ON-DEMAND TELEMEDICINE USING WEB SERVICES

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Abstract

On-demand Telemedicine is a Web application, which provides a comfort level to the patients while taking appointments from doctors by updating their profile. This Web application acts as an User Interface, whereas the database containing the doctor's details, patient's symptom details, and appointment details are maintained. Doctor can view their scheduling time and patient's name for the present day in the data grid view. Online consulting facility and Telemedicine service is also available in emergency cases. The *SMS alert* is send to the patient before a day of an appointment date as an invoice.

Key words:

Healthcare,

Appointment scheduling,

Symptoms registration,

SMS alert,

Online consultancy

Introduction

On-Demand Telemedicine is a Web Service, which is used to help the patient to schedule an appointment. Telemedicine is the use of medical information exchanged from one site to another through electronic communications to improve a patient's clinical health status. Telemedicine includes a growing variety of applications and services using two-way video, e-mail, smart phones, wireless tools, and other forms of telecommunications technology. Telemedicine often refers only to the provision of clinical services while the term telehealth can refer to clinical and non-clinical services such as medical education, administration and research.

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Telemedicine is not a separate medical specialty. Products and services related to telemedicine are often part of a larger investment by health-care institutions in either

information technology or the delivery of clinical care. Even in the reimbursement fee structure, there is usually no distinction made between services provided on-site and those provided through telemedicine and often no separate coding required for billing of remote services. Patient consultations through videoconferencing, transmission of still images, e-health including patient portals, remote monitoring of vital signs, continuing medical education, consumer-focused wireless applications and nursing call centers, among other applications, are all considered part of telemedicine and tele-health.
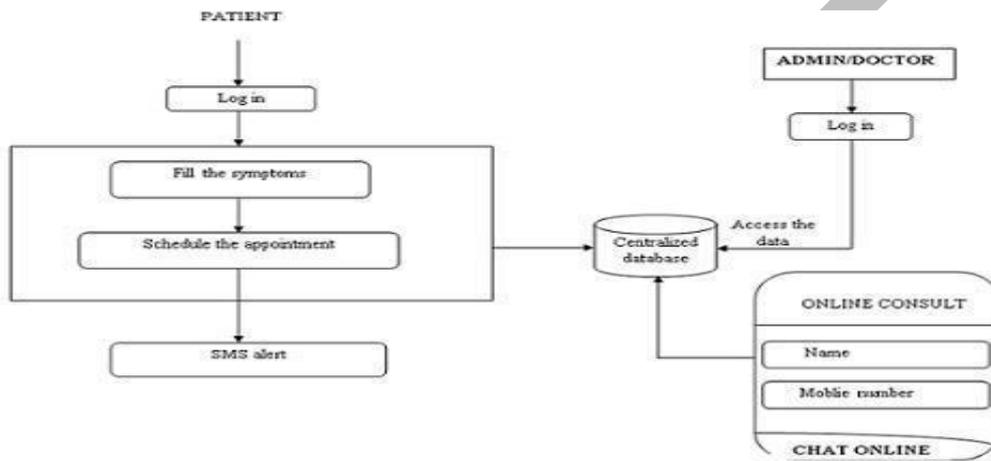
METHODOLOGY:

On-demand telemedicine is the process of scheduling the appointments using the web services. Consumers want telemedicine. The greatest impact of telemedicine is on the patient, their family, and their community. Using telemedicine technologies reduces travel time and related stresses for the patient. Over the past 15 years, study after study has documented patient satisfaction and support for telemedicine services. On-demand telemedicine is the process of scheduling the appointments using the web services. Consumers want telemedicine. The greatest impact of telemedicine is on the patient, their family, and their community. Using telemedicine technologies reduces travel time and related stresses for the patient. Over the past 15 years, study after study has documented patient satisfaction and support for telemedicine services. Such services offer patients access to providers that might not be available otherwise, as well as medical services without the need to travel long distances.

For over 40 years, telemedicine has been used to bring health-care services to patients in distant locations. Not only does telemedicine improve access to patients, it also allows physicians and health-care facilities to expand their reach beyond their office walls.

Given the provider shortages throughout the world—in both rural and urban areas—telemedicine has a unique capacity to increase service to millions of new patients. The proposed work in this paper is an On-demand Telemedicine web services that makes the task of making an appointment from the doctor easy and reliable for the patients. The web Application contains five modules such as Patient Login module, Appointment scheduling module, Symptoms registration module, Admin module, Online consulting module. The patient has to register himself before logging in to the application.

In the Appointment scheduling module, the patient has the option of selecting a doctor from the list of doctors and can view the doctor's details. The patient can request for an appointment on his/her preferred day/time. The selected day/time slot will be reserved and patient will receive the SMS alert of the successfully added appointment. In addition, the patient can contact to the hospital and the doctor by making a call or may send an email to the doctor.

The admin module is designed on the web Application. The admin views all details of doctors and all appointments by the admin. The admin can add doctor, view patient's details and doctor's details and can view appointments also. All the doctors of the specific clinic are registered by the admin. Doctors cannot register themselves.

In Online consulting module, it includes the use of the Internet and wireless devices for patients to obtain specialized health information and access online discussion groups that provide peer-to-peer support. It provides direct patient outreach and services over the Internet. Under telemedicine, these include those sites that provide direct patients care.

Conclusion

The on-demand telemedicine is implemented using HTML5, CSS3, JAVASCRIPT, PHP for web application development. The tasks involved in this work are divided into modules. The data is approached and retrieved by using MYSQL between the website and the centralized database. The admin would be able to use the app for managing the details of the patient and doctors instead of using of the website. Some patient and the doctors instead of using the website. In the patient's module which includes setting reminders for the appointments and saving the appointment date to the calendar.

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List of Figures

Figure1: Architecture of On Demand Telemedicine Service