



## **Tips & Tools #23: Doing Multiple Waves of Data Collection**

The goal of this tip sheet is to provide some answers to questions you may have concerning the seemingly confusing area of evaluation dealing with carrying out multiple waves of data collection in your tobacco control objective. For instance, in what cases would you conduct repeated surveys or multiple waves of key informant interviews, or even multiple observations? Then, there are the litany of issues relating to sampling: for instance, do you need to conduct key informant interviews with the same people both pre- and post-policy adoption? Do you need to conduct a survey with the same population, both pre-and post-intervention? What about multiple waves of observations? This tips and tools sheet answers these questions and more!

### **Q1: What is meant when we say multiple waves of data collection?**

Multiple waves of data collection means the repeated collection of data among the same population sample. Collecting multiple waves of data allows you to see progression and change over time. For instance, if you're doing a TRL objective, you may be doing a youth tobacco purchase survey (YTPS) on a yearly basis to see if there are changes in youth access to tobacco over time. Each year the survey is conducted would be considered a wave. Other examples of multiple waves of data collection can be seen in pre- and post-designs where data are collected both before and after an intervention has been implemented.

### **Q2: What is the purpose of a pre- and post-measure designs?**

When we say pre and post measures, we mean a design where you are trying to determine impact. In essence, pre and post measures can help answer the question, "What changed after the intervention?" By this we mean that you can determine the effect of your intervention or your efforts to make change. This can be done in any number of ways and with a variety of objectives because the pre- measures provide a baseline captured before an intervention or program took place, which can then be compared with the post measure/outcome wave.

### **Q3: Does the method need to be the same when carrying out a pre- and post-measure design?**

Yes! It is important that the methodology used for the pre-test or baseline measure be replicated in the post-test/outcome wave. Although in some cases (where we discuss in examples below) there may be some differences in the methods between the two

phases, the rule of thumb is that the pre and post methods for collecting data should remain the same.

**Q4: How do you make decisions about the methods to use, including your sampling strategies, when carrying out multiple waves of data collection?**

Like all evaluations, we strongly recommend doing end-use strategizing when making decisions about the methods. By this we mean that before collecting data you should think about your evaluation goals. For instance, ask yourself, “What is the purpose of the evaluation?” and “What information do I want to know?” In answering these questions, and carrying out the end-use strategizing process, it is easier to recognize the type of method that is most useful, when data should be collected, the sampling size needed, etc.

**Q5: Do you need to sample the identical people for a pre-and post-public opinion survey?**

If you are measuring public opinion over time, or before and after an intervention, you don't have to ask the same people (you can, and this would become something akin to what's referred to as a longitudinal study, but it's not necessary and not feasible). What's more important is that your sample size is big enough and drawn from a representative group of people, and that the circumstances under which you conduct the survey are the same for both surveys. For example, if you are doing an intercept survey in a shopping center on a Saturday morning, the follow-up survey would most likely not have the same people, but if you conduct the follow-up survey also on a Saturday morning, chances are high that you will get the same type of people in your sample. If you did the follow-up survey on a weekday, chances are the composition of your population would be different. The key, then, is to try your best to replicate the methods, including the sampling and administration of the survey.

**Q6: Do you need to interview the same people when carrying out multiple waves of key informant interviews?**

The quick answer is “no.” Like surveys and observations, we recommend that sampling decisions derive from end use strategizing. Think about what information you want to find out. For the work that we do in tobacco control, we usually advocate doing what is referred to as a purposive sampling strategy. Meaning, you choose informants based on a purpose. You want people who have firsthand knowledge, and those who will be most informative and helpful to what you are trying to do. In adhering to this strategy, you also want to be mindful of interviewing a mix of people—those with different viewpoints and backgrounds, from a variety of organizational positions, and so on, in order to get a mix of representative people in your sample.

Typically, the first round of interviews is a way to uncover insight that will, hopefully, inform your project. Once the intervention or policy adoption campaign is completed, we recommend that you interview key informants to better understand the process; how things progressed from an insider's point of view, and the type of challenges and

barriers that had to be navigated. These post-interviews can be incredibly informative, particularly for future interventions.

**Q7: How should multiple waves of observations be conducted?**

Typically, the sampling plan (time, place and length) for observations will be purposive. Meaning, once again, you will ask: “What information am I trying to find?” Once you answer this question, you will select the place and think about “best” time to observe. The length of your observations will also need to be decided beforehand. The initial observation (first wave) will serve as your baseline, and subsequent observations (waves) can be used to compare with baseline data.

For observations, the waves need to replicate conditions as exactly as possible. For instance, if you do a pre-policy adoption observation in a park, that park is frequented by a particular group of people that is different from the people in a different park. Moreover, the day of the week, weather conditions, time of day, etc. are all important in terms of showing before and after effects or changes over time. Therefore, to reinforce the point, try and replicate the methods and conditions as much as possible.

**Q8: How do multiple waves of focus groups work?**

There are a lot of misunderstandings about the waves of focus groups. When the plan says three waves of focus groups, some interpret this to mean three focus groups at three different points in time and even sometimes with the same people. However, one wave of focus group discussions should have at least three groups with different members in each group. Groups have particular dynamics and the data we collect from focus groups take this into consideration. Two focus groups from a large apartment complex may end up having very different discussions that may both be very enlightening, while taking the results from just one to represent the whole may lead one to false conclusions.

**Resources:**

- TCEC archive of data collection instruments.
- Evaluation associates at TCEC who can advise you on developing instruments.
- [Recorded webinars](#) on a number of evaluation practices.
- [Tips & Tools](#) on evaluation methods.
- Electronic quarterly newsletter.