Reviewer's report

Title: Incidence and economical effects of pneumonia in the older population living in French nursing homes: design and methods of the INCUR study

Version: 2 Date: 14 May 2013

Reviewer: Rodolfo Dennis

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Major compulsory revisions:
1. In “The INCUR study: hypothesis and objectives”, authors mention hypothesis that “…have driven the rationale and conception of the INCUR project”. However, for hypotheses 1, 2 and 3, non-institutionalized controls are needed; hypothesis 5 will need its own sample size estimations, and probably a larger sample, and a complex data analysis; hypothesis 6 will need sample size estimations as well. Authors may want to reconsider the scope of the aims able to be evaluated with the current design.

2. In “Study design and procedures”, the way the sample was selected needs further clarification to confirm the random nature of the selection. It seems that a two-stage sampling procedure was used, but this is not clear. Information would be needed on the sampling frame and the selection procedure for institutions, and then on the sampling frame for subjects within institutions, and the random selection process.

3. In “Sample size analyses”, authors estimate, based on the literature, a number of pneumonia events likely to be accrued over a year, about 67. However, authors should provide formal sample size estimations, at the very least those needed to obtain appropriate precision around incidence rates estimates, with 95 or 99% confidence levels. It would be excellent if the authors could also provide sample size estimations to fulfill some of the other hypothesis/aims, such as those related with costs of pneumonia vs. not pneumonia, case fatality rates of pneumonia vs. not pneumonia, as well as to test hypothesis of prognosis factors associated with functional loss after pneumonia, vs. no functional loss.

4. The manuscript should benefit from a section on the data management and analyses planned.

Minor compulsory revisions.
1. In the “Health care costs” section, it would be useful to specify that the point of view of the cost estimation is that of the government/third party payer, given that no out-of-pocket expense estimation from subject or family is planned to be collected, or impact on society due to caregivers’ time lost from work.

Level of interest: An article of limited interest
Quality of written English: Needs some language corrections before being published

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.