Reviewer's report

Title: Influenza and Pneumococcal vaccine uptake among nursing home residents in Nottingham: a postal questionnaire survey

Version: 1 Date: 22 November 2007

Reviewer: Meirion Evans

Reviewer's report:

General
This is a straightforward cross-sectional survey of vaccine uptake in nursing homes with a good response rate. It highlights poor pneumococcal immunisation uptake whilst confirming that influenza immunisation rates have improved considerably over the last decade. It identifies that existence of a vaccination policy may influence pneumococcal vaccine coverage.

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

Methods
The analysis presented in the table is misleading. The unit of analysis should be the homes and not the residents i.e. mean coverage in homes with a policy should be compared with mean coverage in homes without a policy. There are also a number of potential confounding variables that ought to be considered and, where data are available, these should also be presented in the same table. I suggest the table be redrawn with the outcome variables at the top i.e. mean flu/pneumo vaccine coverage by home, and the exposure variables along the side e.g. policy (yes/no); consent (yes/no); vaccine register (yes/no); category of person administering vaccination; no residents per home; no. GPs per home; etc. The last two variables should ideally be analysed as an interval scale and, since they are probably not normally distributed, an appropriate non-parametric test should be used (Mann-Whitney U test). A multivariate analysis should be considered to adjust for the potential confounding effects of these other variables. Is there any correlation between homes with good flu coverage and those with good pneumo coverage?

Discussion
Para 3. The discussion of confounding variables should be extended to include the effect of the size of home, no. of GPs, whether private or local authority run, etc.

Para 6. Mention is made of intervention studies to promote vaccine coverage. How good is the quality of the evidence e.g. RCTs, systematic reviews, and what is the size of the effect observed? How relevant might the studies be to the
UK context?

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Abstract
Specify how many homes had no vaccination policy.

Background
Para. 1. The quoted data on influenza vaccine coverage is 15 years old. More recent data are available from nursing homes elsewhere in the UK. It would also be helpful to quote recent community coverage rates for influenza & pneumococcal (see HPA website) vaccination in people aged 65y and over.
Para. 2. Reference 1 is to a US study in Minnesota not an UK study. (line 5)

Methods
Define the term ‘care homes with nursing’. Does this include jointly registered homes?
Information should be given about the type of statistical analysis used.

Results
Provide some more info about the demographics of the study population e.g. age range & sex, no. residents per home.
Provide median and range for nos. GP per home.
Give numbers as well as % for key measures e.g. ‘influenza vaccine uptake was 83% (xxx/yyy)’.

Discussion
Para. 1. Please quote actual coverage figures found in previous studies. Studies refer to UK populations not just English populations. Since ref. 8 refers to coverage in the community rather than a nursing home, it would be better to quote ref 3, 6 & 9 here rather than ref. 6, 8 & 9.
Para 2. Please give the primary source rather than a secondary source (ref. 12) for the CDC recommendation. Please reference statement in final sentence on adverse reactions to repeat pneumo vaccination.
Para 7. The pneumo immunisation programme covers the UK not just England & Wales.

Grammar & typos
- needs a good proof read
- number the pages
- Influenza, Pneumococcal & Census do not require capitalisation
- use 'influenza' throughout rather than 'flu'
- insert 'vaccine' before uptake/coverage [Abstract line 1 & line 9]
- vaccination is recommended for people 'aged 65 years and over' not 'aged over 65' [Background para. 2]
- conducted 'in January and February' [Methods para. 1]
- rephrase sentence commencing 'Of those homes...' [Results, para. 6]
- rephrase sentence commencing 'Care home policy...' [Discussion, para. 3] presumably 'time of admission' refers to when consent should be obtained not to the timing of vaccinations.

Discretionary Revisions (which the author can choose to ignore)

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

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

**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.