Author’s response to reviews

Title: Long-term healthcare costs and functional outcomes associated with lack of remission in schizophrenia: a post-hoc analysis of a prospective observational study

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Version: 2 Date: 16 November 2012

Author’s response to reviews: see over
November 16, 2012

Paul Lysaker  
Section Editor  
BMC Psychiatry

Dear Paul Lysaker:

We are pleased to submit the revised version of our manuscript entitled “Long-term healthcare costs and functional outcomes associated with lack of remission in schizophrenia: a post-hoc analysis of a prospective observational study” (manuscript id: 1622953913792426) to *BMC Psychiatry*. We have revised the article based on the comments from the reviewers and editor. Multiple updates have been made and are documented below.

The first reviewer, Kelly Buck, requested one important update:

Although the findings are clearly stated, the discussion could be stronger if the authors include recent recovery literature. As they state, "meeting the criteria for remission does not imply recovery in schizophrenia" which is quite true, yet the authors have neglected to mention or clarify "psychosocial treatment" geared to recovery. In this ms, the authors should refer to this work, (for example Silverstein and Bellack, 2008, and Lysaker, Roe, & Buck, 2010, Barber, 2012, to name only a few). Additionally recent literature devoted to rehabilitation efforts and employment for those with schizophrenia may explain some of the variance between non-remitted and remitted patients in terms of employment (Lysaker, et, al, 2012). These additions to the discussion are considered to be compulsory.

We have added a new paragraph to the discussion to highlight the concepts of recovery in schizophrenia immediately following our comment that remission does not imply recovery that includes the suggested literature.

Recovery is schizophrenia has been defined objectively as clinical recovery or subjectively as personal recovery [33, 34]. Clinical recovery, which has been the focus in the scientific literature, defines recovery as the absence of symptoms and returning to levels of premorbid functioning including working, living independently, and carrying out activities of daily living [33]. Personal recovery focuses on the more subjective process of adaption to the illness and encompasses self-awareness, a sense of empowerment, and functioning at one’s best
ongoing symptoms [34, 35]. Important concepts in personal recovery include overcoming poverty, stigma, demoralization, hopelessness, and social isolation [35]. Recent research has found that the development of a personal narrative mediates the relationship between deficits in social cognition or social withdrawal and negative symptoms [36] and that vocational rehabilitation is linked to reductions in self-stigma [37]. Future research is needed to examine the association between symptom remission and measures of personal recovery. Whether considered from the clinical or personal perspective, recovery in schizophrenia is the ultimate goal and goes beyond symptom remission [33, 34].

We also added the following sentence in the discussion about differences between remitters and non-remitters. “Constructs from personal recovery in schizophrenia, such as a sense of personal agency, may have also differed between the remitted and non-remitted patients [41], but these were not measured in our study.” In addition we updated the last sentence of the 5th paragraph in the discussion to mention “symptom remission” instead of “remission” and “clinical recovery” instead of just “recovery.”

The second reviewer, Mark Opler, had three suggestions. Each is numbered and quoted below with the corresponding updates in the manuscripts addressing the concerns.

1. First, there is a new convention that several other researchers have adopted with respect to the Andreasen et al (2005) remission criteria in recent years, to notate the eight PANSS items as "PANSS-SR" for "PANSS Symptoms of Remission".

We updated the manuscript throughout as well as Figure 1 to refer to the PANSS-SR instead of PANSS 8.

2. Next, the authors correctly point out the significant difference between recovery and remission. However, they reference only the SF-12 total score, suggesting/implying that this is a strong indicator of recovery. While their statement is eminently reasonable, they might want to examine the data somewhat more closely to support this statement. Minimally, if they are going to explore the recovery concept, they perhaps could reference the work of Lysaker and colleagues who have written quite extensively on the subject.

As documented in the responses to reviewer 1, we have added an additional paragraph describing the concept of recovery in schizophrenia.

3. Finally, while the study they reference and describe is well done - and there is no need to provide extensive detail in the methods section beyond what they have already provided - I would still add a point or two about the representative nature of the sample in US-SCAP and the funding sources used to support that study.

In the first paragraph of the methods section we have updated two sentences to highlight the intent of the study to be representative, mention the sponsor, and explicitly point to
other publications that provide more background information on the US-SCAP study. The new sentences now read: “The sites were intended to be representative of usual care for schizophrenia and included community mental health centers, university health care systems, community and state hospitals, and the Department of Veterans Affairs Health Services. The study was sponsored by Eli Lilly and Company and further details are available elsewhere [2, 24, 25].”

Finally, in response to the editor’s request to include the name of the body which gave the internal review board approval, we have made updates to the second sentence in the first paragraph in the Methods section to highlight the 41 sites were in 6 regions: “Data were collected from 41 individual sites in 6 regions (California, Colorado, Connecticut, Florida, Maryland, and North Carolina) throughout the Northeast, Southwest, Mid-Atlantic, and West geographical areas.” We have also updated the last sentence in the same paragraph and added a sentence to name the institutional review boards. “In compliance with the Declaration of Helsinki, the study was approved by Institutional Review Board at each regional site and informed consent was obtained from all participants. The Institutional Review Boards were from the Yale University School of Medicine, Colorado Multiple Institutional Review Board, Children’s Hospital in San Diego, University of Maryland at Baltimore, University of South Florida, and Duke University Medical Center.”

All of the materials for the updated manuscript have been submitted through the online submission process. The text of the manuscript and table are included in a single Microsoft Word file. The updated figure, Figure 1, was submitted separately in the preferred PDF file format. The remaining figures were not changed and have not been resubmitted. We understand that there is an article processing fee and agree to pay it prior to publication of the manuscript.

Thank you for taking the time to review this resubmission for publication in BMC Psychiatry. Should any issues arise regarding the review or submission process please contact me by email at mike@agile-outcomes.com or by phone at (317) 294-0927.

Sincerely,

Michael Stensland, PhD
President, Agile Outcomes Research, Inc