CRITICALINSIGHTS

MEMORANDUM

TO: Don Willard (Town of Raymond) ---------- *via Email*
FR: Kevin Fay
RE: Likely Approach and Associated Costs for Resident Survey
DATE: December 6, 2013

Good to speak with you earlier. Since time is of the essence, I was only able to 'ballpark' a dollar cost based on the approach I would suggest employing if the Town ultimately elected to conduct a resident survey.

Overview of Suggested Approach

While we spoke briefly about a traditional mail-based approach, I am somewhat dubious of only using that approach for the reasons we discussed (lack of representativeness, potential waste, etc.).

In order to access a cross-sectional sampling of the Raymond's resident population, I would suggest telephone interviewing a primary means of data collection. However, the rise in the proportion of households that are no longer reachable through traditional telephone polling methods (i.e. random-digit dial sampling via landline telephone) has introduced some bias into the process of polling, with a sizable blocs of residents having been artificially excluded from traditional telephone polling approaches.

Currently, there is no clear consensus, established protocol, or even a generalized school of thought at this time concerning the best approach to address this situation. What are called "dual-frame" survey designs inclusive of both landline and cell phone sampling frames have been employed in many studies covering large geographies (such as the entire State of Maine, for example), but have proven very costly to administer and require complex post-hoc weighting schemes. Importantly, for a very localized effort such as attempting to reach Raymond residents through identifying what cell switches might be associated with the Town's resident base (across multiple cell carriers) would be extraordinarily difficult and very costly. Further, incorporating cell numbers has proven cumbersome due to number portability.

For a Raymond assignment, I am suggesting an approach called Address-Based Sampling (or "ABS") to address the limitations currently inherent in traditional telephone polling. The concept of ABS is discussed below.

Address-Based Sampling Overview

ABS is based upon what is called the Delivery Sequence File ("DSF"), a database compiled by the U.S. Postal Service which covers every Maine community. These delivery addresses are then run through a matching process whereby a telephone number, if available, is linked to a given mailing address. Any address not linked to a telephone number can be thought of as a cell-only residence or otherwise un-served (i.e. unlisted phone number, recently moved resident whose phone number has yet to be included in key database, etc.). In this manner, ABS provides an effective way to sample and reach cell phone only households without having to include them by sampling directly from cell phone switch exchanges, which can be cumbersome due to number portability, lack of geographic precision and targeting, and other confounding issues.

Tactically, the ABS approach would first draw a random, cross-sectional sample of addresses from the entirety of the Town of Raymond, with the size of the sample draw done in proportion to a desired sample size for the study (I might suggest n=300 respondents and ideally 400, though that may be ambitious given the Town's limited population). The generated sample would match postal delivery addresses to available telephone numbers – with the assumption that these will most likely be landline numbers.

For those addresses not matched to landline phones, an alternate method of outreach would need to occur as a means of contacting households that are likely cell phone only. Outreach of this type typically begins with a mail-based outreach to a random sampling of unmatched (i.e. no corresponding telephone number) households. For a smaller geography such as Raymond, the outreach would likely involve all unmatched households.

Most often, this outreach is a letter mailed to this sample of households, with instructions directing recipients to visit our secure survey website (*www.cisurveys.com*) and take part in an online survey. Alternately, participants are given the option of calling-in to a toll-free 800 number at Critical Insights, being screened for eligibility, and completing a survey in that manner.

To boost participation to the mail-based invitation in ABS, a lottery-based incentive for an attractive prize (commonly devices such as an iPad tablet) is typically offered to these respondents as an enticement to participate.

After an initial data collection period of between one and two weeks (a typical period in which those likely to respond to an online survey or make an inbound call to take part will do so), the remaining desired sample size is achieved through conducting telephone-based surveys with households from the matched sample. Contacts with records in this sample draw are made with an eye toward maximizing cooperation rates, with at least seven contacts attempted with a given sample unit before it is replaced.

To account for any effects of non-response and non-coverage bias, a post-stratification weighting adjustment would be applied to the final sample, based on demographic distributions from the most recent U.S. Census for the Maine offering community-level detail.

It is Critical Insights' position that this multi-mode approach for data collection (an invitation mailing for online survey or toll-free survey call-in number for households not matched for a phone number, coupled with a traditional landline telephone survey) using ABS is an effective approach for improving coverage by theoretically giving those households not served by a landline phone a viable opportunity to take part in a random, cross-sectional research study such as that which would likely occur for Raymond. This improvement in coverage has a favorable impact on the coverage bias that studies have shown is inherent in landline-only RDD studies, as these samples tend to artificially exclude pockets of the population that tend to be under-represented in RDD (e.g. younger people, renters, etc.).

Sample Design

Based on an initial examination of the DSF, there are 3,154 physical residential locations in Raymond. Of these locations, about two-thirds would be served by traditional mail routes and the reminder through P.O. boxes. These are the records that would be attempted to be matched to a phone number.

As we discussed, a relevant point to consider is the seasonal properties in the Town and whether or not to include them in the study. This is a relevant consideration, as a number of residential locations in the Town are flagged as either seasonal or vacant (a fairly vague catch-all which would include properties such as seasonal camps and cottages where there is no mail service and where there is no associated P.O. Box).

If the Town elected to include seasonal properties, it might be a bit complex to try to match up a location that doesn't have local mailing capabilities or even a local telephone number with an alternate address the Town might have, such as a tax mailing address. It could become cumbersome, so I am still trying to ferret out the full implications of seasonal residents on an ABS approach.

Estimated Costs

As I'd noted earlier, at this juncture, I have only been able to 'ballpark' a figure for the project.

In addition to some of the component pieces of the ABS approach yet to be determined (such as season residents), you'd also correctly noted in our conversation, we do not yet know the scope and magnitude of the survey, which also affects cost.

Putting things through a filter of a typical municipal study and the work associated with such an effort, I would estimate an effort like this costing roughly $18,500. This is an all-inclusive cost, covering the following components of the project:

- Develop, edit, test, and ultimately finalize a quantitative survey instrument, which – based on prior engagements in the municipal space – would not exceed 15 minutes in administrative length (either via phone or online);
- Program approved survey for both phone- and web-based deployment;
- Purchase and manage ABS records as described above;
- Print/mail web survey invitation to unmatched ABS (i.e. cell-only) records;
- Collect web survey data;
- Collect data from matched ABS records via phone-based CATI system;
- Aggregate web- and phone-based data, assure consistency, conduct any statistical sample balancing; and
- Analyze and report results according to goals and objectives which will be set forth by the Town.

The suggested lottery-based incentive (one iPad) to entice participation in the online survey is also included in the cost.

Something that would also be a relevant consideration that would assist in the study deployment and is not included in our costs is some advance work done by the Town to inform residents of the study. This has proven helpful in preparing people to be contacted, letting them know any calls or mailers they might receive are legitimate, etc. To that end, it would be helpful if something could be posted on the Town website/*Roadrunner* and also if a small ad could be placed in the *Lakes Region Weekly* informing residents about the study.

I had to fire this off in pretty short order, so please email or call with questions. Have a nice weekend.