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Impediments to innovating choice in Canada's healthcare sector and delivery of virtual products & services

I was pleased to learn that the Government of Canada has committed to investing in an expansion of virtual care and mental health tools across the country. Virtual care can cover dozens of services delivered via telehealth in an effective and equitable manner. Virtual care can affect the on-going management of chronic conditions, mental health counselling, pain management, home care via a delegate model, etc..

Building and commercializing Pillcheck (www.pillcheck.ca) in Canada, GeneYouIn is providing a virtual care service delivered through proprietary software. The effectiveness of most medications depends upon genetic factors: using DNA analysis, Pillcheck tests for these genetic factors, and suggests optimized medication therapy to cover a wide range of conditions.

Pillcheck supports both healthcare practitioners and patients. It combines DNA analysis with an online medication review by expert clinical pharmacists. There is plenty of evidence demonstrating PGX-based prescribing reduces the risk of side effects and improves adherence to treatment.

The Bureau is seeking input on the following discussion questions:

1) Are there ways that policies can better support innovation, choice and access to digital health care solutions? For example, do specific rules unnecessarily impact the ability to offer virtual products and services to Canadians? Please explain.

Pharmacists are excluded from telemedicine in Canada.

Patients vary in their response to medications, and in clinical medicine, it is accepted that only a proportion of the patient population will derive benefit from a given medication. The treatment of some common diseases, such as depression, hypertension or arrhythmias, usually involve therapeutic trials among different drugs or classes of drugs. The healthcare burden imposed by adverse side effects and/or lack of efficacy during these periods of trial and error can be considerable.

The decision-making involved in prescribing is a complex process. The knowledge and skills of clinical pharmacists versed in the pharmacokinetics and pharmacodynamics of drugs give them an advantage; they may take the lead and provide virtual clinical services in the evolving arena of precision medicine.

Different institutions have already initiated pharmacist-managed clinical PGX programs (eg. in USA, QATAR, Taiwan).

Canadian rules "anchor" pharmacists to the physical pharmacy. In addition, they require patients to come to the pharmacy to obtain a medication review (with the exception of the most frail patients who are home-bound and may be visited by the pharmacist at home).

The Pillcheck practice has shown that Canadian consumers value having their own "medication passport for life", informed by their heritage and personal genetics. It is empowering, especially in a multi-ethnic country.

The integration of behavioural and physical health into a whole-patient model improves health outcomes. The difficulty of measuring and treating psychiatric disorders, in general, contributes to challenges in managing mental health issues.

CBT – a widely available mental health program – works better with a concurrent treatment using antidepressants. One recent, large scale study entitled “A Machine Learning Approach to Understanding Patterns of Engagement With Internet-Delivered Mental Health Interventions” demonstrated the limitations of digital CBT: the highest engagers represented just 10.6% of the sample; 25.5% are high engagers with rapid disengagement, 21.4% are late engagers, and 36.5% are low engagers.

Pharmacists are presently excluded from telemedicine services, although they could provide medication assessments for a wide variety of conditions, helping to optimize treatments. While medication therapies can be extremely effective, a mismatch between a person's drug metabolic profile and their prescribed medication is the most common reason for a failure to benefit from the medication treatment.

2) What other barriers are impeding Canadians' access to virtual care and restricting innovation and choice in the health care sector? Can these barriers be reduced—and, if so, how—in order to facilitate the entry and expansion of digital solutions?

Addressing the interoperability issues of regional health systems is a key priority. We have developed API for the secure transmission of Pillcheck alerts and yet struggle to integrate with the existing informatics infrastructure here in Canada. Patients do not have any choice which informatics provider to use and cannot easily extract their data from Telus or other EMRs.

Telus develops APIs for EMR integrations but allows access to data and EMRs only for its closely affiliated businesses.

Telus is a key beneficiary of a federally funded supercluster and has used its position to effect anti-competitive measures (e.g. using 3rd party consulting firms, such as Deloitte, under premises of “collaboration” extract competitive intelligence from start-ups and use this data to their advantage as investor and operator.)

3) What measures have other jurisdictions taken to improve access to virtual care? How have barriers to innovation and choice been eliminated, while balancing legal and regulatory requirements in the delivery of digital health care solutions? Can similar measures be adopted in Canada? Why or why not?

Design an optimal intervention strategy by doing the right thing at the right time at the right price. Ensure that consumers are informed, treated fairly, and receive hassle-free service. The time required to gather information, respond, and manage logistics can be improved for the benefit of the individual and health services operations. Digital solutions such as online psychiatric triage, CBT, self-monitoring health apps and personalized medication management improve health status for specific cohorts of patients. These solutions improve various aspects of health management,

including:

- Establishing a proper diagnosis
- Improving drug therapy and reducing the risk of therapeutic failure and side effects
- Increasing self-efficacy, engagement and empowering individuals

And yet, only coordinated allocation of digital interventions can achieve the full impact based upon functional status and health risk profile. The available arsenal can then maximize return on investment and provide for individual claimants' speedy recovery.

Opportunity: Design an optimal intervention strategy by doing the right thing at the right time at the right price. Time to gather information, respond, and manage logistics can be improved to benefit the claimant and insurance claims department. Ensure that people are treated fairly, are informed, and receive hassle-free service.

Health data exchanges are used by Telus as a competitive mode, while Federal national health data exchange does not exist in Canada. As a better approach, consider Denmark: The Danish Health Data Network (Medcom) acts as a data integrator to ensure interoperability.

4) What impact has the COVID19 pandemic had on innovation and choice in Canada's health care sector, and on Canadians' ability to access health care virtually? Have any barriers hindered the adoption of digital solutions in response to the COVID19 pandemic? Please explain.

The best virtual care is delivered by the usual care providers. This ensures proper continuity of care and avoids unnecessary treatments (and associated costs). At the same time, Canadians value portability of their health information and being able to engage with a wide range of health services, which are not always covered by the provincial health plans.

For example, the most common challenge with prescription drugs is unwelcome side effects. And sometimes, they are simply not effective for the individual. Pillcheck is a fast, easy DNA test that helps identify the right medication at the right dosage from a broad spectrum of drugs. Sharing of results with the doctor(s), who can help you get on the right medications,

Since a person's DNA doesn't change, it is most cost-effective to perform the DNA analysis once, and have a system in place that updates prescribing guidelines according to evolving clinical science. Repeated use of the Pillcheck report ensures cost-effectiveness for the payers. However, current payment models are more conducive to repeated testing rather than accessing DNA analysis multiple times.