Author's response to reviews

Title: An intervention study to improve hand hygiene in the emergency department: getting to the point

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Dear Professor Harris,

Dear members of the BioMed Central Infectious Diseases editorial team,

We herewith submit our manuscript for consideration for publication as a “major article” in BMC-ID.

The two primary goals of this study were (1) to perform a precise analysis of ED-related hand hygiene (HH) procedures and (2) to optimize HH compliance without increasing workload.

Therefore, we performed a prospective tri-phase (6-week observation phases interrupted by two 6-week interventions) before after study to determine opportunities for and compliance with HH according to the WHO definition. Interventions mainly consisted of standard operating procedures compiled for invasive procedures to improve workflow practices and thus compliance with HH.

378 patient cases were evaluated with 5674 opportunities for hand rubs (HR) and 1664 HR performed. Compliance significantly increased from 21% (545/2603) to 29% (467/1607), and finally 45% (652/1464; all p<0.001) in phases 1, 2, and 3, respectively. The number of HR needed for one patient care significantly decreased from 22 to 13 for non-surgical and from 13 to 7 for surgical patients (both p<0.001) due to improved workflow practices after
implementing SOPs. Notably, avoidable opportunities as well as glove usage instead of HR significantly decreased by 70% and 73%, respectively.

To conclude: Detailed data on HH according the WHO definition in an ED setting are provided. Importantly, HH compliance improved significantly without increasing workload by work flow optimization.

Results were presented at the 22. ECCMID (European Congress of Clinical Microbiology and Infectious Diseases), 31.03.-03.04.2012, London, UK.

All authors are in agreement as to the content of the paper.

COI: Nothing to declare.

No data used in this study been included as part of another manuscript. Neither the submitted paper, nor any similar paper has been published in any other scientific journal. The manuscript is not being submitted concurrently elsewhere.

Thank you for your time spend on this matter.

Yours sincerely

S. Lemmen S. Scheithauer, corresponding author