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:** 5 May 2008

**Reviewer:** M Bonten

**Reviewer's report:**

The authors have adapted a previously published model to investigate the effects of hand disinfection practices on transmission of staphylococci in an hospital ward. The methods are straightforward, with interesting (though not so unexpected) results.

I have only 2 remarks:

A random contact structure is assumed between HCW and patients, which is not realistic. The organisation in hospital wards (and certainly in ICUs) is such that not all HCW will contact all patients. In fact, this level of cohorting as introduced by Austin et al has been determined by Grundmann and Nijssen et al (Arch Intern Med. 2003 Dec 8-22;163(22):2785-6) and was about 0.7 in both studies. This cohorting level may well decrease in situations of understaffing. It might be interesting to incorporate this aspect in the model.

Another explanation why transmission control fails despite reasonable observed compliance levels would be the Hawthorne effect. Perhaps, the observations do not reflect real life, and true compliance levels are lower than what they tell us in studies.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

'I declare that I have no competing interests'