Contextual data

KQ4. Should health workers conducting EVD related screening and triage activities wear a face shield alone versus in combination with a medical (non-structured) mask? (Contexts to consider: ETU use vs. healthcare facility; outbreak vs readiness vs. high alert scenario).

KQ7. Should health workers conducting Ebola or Marburg virus related screening and triage activities wear a gown versus wear a coverall? (Contexts to be considered: ETU use vs. healthcare facility)

We conducted our rapid reviews for KQs 4 and 7, especially conducting literature searches to update the Hersi et al. 2015 rapid review and the Verbeek et al. 2020 systematic review. [1] [2]With respect to the extraction of contextual data, the key findings are as follows:.

- Basic PPE ensemble did not seem to work as well as more protected PPE ensemble.[3]
- Gowns led to less contamination than aprons.[2]
- Two pairs of gloves led to less contamination than only one pair of gloves.[2]
- PPEs with more protective gear protected against contamination in simulation studies slightly better but felt more uncomfortable to health workers.[2]
- The peak of contagiousness is around the time of death but patients presenting to HFs and undergoing screening/triage often do so after the onset of symptoms, or they are contagious at the time of screening and triage.[4]

To protect HWs, the limited data (of very low quality) suggest that one would need to err on the side of extra protection, not less. Therefore, if the choice were between gown and coverall, one would go with coverall. If the choice were between face cover versus face cover and mask, one would also go with the latter. However, the tradeoff between more protection and usability (e.g., to be able to work comfortably for longer hours with less protective PPEs) is unclear.

Simulation studies are needed to clarify these choices - they are simple to do at a usability lab, require few participants (e.g., 40), [5] and have low costs. The WHO may consider commissioning a simulation study with an experimental design to test the choices of PPEs in both KQ4 and KQ7 at the same time. For example, the methods section of Drew et al. 2019 provides an example for the planning of such commissioned work, and simulation platforms exist for training and evaluating how HWs use PPE.[6, 7]

References

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