
Micro News

June 2007

1. Environmental contamination in operating department

A short study published as a letter in this month's *Journal of Hospital Infection* used a UV fluorescent dye to experimentally contaminate toilet door push-plates in an operating department (Hennessy et al. 2007). Although the transmission of the dye around the department was less than expected, the dye was spread to countertops, push-plates and a telephone around the department. The big question is how accurately does the dye model actual microbial contamination?

2. VRSA in Iran

Vancomycin-resistant meticillin-resistant *Staphylococcus aureus* (VRSA) with a minimum inhibitory concentration of 512 mg/L is reported this month causing an infected surgical wound in a patient in Iran (Emanini et al. 2007). Although reports of "full-blown" VRSA have been rare, vancomycin MICs continue to creep upwards in VISA (vancomycin intermediate-resistant MRSA) and we can expect to see more VRSA too.

3. CDAD "disease pressure"

"Colonisation pressure" (i.e. the number of patients colonised or infected with a nosocomial pathogen) is a well-established risk factor for the acquisition of MRSA and VRE. Colonisation pressure for the development of *C. difficile*-associated disease (CDAD) is less well defined. One of the problems is that the role of asymptomatic colonisation with *C. difficile* is not understood and few hospitals screen patients for *C. difficile* colonisation. A study published this month in *Archives of Internal Medicine* introduced the concept of CDAD "disease pressure" and showed that patients exposed to more CDAD patients during their stay were more likely to develop CDAD (Dubberke et al. 2007). Key limitations of the study were a rather arbitrary 14-day "infectious" period for CDAD patient and the fact that no screening for asymptomatic colonisation was undertaken. Despite these limitations, in multivariate analysis, CDAD pressure was the risk factor with the greatest odds ratio.

4. NICU outbreaks: a special case?

An article published recently in the *American Journal of Infection Control* has highlighted some interesting differences between outbreaks on neonatal intensive care units (NICUs) and regular ICUs (Gastmeier et al. 2007). This study uses a novel database designed and populated by the authors (www.outbreak-database.com). The study showed that infections on NICUs were more likely to be caused by Enterobacteriaceae, in particular *Klebsiella* spp., rather than *Acinetobacter* spp. and *Pseudomonas* spp., which were more common on regular ICUs. Interestingly, the authors commented that '*the significantly higher frequency of Acinetobacter spp. and Pseudomonas spp. as causing pathogens in other ICU types is probably due to the much higher significance of the inanimate environment as the source of outbreaks among adult patients.*' Furthermore, the environment was reported as the source of the outbreak in 9.1% and 17.2% for NICUs and other ICUs, respectively.

Despite the limitations of the study, including the non-exhaustive novel selection criteria and inherent outbreak publication bias, the study does highlight interesting differences between outbreaks on NICUs and other ICUs.

A similar article published recently in the *Journal of Hospital Infection* compared the characteristics of NICU infection in advanced versus resource-limited units (Srivastava and Shetty 2007). 125 studies were analysed and Gram positive cocci and viruses were more common on advanced units whilst Gram-negative rods and non-fermenters were more common on resource-limited units. Most outbreaks were linked to a breakdown in infection control, regardless of whether the unit was advanced or resource-limited. The article concludes by providing a useful "Top ten cost effective steps" for the prevention and control of nosocomial infection on neonatal units, regardless of their resource status.

5. Fungal contamination of overalls

A French study in this month's *Journal of Hospital Infection* has identified extensive fungal contamination on healthcare workers' overalls (Lacroix et al. 2007). Although not a problem for immuno-competent patients, fungal infections can be severe in the immuno-compromised host and these data suggest that HCWs overalls could be a reservoir for transmission.

6. Costs of an outbreak of MRSA

A Finnish study has attributed costs to a 14-month outbreak of MRSA involving 266 patients (Kanerva et al. 2007). The total costs attributable to MRSA were over £250,000 and the 'opportunity cost' to the hospital (the income loss of the hospital due to closed beds) was over £800,000. Therefore, the total cost of the outbreak was in excess of a million pounds!

7. MRSA infection control knowledge in HCWs

Every questionnaire survey of HCWs' infection control knowledge highlights limitations and a study published this month from Dundee in Scotland is no exception (Easton et al. 2007). Only 16.1% of the 174 HCWs surveyed knew what infection control methods should be applied for MRSA infected individuals and more than 25% of those surveyed disagree that you should usually treat MRSA bacteraemia with antibiotics.

8. And finally...The Trouble with Medical Journals

A book review published in this month's *Journal of Hospital Infection* by the editor, Stephanie Dancer, has reviewed a book by Richard Smith, who used to be Editor-in-Chief of the British Medical Journal (Dancer 2007). The book '*exposes problems with every branch and stem of the medical publishing process*' and both this book review and the book itself are must-reads for anybody involved with medical journals.

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