

Editorial

Detection and management of outbreaks in Australia: well founded or a house of cards?

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Healthcare associated infection (HAI) monitoring remains a cornerstone of good infection prevention practice. Another cornerstone is detection of outbreaks. A third cornerstone is management of outbreaks to arrest their potential for harm. The final and sometimes most difficult piece is intervention which often requires modification of clinical practice or in devices or equipment used.

The articles in this edition of *Australian Infection Control* initially appear to be unrelated; however, closer examination reveals their similarities – each describes changes in the clinical setting, processes of surveillance, detection and investigation of anomalies and subsequent revision of the clinical setting.

Van Gessel and colleagues describe an increase in healthcare acquired *Staphylococcus aureus* blood stream infections (BSI) initially thought to be related to peripheral intravenous cannulae. A collaborative and comprehensive investigation by infection control and IV access staff identified serious concerns regarding existing practices and insufficient policies relating to IV insertion and care across the organisation. This report demonstrates clearly the important individual and collective contributions education, practice, product, policy and monitoring make to infection prevention. The paper is inspiring in that it highlights the potential for outbreaks as opportunities for improvement.

My own co-authored paper in this issue describes an outbreak of device-related BSI in Australia and New Zealand which seemed to mirror recent US case reports. The outbreak was large in terms of its international reports. Paradoxically, the outbreak seemed small if you use the thus far non-response of Australian and New Zealand regulators or government to proactively seek further information. Regardless, this article will hopefully be provocative – it is written as a call to action for Australian infection control professionals (ICPs) and others to continue to aspire to design and deliver infection control programmes that are sensitive to increased incidence of unusual events and that are rapid in their response to arresting these increases. Our intention is to use this

outbreak to highlight opportunities for improved networks among the Australian infection control network. In addition, it hopefully demonstrates the importance of maintaining a watchful and critical eye on international infection control events and activities.

The final paper in this issue is both timely and compelling. Friedman and her co-authors detail a clonal outbreak of rifampicin-resistant Methicillin-resistant *Staphylococcus aureus* (MRSA) in an intensive care unit in Victoria. Their paper considers several contemporary infection prevention issues. Like van Gessel and Murphy, Friedman also describes the possible contributory role of a medical device in this outbreak, although subsequent investigation suggests the device made little, if any, contribution.

Reassuringly, Friedman's manuscript reaffirms the importance of ongoing HAI monitoring activity by describing a two-pronged approach. The first involves laboratory-based surveillance of susceptibilities of all MRSA clinical isolates; the second, routine admission MRSA screening which is repeated weekly. By reviewing historical resistance pattern data, Friedman detected an increased rate of rifampin-resistant MRSA, with an initial hypothesis supposing a link between the introduction of antibiotic impregnated central venous catheters (CVCs) and the emergence of rifampin-resistance. The addition of molecular typing enabled the authors to discount the possible relationship between the CVCs and the emerging resistance. They conclude by surmising that the cluster was a consequence of an unusually high mutation rate in MRSA and was spread by cross-infection.

These articles build upon the common theme of outbreak investigation. Importantly, they each reaffirm the importance of excellence in HAI monitoring, timely detection of increased HAI incidence and appropriate review, revision and resolution of clinical practices and device use. These skills are equally important in their contribution to HAI prevention. More importantly, the ability of Australian ICPs to perform these skills with competence is critical. I hope these outbreaks enthrall, inspire and empower you as they should.