

Connected and Digital Health / Telehealth

Sun. Nov 22, 2020 1:20 PM - 2:10 PM Room E-2 (Congress center 5F - Conference Room 53)

[AP2-E2-2-03] A Snapshot of Telehealthcare Services in Sri Lanka: Gaps and Opportunities

*Gumindu G.A.K Kulatunga¹, Roshan H. Hewapathirana², Rohana Basil Marasingha³, Vajira H.W. Dissanayake²
(1. Postgraduate Institute of Medicine, University of Colombo, Sri Lanka, 2. Faculty of Medicine, University of Colombo, Sri Lanka, 3. Faculty of Medicine, University of Sri Jayewardenepura, Sri Lanka)

Keywords: Guidelines, Health Informatics, Healthcare Services, Sri Lanka, Telehealth

Delivery of care at a distance by telehealth is becoming a major mode of care provision worldwide. Although benefits are more for the elders, the digital divide prevents them from using the full potential of such applications. Absence of guidelines or laws directly related to telehealth in Sri Lanka has made many service providers to implement such initiatives haphazardly. The main objective of this study was to assess current telehealth practices in Sri Lanka with the view to streamline services. Characteristics of institutes providing telehealth were studied using a voluntary web-based self-administrated questionnaire. Nine institutes fully completed the questionnaire. All telehealth services were provided by the Sri Lanka Medical Council registered health professionals. Eight programmes were expecting improvement of patient convenience and better coordination of healthcare like in the rest of the world. Three had institutional medical health record systems which were standalone. Six were providing services on health promotion and primary healthcare while the global trends concentrated on clinical care. None were addressing rural scarcity of specialized healthcare, unlike other countries. Three used video conferencing for Telecare and only one issued internet-based prescriptions. Multi-factor authentication and end-to-end encryption of data were used by a few. Inadequate guidelines increased cost of supporting technology and inability to refer patients between institutions were identified as main barriers in telehealth implementation. In comparison with global standards, protocol measures taken to coordinate telehealth were found to be inadequate in Sri Lanka. Therefore, we recommend that existing medical guidelines and legislation be modified to keep abreast with the rapidly expanding technologies in telehealth.

A Snapshot of Telehealth Services in Sri Lanka: Gaps and Opportunities

Gumindu G.A.K. Kulatunga ^a, Roshan H. Hewapathirana ^b, Rohana B. Marasinghe ^c and Vajira H.W. Dissanayake ^b

^a Postgraduate Institute of Medicine, University of Colombo, Sri Lanka

^b Faculty of Medicine, University of Colombo, Sri Lanka

^c Faculty of Medical Science, University of Sri Jayewardenepura, Sri Lanka

Abstract

Delivery of care at a distance by telehealth is becoming a major mode of care provision worldwide. Although benefits are more for the elders, the digital divide prevents them from using the full potential of such applications. Absence of guidelines or laws directly related to telehealth in Sri Lanka has made many service providers to implement such initiatives haphazardly. The main objective of this study was to assess current telehealth practices in Sri Lanka with the view to streamline services. Characteristics of institutes providing telehealth were studied using a voluntary web-based self-administrated questionnaire. Nine institutes fully completed the questionnaire. All telehealth services were provided by the Sri Lanka Medical Council registered health professionals. Eight programmes were expecting improvement of patient convenience and better coordination of healthcare like in the rest of the world. Three had institutional medical health record systems which were standalone. Six were providing services on health promotion and primary healthcare while the global trends concentrated on clinical care. None were addressing rural scarcity of specialized healthcare, unlike other countries. Three used video conferencing for Telecare and only one issued internet-based prescriptions. Multi-factor authentication and end-to-end encryption of data were used by a few. Inadequate guidelines increased cost of supporting technology and inability to refer patients between institutions were identified as main barriers in telehealth implementation. In comparison with global standards, protocol measures taken to coordinate telehealth were found to be inadequate in Sri Lanka. Therefore, we recommend that existing medical guidelines and legislation be modified to keep abreast with the rapidly expanding technologies in telehealth.

Keywords:

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Introduction

Delivery of healthcare at a distance by telehealth and telemedicine is becoming a major mode of care provision worldwide. Telehealth can be described as the delivery of healthcare at a distance using telecommunication technologies [1]. Telemedicine, on the other hand, is the curative or the clinical part of telehealth [2].

Although benefits are more for the elders, the digital divide prevents them from using the full potential of such applications [3]. Telehealth programmes in most countries adhere to recognized standards such as ISO/TS 13131 by the International Organization for Standardization [4] for quality maintenance. However, lack of guidelines or legislations directly related to telehealth in Sri Lanka has made many service providers implement such initiatives haphazardly. Therefore, it is foremost essential to identify services provided by telehealth programmes in streamlining country's digital healthcare delivery process. It will be helpful for the policymakers to evaluate the telehealth data collected before the pandemic to use it as an evidence base to plan for future telehealth services for the community when the pandemic is no longer the case in Sri Lanka.

The main objective of this study was to assess existing telehealth practices in Sri Lanka with the view of streamlining services to improve health care delivery.

Methods

To assess the characteristics of telehealth programmes in Sri Lanka, a web-based voluntary self-administered questionnaire, prepared in the English language, pretested and validated, was emailed to previously identified telehealth coordinating institutes, during November-December 2018. The institute list was made using Google keyword search as well as other informed sources in November 2018.

Results

Only nine programme managers representing nine out of 20 telehealth institutes completed the questionnaire fully, with a completion rate of 45%. Eight institutional programmes provided island-wide telehealth services. There were seven hot-lines functioning 24/7. Five telehealth programmes were funded, free of charge, by the government sector. Four of these five maintained the anonymity of consumer services. In the private sector, consumers are required to register with personal details.

Eight programmes were expecting better co-ordination of healthcare, improved patient convenience and better patient outcomes through telehealth. However, none were giving attention to research or compensation of rural health scarcities like specialist care. All nine planned to reduce patients' healthcare costs by saving travel time and seven programmes

planned through proper health education and second opinion. However, only two have given attention to reducing the cost by expanding diagnostics.

All nine programmes agreed that telemedicine related care must be provided only by Sri Lanka Medical Council (SLMC) registered physicians and it must be applied only for selected appropriate health conditions. Six were providing services related to health education and promotion and four on primary care. Only one was interested in clinical care and none on acute medical services.

At the time of the study in 2018, less than half of the institutes used advanced data security measures such as end-to-end encryption of data, multi-factor authentication and intrusion detection. However, all had a written document assuring privacy and confidentiality of patient information. Seven programmes have done regular audits and already were or in the final stage of developing a written set of Standard Operation Procedures (SOP). While an Electronic Medical Record (EMR) system was available in three programmes, they operated in silos without interoperability and EMR content was not divulged by the programme managers. Three had synchronous telehealth video consultations while only one issued internet-based prescriptions using an its-own software system. All the others used regular telephone lines for telehealth service delivery. Only three institutes issued electronic Personal Health Number (PHN) for patients as recommended by the department of health.

Inadequate legislation/guidelines, high cost of technology utilities and inability to refer patients between institutions, lack of research on telehealth in Sri Lanka were identified as main barriers in telehealth implementation in Sri Lanka.

Discussion

Those who completed the survey fully were among the few key telehealth providers who are well established in Sri Lanka. However, some were reluctant to describe their programme details. Most of the respondents provided services on health service coordination and health promotion in comparison to the general trends across the globe that focuses on general practice, clinic management, acute medicine and remote monitoring [5]. With regard to the programme ownership, Sri Lanka shows similarities for example with Australia [6] where 62% of telehealth coordinating institutes being coordinated by non-profit public sector institutes,

Telehealth programmes in Sri Lanka, similar to USA, were more interested in the improvement of patient convenience, healthcare coordination and enhanced health outcome [5]. However, reducing the cost of care delivery, improving healthcare access to rural patients, expansion of services via rare specialities and hospital readmission reduction [5], [7] were considered important in USA, unlike Sri Lanka.

Sri Lanka telehealth institutes lack interoperable EMR systems, for example, compared to USA where about 20-30% institutes [5] have these systems in place. The main challenges in telehealth implementation in other countries were, verifying doctors' qualifications, regulation of professional licensing, fee reimbursement and broadband connectivity in rural areas [7-8]. Sri Lanka does not have advanced interconnected telehealth services and the challenges were more related to lack of guidelines/legislation and infrastructure.

Conclusion

In comparison with global standards, protocol measures taken to coordinate telehealth services were found to be inadequate in Sri Lanka. Programmes need to improve the delivery of health services on clinical care, specialist care, rural community care and elderly care which call for long term follow-up. We highly recommend the need for existing medical guidelines to be modified to keep abreast with the rapidly expanding technologies in telehealth.

Acknowledgement

The authors would like to thank all individuals and institutes participated in the survey. We also thank and recognize Health Informatics Society of Sri Lanka, Postgraduate Institute of Medicine, University of Colombo Sri Lanka and Clinical Informatics Research Unit, University of Southampton United Kingdom for their academic assistance.

Ethical approval for this research was obtained from the Ethical Review Committee Postgraduate Institute of Medicine, University of Colombo, Sri Lanka.

The authors declare no potential conflicts of interest concerning the research.

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Address for correspondence**Dr. Gumindu Kulatunga**Postgraduate Institute of Medicine, University of Colombo
Sri Lanka

E-mail: kulatunga.ggak2017@pgim.cmb.ac.lk