Reviewer's report

Title: Assessing Correct Record Linkage between Administrative Data and Vital Statistics

Version: 2 Date: 13 December 2005

Reviewer: Tim Churches

Reviewer's report:

General

The numbers below relate to my previous comments on the previous version of the manuscript.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. It is disappointing that the authors have ignored my suggestion (which was provided under the heading "Major Compulsory Revisions") to adopt, or at least refer to, terminology which is more commonly used in the record linkage literature. That notwithstanding, it is still essential that the authors a) mention the concept of missed links (or Type 1 errors) and b) the fact that the rate of missed links is not addressed in the study and c) the implications of this. Epidemiologists and other data analysts will typically want to know (or have an estimate of) how many links have been missed by a given record linkage process, as well as what proportion of links produced by a record linkage process are actually correct. The study reported in the manuscript only covers the latter aspect. Acknowledgement of the importance of the former aspect - of missed links - is necessary. Furthermore, it is unclear why the authors have not attempted to estimate the proportion of misssed links. Such an estimation would appear to be feasible, at least for the (biassed) subset of records in the Vital Statistics Registry which contain a PHN.

2 and 3) With the most recent revisions, it is now much clearer what quantities are being calculated by the authors. However, what is being calculated is the proportion of "correct-links", as defined by a matching PHN, within the subset of Vital Statistics Registry records which have a PHN - which is only about 70% of all Vital Statistics Registry records. It seems likely that this is not a random subset of records, but may incorporate potential biases which may have improved the correct linkage rate in the subset of records which have a PHN. For example, it is not unreasonable to assume that if the PHN is missing from a Vital Statistics Registry record, then the accuracy or completeness of other data items on that record may also be sub-standard. The authors need to discuss this potential bias and acknowledge that it may have caused an overestimate of the correct-linkage rate produced by this study.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No
Declaration of competing interests:

I declare that I have no competing interests