

DISCUSSION OF BRFSS

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We have heard five interesting papers describing BRFSS, its design, limitations and uses.

My role will be to briefly summarize and generalize what has been presented, and to raise a few new issues. As a member of the ASA working group that advises BRFSS, I am not a totally disinterested commentator. I do believe that BRFSS performs a very important function, although one must be careful to recognize, as this session has done, what the data are and are not.

The first paper by Nelson and Condon gives an excellent discussion of the origins of BRFSS. From a slightly broader perspective, there were two major thrusts at the beginning of the 1980s that led to the development of BRFSS. The first was the movement toward devolution, the transfer of administrative functions from the federal government to the states. This movement received a strong impetus when Ronald Reagan became President.

Closely related to this was the thrust among statisticians for improved methods of small area estimation. Much effort was given (and is still given) to the development of models that could yield reasonable estimates for all sorts of variables, but particularly health related variables, for local areas. It was evident from this work that, even with good models, much larger local samples would be required to provide reliable estimates. Thus, the birth of BRFSS.

Nevertheless, it was clear that budget limitations made it impossible to consider doing fifty state surveys that were as expensive as national area probability samples. Fortunately, as the paper points out there was a growing acceptance among government statisticians of the use of telephone interviews that typically cost about half that of face-to-face interviews. I should note that by this time telephone interviews had become almost universally adopted by commercial and non-profit data collectors, other than those in the federal government.

The second paper presented by Powell-Griner continues the discussion of the first paper, commenting on the uses and the limitations of the BRFSS. Let me stress two of the major benefits of the BRFSS that were mentioned in both papers—it is highly flexible with the ability to adapt to local situations within each state and across time as new health issues arise. Also, on common items, it allows states to compare themselves to those other states that they believe have the same kinds of populations and face the same problems.

Limitations

The Powell-Griner paper also points out the limitations to the use of BRFSS data. This is not the data set to use if one wants the highest quality health data at the national level. There is a temptation to combine the data from all fifty states because the total sample is very large, so that sampling errors are small, but the non-sampling errors in the BRFSS, the possible sample biases caused by the cooperation rates and the methods variability across states, are significantly greater than those in the National Health Interview Survey, if one makes that comparison. Nevertheless, if better national data are unavailable, the BRFSS, even with its limitations, is certainly better than no data. To put it even more positively, comparisons of BRFSS data to validating data such as record checks or observations generally show close agreement, as do national comparisons between the BRFSS and other national surveys.

Nelson, Anderson and Wilson look at the effect of missing non-telephone households and conclude that for a broad range of health indicators the differences between the total sample of households and the sample of telephone households (95% of the total) are small. Even though some racial and ethnic groups have lower phone coverage, there is little evidence of important differences for health variables. I would agree, with one qualification. There are a few variables highly related to economic status where phone and total samples may differ. My own experience of this relates to a telephone survey of access to health care that the Survey Research Laboratory at the University of Illinois did for the Robert Wood Johnson Foundation. We did what Nelson and Anderson did, compared our data to that on the National Health Interview Survey. We found very few differences, but one that stood out was that our estimate of medically uninsured people was significantly below that in the NHIS.

One final limitation of BRFSS data that is common to all data sets. There is always a temptation, as Powell-Griner points out for the states to try to get single year estimates for sub-areas or sub-populations within the state or for rare diseases. Most of these efforts fail or produce misleading results because the sample sizes are just too small. A significant advantage of BRFSS is that it is sometimes possible to combine several years of data to get estimates for small areas, or several states to get

information on prevalence trends.

Although, I have been warning against the uncritical use of BRFSS for national estimates, the papers by Ahmed and Kalsbeek and by Mariolis are excellent examples of how the data from the various states can be combined to provide very useful information for the survey research practitioner. Let me start with the Ahmed and Kalsbeek paper. We are all aware that availability for interviewing has been declining steadily for several decades as more and more women move into the labor force. It is, of course, possible to get data on availability for face-to-face interviewing by examining records from the Current Population Survey. At one time, the Census Bureau published such data. I have not seen anything recently on this from them, but it would be good to have it to compare face-to-face and telephone availability.

Ahmed and Kalsbeek's tables showing the results of calls (pickups, answering machines or ring no answer) by day of week and time of day are useful to all of us who conduct phone surveys and need to plan for staffing. At some point, I hope they will also look at this data by season and region to see if there are differences. Is it really the case that availability differs between summer and winter? It would be nice to know. Do the patterns faced by interviewers in Illinois differ from the national ones? The material demonstrating the effects of interviewer experience is also very useful.

I'm afraid that I am less enthusiastic about the parts of the paper that deal with refusals and conversions. I have two problems with these analyses. It is not clear, as it is with availability, that the same refusal patterns observed by BRFSS would generalize to other survey organizations. An even more pragmatic response is that these data, even if one believed them, are not very useful. March has the highest refusal rate of 6.85% as compared to December's 5.18%, and this difference is statistically significant. So what? Is it of practical importance. I don't think so. At the least, the need for seasonal data would indicate that we interview in all months, rather than only in months with highest cooperation. Actually, the practical narrowness of the monthly range of refusals tells me that we are right to interview the year around.

The data that refusals are higher at night and for those reached on later callbacks simply confirms that those hardest to reach are more likely to refuse when we reach them. It certainly does not argue against calling at night or attempting to convert those hard to reach.

The Mariolis paper provides substantial reassurance that use of list sample procedures that omit zero blocks are very unlikely to cause any significant data biases. This is not surprising since the proportion of telephone numbers in zero blocks is somewhere in the 2-3

percent range depending on what source you believe. Thus, even though there may be some statistically significant differences between households with phones in zero blocks and households with phones in non-zero blocks as shown in Mariolis' Table 2, these differences fade into insignificance when the total sample is compared to the non-zero block sample. Given the significant cost savings obtained by omitting zero blocks entirely, the tradeoff is clear. For those of us who have been using list samples for telephone surveys and omitting zero blocks, the results are very comforting.

The most striking difference between people in zero blocks and others is by age, with about half of all zero-block persons aged 18-35, as compared to 31% for other blocks. I agree that the reason for this is the delay in getting newly installed banks of numbers added to the list frames. This is not a long delay—frames are being updated continuously, but it does disproportionately affect younger households who are much more likely to be moving into new housing.

One minor editorial quibble about Mariolis' presentation. I'd omit Table 1 because it's misleading. It looks as if the percentage of zero block respondents is less than 1%, but this is a function of disproportionate sampling and the true figures, after weighting, are in Table 3.

To sum up, this has been a rich session which, I believe, has accomplished its aim of better acquainting you with BRFSS and its potential uses. I congratulate all the authors on a interesting and useful set of papers.