Reviewer's report

**Title:** The excess mortality risk of diabetes associated with functional decline in older adults: Results from a 7-year follow-up of a nationwide cohort in Taiwan

**Version:** 2 **Date:** 2 November 2011

**Reviewer:** Elsa Strotmeyer

**Reviewer's report:**

General: This is a well written manuscript on an important public health concern – disability and mortality among older diabetic adults. The interpretation of the results is not fully developed for the implications in diabetic adults with comorbid conditions. These conditions, rather than the diabetes per se, are likely further increasing risk of mortality. Accordingly, the discussion needs to emphasize the role of complications in diabetes for disability and mortality to a much greater extent. Also, disability is not fully described as part of the pathway to the mortality and instead ‘maintaining functional status’ is discussed as a way to reduce mortality. In fact, the disability may be occurring for similar reasons as the increased mortality. These points need to be integrated throughout the manuscript. See additional comments below.

**BACKGROUND**

1. Discuss the role of diabetes complications in contributing to increased disability and mortality.

**METHODS**

2. Not clear if in-person data was only collected in 2001 or additionally throughout the longitudinal follow-up.

3. Choice of 3 categories of functional status groups are not clearly described. Why is the low functioning group only defined by ADLs? Don’t IADLs and physical functioning contribute to low functioning?

**RESULTS**

4. Table 1 results: discuss number of conditions by diabetes status. Need to explicitly list what other conditions were considered for this count of conditions.

5. Table 3 final multivariate model is confusing. How does this differ from previous step in the model?

6. Based on Table 1, seems like the real difference in diabetes is with >2 conditions. Were similar analyses for >2 conditions performed as described in Table 4 for >1 conditions. Is there a ‘dose-response’ type effect of >2 conditions over only 1 other condition?

7. Table 4 presentation of results is confusing. Need diabetes and no diabetes on top row to compare side by side and then list functioning group on left column.
DISCUSSION/ CONCLUSIONS

8. Need to consider that diabetic older adults have disability due to chronic conditions associated with diabetes rather than the diabetes per se and your results support this conclusion. Preventing the functional decline may not be the issue. Need to prevent chronic conditions leading to both disability and death.

9. Please highlight uniqueness of results, not just for Taiwanese but for all older populations.

10. Discuss survival bias in results.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I declare that I have no competing interests.