About This Series....
Welcome to the fifth and final edition of Timeless III, a historical perspective of infection control, to celebrate Infection Prevention and Control Week. This year’s series has highlighted some of the technical advances that have impacted on infection control. Enjoy your read.

*"Technology (derived from the Greek word for ‘Craft’) refers to the tools in the service of an intellectual enterprise…Once established, technologies not only alter practice, but they also change perceptions of illness, patients, doctors and disease. The last two hundred years have witnessed an unprecedented burgeoning of technology, partly because of the demands of keeping medicine ‘scientific’, defining professional identity, and satisfying an innate human love of gadgetry".*

--- J. Duffin

**The Past:**

The computer is arguably one of the greatest advances of our time, revolutionizing many aspects of our lives, including medicine and health care. The first freely programmable computer was invented by Konrad Zuse in 1936.

By the end of World War II, transistors had been invented to replace the bulky vacuum tube computers that were large enough to fill a room and generated sufficient heat to make them susceptible to overheating. From vacuum tube computers that filled a room in the 1960s, to transistors, to silicon microchips, computers have become faster, smaller, cheaper and capable of complex calculations and digital data storage. Applications of computers in medicine and health care include – information systems, robotics, eHealth, communications, education, surveillance, monitoring, decision aids and digital imaging.

**At the Bedside:**

Computers have become increasingly portable, with commands directed by keyboard or touch screen. They have become ubiquitous in health care settings, often portable enough to be brought directly to the patient bedside, or the “point of care”. With this mobility come concerns about their potential role as reservoirs for pathogens, especially since healthcare associated pathogens can survive from days to months on clinical surfaces, such as keyboards.

**Present Day:**

The most recent innovation has been mobile computing devices such as the smart phone. It can allow quick access to a lot of clinical data, as well as resource materials, such as medical reference information, clinical decision aids and best practice guidelines. Hand held computing devices have an important role to play in patient data management, surveillance and communication between healthcare workers. In the absence of manufacturer guidelines for disinfection, ML Manning et al. (AJIC, 2013) have proposed the following recommendations for the use of mobile handheld devices (MHD) at the point of care:

1. Place a waterproof or water-resistant barrier over the MHD
2. Disinfect the MHD before and after patient/family interface with an approved disinfectant as per facility policy for non-critical items
3. Set alarm on the MHD to remind users to disinfect regularly in addition to the before and after patient/family interface disinfection
4. Perform hand hygiene before and after use of a MHD

In healthcare, mobile computing devices are increasingly used for communication, information management, patient care and education, yet in a survey of 87 on-call physicians, 78% were aware that mobile phones could carry pathogenic bacteria but only 8% reported they cleaned their phones regularly. Mobile computing devices have become so valuable an asset and ubiquitous that their use within patient care areas cannot be restricted. Regardless of the application, IPAC programs have a role to play in providing guidance and education about the selection and use of computerized equipment to reduce the risk of it becoming a means of transmitting infectious pathogens. This concludes Timeless III, a review of changing technologies and how it impacts Infection Prevention and Control. As Duffin has stated, *"The history of technology is just beginning. It will demonstrate the ingenious solutions and marvelous potential of medical instruments. It will reveal how each intervention created new diseases where none had been conceived. And it will uncover more fascinating discrepancies between the aspirations of inventors and the applications that their instruments subsequently found".* Let’s not allow infections be one of the unintended consequences of technological advancement in healthcare.