Reviewer's report

Title: The effect of influenza vaccination among general practitioners: a controlled trial [NCT00221676].

Version: 1 Date: 13 March 2006

Reviewer: Eelko Hak

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Comments manuscript BMC Medicine, Michiels B, et al.

This study is an addition to the recently published study on the efficacy of influenza vaccination on the induction of protective serum antibodies in GPs (Vaccine 2006). Results showed some (non-statistically significant) effects on RTI's for the whole group and the authors feel that those results were more pronounced in the younger persons.

1. Did the authors perform a formal power analysis before analyzing these results, especially with regard to the subgroups? If the power is too low, they should not look at different subgroups.
2. What were the characteristics of the influenza seasons, and how intensive was the influenza activity?
3. Given the low numbers of participants and the low power to detect meaningful differences I believe there is too much speculation in the discussion on the potential factors influencing the negative findings. More emphasis should be placed on the effects on the more specific outcomes, notably the serological protection. For example, the outcome positive nose and throat swabs indicate much protection by the vaccine, but the study was imprecise.
4. I do not agree with their conclusion that the vaccine can not benefit GPs. An efficacy of 50% is substantial and suggestions with regard to age can not be substantiated from the data simply because of limited power.

Overall, the authors should shorten their paper considerably and focus primarily on the specific and then on the RTI endpoint. They should recalculate the power and then make clear to the reader that there is efficacy and the study is too small to detect meaningful differences on less specific endpoints.

Which journal?: Appropriate or potentially appropriate for BMC Medicine: an article of importance in its field

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

Quality of written English: Needs some language corrections before being published

Statistical review: Yes

Declaration of competing interests: no competing interest