Reviewer's report

Title: Impact of infection control activities on the rate of Needle Stick Injuries at a tertiary care hospital over a period of six years: an interventional prospective study from Pakistan

Version: 1 Date: 24 February 2009

Reviewer: Anne-Marie Rogues

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The authors describe the “influence” of an educational program on incidence of needle stick injuries (NI) at a tertiary care hospital in Pakistan. Data presented show a reduction of annual rate of NIs conducting the authors to the conclusion that education and training are the keys for prevention in Pakistan.

However, the design of the study was not “an interventional prospective study” as announced in the title! Data were examined retrospectively. Title is not adapted because the design used couldn’t measure the “impact” of this intervention. It’s an observational study without control group so their conclusion should be moderated.

Concerning the method used, more precisions are necessary on:
- Collection of NIs
- Types of intervention included in this “multifaceted educational approach” (brochure, lecture, course, “hands-on” training session... feed-back of th NI survey??).
- Number or proportion of HCWS trained in the different categories.
- Implementation of standard precautions in this hospital: when and how, what about compliance to these measures ??

Results should be completed:
- It would be interesting if the authors could examine the data in terms of “Injuries/exposures prevented” = incidence by number of venipuncture and per year for example (or number of surgery…) and see where the decreased occurred significantly (suggesting a place where educational efforts may be most effective). Or expressed as NI per 100 full-time employment-year by high risk personnel and not only in number of NI in each categories of HCW as presented in table 3 (and not table II).
- The study period ranged from 2002 to 2007, why Fig 1 showed data on 2001 and why there is no data for 2007 in table 2.
- There is no statistical comparison between the incidence of NI between the fisrt and the second period studied (before end after 2005).
- The relative proportion of injuries by activities presented in Figure 1 (tile not adapted)
- In the abstract, the result section should be focused on the main result and not on the comparison. It’s not clear.

Some points should be discussed:
- What about under reporting from the different HCWs categories? These could be explained the proportion of Nis reported by doctors or medical student?
- The educational program appeared to have positive impact on reducing recapping injuries and doctors but many other NIs did not change significantly. How that could be explained? This should be discussed.