

DocCall: a mobile phone based medical advice service to accommodate health care unmet needs in Sri Lanka

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Abstract

Non-availability of access to authentic health advice when needed, especially in emergency situations, is one of the major problems in Sri Lanka. This paper describes how the telemedicine approach was used to provide a solution to this problem. Convenience is a must in today's fast paced world, hence areas which were hitherto not considered fit for technical innovation have evolved to match the needs of the modern society. Instantaneous access to advice by competent medical professionals on health conditions is considered to be vital. A pre-requisite of such a service include protection of privacy and anonymity of the care recipient. Moreover, availability of a governing professional body to scrutinise the ethical behaviour of the care provider is deemed essential to deliver trustworthy medical advice to the recipients. Use of Information Communication Technology to provide health care at a distance (telemedicine) is a novel tool. Empowerment of people to use telemedicine tools to access medical advice in an emergency, chronic care as well as in confidential and sensitive matters is a realistic concept, which requires evaluation by all stakeholders.

Keywords - Telemedicine; Privacy; Anonymity

Introduction

Instantaneous access to qualified medical advice in an emergency as well as for any chronic medical condition is of paramount importance to majority of the people in this fast-paced society. For instance, proper guidance given by a doctor to a person assisting a victim of domestic or road traffic accident could prevent further harm to the victim and improve the chances of survival. Instantaneous access to qualified medical advice is also useful for working parents, who are compelled to leave their children with a domestic aide or elderly parents, who otherwise live with constant fear due to their inability to attend to the health disasters at home.

There are other concerns when it comes to issues such as psycho-social conditions. The common barriers preventing people with mental health and sexual health issues from seeking medical help

includes confidentiality concerns, preferring self-help over professional wisdom, perceptions that no one can help, and lack of knowledge of where to access potential helpers. This phenomenon is not unique to Sri Lanka and is a global concern. According to the study done by Kate and colleagues in England, 34% of men and 41% of women reported having sexual problems and only 6% of men and 4% of women who wanted help actually received it⁽¹⁾. Another study conducted among adolescents living in rural Australia found that social visibility and lack of anonymity potentially having a negative impact on rural young people seeking help for mental health problems⁽²⁾. According to the findings of a study by Garside and colleagues of School of Postgraduate Medicine and Health Sciences, University of Exeter, Exeter, UK, many teenagers who were subjected to the study have voiced their concern over the possibility that information about them might be casually passed on in social or family situations because of the number of known connections between health professionals and others in their small communities⁽³⁾.

Telemedicine, use of Information Communication Technology to provide health care at a distance, can effectively facilitate health care provision using readily available telecommunication tools to reach needy people in geographically distant locations in times of despair or for routine care and it can safeguard anonymity and confidentiality where required. In fact, telecommunication and medicine have always been close allies. For instance, Alexander Graham Bell's first telephone conversation since its invention has been to seek medical help after he spilt sulphuric acid on himself in 1876. Thus, the inventor himself experienced the speed, improved access and convenience of a telephone medical consultation on his very first encounter with the new communication tool.

Evidence on effectiveness of telemedicine is emerging worldwide. A telephone consultation system to support pediatrics after hour care initiated in Denver showed that the satisfaction among parents was exceptionally high on a variety of issues⁽⁴⁾. Similarly, a telephone advice system in the Department of Accident and Emergency Medicine Royal Liverpool Children's Hospital, Liverpool was successful in preventing a large number of unnecessary visits either to the hospital or to general practitioners⁽⁵⁾. More importantly, a clinical trial on telephonic case management has demonstrated that standardised telephone case management in the early months after admission for heart failure reduced re-admission rates and healthcare costs compared with routine models of care and was comparable to other disease management approaches⁽⁶⁾.

However, to provide a trustworthy and efficient service, mere presence of technology and care providers is considered to be inadequate. Quality of health care services depends fundamentally on the ease of access, skills of care providers, good health care infrastructure, confidentiality, privacy and protection of anonymity of the care receiver. In Sri Lanka, we observe with much discomfort, breach of some of these fundamentals owing mainly to inadequacy of resources, higher turnover of care receivers and ignorance of care providers. In this context, participation of a reputed professional medical organisation to observe and regulate the adherence of the membership to the universally accepted norms of ethical conduct is deemed mandatory. Selection of the telecommunication service provider would be based on their capacity to reach a wider clientele spread across the country and technical capacity to meet the stringent quality standards required to protect their privacy.

Method

After observing the prevailing health care system, the Sri Lanka Medical Association as the national professional medical association took the bold initiative to introduce a telemedicine solution to Sri Lankans of all walks of life. Sri Lanka Telecom Mobitel (Pvt) Ltd. was invited to provide the telecommunication platform for the DocCall medical advice service.

DocCall service is accessible for all active Mobitel subscribers via the easy to remember short code 247 (standing for 24 hours a day 7 days per week) regardless of their connection type (ie. Prepaid / Postpaid). DocCall connects people from all corners of the country with a qualified doctor 24 hours a day 7 days a week in their preferred language for initial medical advice and guidance. In order to ensure the anonymity of the client and the doctor, a conference bridging platform is utilised to link two parties. By dialing 247 a patient can access the DocCall platform which creates a conference bridge between the doctor and the patient without revealing the patient's number and demographic information. DocCall platform operator has no access to the information shared between the doctor and the patient.

Findings

A survey of a group of 1346 customers who have already used the service showed that 1279 (95%) of them were highly satisfied with the service. Furthermore, it was noted that the service was accessed by a diverse segment of customers from all around the country ranging from teenagers to senior citizens, students to PhD holders and housewives to professionals. Distribution of DocCall users by place of residence is shown in Figure 1.

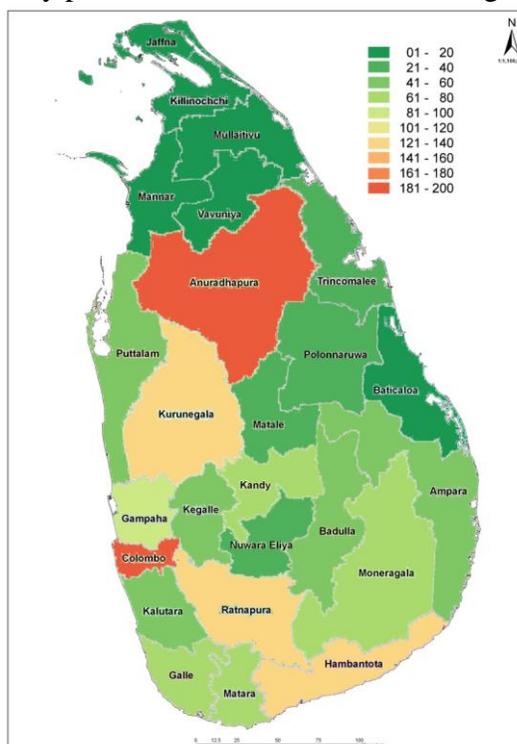


Figure 1. Distribution of DocCall users by place of residence

Analysis of calls received from clients since the commencement of the service showed the stark reality of the unmet needs of traditional health care provision. Figure 2 shows the distribution of DocCall users by gender.

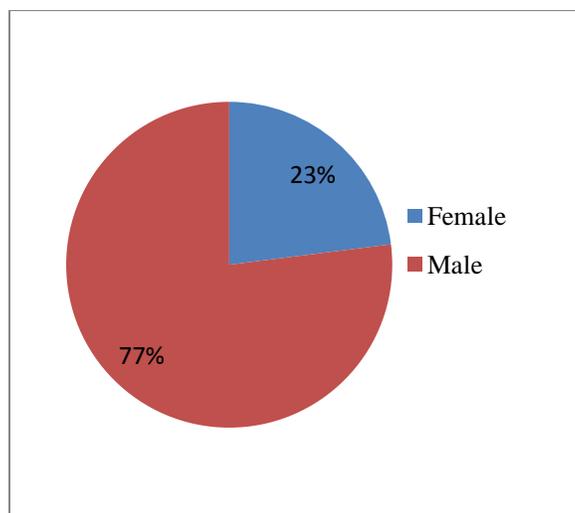


Figure 2. Distribution of DocCall users by gender

Senior citizens, mostly with chronic illnesses are concerned about their diseases and the treatment received by them. They use of the DocCall service to query a doctor to clarify their doubts or needs, they claim have not been fulfilled at a traditional consultation. Figure 3 shows the distribution of DocCall users by age group.

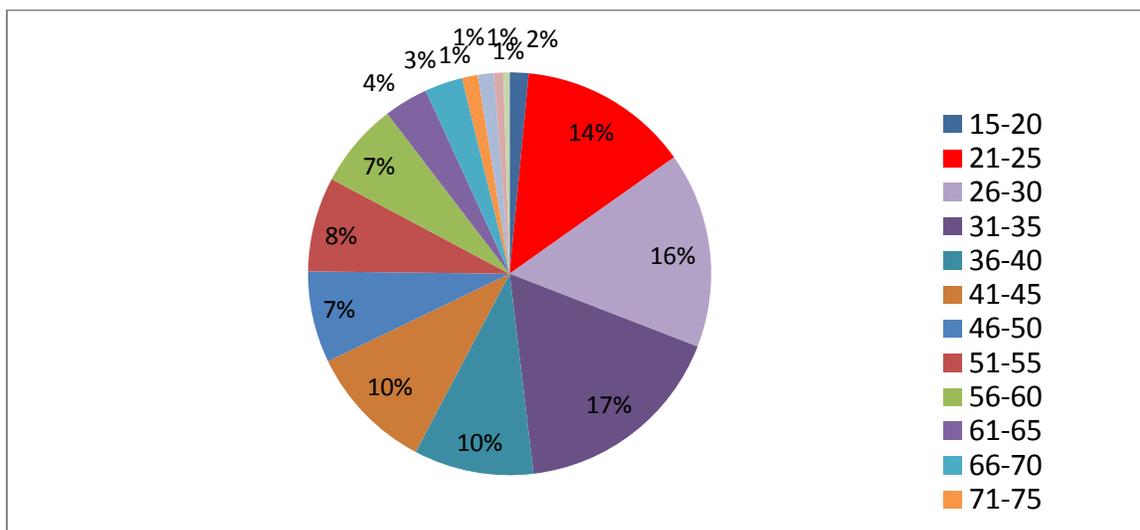


Figure 3. Distribution of DocCall users by age group

Many calls received from male clients were on sexual problems ranging from erectile dysfunction, premature ejaculation and sexually transmitted diseases. Most of the callers had

never talked to their doctors about their condition mainly due to ignorance, perceived ‘stigma’ and embarrassment associated with having one-to-one discussions on sexuality (see Figure 3).

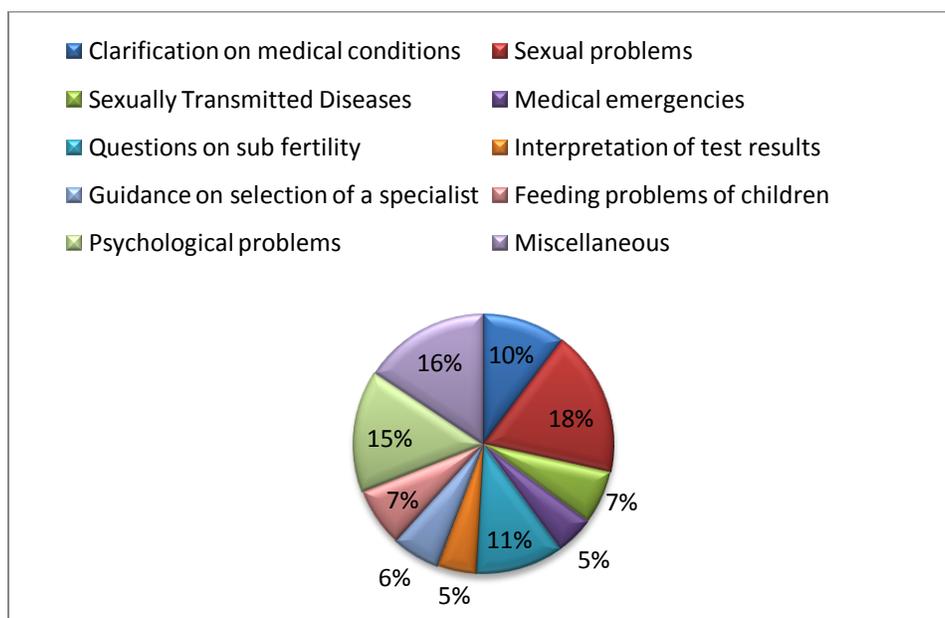


Figure 4. Distribution of DocCall users by query

Hence, they resort to receiving advice and obtaining care from unqualified persons. One young client with premature ejaculation living in Tangalle (far south of the island) had travelled several times to Colombo to see a ‘traditional healer’ bypassing many government hospitals and specialists merely due to lack of awareness of services available at local hospitals and was too shy to ask about it from anybody.

A considerable number of women with psychological problems only wanted guidance to find the right doctor. Shedding light on the bitter realities of today’s fast paced, non-personal relationships, it was revealed by a woman, who had wept throughout the ten-minute consultation, that there was no one at home to listen to her problem. The doctor was successful in consoling her and directing her to seek appropriate medical care at the end of the conversation.

Many questions related to reproductive health have come from female callers as well. While majority of queries from women on reproductive health were focused on sub fertility and emergency contraception few participants inquired about sexually transmitted diseases and sexual dysfunction.

Discussion

Telemedicine is the use of Information Communication Technology to provide health care from a distance. It can facilitate communication between a health care provider and a care receiver without each other’s simultaneous physical presence. The most important aspect of telemedicine is that, it is not intended to replace the traditional doctor-patient relationship but to enhance existing modes of communication, thus providing more opportunities for an effective interaction

between doctors and clients. For instance, people with socially unacceptable illnesses and those unable to find proper solutions to their problems due to stigma or ignorance become desperate and turn to unqualified persons for help jeopardising their health and wealth. With the help of the Doc-Call service people have the choice of receiving qualified medical advice without ever revealing their identity thus improving the chances of getting proper medical attention.

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