Reviewer's report

**Title:** Evaluation of the Consequences Associated with Diffuse Vascular Disease History in Patients Diagnosed with Peripheral Arterial Disease: Estimates from Saskatchewan Health Data

**Version:** 1 **Date:** 28 June 2010

**Reviewer:** Richard Chapman

**Reviewer's report:**

Major Compulsory Revisions: [None]

Minor Essential Revisions:

Summary: Describe the Saskatchewan Health database in more detail.

Methods:

Data Source & Patient Population, para 2: Diagnosis code 440 (atherosclerosis); does this mean 440.x or 440.0? Please specify.

Data Source & Patient Population, para 2: “pentoxifylline” – Please comment on why other drugs were not included.

Data Analyses, para 2: The term “time until death” should be changed to “patient-time”, as patients who are censored do not have a time “until death”.

Data Analyses, para 3: Please justify the use of t-test statistic for comparing time-to-event measures, versus other tests.

Results, Hospitalization Costs Related to Atherothrombotic Disease, para 1: Please add the results of statistical significance tests to these results.

Results, Hospitalization Costs Related to Atherothrombotic Disease, para 2: I am not sure of the usefulness of this sensitivity analysis, as varying the year of costs should not in itself lead to any rank-order changes among alternatives.

Discretionary Revisions:

Introduction, para 2: “evidence show that this subgroup is often undertreated” – Please also discuss the problem of under-diagnosis of these patients here.

Methods, Data Analyses, para 4: Why not use medians to compare costs as well as means and SD’s, especially given the skewed (non-normal) nature of cost data?

Results, Patient Characteristics, para 1: I was unable to open Table 2 in the links sent to me, so was not able to review this table.

Results, Hospitalizations Related to Antithrombotic Disease, para 1: Consider changing Figure 2 to compare patient type (e.g., PAD only) within event type (e.g., All CV-related), rather than the opposite, as now shown. I believe this will make the relevant comparisons easier to see.
Results, Hospitalizations Related to Antithrombotic Disease, para 2: I was unable to open Table 4 in the links sent to me, so was not able to review this table.

Discussion, para 2: “history of stroke or MI+stroke had a greater impact on mortality…” – Any speculation as to why this might be the case?

Discussion, para 4: “reasonable estimate of the relative economic burden” – But likely to be an underestimate according to the statement directly above; please state this explicitly.

Discussion: Some general discussion of the under-diagnosis of PAD would be useful here.

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.