

How Long Should You Wait Before Attempting to Convert a Telephone Refusal?

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Are telephone survey response rates declining? Is it costing more to achieve particular response rates? While the exact extent of declining rates and increasing costs is not known for the survey industry as a whole, or even for segments of it, many, if not most, organizations would answer yes to both questions. This perception of increasing problems with a primary indicator of survey quality has led to much recent research focused on reducing various components of non response.

One major component of non response is refusal to be interviewed. Refusal conversion is a standard practice of survey organizations; and a substantial portion of final data sets for telephone surveys consist of converted cases. One factor that may affect conversion success is the callback strategy.

There have been a number of studies on calling strategies for Random Digit Dial (RDD) samples as a whole. Effective calling strategies for refusal conversion have seldom been studied. In particular, the length of time between the

refusal and the attempt to convert it has not been the subject of much research. Yet the amount of time between calls is considered important enough that there are often specific, though unsupported, rules governing it. In Groves' and Couper's major study of non response in household surveys¹, they simply note that "It is common...to set [refusals] aside for a period of time and then attempt another contact."

Methodology reports often provide information about refusal conversion practices, but rarely provide any basis, beyond organization experience or supervisor judgment, for the procedures that were used. Thus, the methodology description for the National Study of Health and Activity notes that mild and firm refusals were recontacted after a 13 day break. Another methods report of a major survey notes that attempts to convert "generally occurred after a period of at least 10 days." At the UM SRC, a week's delay is the rule of thumb.

¹ Groves, Robert M. and Couper, Mick P. "Non Response in Household Surveys," John Wiley, 1998

Presumably, in these and other instances, the rule varies if methods such as monetary incentives and/or refusal conversion letters (sent by regular or express mail) are used to help increase conversion rates. In addition, the length of the data collection period and whether a refusal occurs early or late within that period is an additional constraint on whatever rule one would “ideally” apply.

In the absence of experimental methods research on this issue, it is useful as a starting point (and perhaps as a guide to designing experiments for more careful investigation) to examine the success of conversion attempts after different amounts of elapsed time.

For this research, we included data from nine national studies that were conducted at the University of Maryland’s Survey Research Center from the Spring of 1995 through the Summer of 2000. The combined total sample size was 31,676 phone numbers from which we completed 10,572 interviews and got 5,386 initial refusals. For the studies that were included in this research, target populations were adults age 18 or older, residing in telephone households in the contiguous United States. Telephone numbers were selected from one plus list-assisted random digit dial sampling frames.

Within each sample household, the target respondent was selected at random from among all adults residing there using either the “Next Birthday” selection method or a “Kish” household enumeration procedure. All phone numbers were called until a final disposition had been determined, or a minimum of 20 times if no one had ever answered the phone, or 25 times if anyone had ever been contacted at the number or if an answering machine was reached.

The Survey Research Center uses the standard AAPOR final disposition codes for all interview and refusal final dispositions. A case becomes a completed interview if 100% of all essential or crucial questions are answered. The percentage of required crucial questions answered for a partial interview differ from project to project. A refusal has occurred when some contact has been made with a housing unit and a responsible member has declined to do the survey. A household level refusal, or informant refusal, is a refusal that has been made by either someone who is not the targeted respondent or it is unsure whether they may be. A known respondent refusal is a refusal that has been made by the selected respondent.

Most households who initially refused were recontacted by a specialist in refusal

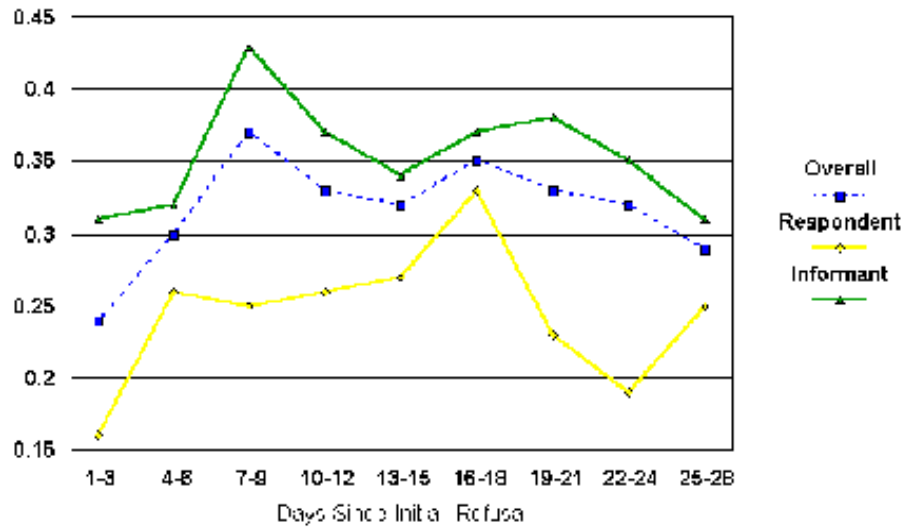
conversion. While there is no set rule, for most studies, we waited at least a full week before attempting refusal conversion. In some cases, we called earlier, especially if the refusal had occurred at the end of a study and there was not enough time to wait a week. No break-off's, where some data had been collected in an interview, were included in the analysis for this paper because it was too difficult to determine whether a break-off occurred because the respondent refused to continue or because the respondent needed to be called back.

A successful refusal conversion occurred when either an informant refusal or respondent refusal had been successfully recontacted and the interview was completed. An unsuccessful conversion occurred when the recontact resulted in a second refusal. A third situation occurred when a refusal conversion was attempted but the household could not be reached again. These non-reached refusals were not included in the analysis. The conversion rate is defined as the number of successful refusal conversions divided by the total successful and unsuccessful attempts. The conversion time is the number of days that had elapsed between the initial refusal and the successful or unsuccessful refusal conversion.

Across all nine national studies, the overall conversion rate for successfully recontacted refusals was 32%. When all refusals are included in the denominator, including those refusals that were not tried or were unable to be recontacted, the overall conversion rate drops to 24%. In this analysis, the conversion rate (32% overall) that only includes refusals that were either converted to completed interviews or a refused a second time. Figure 1 shows how this conversion rate varies depending on how many days after the initial refusal the successful or unsuccessful recontact occurs.

Looking at all refusals together, the conversion rate is worse during the first six days after the initial refusal occurred. After waiting seven days, the success rate of converting refusals is fairly stable. However, when looking separately at the respondent refusals, waiting an extra 10 days does improve the refusal conversion success rate. With respondent refusals, waiting a little more than two weeks is optimal, but after 18 days the refusal conversion rate begins to decline. On the other hand, when looking separately at the informant's refusals, waiting about one week appears to be the best strategy. After one week, the refusal conversion

Figure1: Refusal Conversion Rate By Days Since Refusal
 (Informant Refusals = 1,695 : Respondent Refusals = 741)



rate for refusals begins a slow decline. It is best to try and convert respondent refusals two weeks after the initial refusal and informant refusals one week after the initial refusal. Waiting longer than this recommended time period is likely to lower refusal conversion success.

Another important point to keep in mind when converting refusals is that it takes, on average, almost five call attempts before successfully converting an initial refusal to a completed interview, while it takes less than three and a half call attempts to finalize initial refusals as double refusals. Given that five call attempts or more are often needed to reach and convert an initial refusal, the waiting period to

start calling refusals should also take into account how much time remains in the project schedule. Also, most initial refusals that occur late in the study will probably already have had more than three prior call attempts. There is some evidence in the data (though not statistically significant) of higher conversion rates when converting initial refusals that occurred after the third call attempt. Thus, to increase response rates even refusals that occur in the final week of the study should be called back.

Another interesting finding in looking at the Center's refusal conversion data, is that refusal conversion rates are higher when a male initially refused the survey, versus when a

female initially refused the survey. The higher refusal conversion rate for converting male refusals occurs no matter how many days later refusal conversion is attempted. Therefore, the optimal time to call refusals is not affected by the gender of the person who initially refuses.

For most random digit dial surveys, there are usually higher percentage of females interviewed. It is also the case that the percentage of initial refusals that are from female respondents is slightly greater than the percentage of male initial refusals. However, it is striking that converting refusals actually worsens your final overall gender distribution. When refusal conversion is successful, about one third of all initial male refusals and over half of the male refusals in which respondent selection has not been completed results in an interview with a female respondent, while only about 17% of all initial female refusals that are converted to interviews result in a male completed interview. Therefore, reworking refusals is likely to increase the overall percentage of female respondents in the final sample distribution.

Refusal conversion rates vary somewhat regionally, with respondents living in the South being the most receptive to refusal conversion attempts a few days after the initial refusal.

Attempts at converting refusals with respondents in the South two days after the initial refusal occurred is just as successful as waiting one or two weeks. With respondents who live in the West, waiting about one week before attempting to convert initial refusals will significantly improve refusal conversion rates. It is also advisable to wait about one week before attempting to convert initial refusals in the Midwest. The overall success of refusal conversion is lower in the Northeast than the other three Census regions (South, Midwest, West). But once again it is best to wait about one week before attempting to convert initial refusals in the Northeast.

In conclusion, a “cool down period” of about one week is generally advisable. If the actual respondent has refused the survey, waiting two weeks would be optimal. It is our recommendation that you separate your informant and respondent refusals and treat them differently. Not only is a longer “cool down period” advisable for the respondent refusals, but because they are harder to convert, they should be assigned to better refusal converters.

Some other general conclusions from this research are that converting refusals is easier if a male initially refuses. Refusal Conversion

rates are lower in the Northeast. Successful refusal conversion takes on average about five additional call attempts. Finally, refusals that happen on the first few call attempts are harder to convert than refusals that occur after several call attempts have already been attempted.

REFERENCES

- Greenberg, B.S. and Stokes, S.L. Developing an Optimal Call Scheduling Strategy for a Telephone Survey. *Journal of Official Statistics*, 1990, Vol. 6, pp. 421-435.
- Groves, Robert M. and Couper, Mick P. "Non-Response in Household Surveys." John Wiley, 1998.
- Groves, Robert M., Singer, Eleanor, Corning Amy D., Bowers, Ashley. A Laboratory Approach to Measuring the Effects on Survey Participation of Interview Length, Incentives, Differential Incentives, and Refusal Conversion. *Journal of Official Statistics*, 1999, Vol. 15, pp. 251-268.
- Lavrakas, Paul J., Bauman, Sandra L., and Merkle, Daniel M. Refusal Report Forms (RRFs), Refusal Conversions and Non-response Bias. Presented at the May 1992 American Association for Public Opinion Research Conference, St. Petersburg, Florida.
- Massey, James T., Wolter, Charles, Wan, Siu Chong, and Liu, Karen. Optimum Calling Patterns for Random Digit Dialed Telephone Surveys. *Proceedings of the Social Statistics Section*, ASA, 1996, pp. 485-490.
- Sebold, Janice Survey. Period Length, Unanswered Numbers and Non Response in Telephone Surveys. "Telephone Survey Methodology." John Wiley, 1988. Chapter 15, pp. 247-256.
- Triplett, Timothy. What is Gained from Additional Call Attempts & Refusal Conversion and what are the Cost Implications? September 2000. Unpublished paper available on the web: www.src.bsos.umd.edu/src/papers.html
- Triplett, Timothy, Blair, Johnny, Hamilton, Teresa, and Kang, Yun Chiao. Initial Cooperators VS. Converted Refusers: Are There Response Behavior Differences? *Proceedings of the American Association of Public Opinion Research Conference*, Social Statistics Section, ASA, 1996, pp. 1038-1041.