

Handwashing at University Hospital

Sir,

A handwashing campaign was held at the University Hospital, Kuala Lumpur, to increase awareness of the importance of hand hygiene. Demonstrations on the correct techniques of handwashing were shown to the staff and we determined the effectiveness of handwashing amongst various categories of hospital staff using a dye test comprising 50% carmine dye in 70% alcohol. The areas of the hands which were unstained by dye were recorded as areas missed in the simulated handwash. We also demonstrated the bacterial content on hands and the bacterial reduction obtained following handwashing with soap and water by doing the fingerprint-agar plate method. The time of handwash was noted at the end.

The carmine dye test was done on 102 hospital staff and the average time taken in a simulated handwash was 39 seconds. The areas commonly missed in handwashing were interdigital spaces (72%), back of fingers (53%), dorsum of thumbs (51%) and dorsum of hands (44%). Some areas of the tips of the thumbs or fingers were missed in more than 20% of the staff tested.

There were more gram positive than gram negative organisms isolated from the fingerprints. The commonest bacteria isolated was *Staphylococcus epidermidis* in 95% of those tested, followed by *Bacillus* species (70%), *Streptococcus* species (58%) and *Micrococcus* (56%). Seven percent of the staff carried *Staphylococcus aureus* on their hands. Gram negative bacteria isolated were *Acinetobacter* species (8%) and *Proteus* species (2%). Fungi, *Aspergillus* and *Candida* species were less commonly isolated.

Handwashing which resulted in a bacterial reduction rate of 60% or more may be considered to be satisfactory, and this was obtained by 57% of the staff tested. The nursing staff of the Special Care Nursery were found to wash their hands better than those in other wards. Their hands showed low bacterial carriage even before handwashing, and this could be due to the strict handwashing requirement of that unit. Poor handwashing results were observed, especially amongst the attendants, including cooks, of the Catering Unit, their fingerprints being very heavily contaminated before and even after handwashing.

The handwashing campaign should be a continuous exercise to ensure adequate coverage in educating new staff members and also to reinforce the importance of proper handwashing techniques to every member of staff. It is also important that there should be an adequate supply of handwashing basins preferably equipped with elbow-controlled taps, soap, water and also disposable paper towels for drying hands. Antiseptics, like alcoholic chlorhexidine handrub, are useful for hand hygiene in infectious disease isolation rooms and in outbreaks of infections. Otherwise, only soap and water is sufficient and should be recommended for handwashing in the general wards and clinics².

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References

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