How Stable are Responses Over Time

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Abstract
The Substance Abuse and Mental Health Services Administration (SAMHSA) is mandated by Congress to collect data on the provision and utilization of substance abuse treatment services. As part of this mandate, SAMHSA (1) maintains a national inventory of facilities that offer substance abuse treatment and prevention services; (2) conducts an annual multi-mode survey of all known substance abuse treatment facilities; and (3) maintains a national database on clients admitted to substance abuse treatment programs. Together, these components form the Drug and Alcohol Services Information System. Mathematica Policy Research partners with the prime contractor, Synectics for Management Decisions, Inc. to collect the data for the annual survey and works with SAMHSA to continue to improve the quality of the data. Although this multi-mode survey has had response rates in the middle 90s, over time the response rate has declined slightly and there has been concern over facility burden. This paper will explore the stability of the response, over time, while responding to a direct request from our recurring respondent base to reduce their burden.

Key Words: Prefilled Data, Stability of Respondent Response

1. Pre-filling the Web

The National Survey of Substance Abuse Services (N-SSATS) is an annual multi-mode establishment survey conducted by Mathematica Policy Research on behalf of SAMHSA. The survey collects information on facility characteristics, the specific treatment services provided, and client count information for over 17,000 substance abuse facilities across the nation and its territories. The data also provides the information that is published in the National Directory of Drug and Alcohol Abuse Treatment Programs and Online Treatment Facility Locator annually. The N-SSATS employs mail, phone, and web modes to collect data from respondents. Mathematica has conducted this survey for the past 15 years and the response rate has consistently been above 90 percent.

Over the years that Mathematica has conducted the survey, respondents consistently contacted us to request data from their previous year’s survey submission. A significant number of respondents provided feedback indicating that many of their services and data points did not change from year to year. Their requests for previously-submitted survey...
responses were an effort to complete the new year’s data collection with much more speed and efficiency.

While wanting to be responsive to requests to reduce respondent burden, the study team was concerned that providing previously-reported data may have a negative effect on the quality of the data. Two main areas of concern were: 1) the respondent may not pay close attention to the answers they were providing and would simply accept any prefilled response; and 2) the rates of data changes would likely decrease, causing a trend that may not be based on purely empirical facts.

In 2008, Mathematica conducted an experiment that prefilled responses from the prior year into the web questionnaire. After discussions with SAMHSA, it was determined that only data points for questions which had previously changed very little over time were designated to be prefilled. The results of this initial experiment indicated that the prefilled responses encouraged respondents to complete the online version of the survey, which was the only mode to offer this prefilled response option. This development’s secondary benefit, in addition to addressing respondent burden, was that higher rates of data were being collected using the preferred online method. The study team had an extra level of confidence in the high quality of the data being collected due to the web instrument’s self-cleaning/edit process. It also demonstrated that the rate of data changes, for prefilled questions, was in line with the rates of change for those that were not changed in the other two modes.

Based on positive feedback from respondents, the web prefill was implemented as standard operating procedure in 2009. For each subsequent year, the data from the prior year was prefilled into the web questionnaire. This methodology was useful in encouraging facilities to complete their annual questionnaires on the web, since responses from the prior year were prefilled in the web questionnaire for all modes of prior response. Given that the prior year responses have been prefilled since that time, a concern remained that facilities may not be reviewing and updating the prefilled information.

To address the concern, we looked at differences in response changes from the prior year by web versus mail and telephone respondents, over the course of three years – 2009, 2010 and 2011.

1.1 The Sample
The full sample size of the N-SSATS is approximately 17,000 facilities each year. A consistent turnaround of facilities that are included in any given data collection period means that the sample fluctuates. Each year about 2,000 facilities are found to be ineligible for the survey due to facility closure, no longer providing substance abuse treatment, or other reasons. Approximately 14,000 facilities complete the N-SSATS questionnaire by one of the three modes each year. At the start of each cycle about 2,000 facilities are newly identified and added to the sample frame, and fewer facilities may be added sporadically throughout the six-month data collection period. To look at response change over time, the analysis frame for this paper was limited to the 8,670 facilities that participated and provided data each year from 2008 through 2011. Figure 1 shows how these facilities responded in the three years that were used in the analysis.
1.2 The Data
About 120 fields are prefilled in the web questionnaire with data from the prior year’s survey. Only factual questions that are used for updating SAMHSA’s Online Locator and National Directory are the focus of this effort, since these data points are the least likely to change. The types of questions ultimately determined for prefill are: facility characteristics, facility contact information, type of services offered, languages available other than English, and types of payment accepted. To clearly distinguish the questions that were prefilled for the respondent, an on-screen icon was added to the web display of each of these questions. We received positive feedback from respondents, indicating that this identifier was helpful to them as they completed the questionnaire.

1.3 The Response Results
To analyze the responses, we selected 15 prefilled items and then calculated the percent of facilities that changed their response from the prior year, to these items. Then, we compared the change for facilities that completed on the web (Prefilled) versus those that completed by mail or telephone (not prefilled). This analysis (t-test) was done for each of the past three years for which the web prefill was the standard protocol. The percent of data changes are illustrated in the figures that follow.

The first question in the survey asks the respondent which basic substance abuse services are provided at their specific physical location. Many of our reporting facilities are part of a larger network of facilities that, in some instances, share a common respondent. A key component of the data collection process is to emphasize that these questions are about only one physical location. There are three main types of substance abuse services referenced: intake (including assessment and referral), detoxification, and substance abuse treatment. In Figures 2-4, we see that there were no significant differences in the percent of responses that were changed from the prior round for respondents that reported on the web (prefill) and those that reported by mail or telephone (not prefilled).
Figure 2: Percent of data changed from the prior year for intake, assessment, and referral services.

Figure 3: Percent of data changed from the prior year for detoxification services.
In addition to substance abuse services, which are the primary focus of the survey instrument, some questions reference mental health services. In the following figure (Figure 5), we see no difference by group in the percent of respondents that change their response from the prior year. In fact, in 2009 slightly more facilities that changed their responses when the response was prefilled on the web versus those that responded by mail or telephone. In 2010, this response pattern shifted, and the percent of facilities that changed their response from the prior year was slightly higher for those that responded by mail or telephone.

**Figure 4:** Percent of data changed from the prior year for substance abuse treatment services.

**Figure 5:** Percent of prefilled data changes for comprehensive mental health assessment or diagnosis.
In addition to the types of services provided at each facility’s specific location, other basic data that is often the same year to year were prefilled into the web survey. The next figure (Figure 6) details the percent of response changes that occurred as respondents updated data as to whether they were a hospital, or if they were located in/operated by a hospital. Again, there are no significant differences between the groups, and the respondents that reported on the web showed a greater tendency to change their response than those that reported by mail or telephone.

![Figure 6: Percent of prefilled data changed of the facilities that are a hospital or are located in or operated by a hospital.](image)

In Figure 7, another important characteristic of a facility, providing substance abuse treatment services in a language other than English, is shown. For this variable, significantly (p<.05) more facilities than responded by mail or telephone in 2010 changed their response from the prior year compared to facilities that responded by web (prefill).

Overall, there were very minor differences in the response patterns of facilities that were presented with prefilled data when they completed by web versus those that did not have prefilled data when they completed by telephone or mail. Any significant differences that were seen were minor and could be attributed to the multiple comparisons that were conducted.
2. Respondent Burden and Perception

2.1 The Respondent Base
Since the web survey was launched, the number of respondents reporting in this mode steadily increased. To illustrate this point, we can compare the number of respondents over a four year period and look at the mode they selected for completion. In 2008, 6,921 facilities completed on the web, representing 47.9 percent of all completes. In 2009, 8,134 facilities completed on the web, representing 57.2 percent of all completes. In 2010, 8,431 facilities completed on the web, representing 59.9 percent of all completes. And, in 2011, the number of completes jumped to 11,191 facilities completing on the web, representing 78.4 percent of all completes.

As the response rates and modality were analyzed, we discovered that 8,670 facilities completed the N-SSATS questionnaire every year from 2008-2011, of those, 47 percent always completed on the web; 9 percent always completed by either mail or telephone; and 44 percent completed some on the web and some non-web.

2.1.1 Time to Complete
The time for a respondent to complete the web instrument varies slightly from year to year, and fluctuates to some small degree in the same year of data collection. On average, respondents take 36 minutes to complete a web questionnaire, regardless of whether or not responses are prefilled. The prefilled data did not have much of an actual impact on reducing the burden to a respondent. Feedback from respondents indicated that they were pleased with the historical data provided and their perception of the experience...
completing the survey had been positive. Therefore we hypothesize that the perception of a reduced time to complete burden on behalf of the respondent was more of a benefit than the actual reduction in time to complete.

2.1.2 Respondent Comments
At the conclusion of each survey completed on the web, respondents are asked if they would like to leave a comment. While not every respondent decides to leave a comment, some do. The comments can indicate a change to something related to the facility itself, or general facts or requests. Some respondent comments received discussed the prefilled data, include:

– The survey was easy to work with. Having the pre-filled information included was helpful. Also having the "icon" highlighting newly requested information was helpful.

– This questionnaire is so much easier to complete with the previous year's information entered.

– Having last year's information prefilled was VERY helpful!

– Pre-filling the survey continues to be a great advantage. Also, I like the new items, flagged as 'new'.

– I really liked the ability to review and submit my prior responses, there were only minor changes. The time needed to complete the survey was very reasonable and I appreciate the process.

3. Summary

Overall, concerns about data quality related to prefilling responses with data from the previous year on the web have been mitigated. Respondents change responses to items from one year to the next at about the same rate, regardless of whether or not the previous response has been prefilled. This suggests that respondents don’t appear to be satisficing, but rather attending to the data that is being presented and changing it accordingly. One of the goals of prefilling responses was to reduce respondent burden. Although the prefill did not reduce the amount of time spent completing the web questionnaire, however, respondents’ comments suggest that there is less perceived burden, and possibly less cognitive burden. This is particularly important given that more facilities are completing the questionnaire by web with each passing year of the survey and maintaining a high response rate is particularly important.