Letters to the editor

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Infection control: another look

We read the many interesting and sometimes provocative points recently made by Rob Baird [1] and below we address the main issues raised. We believe that most of the suggestions made should be followed, but disagree with some of his comments.

- National surveillance systems: We are in agreement with the need for a national surveillance system. AICA has already developed national definitions for surveillance of blood stream infection (BSI), surgical site infection (SSI) and multi-resistant organism (MRO) following a lengthy consultation process [2]. These definitions were adapted from principally the CDC definitions but made more 'user friendly'. Many healthcare institutions throughout Australia have taken on these definitions. One exception is Victoria, which seems to have gone its own way on this issue by using the strict CDC definitions rather than those from AICA. In our opinion, the CDC definitions are much more labour intensive and more difficult to implement.
- Patient bacterial surveillance: At The Canberra Hospital we undertake whole of hospital BSI surveillance, MRO surveillance and targeted SSI surveillance. By undertaking BSI and MRO surveillance we can identify many issues in a timely manner leading to reduced length of stay and improved outcomes for patients, and clinicians in all areas of the hospital are involved in change as it occurs. Ideally we would like to see nationally funded programs allowing for the sharing of data. We are aware that NSW has set up an expert working group to tackle this issue and will be monitoring *Staphylococcus aureus* bacteraemia. Perhaps one way to at least make a start and highlight these issues (especially MRSA) is to make all *Staphylococcus aureus* bacteraemia episodes 'notifiable'; therefore both highlighting public awareness and identifying preventable factors in individual episodes [3].
- Tertiary training: Lack of tertiary training remains an issue for medical staff but we need to also acknowledge that there has been progress. For other healthcare professionals there are at least two recognised university-based infection control courses. However, we heartily agree that infection control practices should be included in all basic training for all healthcare professionals. Staff should not be allowed to start work in a healthcare facility until they can show that they know and can apply the basic infection control concepts (eg hand hygiene).
- Environment and equipment surveillance: On this issue we beg to differ. Working in clean environments and with clean equipment is essential. Microbiology testing and/or air sampling can be a useful indicator for good cleaning, serving to reinforce to those undertaking the testing that there is no room for complacency and that dirty equipment is unacceptable. At our hospital we do endoscopy bacteriology testing. We know of several incidents at our hospital and elsewhere, where detecting organisms in endoscope sampling has highlighted a fault either in equipment or cleaning practices that would have otherwise gone undetected. None of these incidents are ever likely to be published for legal and other reasons, so one should never rely on the published literature for 'evidence'. We have used air sampling in operating rooms and oncology, where we have found it to be a useful indicator to determine the cleanliness of the patient rooms and improve cleaning practices or design areas. It is important to realise that this testing is just part of a 'quality system'. However, we fully agree that we could do with better tests. With endoscopy it is desirable for a test with rapid results to be performed immediately before a procedure. A point of care test, such as looking for adenosine triphosphate (ATP), would be a significant improvement. Testing for ATP is commonly done in the food industry. ATP detection signifies the presence of bacteria and/or organic material and thus that something is not 'clean'.
- Cost implications of AS4187: We believe that these Australian standards have been very useful. What is the alternative if they are not followed? Re-use of single use items and no accountability? Does anyone want this equipment re-used on themselves in sterile sites? The plastic structure and internal design of single use items often means that they can not be cleaned adequately and so are of doubtful sterility. The sterilising process may also alter a device structurally, leading to malfunction [4].
- Hand hygiene: We agree that the new products for hand hygiene are the best initiative for infection control in recent years, but we also understand how or why Semmelweis went 'mad'. Lack of compliance with hand hygiene remains 150 years later and is still a major issue for all infection control practitioners, often because of the poor compliance of health professionals. We agree that we need to know more about *Clostridium diifcile* spores and hand hygiene alcohol activity. This is why we must insist that there are enough hand basins in clinical areas for healthcare workers to wash hands [5].

References

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4. Collignon P, Dreimanis D, Beckingham W. Single-use devices (SUDs): How often are they reused in sterile sites in Australia? Aust Infec Control 2003; 8(3):94-99.

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In Reply:

The comments of Beckingham et al, are to be welcomed with general agreement to my letter to the editor in many areas. The 2 main issues of debate involve "environment and equipment" surveillance and the cost implications of AS4187.

The 2 environment and equipment issues raised were specifically endoscopy microbiology and operating theatre bacterial air sampling.

Little evidence exists to justify the routine microbiological monitoring of endoscopic equipment in the last 10 years. The majority of the literature relating to endocopes bacterial infection dates from 15-20 years ago, long before current standards were implemented. Unnecessary reliance on microbiology removes the focus from adequate staffing, training, education and ongoing competency evaluations. There are a number of examples in the literature [1,2] where endoscopy transmitted infections have been detected by routine clinical surveillance and detection would not have improved with routine microbiological sampling of endoscopes.

With respect to operating theatre air sampling, there is an absence of peer reviewed publications justifying the position of the authors. Much of infection control has not been evidence based but has been handed down on carved tablets to the faithful. There is little published data to support current practice. Bacterial counts in the operating theatre air is a very minor component of post-operative infections and distracts attention away from the real causes of infection.

With respect to the cost implications of AS4187, the suggestion is not against standards but that each revision of the standards increases compliance costs and that cost benefit analysis of the revised standards has not been performed.

Unnecessary focus on equipment, distracts from issues such as staffing and education; focussing huge resources in some equipment specific areas ignores important areas such as hospital design, patient placement, restricting staff contact with some patients, education and staffing levels. Strategies with evidence to support their implementation and activities providing cost effective reduction in infection and multiple resistant organism rates, should be welcomed.

References

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