Reviewer's report

Title: Vascular disease in women: Comparison of diagnoses in hospital episode statistics and general practice records in England

Version: 1 Date: 14 May 2012

Reviewer: Michael J Goldacre

Reviewer's report:

Major compulsory revisions: none
Minor essential revisions: none

Discretionary revisions:
1. Bottom of page 8 and top of page 9: "ie there was no record that a woman had been diagnosed with any vascular disease". Do the authors mean just "diagnosed with..." or is it "diagnosed and hospitalised with..."?
2. Results, five lines down: "sent to the regional health authority for archiving": is this the correct title of the archiving body? Also, earlier in the sentence, "patient's death" is singular, "their" is plural - maybe change "their" to "the" (or "her")?
3. The message about agreement between a HES record of vascular disease and corroborating primary care records is clear, extremely useful, and based on sizeable numbers of 'cases'. The message about 'non-cases' is not quite so clear. Can we infer that, if a woman does not have a HES record for the diagnoses sought, then she probably doesn't have the condition? This seems a reasonable conclusion for diseases that are usually hospitalised, eg MI, stroke. It is not so obvious that this would be so for (say) angina (I20). Two points: would the authors like to include a comment on the likely statistical power of this part of the study for (say) angina. Second, if it is true that the great majority of women with a GP record for the various vascular diseases will appear in HES as admissions, that's a very important conclusion.

Comment: Current privacy regulations in England make validation studies of hospital statistics like HES very hard to undertake. Validation, using information from an independent source, as here, is extremely valuable for users of such statistics. This is an important study.

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests