

Moving forward: Technology in medicine in 2017

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One of medicine's greatest challenges in the 21st century is to maintain pace with the incredible steps of advancing technology. In only the past few years, scientists, with the help of rapidly changing technology, have used brain–spinal interfaces to restore locomotion, engineered chips that mimic brain function, manipulated memories, and altered human embryos using a powerful technique known as CRISPR.¹⁻⁴ These incredible advances have certainly increased our understanding of human biology, but their translation to clinical medicine can often take decades. The aim of this issue of the University of British Columbia Medical Journal (UBCMJ) is to explore the challenges and inform on the interplay between technology and medicine as these fields align to keep our society healthy. We also hope to identify areas of healthcare that are in critical need of support from recent technological advances.

Although changing technology has the potential to revolutionize the standard of medical care, medicine may be lagging behind due to a variety of reasons. Technology is changing the way that we communicate and this has a multitude of bearings on the ways that medical care is delivered. With alternative modes of delivering medical care such as telemedicine or text–based medicine, issues with confidentiality and familiarity with the technology may affect the adoption of such services.⁵ Information is also now widely available to the patient population and accessing their own medical information online may impact a patients' perceptions of disease and expectations for treatment.⁶ Sometimes, technological solutions fail to be adopted simply because of logistical barriers. Indeed, this may be the case with standardized electronic medical records, which still remain to be adopted universally nationwide in a centralized fashion.⁷ Some technological feats related to medicine may simply still be out of reach, such as the technology that would be required for sending humans on extended outer–space journeys. The articles contained in this issue touch on these topics by discussing the navigation of a world of online health information, how Canadian healthcare is faring in regards to advancing technology, and what the future may be looking like for fields such as space medicine and genomics.

Our feature articles further discuss the complexities of adopting technology in medicine from various angles. Dr. Copley comments on how technology is changing telemedicine and why a focus on the medicine, and not the changing technology, may be advantageous. Adam Ramzy discusses how gene therapies are rapidly moving from bench to bedside for the treatment of conditions such as hemophilia, rheumatoid arthritis, and other genetic disorders. Moreover, Dr. Vogl discusses the challenges of maintaining a strong anatomical education in the face of the dynamic medical school education playing field. We hope that this latest issue of the UBCMJ provides a discussion of the adoption of technology in medicine and how medical students and future physicians can be involved in contributing to the technological revolution in medicine.

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