

Implementation Of A Telemedicine Program In Dermatology Derm-Tel Program

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Introduction

In the 21st century, telemedicine has proven to be a major innovation in medical healthcare services. Telemedicine uses “Information and communication technologies” (ICTs) to overcome geographical challenges and overpriced treatments by providing rapid medical services regardless of external circumstances. Telemedicine programs can be defined as medical/ clinical health care services through audio-visual conferencing technology in remote areas that face the challenges of specialist unavailability. The telemedicine program is specifically beneficial for remote areas that cannot easily access medical services.

Tele-Dermatology: Derm-Tel Program

The innovative technological role of telemedicine has immense significance in the field of dermatology because of the significance of visuals of dermatological conditions in this particular field. The visual importance of dermatological conditions has propelled the importance of teledermatology in this global pandemic of COVID-19. In the current global crisis of coronavirus, it is a grave risk to go to the hospital to get treatment for their skin problems. Therefore, the Derm-Tel program has taken the initiative to provide quality medical care related to skin problems at patients’ homes. The histopathological images showing the skin symptoms are sufficient for the dermatologist to provide consultation online (Telemedicine program) in remote areas where consultancy of dermatologists is not present. This essay aims to design a telemedicine program in the field of dermatology: “Derm-Tel”. The designed Derm-Tel program will include the key factors of Supply and Demand, Insurance Coverage, Evaluation of Cost-Effectiveness and Quality, Price Determination, Regulatory Concerns, and the Biblical Perspective.

Supply And Demand

This Derm-Tel program will strive to become an excellent virtual medical care program in the field of dermatology. Usually, there are two service models implemented in the field of teledermatology. These two service models are the Live Interactive model (LI) and the Store and Forward (SAF) model. The Store and Forward Model (SAF) is also known as the “Asynchronous model”, in which the medical treatment and consultation take place outside of real-time consultation with the patient. The patient shares his/her complication and medical data with the primary care physician (PCP). The PCP then

shares this medical data and patient reports with the consultant.

Due to the increased demand for specialists in dermatology in rural/ remote areas, the Derm-Tel program will use the Store and Forward (SAF) model for implication. In the contemporary scenario, the number of specialized dermatological services is increasing day by day, causing strain on dermatology consultants. Therefore, the SAF model will be incorporated to meet the demands of the medical services in dermatology (Mortan 2010). This SAF-based teledermatology program (Derm-Tel) will particularly enhance dermatological access to remote/ rural areas that lack access to specialist dermatological care or have suffered from a shortage of dermatologists.

The Derm-Tel program will use an online website (www.Der-Tel.com) to function by involving the patients, primary care physicians, Dermatological consultants, accounts manager, and follow-up manager. The panel will be based on 4- person consultants experienced in the field of dermatology. There will be four primary care physicians (PCPs): 2 PCPs on the morning shift and 2 PCPs at night, who will address the patient complaints via phone call, email, or online form. The Derm-Tel will employ a primary care physician (PCP) who will upload the patient's medical notes via email or call along with the image of the concerned laceration on the website. The patient must provide a high-quality image to help the dermatologist diagnose the skin problem accurately. The patient can visit the nearest clinic to use a dermoscopy to give a detailed image. The licensed dermatologist (consultant) will view the image along with details and advise the patient on his/her online report. A phone call will be made to the patient to inform him about his diagnosis report, which will be uploaded to the website along with the prescription. The patient can view the report on the website after paying online, and the report will be validated by the accounts manager. Follow-up will be ensured, ranging from 1 month to 6 months, depending upon the severity of the skin problem by the follow-up manager. These actions will be made via email, phone calls, and messages. The Derm-Tel program will cater to skin problems related to General Dermatology, Pediatric Dermatology, infectious Dermatology, Acne, Eczema, Psoriasis, and Rosacea.

Insurance Coverage

The Derm-tel program understands the major challenges faced by patients regarding reimbursement fees and policies. Derm-Tel will accept insurance plans, including reimbursement policies, during the global crisis caused by the coronavirus. Der-Tel accepts mostly all insurance carriers. However, the patient must confirm their insurance plan with the PCP or accounts officer before their online appointment. Derm-Tel program will mostly cover the insurance carriers in Massachusetts, New Hampshire, and Rhode Island. The rural and LGBT community will be offered exceptional insurance plans designed according to their level of employment.

Evaluation Of Cost-Effectiveness And Quality (The Triple Aim)

The SAF model for teledermatology is considered the most preferred and accessible model, and it ensures cost-effectiveness and quality in providing medical care services in rural areas. The capital costs of the SAF model will include a good quality digital camera, internet connection, and a dermoscopy in complex case scenarios for examining the lesions. However, the development of smartphone technologies and camera resolution have played a significant role in further reducing cost expenditure. Therefore, the cost of buying a digital camera will also be reduced. According to Snoswells' systematic review, the SAF teledermatology model is found to be the most cost-effective and accessible teledermatology model when it is implemented on triage patients (Snoswell 2016). The Derm-Tel program will be most beneficial for the remote areas of patients who have to travel a long distance just to have an appointment with their consulting dermatologist. Potential analysis of teledermatology consultations conducted in The Netherlands concluded that the SAF model for dermatology prevented 74% of in-person referrals and an 18% decrease in healthcare disbursement (Van Der 2011). Significantly, this Derm-Tel program will provide decreased healthcare expenditure and increased healthcare quality in a short time globally across rural areas.

Price Determination

The Derm-Tel program is based on the prime motive of cost-effectiveness for rural/remote areas. Therefore, the major goal of this program will be technological flexibility and decreased service delivery costs. The patients will have to pay \$22.00 for their initial E-report/diagnosis and prescription by the dermatological consultant. After the first E-visit, the patient has to pay half the amount, which will be \$11.00, for their follow-up reports. Furthermore, special discounts will be offered to patients who are informal employees.

Regulatory Concerns

In the implementation of this model (Derm-Tel) for teledermatology, the rules and regulations will be the utmost priority. Radical measures will be taken to ensure the ethical concerns, security, and consent in this program. According to the American Medical Association (AMA 2016), new guidelines have been issued to carry out ethical practices. These guidelines encourage coordinated improvement for the limitations faced by the physicians and the patients. The major parameter which will be the prime focus of this program is the security protocols of the patients. The staff involved in the program will ensure the security protocols of the patient's information. The confidentiality and the integrity of the patient's information will be secured. The data involving the images of the skin problem sent by the patients will be kept in highly secure servers and only visible to the consulting dermatologist.

The consultant dermatologist will share the case scenario of the patient with other dermatologists for a joint opinion only with the patient's consent. Proper consent forms and protocols will be followed for sharing the patient's data with other telecom programs. Only licensed telederm institutes by the Federal States of Medical Board will be approached for consultation and conducting research.

Biblical Perspective

Christianity and the fields of medicine have a long, endless relationship. According to the Bible's quote, "Bless the Lord, O my soul, & forget not all His benefits, Who forgives all your iniquity, Who heals all your diseases." (Psalm 103:2-3). In the Christian religion, God has embedded immense importance for the healers or, we could say, the doctors. The main premise of the Derm-Tel program's foundation relies on the purpose and gift given by God to be able to serve people in need. Religion gives us faith to keep struggling till the last chance. We witness the healing of sick patients throughout our medical careers and observe the power of God. In the medical journey, we find the glory of God in full display. Indeed, it is a privilege to witness such glory and acquire the most important rank given by God.

Conclusion

The Derm-Tel program has the potential to improve access to dermatological consultants for patients living in rural and remote areas. This program is particularly designed for people living in rural/remote areas or who cannot access quality treatment by dermatological consultants during this global coronavirus pandemic. It will globally associate with other teledermatology programs to deliver extensive medical care and expert advice. Therefore, the Derm-tel program promises to provide cost-effective medical treatment, quality medical care, and experienced practitioners in the field of dermatology.

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