Doctors without bricks (and mortar)

Akira and the emergence of mobile health services

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For most of the twentieth century, if you wanted to talk to a friend who lived across the country, you would call them on a land-line or you would write them a letter. If you needed a taxi, you could flag one down on the street or call dispatch and give them your location, and have limited options for payment. And if you wanted the answer to a complex medical question, you would have to search a library's catalogue in person and find the relevant book or journal on the shelf.

Advances in technology and mobile communications in the last few decades have changed all of that. We now have devices in our pocket capable of performing all of these tasks with ease. Apps like Skype, Uber, and Google have each revolutionized our society and the way we interact with each other, and many are accessible from a small device we carry in our pocket.

Health is no exception. A large number of mobile apps are available for patients to manage their health. They can manage their diet with MyFitnessPal¹, log their routes with Map My Run+², and track their menstrual health with Flo Period Tracker.³ With the purchase of a minor accessories, patients can monitor their sugar levels with MyStar SMS⁴ or their blood pressure with Qardio.⁵ Furthermore, accessories such as Fitbit⁶ and the Apple Watch have also enabled patients to manage vast amounts of personal health data.

Despite these changes, much of healthcare that has yet to fully exploit the new mobile communication technologies available to patients and healthcare practitioners. Telehealth, the practice of providing healthcare virtually with the aid of videoconference or specialized equipment, has been employed in situations such as providing isolated or remote communities with access to specialty care⁷ or managing chronic disease⁸ but has not become fully mainstream. However, it is a provocative opportunity to modernize the way we provide healthcare, and may help address barriers to care such as appointment wait times. Two very strong predictors of patient satisfaction are the amount of time spent with the physician as well as the amount of time patients spent in the wait-room for their appointments.⁹

Akira is a smartphone telehealth app that aims to address that barrier. Based in Toronto, Ontario, and available on both iOS and Android, Akira provides a platform for patients to access physicians' opinions and diagnoses for common medical problems, all via a smartphone. Some of their services include providing prescriptions for simple medical problems such as uncomplicated urinary tract infections in women, oral contraceptives in otherwise healthy patients, medication renewals, mental health counselling, referrals for specialists, and sick notes.¹⁰ It is staffed by physicians licenced in Ontario, as well as registered nurses, nurse practitioners, social workers, and mental health counsellors, who provide care via text and video chat. Setting up an account takes a matter of moments,

and after a brief conversation with a nurse who establishes your initial health history, you are connected with the health professionals to address your issue.

The catch? The service is not covered by the Ontario Health Insurance Plan. It is available as a subscription for \$120/year for individuals or \$240/year for a family of two partners with unlimited children and covers an unlimited number of consults, though there is a pay-as-you-go option for \$49 per consult.¹⁰

Paying for healthcare is legal in Canada. While the Canada Health Act stipulates that medically necessary healthcare services must be covered by provincial health plans in order for provinces to receive federal transfer payments, it leaves most of the determination of what is medically necessary up to the provinces. Any service that is not deemed medically necessary may thus be provided for a fee. The College of Physicians and Surgeons of Ontario (CPSO) has published guidelines for physicians for how, and how much, they may charge patients for these services, based on recommendations outlined by the Ontario Medical Association, though these recommendations do not outline specifically how much should be charged for telehealth services.^{11,12} The CPSO also allows for the provision of telehealth by its members and has published guidelines which essentially state that physicians in Ontario are still governed by the same standards of care that they would were they seeing their patients in person.¹³ Furthermore, the Canadian Medical Protective Association (CMPA) also allows for the provision of telehealth by its members and will cover a physician practicing telehealth, provided the patient resides in Canada and any legal action filed against the physician is initiated in Canada.¹⁴ Akira states on its website that its physicians adhere both the CPSO and CMPA standards, and that its nurses adhere the College of Nurses of Ontario's respective guideline on telehealth.¹⁵

Telehealth is not a new concept, and already exists in Ontario via the Ontario Telemedicine Network. It is however limited to only managing certain patients with chronic disease (such as heart failure or emphysema), and allowing certain patients in remote or rural communities to access specialists with the use of videoconference and specialized monitoring equipment.⁷

Systematic and scoping reviews of telehealth have shown mixed results. Some show modest improvement in the management of chronic disease,⁸ doctor-patient communication,¹⁶ and encouraging health behaviour change.¹⁷ However, limitations in diagnostic accuracy compared to gold standard remain a challenge,¹⁸ and it does not appear to reduce healthcare spending.¹⁹

Telehealth has the potential to vastly change the way that healthcare is delivered, both in Canada and globally. For Akira, the fact that the only physicians available currently are Family Physicians and Paediatricians will limit its widespread adoption for the

time being.¹⁰ It is possible that other specialties may become available in the future, but for the time being it will only be able to address uncomplicated medical concerns in primary care.

Mobile technology will continue to advance, and until health-care delivery catches up, it is my impression that the general public will increasingly view healthcare as an ossified institution, stuck in the past.

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