Reviewer's report

Title: An investigation of nurses' knowledge, attitudes and practices regarding disinfection procedures in Italy

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Reviewer: Maria Pavia

Reviewer's report:

This paper presents the results of a survey conducted to assess knowledge, attitudes and practices regarding disinfection procedures in hospital nurses, and to assess characteristics influencing these outcomes. This is an interesting study, addressing a relevant public health topic, and according to the Authors, few studies have been published on this topic. A face-to-face interview among a random sample of nurses was performed in several hospitals in Italy. Methods appear to be sound, data are nicely presented and information provided adds knowledge to this topic area and may be of stimulus to other researchers in the investigation in this and other areas.

Some minor essential revisions are following:

Introduction
Though from a cross-sectional point of view, the Authors have attempted to identify characteristics influencing knowledge, attitudes and behaviour on disinfection practices. In the objectives of the study, a broad definition of which characteristics they want to investigate should be added.

Results
In model 1 “participation in the activities of infection control committee” had a p value of 0.069 and a CI ranging from 0.95 to 3.7. Some discussion on possibility of low power to detect this association should be addressed. The same may be referred to “knowledge that inappropriate disinfection increases HCWs’ risk of getting and transmitting infectious disease” in the attitudes model (Model 2) and to “perceived risk of transmitting an infectious disease while working” in Model 3. Moreover, in this latter case, it seems strange that the CI is 0.99-2.42 and the p value is 0.05. Please, verify.

Discussion
The Authors underscore the need of educational programs to improve knowledge and compliance to disinfection practices. There is now great concern in the scientific community related to the difficulties to translate evidence-based knowledge into practice, and I suggest to mention these issues in the Discussion.

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable
Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

'I declare that I have no competing interests'