Reviewer's report

**Title:** The association between survey timing and patient-reported experiences with hospitals: results of a national postal survey

**Version:** 2 **Date:** 20 October 2011

**Reviewer:** M Beckett

**Reviewer's report:**

Response to authors

The author is to be commended for trying to address reviewers’ comments in this revised draft, but in some cases has over-addressed comments by introducing extraneous information which has made the manuscript less focused. Ultimately, because this is an observational study repeating prior work, I suggest, I recommend the author consider revising a second time with the goal of removing extraneous information and producing a more concised and focused manuscript. More detailed comments below.

**Abstract**

1. **Methods:** Describe number of respondents (with response rate in parenthesis) instead of number of respondents sent the survey. The methods is describing the data used in the analyses and not describing the population surveyed.

2. **Describe your key outcomes in the Methods, not the Results section.**

3. **Results:** It is strange that Survey time is related to 1 of 6 outcomes in the bivariate analyses and 3 of 6 in the multivariate analyses. I assume this is because you did multilevel analyses for the multivariate but not the bivariate analyses. Given sensitivity of your results to whether you adjust for clustering within hospitals, I suggest your bivariate results should also adjust for clustering. I would remove the discussion of bivariate results and just describe multivariate. When describing multivariate, please indicate the direction of association between response time and patient experiences. You can also briefly note other significant predictors of patient-experiences (and the direction of the relationship).

4. **Conclusions:** The author has statements such as “relatively” in comparing effects of different predictors, but the coefficients are not standardized. They should be standardized if the author wants to draw these comparisons. The fact that survey time mattered in 3 of 6 patient experiences does not on the face of it indicate to me that hospitals should think they have flexibility in when they send out surveys, but it does suggest that if analysts want to equalize hospitals, they need to standardize for survey time.

**Background**

5. **Paragraph 1.** Focus on the methodological challenge this manuscript addresses. Drop discussion of other challenges

6. **Paragraph 2.** How are you defining rigorous? Which studies were rigorous?
The rigor of studies does not seem to focus of this paragraph. I do not understand how patient recall relates to the two different theoretical models for patient satisfaction. Consider dropping all or most of this paragraph.

7. Paragraph 3. Too much attention is paid to survey mode in the introduction and the conclusion section. In the original manuscript, the issue related to survey mode was one of commenting on methodological issues that most of the prior observational studies that the author had cited examining the relationship between survey time and patient experiences. This paragraph should summarize the prior literature, noting how many observational studies (and which) found a positive relationship of survey time and patient experiences, how many found a negative relationship, and how many found no relationship, along with comment on the nature and quality of the studies. Much of the summary of the prior literature findings have been dropped from this revised literature, so I recommend going back to the original overview of this literature and adding the findings based on CAHPS in the US.

Methods

8. Data collection: The paper is describing analyses of the data, not the results of the data collection. Consider renaming this sub-section “Data” and just describe the survey, response rate and total sample size, and brief overview of the purpose of the study and refer the reader to another publication that describes the study in more detail.

9. Statistical analyses: You note that “delays in transfers from hospitals” meant that some patients have survey times that are in some cases substantially beyond that 15 days the protocol calls for. I strongly suspect that just some hospitals exceeded the protocol and that these hospitals may be ones that differ from other hospitals in patient experiences, which is why you see such dramatic differences when you cluster by hospital. You may want to note this in the Conclusion section. [You may also want to look at the series of hospital cahps papers that are published for ideas on other analyses you might do to investigate differences between and within hospitals’ patient experiences. It looks like there may be considerable heterogeneity across hospitals.]

10. Consider moving discussion of all variables into a section on Measures.

11. Response time: My understanding of response time is that it sometimes includes combination of what you call survey time and response time. That is, it is the time since discharge (at least in CAHPS world). You are parceling out the different components of time since discharge and find that they both work in the same direction. I.e., the longer the time since discharge, the more negative the effect.

Results

12. Response rate should be discussed in the section on the Methods section.

13. The first two paragraphs can be shortened and you can just say which measures were significantly related to patient experiences (and the direction of association). The bivaraiate results should be estimated adjusting for clustering (per earlier comment).
14. Re-interpret conclusions about relative importance of coefficients after standardizing the coefficients.

Discussion

15. p. 10. This is the paragraph that should be moved to the front and fleshed out just a little bit (per recommendation earlier). In the first paragraph, say something like “Similar to what was found by previous observational studies, we find that patients report worse experiences for 3 of 6 measures when survey time is longer.”

16. 1st para on p. 11. You can delete this altogether. Your analyses has nothing to do with mode effects; mode effects only relate to methodological flaws in some of the earlier studies. Mode effects only have to do with effects of responding paper versus telephone, for example, and nothing to do with time between discharge and when patient is contacted.

17. p. 11., paragraph starting with “While mode”. Again, most of this will already have been covered elsewhere and I think you can delete it altogether.

18. P. 12. The author writes: “it is well known that patient evaluations tend to be highly skewed against positive evaluations (28).” The 28 reference is Fitzpatrick and Ray 1983 article which I unfortunately cannot access. This statement is the opposite of what I have seen in the literature and it is opposite of what Fitzpatrick wrote in a 1991 article (solo authored) that cites his 1983 article in the following sentence: “Indeed, one of the greatest single problems in this type of work [referring to surveys of patient satisfaction] is the lack of variability in results; typically, at least 80% of respondents express satisfaction for any given question. One reason is the reluctance of many patients in the NHS to express critical comments about their health care.” I think what may have been well-known in the original article is that patient evaluations tend to be highly skewed against negative evaluations or that providers believe that patient evaluations are skewed against positive evaluations (but providers are wrong). Regardless, this sentence does not add much detail so you can delete it.

19. Para starting…. “Research on possible reasons for decline over time…is needed.” The reasons for negative relationship between survey time and patient reports are pretty well-understood already. Memory recall decays with time; memory decay is fastest for least salient events. Negative events are more salient. So patients are more likely to remember negative experiences in the hospital, so those with negative experiences will be more likely to remember them 45 days from now and to reflect them in their reports whereas patients with average experiences will forget and there reports will be as accurate but have greater error. On average, this means that negative experiences will draw down the reported experiences. See for example, Elliott, Beckett et al. 2007 for discussion of this literature in context of patient experiences, but there is a much larger and well-developed literature that supports this interpretation.

20. P. 13. It is true that one always wants a higher response rate, but prior work shows that “response rates are only weakly associated with non-response bias in probability sample surveys adhering to typical process standards of survey methodology” (Groves RM, Peytcheva E. The Impact of Nonresponse Rates on

Conclusions

21. Again, do not say anything about relative strength of survey time until you standardize the coefficients. I disagree that this suggests flexibility among hospitals. Instead, this suggests that hospitals and those who are implementing the surveys will want to keep within protocol. What is not clear from your results is whether there is a certain category of survey time that is associated with markedly worse patient than other response times. For example, is it just those with 15+ days (outside the protocol) that significantly differ from those in the lowest category. If so, then you might be justified in concluding that there may be flexibility within the protocol, but there is strong reason to follow the protocol. Also, it would be useful to interpret the finding of survey time in combination with response time in that really what both are measuring are time since discharge which is negatively related to patient experiences because of the memory decay and salience issue. The difference is that hospitals and survey implementers have some control over the survey time component of time since discharge.