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Experiences in Implementation of a Statewide Telemedicine System at a Medical College with Multi-speciality Hospital in Kerala

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Abstract

This is an extended abstract of a paper which narrates the authors' experiences in implementing a telemedicine system in their institution in the southern Indian state of Kerala, as a part of a state-wide telemedicine network. The focus was to achieve the maximum with the limited resources available. Though the project is running smoothly as outlined in the initial phase, scaling up to more rural centres only will make it a cost-effective and sustainable solution.

Keywords:

telemedicine, telehealth, low-resource setting, developing country

Introduction

Academy of Medical Sciences, Pariyaram is one of the new generation medical colleges in the southern Indian state of Kerala. It has been chosen as one of the specialist nodal centres under the Kerala Government's Tele-Medicine project connecting various Medical Colleges in the state with District Head Quarters Hospitals in the first phase and later to be extended to the Primary Health Centres.

The Project

The project is partly funded by the Indian Space Research Organization (ISRO) and is christened as the Kerala Tele-Health & Medical Education Project. An IP based system, working on satellite technology, it has got its own merits and a few demerits as well. This paper discusses the issues faced by the authors and their fellow officers in implementing this project statewide. Though ISRO has been providing such connectivity elsewhere in the country it is the first time where it has been declared to be used for educational activities as well.

Figure 1- Map of India showing Kerala in the South

Figure 2 – Map of Kerala showing Pariyaram

Currently we are getting consultations from district hospitals and at times from other specialist centres as well. Similarly we can seek expert opinion from other specialist centres as well. There is customized software for using this, which helps in transmitting electronic medical

records and imaging data from a tele-nodal centre to a tele-specialist centre like ours. (Store and forward method) Based on the patient record, an appointment is fixed for videoconferencing between the consultant at the specialist centre and the treating doctor at the nodal centre (Real time method). But the above software does not support consultations between the tele-specialist centres - this is a major drawback to be worked upon - for which videoconferencing alone has to be used.

The connectivity is extended from the main tele-medicine room to the operation theatre complex, one lecture theatre and a small seminar hall. The connectivity for operation theatre is being used both for seeking expert advice as well as to conduct Tele-Education programmes on surgical techniques. The connectivity with the lecture theatre and seminar hall again is intended for scaling up the continuing education activities. In the next phase of the project, apart from extending the connectivity to more centres, plans are put forward for using the connectivity for sharing electronic resources and also to use it for enhancing surveillance and epidemiological research.

Conclusion

Here we have tried to give just an overview of this large scale eHealth programme. A detailed account of the project from its planning stage to the implementation stage has to be narrated in order to derive lessons and best practice guidelines, which shall be dealt with in the full paper. Finally the paper will compare with other institutions within our community and from outside and shall highlight the best practices. Definitely there is a lot to be learnt from the Kerala State Tele-Health & Medical Education Project.

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