Reviewer’s report

Title: Administrative database as a source for assessment of systemic lupus erythematosus prevalence: Estonian experience

Version: 0 Date: 20 Nov 2018

Reviewer: Vera Golder

Reviewer's report:

This is a well written manuscript describing the accuracy of a database search strategy in epidemiological studies of SLE.

The main message from this paper is that diagnostic uncertainty or the false positive rate of incorrect ICD coding for SLE diminishes with increasing number of codes applied to the same patient (in most cases).

Major suggestions for consideration:

1. One take from the main message is that perhaps the initial code for SLE per patient should be disregarded when conducting database searches, the advantages and pitfalls of this approach should be briefly discussed.

2. M32 is the umbrella ICD-10 code for all systemic lupus erythematosus, and indeed in many countries this is not sufficient or specific enough for billing purposes.

Did the authors look at any of the codes under this umbrella in subgroup analyses? e.g. M32.14 - glomerular disease due to systemic lupus erythematosus.

It would be interesting to note if the PPV values improve and false positive rates reduce with more specific coding.

3. A large limitation of this study is its generalisability to other health systems, and this should be clearly stated. The high rate of reporting of the ICD-10 codes, and therefore the low probability of missed cases, is driven by the billing set-up whereby the "fee for service" is not received without the code. Without this inbuilt financial incentive the rate of reporting would be much lower, especially in ambulatory care settings where administrative support is likely to be lacking.
Minor style editing:

When citing the work of others use either "Author et al." or "Author and colleagues", not both interchangeably

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.
Yes

Does the work include the necessary controls?
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Unable to assess

Are the conclusions drawn adequately supported by the data shown?
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