



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

Reflecting on the future of infection prevention and control: Are we waiting or creating?

Carol O'Boyle, RN, PhD, FAAN, and Barbara M. Soule, RN, MPA, CIC

Copyright © 2009 by the Association for Professionals in Infection Control and Epidemiology, Inc.
(*Am J Infect Control* 2009;37:613-4.)

October is the time for International Infection Prevention Week in the United States, Canada, and many other countries around the world.^{1,2} The week provides an opportunity to focus on the unique specialty of infection prevention and control (IPC), highlight the important contributions of the profession to patient safety, and provide infection prevention education for health care workers and the larger community. In 1986, President Ronald Reagan proclaimed the third week in October as "Infection Control Week" (now known as International Infection Prevention Week) as a way to focus attention on the importance of infection prevention in the United States and the global community and to honor the work of infection preventionists (IPs).

International Infection Prevention Week is an opportunity for IPs to demonstrate the importance of IPC in all care settings and to emphasize to their health care colleagues the ongoing efforts needed to keep patients and clients safe and free from infections. Celebrating International Infection Prevention Week also provides an opportunity to review past accomplishments and reflect on the challenges in the near and distant future being raised by changes in the social and political environment, regulatory trends, changing consumer interests, new scientific discoveries, and the evolution of strategies to reduce and eliminate health care-associated infections (HAIs).

In the midst of the busy, sometimes frenetic pace of work in contemporary health care, we pause to ask several questions: What does this week mean for the specialty of IPC? What does this week mean for the future

of infection prevention and patient safety in emerging health care systems? How will infection prevention professionals and organizations participate in shaping future health care systems?³

Historically, IPC has provided a systematic, unbiased method for identifying infections and infectious risks for patients and health care workers. In 1986, the year of the first "Infection Control Week," most acute care occurred in hospitals, and although hospital IPC programs included "prevention" as a function of the program, the emphasis was on surveillance, with most of the program resources devoted to this area. During the 1980s, most health care involving invasive procedures or devices was provided in acute care facilities, HAI rates were not shared with persons or agencies outside of the hospital, and in most cases IPC was performed by designated ICs, not multidisciplinary teams. At that time, bioterrorism belonged in science fiction, AIDS was an "emerging disease," methicillin-resistant *Staphylococcus aureus* was starting to migrate from academic tertiary care centers to mainstream community hospitals, and health care workers practiced using information from specialized disciplines.⁴ Health care was evolving from a reliance on structures and processes that were more appropriate for organizations with predictable, discreet knowledge areas to the use of processes for complex adaptive system in which services and departments built on separate and unique knowledge areas were integrated and interactive. This newer environment was also one in which performance improvement was mandated and cost reductions were expected.⁵

In 2009, complex, invasive health care procedures and technologies are not limited to acute care facilities, but occur in a variety of settings, including long-term care, ambulatory care, and patient homes. There are also discussions about providing some types of postoperative care at hotels located near surgery centers. IPs are challenged to institute IPC programs in these new practice settings but often lack a sufficient evidence

From the Joint Commission Resources/Joint Commission International, Chicago, IL.

Address correspondence to Carol O'Boyle, 1515 W 22nd St, Suite 1300W, Oakbrook, IL 60523. E-mail: coboyle@jcrinc.com.

0196-6553/\$36.00

Copyright © 2009 by the Association for Professionals in Infection Control and Epidemiology, Inc.

doi:10.1016/j.ajic.2009.07.002

base to support their recommendations. In many nonacute care settings, infection criteria are not established, infections are not investigated, antibiotics are prescribed empirically, and denominators are not standardized. In addition, IPC staff are expected to provide strategies to control emerging biological challenges, such as multidrug-resistant organisms, severe acute respiratory syndrome, and such infections as pandemic influenza. IPs are key leaders in the application of intervention bundles that when instituted with other multidisciplinary health care workers, synergistically produce unexpected and welcome improvements in outcomes for patients with a central vascular line or on a ventilator. Furthermore, today there is a growing awareness that although health care involves complex, sophisticated, highly technical processes and devices, the basics still count, and isolated independent actions can impact other processes and parts within health care systems. There is an appreciation of the fact that successful outcomes require synergy among elements of care, including the mechanical–physical, psychological, social, emotional, and spiritual aspects.

As IPs look to the future, changes may include the use of antiaging drugs, increased prevalence of chronic diseases, machine translation of languages, universal electronic medical records carried by every patient, innovative methods for drug administration, surveillance performed by electronic systems, increased xenotransplantation, geographic information systems available for tracking movements of patients and health care workers, and decreased reimbursement for care.

Currently, the United States and many other countries are struggling with health care reform. For the field of IPC, pertinent questions include how proposed new or reformed health care systems reduce infection risks, whether the proposed changes in health care will increase infection risks for some patient populations and how IPC will influence patient safety in emerging health care systems.

It is clear that in 2009, the role of the IP has moved from serving primarily as a data collector and infection control consultant to acting as a proactive leader in health care improvement, participating in decisions about the judicious use of resources for evidence-based infection reduction practices. IPC work has evolved since 1986, and consequently the knowledge and skill sets needed by IPs must expand from the traditional fields of microbiology, epidemiology, biostatistics, infectious disease, patient care practices, occupational health, environmental microbiology, sterilization/disinfection, management, and communications to include such emerging knowledge fields as human factors engineering, social marketing, organizational dynamics, data mining, bioengineering, health care economics, “green technology,” electronic educational innovations, and biomedical ethics.

Recent and projected changes should prompt IPs to question the degree to which patient outcomes are positively influenced by changes in IPC practices. Has the increased accountability and transparency intended by the public HAI reporting system improved outcomes for patients? Have electronic medical records and data mining systems improved patient care? How will IPs enter into and influence discussions regarding the cost-benefit analysis of infection reduction technologies? What role will IPs play in multitiered health care systems in which patients with sufficient resources will be able to obtain an extra margin of safety by purchasing better infection prevention devices or procedures? What is the role of professionals in the field, and what are the external influences that will shape future health care systems?⁶

What do these and other similar contemporary issues have to do with International Infection Control Week? We believe that our work is essential to health care; do the legislative and regulatory decisions-makers agree? The only way that we can predict how IPC will be included in future health care systems is, as individuals and organizations, to participate in the decisions leading to the creation of new or reformed health care systems.

International Infection Control Week can be used to highlight the unique contributions of infection prevention to health care, increase visibility, and provide a forum to articulate the role of IPC practice to both the health care and larger communities. Organizations such as APIC, the Society for Healthcare Epidemiology of America, and global, national, regional, state, and local government agencies and IPs can use International Infection Prevention week as a time to reflect on these critical issues and an opportunity to position the practice of IPC as essential to patient safety. Proactive discussions and activities related to the above issues will help weave the important and indispensable thread of IPC into the larger tapestry of national and global health care.

References

1. Association Professionals in Infection Control and Epidemiology. International Infection Prevention Week. Available from: http://www.apic.org/AM/Template.cfm?Section=2009_International_Infection_Prevention_Week&Template. Accessed August 31, 2009.
2. National Infection Control Week, Community and Hospital Infection Control Organization-Canada (CHICA) News and Features. Available from: http://www.chica.org/news_icweek.html. Accessed August 31, 2009.
3. Murphy D, Carrico R, Warye K. Building the infection prevention system of tomorrow: proceedings of the 2007 APIC Futures Summit. *Am J Infect Control* 2008;36:232-40.
4. Garcia R, Barnard B, Kennedy V. The fifth evolutionary era in infection control: interventional epidemiology. *Am J Infect Control* 2000;28:30-43.
5. Larson E. The infection control community's response to the Agenda for Change. *Am J Infect Control* 1989;17:241-3.
6. Edmond M, Eickhoff TC. Who is steering the ship? External influences on infection control programs. *Clin Infect Dis* 2008;46:1746-1750.