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Telemedicine and public health – pearls and pitfalls

Sinha RK *et al*. Telemedicine and public health

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Abstract

We hereby comment on the interesting systematic review by Grewal *et al*. where they have provided an overall picture of the current status of available tele-health programmes in the USA with emphasis on the Amazon Clinic. Their analysis is an appreciable effort in discovering the features available and features lacking in these tele-health programmes. The concept of tele-health originated to curtail the need for physical attendance of patients at health clinics, and has been beneficial during the COVID-19 pandemic. We implore that the pearls and pitfalls of these programmes have to be understood by policymakers prior to forming a consensus regarding the availability, accessibility and affordability of these programmes as methods of healthcare delivery. Unrestricted proliferation of tele-health programs in their current form may pose threats to patient and provider safety and medicolegal liability; however, patients and providers must work together to improve them to meet their expectations and enable them to provide the best care for the ailing public.

Key Words: Telemedicine; Remote Access; Availability; Accessibility; Affordability; Ethics; Privacy; Medicolegal liability

Core Tip: The systematic review by Grewal *et al*. has provided an overall picture of the current status of available tele-health programs in the USA with emphasis on the Amazon Clinic. We present the pearls and pitfalls of these programmes in a critical analysis to conclude with a warning that unrestricted proliferation of tele-health programs in their current form may pose threats to patient and provider safety and medicolegal liability; however, patients and providers must work together to improve them to meet their expectations and enable them to provide the best care for the ailing public.

<u>TO THE EDITOR</u>

We read with great interest the article entitled ‘Strategic insights of telehealth platforms and strengths, weaknesses, opportunities, and threats analysis of Amazon's clinical endeavors’ by Grewal *et al*. recently published in the World Journal of Methodology[1]. They have provided an overall picture of the current status of available tele-health programmes which have been launched in the United States of America for the purpose of doctor-patient interaction, teleconsultation, and remote prescription. Their analysis is an appreciable effort in discovering the features available and features lacking in these tele-health programmes, and allows for an overview of the options available to patients who wish to benefit from these initiatives.

The concept of tele-health originated from observations that some parts of the doctor-patient interaction did not require the physical presence of the patient in front of the healthcare provider (HCP), and could be accounted for by bidirectional high-fidelity audio and/or video interaction. Serious attention to this aspect of tele-health was drawn during the COVID-19 pandemic wherein physical movement of persons was restricted through an international lockdown enforced by governments across the world[2]. Efforts of governments to allay the apprehensions of HCP and provided impetus to this approach. However, the pearls and pitfalls of these programmes have to be understood prior to forming a consensus regarding the availability, accessibility and affordability of these programmes.

The aforesaid systematic review has presented key features of these initiatives. According to the summary presented by the authors, Amwell appears to be the most feature-rich programme with accessibility in all 50 states, including pediatric and LGBTQ+ patients, acceptance of insurance and organizational subscribers, and coverage of behavioral and mental health. One or more of these facilities is not provided by other such tele-health programmes – for example, LGBTQ+ patients are not likely to benefit from Teladoc and CVS Minute Clinic. Amazon Clinic does not provide any of these facilities but is accessible in all 50 states. The authors have also provided an analysis of strengths, weaknesses, opportunities and threats (SWOT) for the Amazon Clinic[1]. We would like to add to the authors’ evaluation by critically analysing the basic concept of tele-health programmes, in an effort to provide readers the insights regarding the advantages and disadvantages of these programmes.

The authors have endeavoured to impress that tele-health is beneficial for the underserved population. The exact definition of the population yet underserved by adequate access to health facilities is a matter of continuous monitoring by local healthcare bodies, which should be supplemented by a system of national reporting which can then engage HCPs from areas of surplus to the areas which need them. For example, the latter may include mountaneous terrain or islands that are difficult to reach and have limited healthcare facilities for larger areas, wherein access to immediate consultation is limited by distances. Inequalities in healthcare accessibility also stem from disparities in insurance coverage, availability of preventive services and household income[3].

The authors have rightly pointed out about the difficulties faced by lay public in locating essential information from treatment cards and reports, as also the understanding as to how to initiate a virtual consultation[1]. The concept of doctor-patient relationship has been challenged by concerns that teleconsultation affects the accuracy of the patient's understanding of the treatment and their compliance, leading to an inadequate assessment of the impact of the treatment on the part of the HCP[4]. While there may be complacency on the part of patients who believe they have already come under medical care may lead to aggravation of the conditions, identifying the need for surgery may get delayed due to the HCP possessing inadequate information about the exact physical condition of the patient. Thus, not interfacing the patient, and not performing a physical examination by hand can be dangerous. This practice has not been preferred beyond the COVID-19 pandemic, and even made illegal in some countries.[5] In addition, the medicolegal liability of doctors who are not actually examining the patients needs to be determined. How much of an overall responsibility can be fixed on clinicians who have not performed a detailed examination needs to be defined in terms and conditions of liability[6].

The authors reported that 6% of Teladoc consultations resulted in a follow-up visit for similar conditions and that the tele-mental health platform Brightside provided superior outcomes[1]. It is known that tele-health may improve follow-up and have a positive impact on outcome. However, these interim endpoints cannot be utilized to define the success or failure of the tele-health initiative. For instance, explanation is required on the proportion of follow-ups on the teleconsultation portal and physically, the number of new disorders diagnosed on these follow-ups and the quality of life improvements achieved through them, which are difficult to quantify but essential to compare it with similar initiatives[4,7].

We agree that teleconsultation can be effective for elective procedures like post-cancer surgery skin reconstruction and follow-up care. This is also possible for diagnosed ophthalmic conditions like cataract, the surgery for which is elective for most types. How much can this be effective in other disciplines or other conditions is a question yet unanswered[8]. Similarly, the advantages of the Amazon clinic have been enumerated to be the quality of care, patient retention, high satisfaction rates and overall cost saving. The quantitative cutoff for these interim endpoints is yet to be found. While the mentioned use of existing customer base data, wide access anywhere in the USA, 24/7 service, video or text facility and payment flexibility can be advantages for patients, other initiatives such as the Behemoth digital pharmacy, Google helpouts and IBM Watson health unit also had the same opportunities but could not be successful, implying that these are not the only considerations that patients may have[1,4,7,8].

Ethical considerations are an added problem. A tele-health provider is often viewed akin to taxi or hotel aggregators, performing dichotomy of fees against the utilization of their user interface. With growing usage, it must be predetermined how exploitation of registered HCPs would be prevented before the HCPs consider enrolling in these programmes. Data privacy and patient autonomy also have the potential to be compromised[4-7]. There is also a need to improve the documentation of user and system quality aspects of these platforms, which are responsible for poor acceptability of such programs[9].

In conclusion, while tele-health as a method of healthcare delivery does have several advantages and disadvantages, and policymakers must consider the aspects of patient and provider safety, ethics and medicolegal liability. Unretricted proliferation of these programmes must be effectively regulated, and patients and providers must work together to improve them to meet their expectations and enable them to provide the best care for the ailing public.

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