

## Editorial

# Infection Control Professionals: who are we and what is our purpose?

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An innate component of the human condition is the need to answer the following questions: Who am I and why am I here? This need is experienced on a personal and individual level but also on a collective level where individuals form groups because of features they have in common such as race, language, geographical context, or, more broadly because of a common goal or set of beliefs. Professionally, the need to answer these essential questions is what drives us to define ourselves, and our scope of practice. Our professional origin is based on a response to outbreaks of staphylococcal infections in the 1950s that led to the establishment of infection control committees with the first Infection Control Nurse (ICN) appointment in the UK in 1960.<sup>1</sup> The first ICN appointment in the USA followed shortly thereafter at Stanford University Hospital in 1960.<sup>1</sup> Hospitals in the USA had similarly begun to try to address their infections. The widespread establishment of infection control programs in the USA followed reports of these approaches at conferences and in publications.

The Centers for Disease Control (CDC) had been recommending hospitals establish some form of surveillance of hospital-acquired infections in order to obtain epidemiological information as a basis for identifying control measures. Initially the CDC recommended that a physician with specific training in hospital epidemiology should undertake the surveillance. However, by the 1970s available evidence suggested that a nurse with specific infection control training was best placed to undertake the work. The CDC conducted training courses to equip these ICNs and the focus of the courses provides an outline of the infection control program of the day: infection surveillance and feedback to surgeons, policy development and implementation relating to patient care, especially care associated with invasive devices such as urinary catheters.<sup>2</sup>

Despite the increasing acceptance of this approach to infection prevention and control, the CDC recognised that the long-term viability of the infection control programs would eventually be dependent on its cost-benefit ratio especially as the cost of the ICN and the program could not be directly charged to the patient. In response to these concerns, Haley and co-workers undertook the landmark Study on the Efficacy of Nosocomial Infection Control

(SENIC) project.<sup>2</sup> Thus it was, that the reality of staphylococcal infection outbreaks led to the establishment of infection control programs and the threat of funding cuts resulted in evidence supporting their efficacy. SENIC also provided the first description of the elements necessary for an effective infection control program. These elements were identified as follows: ongoing infection surveillance, active control efforts and qualified personnel coordinating the program.<sup>2</sup>

As the results of SENIC indicating an overall reduction in infection rates by approximately one-third were promulgated, acceptance of the role of the ICN increased and establishment of infection control programs became widespread in the USA and worldwide including Australia.

Over time the elements deemed essential for an infection control program expanded in response to the identification of new needs such as infection outbreaks. Some 30 years after the establishment of infection control programs, Scheckler *et al.*, reported the outcomes of discussion by a group drawn together under the auspices of the Society for Healthcare Epidemiology of America (SHEA) to develop recommendations around the necessary infrastructure and essential elements of an infection control program. This panel's consensus view was that infection control programs should, 'protect the patient; protect the healthcare worker, visitors and others in the healthcare environment; and accomplish the previous two goals in a cost-effective manner' (p. 48).<sup>3</sup> More specifically, the means by which these goals would be achieved included and expanded upon the program elements previously described. Thus, in 1996 according to SHEA's consensus panel an infection control program in the USA should include: infection surveillance, policy development and implementation; employee health protocols that ensure consideration and mitigation of infection risks; outbreak investigation and management, and education and training of staff. In addition, the panel agreed that the following additional elements may need to be considered on the basis of each facility's requirements: antibiotic usage monitoring, product evaluation, laboratory consultation, facility design consultation, research activities and coordination with other safety and quality programs.<sup>3</sup>

In 1997 SHEA again gathered a group of experts to form a consensus panel regarding essential infection control activities; however, this time the focus was out-of-hospital settings such as dialysis centres, ambulatory care surgery centres and infusion centres. Despite the change in practice setting, the elements of the infection control program remained essentially the same as those required for the acute-care setting.<sup>4</sup>

The Association for Professionals in Infection Control (APIC) has also been active in defining the role and function of its members. Members from APIC participated with SHEA in the endeavours previously described. APIC also worked with their Canadian colleagues (Community and Hospital; Infection Control Association – Canada [CHICA]) to develop professional and practice standards for the Infection Control Professional (ICP). These standards also serve to define the role of the ICP.<sup>5</sup> In 2008 APIC and CHICA updated these standards and the revised version recognises the ever expanding role of the ICP by including emergency preparedness.<sup>6</sup>

Although the role of the ICN was pioneered in the UK and initially served as a model for the USA, expansion of the role and definition of the program elements was not as rapid. The Hospital Infection Society (HIS) was founded in 1979; however, the membership was largely limited to physicians and medical microbiologists.<sup>7</sup> In 1987 a survey conducted by a HIS working party found that 91% of responding hospitals had infection control committees and 82% employed ICNs. The vast majority of programs included surveillance, education, consultation and responsibility for notifiable diseases.<sup>7</sup> Larson identifies two significant differences between the British and American systems. The first is that the British infection control system is microbiologically based, whereas the American system is epidemiologically based; and, the second relates to the driving influence the CDC, Joint Commission and Health Care Finance Administration had on the American system.<sup>7</sup> Recent media and public interest in infection control in the UK has politicised the discipline and resulted in the development and implementation of a number of guidelines and programs relating to hand hygiene, surveillance, environmental hygiene and mandatory public reporting of specific infection rates, as well as target setting in relation to these rates. Thus the government has been the major driving force in relation to the scope of practice and elements of an infection control program in the UK. As a consequence, infection control practice standards and core program elements have been enshrined in legislation and will continue to shape infection control programs in Britain.<sup>8</sup>

The first ICN in Australia was appointed at the Princess Alexandra Hospital in Brisbane, Queensland in 1962. The role required the ICN to work with the surgeons to conduct surgical site infection surveillance, to supervise and instruct on aseptic technique and examine sterilisation procedures.<sup>9</sup> The literature on this topic from an Australian perspective is scarce until 1999 when Murphy and

McLaws reported the results of a survey of members of the Australian Infection Control Association (AICA). Although the aim of the survey was to profile the ICPs in terms of experience, training, education, and staffing levels, the survey results provide some insight into the major components of an infection control program at the time. In 1996 when the survey was administered, the activities undertaken by ICPs in the Australian healthcare context included surveillance, consultation and policy development.<sup>10</sup>

Increasing interest in Australian infection control programs and the ICPs' scope of practice is demonstrated by the results of a survey by Jones *et al.* reporting on the evolving and expanding role of the Australian ICP. Based on their description of the ICP scope of practice, conclusions can be drawn about the elements of the infection control program. Results of this survey indicated that the infection control program in Queensland in 1999 was context-specific; however, to a greater or lesser degree, ICPs in the acute care setting were responsible for: management including strategic planning, policy development and meeting participation; clinical practice relating to patient care and staff health; consultation including environmental hygiene, building and refurbishment; research and surveillance; and, education.<sup>11</sup> More recently in 2007 a group of Victorian ICPs, considered experts in the field, participated in a workshop to define the scope of practice for ICPs in Victoria. Hobbs reports that in Victoria, the ICPs key duties are similar to those of their Queensland colleagues, however, the specific tasks were defined in this instance, providing greater detail and identifying some additional elements including outbreak and adverse infection event management.<sup>12</sup>

To date, the work around the elements of an infection control program and the ICPs' scope of practice in the Australian context has been almost exclusively undertaken by ICPs pursuing post-graduate academic degrees incorporating research. However, publication of the results of the "Quality in Australian Health Care Study"<sup>13</sup> brought public and political attention to the issue of healthcare-associated infections in Australia. As a consequence, the Australian Government established the Australian Council for Safety and Quality in Health Care in 2000 with a 5-year timeframe for developing and implementing strategies to reduce adverse events associated with healthcare provision. At the completion of this term the Council was replaced by the Australian Commission on Safety and Quality in Health Care (ACSQHC). It is this latter body that has provided the opportunity and impetus to build upon the work already undertaken in relation to infection prevention and control in Australia. To this end, ACSQHC has identified five key initiative areas in their healthcare-associated infection (HAI) program. The areas are: national HAI surveillance, national infection control guidelines, national hand hygiene project, antibiotic utilisation, and building clinician capacity.<sup>14</sup> The work of ACSQHC in relation to the HAI program is vitally important to ICPs and recognising this, the Commission has taken every opportunity to engage the infection control community, thereby

ensuring that practical and achievable goals and initiatives are recommended. The progress of this work has been reported at the recent AICA conference in Melbourne and because of the ongoing dialogue between ACSQHC and AICA, ICPs have had a number of opportunities to inform the proposed strategies through member surveys and comment on draft proposals.

The pivotal role of the ICP in terms of the success of the HAI program is acknowledged through the building clinician capacity strategy. The Commission has established the Implementation Advisory Committee (IAC) comprised of ICP representatives from each state and the AICA President as well as some ICPs who have conducted research and/or hold academic positions. The work of this group has resulted in some significant outcomes for the infection control profession in Australia. The answer to the “who are we” question has been honed, refined and polished in two documents produced for ACSQHC and available from the Commission’s website.<sup>15,16</sup> This work provided a basis for proposing an answer to the second ‘why are we here’ question and on a grey and rainy Friday in December 2008, late in the afternoon, the IAC reached consensus on the content of a document outlining the essential elements of an Australian infection control program. This moment, like those that led to it, passed largely unremarked as the focus of the group moved to the next agenda item, but there should have been a pause. This remarkable achievement was only possible because of the work that has been done previously and because the ACSQHC provided the means and opportunity to do the work. The International Federation of Infection Control (IFIC) website lists 77 member organisations, representing 60 countries.<sup>17</sup> Of these only four, including Australia, have defined the ICP scope of practice and the essential elements of an infection control program. This is exacting work, but worthwhile if we are to be understood and our work is to be acknowledged and marketable, and if others are to follow us into the profession.

There should have been time to reflect upon, and celebrate, the coming of age of the infection control profession in this country. That moment has passed; however, as we face a new year, it is worth taking a moment to enjoy the view from this lofty vantage point. Look how far we have come and how bright the future appears. Take the time to consider our individual positions within the discipline and the legacy we will leave those who follow, and take up the challenge to participate and contribute to the evolution of our profession.

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