Reviewer's report

Title: Evaluation indicates that the Belgian Creutzfeldt-Jakob disease surveillance meets its objectives but can be optimized

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Reviewer: André Karch

Reviewer's report:

Litzroth and colleagues present a study which aims at assessing the success of the Belgian CJD surveillance system with respect to its 2 main objectives: 1) Detection of vCJD cases; 2) Detection of changes in CJD incidence.

The study combines two different proxy approaches (evaluation of surveillance data quality and a survey for participating health care professionals) since a direct evaluation of the surveillance objectives is not possible (no vCJD cases in Belgium and no changes in incidence rates during study period). While the results are generally worth to be reported and the analysis strategy seems sound, I think there is some room for improvement so that the study results can be of higher value for the research community.

Major Compulsory Revisions

- The text lacks focus as it on the one hand tries to stress the study objectives (although they cannot be formally evaluated) and on the other hand wants to report the results obtained during the surveillance period and the results of the survey. I think that the manuscript would benefit from shifting the focus a bit more to reporting the results of the surveillance period (including annual incidence rates, maybe event together with rates standardized for an international standard population)

- More information on surveillance data is necessary (incidence rates, description of the Belgian population in these years, standardized incidence rates). This should also be reported in a separate table and/or figure

- The same is true for the reports of data quality. More information would be nice on which variables showed which level of data completeness and on what kind of information became worse over time. In this case I’m not sure on how the test for linear trend was performed (summed up over all variables?)

- Capture-recapture methodology should be used to estimate the true number of CJD cases. One focus of the study is the use of two data separate data sources which provide differing information. These conditions are a perfect prerequisite for a capture recapture analysis; the value of the manuscript would be improved considerably.

- Rotterdam criteria are no longer up to date for sCJD; usually criteria proposed by Zerr et al. (2011) are used as they include typical MRI abnormalities. Please comment on why you chose these criteria for your manuscript. If the Belgian Surveillance system still uses these criteria, please discuss it critically
- The description of the analysis strategy and the tests used is not clear enough. Did the authors test for a linear trend only? How was the test for spatial heterogeneity performed? Did you ignore spatial dependencies defining provinces as different levels of the same categorical variable?

- The discussion needs to include all of the points above and should in general be a bit more critical, especially about the survey results.

Minor Essential Revisions
- The color code of the figures is not suitable for b&w printers. Please try to improve this.
- There is a typo in lines 210-214 (results, acceptability); at the moment vCJD is reported twice and sCJD not at all – one should be sCJD

**Level of interest:** An article whose findings are important to those with closely related research interests

**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