Author's response to reviews

Title: The time course of subsequent hospitalizations and associated costs in survivors of an ischemic stroke in Canada

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Author's response to reviews: see over
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Melissa Norton, MD
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Dear Dr. Norton,

Manuscript Title: The time course of subsequent hospitalizations and associated costs in survivors of an ischemic stroke in Canada.

Manuscript ID: 1722981184943716

We would like to thank the reviewers and the editors for their reassessment of our manuscript referenced above. We have reviewed the additional comments provided by Dr Kaplan and revised the manuscript accordingly. In this letter, we provide a response to each of his comments.

Thank you for your reconsideration of this manuscript. We look forward to hearing from you soon.

Sincerely,

J. Jaime Caro, MDCM, FRCP, FACP
Reviewer 1 (R1): Charles Wolfe

Major Compulsory Revisions

None

Reviewer 2 (R2): Robert Kaplan

Major Compulsory Revisions

1. The authors have provided several revisions which clarify the study design and results. One of points that has been clarified is that a relatively small percentage of study subjects were hospitalized for their stroke event (36%, see Table 1 and Abstract). This was not made clear in the initial version (the figure was only presented in Table without being noted in text). Thus, 64% were included on the basis of a physician visit that contained a diagnosis code for stroke in computerized databases. Throughout the manuscript, the authors describe their data using phrases such as "admissions following a stroke", "first six months following a stroke", "time since index stroke" etc. (eg, Tables 2-4 and Figure). If these were truly acute stroke events, one would expect the percentage hospitalized to be higher than 36%. Critical questions, then, include:

a) are stroke subjects included in this study generalizable to populations of acute stroke survivors?

b) is it accurate to characterize the followup period as time since stroke, as is done throughout the manuscript?

Reply: We apologize for what is clearly a misunderstanding. The Saskatchewan Health databases record separately the physician claims from the hospital ones. Physicians, even when working in a hospital setting, submit their claims independently of the hospital record. Thus, it is quite possible for the first mention of an acute stroke to occur in the physician file. This can happen if the Emergency room doctor or one in the outpatient clinic sees the patient first and submits their claim. It can also happen that the patient has to wait for a bed to be admitted even
though he or she is being cared for in the ER, a holding unit or other area of the hospital. Any
doctors seeing the patient before the official admission date would also submit claims with
earlier dates than that of the hospital record. It is not surprising, therefore, that the majority of
strokes were first identified in the physician file. This does not imply, however, that the patients
were never hospitalized and should in no way invalidate our results or their interpretation. The
decision to use both physician and hospital files and to take the first date as the index date was
made in consultation with Saskatchewan Health and based on their knowledge of how their
system works. The same process has been followed in many other analyses of these data by us
and by other investigators.

Thus, in response to your two questions: yes, the stroke subjects in this study are generalizable to
populations of acute stroke survivors and the follow-period is accurately the time since stroke.

We have modified the methods (pages 5, 6) and discussion (page 13) to clarify these points.

2. In previous studies that are referred to (refs 21, 22) as "comparable" investigations, design
features were in place to ensure that events were in fact acute stroke, including neurologist
validation, and applying minimum length-of-stay criteria. These features are lacking in the
present study. This should be highlighted as a limitation of the present study.

Reply: We have edited the Discussion on page 11 to address this point.

Reviewer 3 (R3): Peter U Heuschmann

Major Compulsory Revisions

None