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EDITORIAL

Telemedicine and COVID-19: beyond just virtual consultations – the Singapore experience

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The coronavirus disease (COVID-19) pandemic has introduced significant changes to healthcare delivery, with more patients turning towards telemedicine. In this article, we describe examples of telemedicine in Singapore and the need to adopt a cautious approach towards it.

Recognized domains of telemedicine include teletreatment for diagnosis and clinical care, telemonitoring for remote monitoring of patients using biomedical information technology, and telesupport for educational and administrative purposes.

During the COVID-19 pandemic, demand for telemedicine has increased steadily,[1] likely stemming from policies encouraging social distancing and public willingness for digital health services. An example would be MyDoc, a telemedicine provider in Singapore, which reported an increase of more than 160% in daily active users since the beginning of 2020.[1] Besides digital consultations, measures were taken to ramp up other domains of telemedicine, in particular telemonitoring and telesupport. This includes tools such as the Singapore COVID-19 Symptom Checker, where artificial intelligence is used to advise users on their next course of action should they experience the symptoms listed in the application.[2] The "Flu Go Where" microsite advises those who meet the criteria for COVID-19 screening on the location of the nearest clinic. In terms of pharmaceutical logistics, a similar service "Mask Go Where" webpage advised on mask distribution, while medication delivery services were ramped up for delivery of temperature-controlled medication nationwide. In the realm of telemonitoring, 20,000 pulse oximeters were distributed and telekiosks for video consultations were made available as part of a wider comprehensive health support plan.[3] Personalized concierge medical services via app such as Speedoc[4] also improved patients' accessibility to medical services.

Telemedicine has played a crucial role in efforts against the COVID-19 pandemic, with its unique ability to minimize physical physician-patient contact, thereby breaking infection chains, as well as its ability to optimise healthcare system capacity during demand surges. Being a densely populated city-state renowned for its digital infrastructure,[5] a key advantage that Singapore has is the connectivity and seamless experience, where the government embraced an all-rounded approach towards telemedicine. Beyond virtual consultations, Singapore's approach has been multipronged, with various screening and primary prevention tools to enhance digital health services, with timely option for care in brick-and-mortar facilities if necessary.

While the advantages of telemedicine have been applauded, we wish to highlight areas that need to be addressed before telemedicine becomes the mainstay of medicine. This includes the need for legislations governing telemedicine, as well as digital security and personal data protection. Lawsuits arising from medical negligence via telemedicine platform and compromises in medical records and patient privacy would represent major setbacks to the industry.[6] It would also likely require more time before digital infrastructure and equipment for safe and comprehensive consultations become more widely available.

Nonetheless, we believe further aspects of telemedicine can be explored, such as that in telesupport, with use of digital tools for

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pre-operative patient counselling and collection of peri-operative outcome measures for research. Postoperative rehabilitation can also be enhanced with telemonitoring tools. COVID-19 has ushered a new era of digital technology in healthcare, and more can be done to harness its potential while moving forward with caution.

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