EDITORIAL

COVID-19 and eHealth: A Promise or Peril Paradox?

It would be difficult to conceive of anyone not knowing about or not having been impacted by (directly or indirectly) the COVID-19 pandemic. There will be profound and long-lasting personal and societal effects of this global event. It also seems destined to dramatically change the future of eHealth (or digital health[1]).

The scientific literature and social media are already replete with papers, news pieces, and opinion pieces providing examples of eHealth being applied to counter, circumvent, or combat some aspect of COVID-19's impact. Such uses include mobile apps to assess signs and symptoms, to provide information about testing, and to allow automated Artificial Intelligence enabled contact tracing. Varying applications of teleconsultation have been applied to reduce the need for public transit and physical presence for diagnosis of this variably infectious and (particularly for some demographics) deadly virus. eHealth solutions have also been noted to be of particular value in addressing mental health issues, exacerbated by 'lock downs' imposed to counter COVID-19. The utility of biosurveillance and big data analysis has come to the fore, as have more mundane applications for rapid access to information including, regrettably, mis- and dis-information expedited by social media.[2]

Many of these publications have advised, inspired, implored, recommended, or urged the application of eHealth long after resolution of the COVID-19 pandemic.[3-7] The collective sigh "At last ...." has been almost palpable, as many eHealth proponents have exhaled loudly throughout the world after decades of exasperated effort to implement and integrate scaled and sustained eHealth solutions.

But is this 'promise' of rapidly expanded adoption, even integration, of eHealth into the fabric of health systems globally something to be hailed. Or is it a 'peril' about which we must be astute enough to view with caution? Certainly it is a paradox.

There will be a temptation to simply let the flood gates open, beckoning forth every eHealth solution imaginable like a Pandora's Box. We have already seen the innate introduction and adoption of 'spontaneous' telemedicine, where healthcare providers themselves saw the value of an eHealth solution and implemented it independently and without traditional steps or approval.[8] But is such blind faith in 'kismet' advisable when it comes to the widespread adoption and integration of eHealth – a known opportunity cost! There has been a somewhat step-wise (and time con-

suming) approach to introduction of successful solutions in the past;[8] will time be made for these steps in the urgency to implement eHealth?

What of the evidence-base for many applications of eHealth, which may be promising but which is not absolute? Cost-benefit analysis of eHealth in low and middle income countries has been said to be 'lacking',[9] the evidence-base for telemedicine has been described as 'equivocal',[10] and for telehealth it has been stated "The available evidence cannot promise that telehealth will solve the complex problems the healthcare system faces".[11] What of the varying capability of health systems (particularly in developing countries) to appropriately absorb, utilise, sustain, and maintain country-wide eHealth implementations and associated info- and infra-structure – let alone to be able to afford them? Health systems of limited resource-settings struggled prior to the pandemic; is the expectation they will not only recover from the added strain of a pandemic response and continue to absorb local and / or migrational population growth, but also sustainably adopt and integrate eHealth solutions! Implementation of e-health on a national basis is a complex undertaking.[12,13] Who will exercise the requisite caution to ensure only fitting evidence-based and needs-based eHealth solutions are selected for implementation in any specific setting? Profit motivated vendors? Pressed politicians? 'Dark side' eHealth proponents turned lobbyists?

Pressure to implement eHealth comes in many forms. Vendors are naturally excited by the anticipation of a growing global digital health market, in particular the mhealth market. It is projected to grow six-fold (at a CAGR of 28.5%) to over $600 billion dollars (USD) by 2026.[14] Politics govern socio-political, economic, and health aspects of each country, and a conducive political setting is essential for digital development which it is believed will be one driver of the post-pandemic recovery,[15] and this will include eHealth. Continued pressure also comes from the World Health Organization (WHO) which continues to urge member states to adopt eHealth / digital health. There are no published reports yet of eHealth proponents / advocates / champions pressuring policy- and decision-makers to adopt specific eHealth solutions, but inevitably this will occur. Reliance on such individuals will see variation in perspective and foresight, influenced by their experience, and by their breadth and depth of understanding of what constitutes eHealth / digital health. Each of these forms of pressure will provide significant stimulus to all 'users' – patients, providers,

policy-makers, and vendors – to adopt eHealth.

The dawning of a greater global understanding of the 'potential' of eHealth is encouraging. But society collectively, and the eHealth / digital health community specifically, must rise to the occasion. Enthusiasm must be tempered with thoughtful guidance regarding technologically appropriate, culturally attentive, environmentally sensitive, economically fitting, politically palatable, setting specific, health needs-based, and evidence-informed eHealth adoption, thereby reining in possible future misadventures. Given the anticipated post-pandemic opportunities, this approach may seem counter-intuitive - even counter-productive - but it is the responsible thing to do …….

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