Reviewer's report

Title: Collection of patient-reported outcomes; text messages on mobile phones provide valid scores and high response rates

Version: 2 Date: 3 March 2014

Reviewer: Chad Gwaltney

Reviewer's report:

This paper addresses a topic of great interest and provides some compelling data supporting the use of text messages to administer patient-reported outcome items. I have only a few comments and suggestions.

Major Compulsory Revisions

1. The title suggests that the validity of the items administered via SMS will be examined. However, none of the analyses examine validity. As noted by the authors, P&P diaries are notoriously flawed and should not be used as a criterion to validate an instrument.

2. The authors call P&P the "gold standard" for frequent data collection (presumably including daily diaries). At this point, I would consider electronic daily diaries - administered on stand-alone devices - as the gold standard. (This is the potential appeal of SMS approaches - there would not be a need for the stand-alone device.) Additionally, the authors seem to indicate that they wish to examine the equivalence of the SMS and P&P modes in a manner similar to the studies included in a meta-analysis on this topic. However, the design of the study does not allow for this type of comparison (patients do not rate the same experience with both methods; see also a paper published by Coons et al in Value in Health in 2009 on mode equivalence). I would suggest that the authors focus on the feasibility of the method and note that the comparison with P&P establishes the initial foundation for additional inquiry. This should lead to an adequately powered study designed to examine the equivalence of SMS approaches and electronic diaries.

3. There is a note in the conclusion that "mobile phone ownership is high across the world." This is key in interpreting the feasibility of this method. Can the authors cite any data on mobile phone ownership globally and also the percentage of owners with SMS capabilities? The concern is that ability to send/receive text messages would be biased in a way that could influence the outcomes of trials (e.g., age, socio-economic status, global region).

Minor Essential Revisions

None

Discretionary Revisions
None

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I am an employee of ERT, inc., which provides electronic diary services for use in clinical trials.