Author’s response to reviews

Title: Treatment of generalized anxiety disorder among older patients in Germany

Authors:

Ariel Berger (aberger@pai2.com)
Marko Mychaskiw (Marko.Mychaskiw@pfizer.com)
Ellen Dukes (Ellen.Dukes@pfizer.com)
John Edelsberg (edelsberg@pai2.com)
Gerry Oster (goster@pai2.com)

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Author’s response to reviews: see over
Thank you for your interest in our manuscript. Our responses to the editors’ comments are set forth below, arranged by editor and by comment.

Reviewer #1

Major Compulsory Revisions

Methods:

1. Some of the date information is somewhat confusing. The database encompassed 2002 to 2005, but the authors used data from one year only (2003-2004). If longitudinal data were available to examine prescribing trends, why was this information not used?

   Upon reviewing the manuscript, we noticed that the time period specified was incorrect. The text should have indicated that the database encompassed only 12 months (i.e., October 1, 2003 to September 31, 2004). We apologize for this error and have made the necessary correction to the Methods section of the manuscript.

2. Please describe how the diagnosis is linked to the prescription--is it mandatory on prescriptions for physicians in Germany to indicate diagnosis?

   A diagnosis is not required on prescription records; about 40% of such records were missing linked diagnoses. We have added this information to the Methods section of our manuscript.

3. If the prescription date for study eligible medication preceded the first occurrence of an office visit for GAD, would this patient be included in the study?

   GAD is a chronic condition with a lifetime prevalence of 4-6%. Accordingly, we assumed that all patients with any encounter (i.e., physician office visit, dispensed prescription) with a diagnosis of GAD during the study period had GAD and therefore included them in our study, irrespective of whether receipt of a medication of interest (eg, amitriptyline, diazepam) preceded the occurrence of a physician encounter for GAD.

4. Given that some of the medications were anti-depressants, how could the authors ensure the prescription was for GAD? If they could not be sure, how would this possibly impact the results, given the high prevalence of co-morbid depression?

   While we could not know with certainty—due to limitations in the database—why patients were prescribed particular medications, the Beers’ criteria for potentially inappropriate prescribing are based on age and not indication. Thus, it did not matter to us whether a patient aged ≥65 years received amitriptyline for GAD or depression; age alone rendering such prescribing potentially inappropriate.

5. What does “medically attended” comorbidities mean?

   We used the term “medically attended” to denote comorbidities noted by physicians during patient encounters; we have added this definition to the Methods section of our manuscript.

Results:
6. The methods state a stratified analysis based on number of comorbidities was done, however this analysis is not presented in the results.

*We apologize for the inadvertent omission of these findings. Upon further thought, however, we believe a more meaningful analysis to be an examination of receipt of use of agents deemed potentially inappropriate by comorbidity (e.g., depression, sleep disorders, digestive system disorders). We have undertaken these analyses and amended the Methods section accordingly; we also have added results of these analyses to the Results section of our manuscript.*

**Minor Essential Revisions**

**Results:**

7. Tables 1 and 2 are not presented in the manuscript or in the attached appendices.

*These tables must have been “lost” during the upload process. We have reattached them to our resubmission.*

**Discussion:**

8. There should be more discussion of the clinical implications of the results in light of the high prevalence of comorbid depression and several other highly prevalent conditions. For example, patients with GAD may represent a group of older patients who are clinically complex with many medication challenges.

*Per the request, we have expanded our Discussion section to better address the clinical implications of our findings.*

9. The first sentence of the discussion could be removed--all of this information has been presented in the background.

*We would prefer to retain this sentence, as it (and the remainder of the first paragraph of the Discussion) serves to refocus the reader on the issue at hand—namely, that GAD is difficult to treat, and that elderly patients with this condition often are prescribed medications that may be potentially inappropriate.*

10. The third paragraph of discussion re-states results but does not add any interpretation or comparison with previous literature.

*We have expanded the third paragraph of the Discussion as suggested by the reviewer.*

**Conclusions:**

11. Conclusions could be more specific. There may be specific sub-groups of elderly in whom the benefits outweigh the risks, and these groups have yet to be determined. There is a need to understand the underlying cause of GAD in the elderly (and it may be related to multiple physical comorbidities and depression) that could relate to isolation due to illness, inability to exercise etc. There may be a focus of physicians on treating the complex physical illnesses, and other non-pharmacologic treatment modalities for mental health in this population are needed.

*We have modified our Conclusion to call attention to the fact that elderly GAD patients with comorbid depression may be more likely to receive medications that have been designated as potentially*
We also have added text to the Conclusion highlighting the need for additional research to ascertain whether there are some subgroups of elderly GAD patients for whom the benefits of therapy with agents designated as “potentially inappropriate” may outweigh the risks.

While we agree with the Reviewer’s comment regarding the need to understand the underlying cause(s) of GAD in the elderly, as well as the need for non-pharmacological interventions, we would prefer not to speculate on these issues given the relatively narrow focus and limitations of our study.

References:

12. There is a newly published commentary in BMC Geriatrics the authors should consider for discussion points. Inappropriate prescribing and adverse drug events in older people Hilary J Hamilton, Paul F Gallagher and Denis O'Mahony BMC Geriatrics 2009, 9:5doi:10.1186/1471-2318-9-5

We thank the reviewer for calling our attention to this reference and have incorporated it into our manuscript.

Reviewer #2

Minor Essential Revisions:

13. The title of the paper is too general, and should be changed into a specific one, such as potentially inappropriate medication use in older patients with generalized anxiety disorder in Germany.

Per the reviewer’s request, we have changed the title of our manuscript to “Magnitude of Potentially Inappropriate Prescribing in Germany Among Older Patients with Generalized Anxiety Disorder”.

14. Typographical error on Page 8, line 6: 85 should be replaced with 75.

We thank the reviewer for catching this error and have made the appropriate correction.

Discretionary Revisions:

15. At the end of the results, the authors showed potentially inappropriate medication use among patients with or without depression. The reviewer would like to know similar analyses according to the number of comorbidities.

As noted above in our response to Comment #6, we have amended this analysis to an examination of receipt of these medications by comorbidity and have added results of these analyses to the manuscript.

Additional Editorial Comments

16. Please remove the following text from your Title Page:

- "Running Head: Treatment of GAD in older patients."
- "Financial Support: Funding for this research was provided by Pfizer Inc, New York, NY."
- The authors’ qualifications should be removed from the Title Page.

The Title Page has been modified as requested.
17. Please re-format your Authors' Contributions section so that it adheres to these guidelines: http://www.biomedcentral.com/bmcgeriatr/ifora/#authorscon

The Authors’ Contributions section has been reformatted as requested.