mHealth and the change it represents

The views expressed in this editorial are those of the author and do not necessarily reflect the position of the Canadian Medical Association or its subsidiaries.

Medicine is changing. We know that, of course. There are new drugs and protocols, cool new procedures, and innovative education tools that are making doctors from a different mould. But those are not the changes that are going to affect us most in the future. Mobile health (mHealth) is a tide of economic and social change that will reconfigure the medical landscape. It has started already with the push to adopt telemedicine in developed countries. The goal of most mHealth services should be to allow better apportioning of health care dollars — keeping healthy patients at home and getting sick patients early, timely care. The main goal of some systems' adoption of telehealth may be to increase the branding of the hospital or health care system providing telehealth. Some evidence shows it increases new patient capture, but also may increase health care costs as previously untreated patients are brought into the care envelope.[1] Other findings[2] have shown that pediatric telemedicine significantly reduced emergency ward and urgent care usage. That study found that, without telemedicine service, 28% of parents would have visited the emergency department; telemedicine was associated with a projected savings to the Florida health care system of approximately $114 million.[2]

Mobile or virtual health may have an interactive aspect, but it also could include artificial intelligence (AI), health apps, and automated chat rooms (psychiatrists beware).

Telehealth is addressing the desire to improve health, enhance patient experiences, reduce overall costs and, hopefully, increase provider satisfaction. There is a built-in drive on the patient side to expect this to happen. A lot of patients will soon expect access and convenience in their health care that is on par with ridesharing or an Apple Store purchase. Skyping your physician (or physician extender) is going to happen as a standard preclinic screening tool. I believe that in the United States, the fear of overwhelming demand is keeping telehealth (except in remote, rural areas) from being included in Medicare. But once that barrier is breeched, the floodgates will open — maybe not in demand for visits but in possibilities of care delivery in fields like dermatology, psychiatry, family medicine and others. Canadian health care systems are operating like this scenario will never exist — but it will. Surgery may be safe until an app and instrument package is available for a smartphone that allows anesthesia and cholecystectomy surgery.

The do-it-yourself movement for the rest of medicine is coming through apps and add-ons for your phone. Diagnostics allowing at-home ultrasonography with devices attached to a phone already exist. Current apps do everything from wellness promotion to medical diagnostics (e.g., foot ulcers and rashes). Patients will be able to self-diagnose with a little help from AI, and they will not have to see the inside of a clinic or hospital unless they are judged to be truly sick. These movements may not obviate the need for a surgeon, but definitely will take the load off other specialties. We are not well prepared for these changes being driven on the economic side of medicine. We will need to substantiate these changes. The changes are coming.

Edward J. Harvey, MD

Coeditor, *Canadian Journal of Surgery*

Competing interests: E.J. Harvey is the chief medical officer of Greybox Solutions, the co-founder and head of medical innovation of NXTSens Inc., the co-founder and chief medical officer of MY01 Inc., and the co-founder and director of Strathera Inc. He receives institutional support from J & J DePuy Synthes, Stryker and Zimmer, and he is a board member of the Orthopedic Trauma Association and the Canadian Orthopaedic Association.

DOI: 10.1503/cjs.007919

References

1. Flodgren G, Rachas A, Farmer AJ, et al. Interactive telemedicine: effects on professional practice and health care outcomes. *Cochrane Database Syst Rev* 2015;9:CD002098.
2. Vyas S, Murren-Boezem J, Solo-Josephson P. Analysis of a pediatric telemedicine program. *Telemedicine and e-Health* 2018 Dec. 1 [epub ahead of print]. Available: https://doi.org/10.1089/tmj.2017.0281 (accessed 2019 May 6).