Reviewer's report

Title: Increasing the frequency of hand washing by healthcare workers does not lead to commensurate reductions in staphylococcal infection in a hospital ward.

Version: 1 Date: 12 May 2008

Reviewer: Tim Eckmanns

Reviewer's report:

The manuscript is of value as efficacy of hand cleansing process is taken into account. The authors are right that overcrowding and high workload are important factors influencing infections. But the authors should not charge up hand hygiene compliance against nurse staffing. Good values in both are important and values of hand hygiene compliance below 50% are unacceptable.

Major Compulsory Revisions

1) The title and the interpretation of the results of the study are misleading. In my view it is not a clear result of the study that increase of frequency of hand washing does not lead to commensurate reductions in staph infections. Results of a model are dependent of the set up of the parameter values in the model. The parameter values are the crucial points in a model. The values have to be taken from studies (not from other models like in this study but from results of real life studies). E.g. contact rate of > 10 is normal for ICUs (the authors cited Pitte’s study with 43 hand hygiene opportunities per hour, there are of course more than 10 patient contacts per day).

Therefore title and second sentence (and some more) of the discussion are not the accurate interpretation of the results.

Minor Essential Revisions

2) Abstract: It is not clear from the abstract that the important new is that the efficacy of the hand cleansing process is taken into account. This should be mentioned in a clearer way.

3) At the end of the manuscript environmental reservoirs are mentioned. This is another important point. Authors should give more background information from the literature or omit this part. (Of course has a higher compliance of hand hygiene a positive impact on transmission from environment to patient.)

4) Authors should discuss why they use a deterministic model and no stochastic model.

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 declare that I have no competing interests.