Reviewer's report

Title: Nursing Home Characteristics Associated with Methicillin-Resistant Staphylococcus aureus (MRSA) Burden and Transmission

Version: 2 Date: 24 July 2012

Reviewer: Olivier Denis

Reviewer's report:

This manuscript describes point prevalence and admission prevalence of MRSA nasal carriage in residents of 26 nursing homes. The authors have analysed the analysis of risk factors of MRSA carriage in this population.

I have major comments concerning the variable analysis and the microbiological procedures. First, the nursing home characteristics, including individual variables, were not collected by structured questionnaires but via MDS data. The data of 2009 were analysed but the study was conducted between 2008 and 2011. This could bias the analysis of risk factors for MRSA in particular concerning the co-morbidities. The authors should specify the number of cases included but also that was potentially eligible. For MRSA admission prevalence, they should describe the number of admission and the number of residents screened at the admission. Second, only nasal swabs were sampled for MRSA screening. Additional samples including throat, perineum and decubitus ulcer increase significantly the sensitivity of the screening. Moreover, enrichment is recommended for sensitive detection of MRSA carriage since it may increase the recovery rates by 15 up to 30% in comparison to solid media alone.

Minor comments:
1. Methods, pages 4: The methods for culture (time of incubation) and for MRSA identification should be described.
2. Results page 6: The abbreviation of SD should be explained.
3. Results page 7, third paragraph; discussion page 8, last paragraph; discussion 9, first paragraph: The use of “MRSA transmission” is improper. The authors have demonstrated transmission but high prevalence.
4. The Table 2 should be clarified. The size of NH should be added.

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

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.
Declaration of competing interests:
I have no competing interests