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RESEARCH PAPER

Time spent by infection control professionals undertaking healthcare associated infection surveillance: A multi-centred cross sectional study

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Abstract *Background:* There is limited contemporary information on how infection control professionals (ICPs) in hospitals utilise their time, with even less providing any specific data on time taken to undertake HAI surveillance. HAI surveillance is a critical component of any infection control program.
Methods: An anonymous online web-based survey was used to conduct a cross-sectional study of infection control units in public and private Australian hospitals. Participants were asked demographic information and time spent undertaking infection control activities, including surveillance.
Results: Forty infection control units, responsible for providing services to 138 hospitals completed the survey. The percentage of time spent undertaking HAI surveillance activities by members of the infection control units was 1675 h or 36.0% (95% CI 34.3%–37.8%; range 17%–61%) of all contracted infection control professionals time (4653 h). Of the time spent undertaking HAI surveillance, 56% was spent collecting data, 27% collecting data on compliance with infection control activities and 17% feeding HAI data back to clinicians and management. There was no difference in the proportion of time spent undertaking HAI surveillance between public and privately funded hospitals or infection control units led by a credentialed ICP. Infection control units with a form of electronic surveillance dedicated more time to surveillance, compared to units that did not use such a system.

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Demands for surveillance increased with larger number of hospitals beds.
Conclusion: The costs of undertaking HAI surveillance and collecting data can be considerable. The efficiency of undertaking surveillance should be considered, weighing investment against the likely improvement in infection rates and patient quality of life.

Highlights

- There is limited contemporary information on how infection control professionals (ICPs) in hospitals utilise their time.
- Australian ICPs spent 36% of their time undertaking surveillance.
- The efficiency of undertaking surveillance should be considered, weighing investment against the likely improvement.

Background

The Centres for Disease Control and Prevention (CDC, United States) define surveillance as the ongoing, systematic collection, analysis, and interpretation of health data essential to the planning, implementation and evaluation of public health practice, closely integrated with the timely dissemination of these data to those who need to know [1]. Surveillance is a critical component of any infection prevention and control program and is the foundation for providing a mechanism for an effective monitoring and alert system — ultimately with the ability to evaluate reductions in healthcare associated infections (HAIs) for following interventions and quality improvement activities [2].

There is limited contemporary information on how infection control professionals (ICPs) in hospitals utilise their time, with even less providing any specific data on time taken to undertake HAI surveillance. In a related study we have reported on the tasks ICPs undertake in Australia, but not the time taken to perform each task [3,4]. A study published in 2014 exploring hospital infection control structures in the United States suggested that 46.7% of ICP time was spent on HAI surveillance [5]. This study was in the context of a more structured national HAI surveillance program. Unlike the United States, the United Kingdom and many other countries, Australia is without a national HAI surveillance program and lacks well-structured processes to produce high quality national HAI data [6]. There is also considerable variation in the approaches undertaken [6–8]. The choice of what infections require surveillance is largely determined locally or by State health departments. There is inconsistency in surveillance approaches between States and Territories in Australia [6,9], with the exception of a national surveillance approach to *Staphylococcus aureus* bacteramia and *Clostridium difficile* infection. The responsibility of who undertakes HAI surveillance and how this occurs is also largely determined at the hospital level. A limited number of States have an electronic HAI surveillance program to assist ICPs in identifying and reporting infections; however that does not apply to privately funded hospitals within these States and does not limit the use of other systems or approaches by hospitals.

To inform future decisions around HAI surveillance both locally and nationally, it is important to understand how ICPs currently spend their time. We seek to build on recently published work discussing staffing, resources, roles and responsibilities of ICPs in Australia and New Zealand [3,4], by specifically exploring the time ICPs spend on HAI surveillance in Australia. In Australia, ICPs are an interprofessional group. Different funding models for hospitals, significant geographical differences in locations of hospitals and significant variation in hospital bed size all play a part in the variety of professional groups that constitute ICPs in Australia. For this reason, when exploring the time ICPs spend on HAI surveillance, we have refrained from identifying a particular professional discipline group. There are no regulations in Australia that require the employment of an ICP or a defined time that has been contracted (e.g. ICP per number of beds). Australia does have an accreditation process for hospitals and this accreditation process requires evidence that a number of infection prevention and control activities and processes are in place [10]. This includes surveillance of HAIs.

Implications

- This is the first national Australian study describing the time infection control professionals spend on healthcare associated infection (HAI) surveillance
- 36% of time is spent undertaking HAI surveillance.
- Time taking to undertake surveillance should be always be considered and evaluated, weighing investment against the likely improvements

Methods

A pseudonymous online web-based survey was used to conduct a cross-sectional study of infection control units in public and private Australian hospitals in 2014. Infection control co-ordinators of infection control units were invited to participate via combination of post (addressed to the infection control co-ordinator/manager) and email using an