189 adults, 128 children). A ten-week field period began in September 1996. One week prior to the start of calls, a brief introductory letter was mailed to the sample. Our telephone interviewers first attempted to contact the target respondent using the phone number provided in the membership file. Once that number was exhausted (for example, disconnected, respondent not known at that residence, or consecutive no answer), interviewers then tracked the respondent using operator directory assistance and a criss-cross tracking service (both hardcopy directories and on-line service). Both tracking methods yielded new possible numbers for the respondent; however, the criss-cross tracking service provided three neighbors. When new phone numbers were exhausted, interviewers moved to the neighbors' phone numbers. Neighbors were asked if they knew of the respondent and if they could deliver a message and our toll-free number to him or her. Follow-up calls were made to neighbors who had agreed to deliver a message. Once the respondent was contacted, his or her identity was verified by the name and birthdate we had on record. Each respondent was assured the interview was confidential and all data would be reported only in aggregate. Interviews were completed in either English or Spanish. Overall, each case received an average of 9.1 calls. Table 1 below summarizes the telephone sample performance.

Table 1

Telephone Sample Performance

	Completed Interview	Located By Phone	Not Located By Phone
Raw Number	137	171	146
Percentage of Sample	43%	54%	46%

Of the cases not located by phone, 55% (80 cases) were from those provided by the Medicaid health plan, and 45% (66 cases) were from the state sample. Fifty-eight percent (110 cases) of the adult sample, and 47% (60 cases) of the child sample was located by phone. "Located by phone" is defined as confirmation of the correct target respondent in a telephone conversation with that respondent (this includes outgoing calls as well as calls incoming to the toll-free project number).

Mixed Mode

A total of 313 cases was assigned to the mixed mode (188 adults, 125 children). A 12-week field period began in early September 1996. Each mail packet contained a \$5 cash incentive, a personalized cover letter, the survey, and a postage-paid return envelope. The prepaid incentive was included because it has a demonstrated ability to enhance response (Berry and Kanouse, 1987; Armstrong, 1975; Dommeyer, 1988; Furse and Stewart, 1982), and we wanted to maximize the response rate. The packet also included a Spanish survey request card, which the respondent could return to receive a Spanish version of the questionnaire. Ten days after the initial mailing, a reminder postcard was sent out to all respondents. A second mailing of the materials (excluding the cash incentive) was sent two weeks later to all who had not yet returned a completed survey. During week 6 of data collection, a telephone interview was attempted for the remaining non-responders and mail undeliverable cases (73% of the sample). Interviewers were instructed to follow the same protocol as the phone-only sample in contacting a target respondent and tracking cases after exhausting a phone number. Once located, respondents were given the choice of requesting another mail survey or answering the questions by phone. Whenever possible, more emphasis was placed on completing the questionnaire over the phone. Interviews were completed in either English or Spanish. Overall, cases pursued by telephone received an average of 9.8 calls. Table 2 summarizes the mixed mode sample performance.

Table 2

Mixed Mode Sample Performance

	Completed Interview By Phone or Mail	Located By Phone or Mail	Not Located By Phone or Mail
Raw Number	176 (97 mail)	209	104
Percentage of Sample	56% (31% mail)	67%	33%

Of the cases not located by mail or phone, 66% (69 cases) were from the plan sample, and 33% (35 cases) were from the state sample. "Not Located by Phone or Mail" is defined as no mail survey return (or an undeliverable survey return that failed tracking) and no confirmation of the correct target respondent in a telephone conversation with that respondent. Seventy-five percent (141 cases) of the adult sample was located by either mail or phone, and 59% (74 cases) of the child sample was located by either mail or phone. "Located by Phone or Mail" is defined as a mail survey return (partial, complete, refusal) or confirmation of the correct target respondent in a telephone conversation with that respondent.

RATIONALE FOR TRACKING SUBSTUDY

The CAHPS instruments were designed for health plans, employers, and other purchasers of health insurance (such as state public insurance programs) to use in surveying plan members, employees, program beneficiaries, etc. For most users, data will need to be collected in a manner that is cost effective, efficient, and that results in a sufficient number of observations during a reasonably quick field period. With this in mind, we attempted to see how much four different tracking methods could increase the proportion of the sample that could be located by telephone. We focused our efforts on the adult sample provided by the southern California health plan, because the performance of the state sample was acceptable, and because states have other means of tracking Medicaid and AFDC beneficiaries (e.g., through social workers, benefits offices).

A sample of 300 adult Medicaid and AFDC beneficiaries were called for 12 weeks beginning in mid-December 1996. Because of the holidays, a 17-day recess occurred in data collection. The effective field period was 9.5 weeks. In preparation for the data collection, the sample was processed through three tracking methods: a CD-ROM phone and address directory, and two telephone matching or look-up vendors. When phone calling began, each case had as many as four or as few as one phone number(s).

One week prior to the start of calls a brief introductory letter was mailed to the sample. In addition to explaining the purpose and importance of the study, the letter informed the respondent that if he completed an interview he would be entered in a prize drawing (or lottery) for one of three prizes: \$200, \$100, and \$50. Our lack of a control group prevents us from comparing the effect of the prize drawing or lottery on response. However, Warriner et al. (1996) have demonstrated that a lottery is not as effective as prepaid incentives.

Interviewers were instructed to attempt all possible numbers during calling. Interviewers did not wait until one number was exhausted before moving on to the next number. That is, if one number resulted in a repeated “no answer” outcome after several dialings, alternate numbers were dialed. This allowed all the phone numbers to be fielded at the same time. After contact with the target respondent was made at a number, interviewers stopped calling all other numbers. In cases where the pre-field period phone numbers had been exhausted, interviewers began tracking the respondent using operator directory assistance and a criss-cross directory service. If the respondent was not reached, interviewers began calling the neighbors provided by the criss-cross service. Neighbors were asked if they knew of the respondent and if they could deliver a message and our toll-free number to him or her. Follow-up calls were made to neighbors who had agreed to deliver a message. Once the respondent was located, his or her identity was verified by the name and birthdate we had on record. Each respondent was assured the interview was confidential and all data would only be reported in aggregate only. Interviews were completed in either English or Spanish. Cases received an average of 12.8 calls. Table 3 summarizes the overall performance of this sample.

Table 3

Tracking Study Sample Performance

	Completed Interview	Located By Phone	Not Located By Phone
Raw Number	116	178	122
Percentage of Sample	39%	60%	40%

Overall, the tracking study obtained a 6% increase in the proportion of the sample located by phone when compared to our prior phone data collection with an adult and child sample (this is a 2% increase in the proportion of adult sample located). The overall location rate exceeds that of other telephone surveys of Medicaid populations (Gold et al. 1995, Donat et al. 1995).

EFFECTIVENESS OF TRACKING METHODS

The accuracy of each tracking source is represented in Table 4. Based on the volume of numbers provided, the health plan provided the largest proportion of telephone numbers for cases in the sample. However, the accuracy of these numbers was far below our expectation. We had expected half to two-thirds of the plan numbers to be accurate. Directory assistance performed with comparable accuracy to other telephone surveys of Medicaid populations (Donat et al. 1995), and the number look-up or matching vendor performance confirmed the supposition that such services work best for more stable, established populations.

Table 4

Accuracy of Numbers Found Using Tracking Sources

Source of Number	Candidate Numbers	Numbers Resulting in Contact (% From Source)	Numbers Confirmed as Inaccurate (% From Source)	Numbers Confirmation Pending (% From Source)
Health Plan	263	88 (33%)	175 (66%)	0
CD-ROM	143	21 (15%)	122 (85%)	0
Look-up Vendor 1	24	4 (17%)	20 (83%)	0
Look-up Vendor 2	57	10 (18%)	32 (56%)	15 (26%)
Directory Assist.	138	36 (26%)	92 (67%)	10 (7%)
Criss-Cross Resp.	10	6 (60%)	4 (40%)	0
Criss-Cross Nbor.	190	42 (22%)	135 (71%)	13 (7%)

When data collection concluded a total of 122 cases had resulted in a “Respondent not contacted.” Ninety-six cases (79% of non-contacts) had failed tracking, meaning that all possible numbers had been attempted and all had been confirmed as inaccurate numbers for the target respondent. Of the remaining 26 cases, 12 were finalized as maximum call limit reached (20+ calls), and 14 were active at the conclusion of the field period. These 26 cases are represented in the last column (Confirmation Pending) of Table 4. At the end of data collection, all numbers had been tried, but due to repeated no answers, answering machines, etc., the accuracy of the numbers had not been confirmed.

Table 5**Cost of Tracking Sources**

Source of Number	Cost Per Number Found	Cost Per Accurate Number
Health Plan	N/A	N/A
CD-ROM	\$0.73	\$4.95
Look-up Vendor 1	\$8.33	\$50
Look-up Vendor 2	\$3.51	\$20
Directory Assist.	\$.75	\$2.88
Criss-Cross Resp.	\$2.93	\$12.20
Criss-Cross Nbor.	\$2.93	\$12.20

The cost of the various tracking sources in Table 5 includes labor and service. While directory assistance has a low accuracy rate, it comes with a low cost. Given that 20% of the sample could only be located through directory assistance (Table 6), it seems an effective mode of tracking for this population. The conclusion that directory assistance is an effective supplement to a list-based sample is demonstrated in a less urban setting by Donat et al. (1995).

Table 6**Sole Source of Accurate Number**

Source of Number	Number of (Sole) Source Contacts	Percentage of Cases from Source ¹
Health Plan	82	46%
CD-ROM	8	4%
Look-up Vendor 1	0	0%
Look-up Vendor 2	1	1%
Directory Assist.	36	20%
Criss-Cross Resp.	6	3%
Criss-Cross Nbor.	31	17%
One or more sources	14	8%
TOTAL	178	100%

¹ Represents the proportion of sole source contacts over the total number of cases provided by source.

Unique phone numbers provided by the sample source and tracking methods led to a confirmed contact with 60% of the sample. While this was an overall increase in contacts over the prior telephone sample, the contact rate is below our expectations--we had hoped to contact 62-70% of the sample using these enhanced tracking methods.

CONCLUSIONS

Analysis and testing of the significance of these results has not been completed. But based on the performance and raw response rates of the various field test samples (telephone, mixed mode, telephone with enhanced tracking), we conclude that a mixed mode approach is best for surveying Medicaid populations. This conclusion is not novel and as noted by Gold et al. (1995) mixed mode can be less costly than telephone-only data collection for a list-based sample of eligible Medicaid beneficiaries. It also appears that state sample sources may be more accurate than are health plan lists. We draw this conclusion from the difference in contact rates across the two sample sources in our initial phone and mixed mode field tests.

A mixed mode approach that incorporates enhanced tracking in the telephone phase through the use of directory assistance and criss-cross services would be expected to achieve some improvement over our mixed mode completion rate of 56% (contact rate of 67%), and given the potential bias of non-response (Barkley and Furse, 1996), may be well worth the cost.

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