



## Online Doctor Consultation

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### ABSTRACT: -

Online medical consultation refers to a virtual healthcare service where patients can receive medical advice, diagnosis, and treatment from a doctor or healthcare provider through an internet-based platform. This type of consultation allows patients to access medical care from the comfort of their own home, and can be an efficient and convenient alternative to in-person visits.

**Key-Words:** - Doctor, Online, CPU, MONGODB, MERN, Consultation, etc.

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### I. Introduction

Online medical consultation (OMC) is the term utilized as a part of this report to allude to web-based remote patient-specialist (consumer-provider) medicinal discussions. With the approach of broadband and video conferencing, numerous people have swung to online web-portals to get an online consultation. Utilization of this technological innovation has numerous advantages for both the doctor as well as the patient; including cost savings, comfort, accessibility, and enhanced privacy and communication.

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### II. Problem Formulation

Today's era has dramatically changed how outpatient care is delivered in healthcare practices, many patients don't want to leave their homes and risk exposure. People living in remote or rural areas lack good quality of doctor's consultation because doctors that are specialized in their field are located in the urban area and to reach out to them is really a tough task for people in rural area. The hospitals would never have the capacity to give in-private consultation since you have to be available publicly in the crowd to see the doctor. Subsequently, though medical records are kept undisclosed in password protected systems on computers.

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### III. Literature Review

A study has shown that Online Booking Doctor's Consultation Time system bring out quite a few advantages, one of it is that it can save the patient's time. By using the system, they can book the appointment with doctor through online instead of going to the hospital or clinic and wait for register and wait again for their turn to consult with a doctor after the register. Some of them even need to wait for the nurse or workers there to get their medicine.

This waiting process is obviously too long for them and it is time-consuming too. The purpose of literature survey is to give a description of research topics related to patient opinions and feeling on the current way of making appointment with doctors.

#### A) Waiting time

Waiting time is the duration that a patient already waited in the clinic before meet by anyone of the staff. Patient's waiting time is a very important indicator of quality of services offered by hospitals. One factor affecting the use of healthcare services is the amount of time a person spends waiting to be seen. Patients view long waiting times as an obstacle to receiving services effectively. For both patient and doctor, letting patients waiting unnecessarily can cause them stress.

#### B) Appointment Delay

Appointment delay is defined as the time between the days a patient requests an appointment and her actual appointment date, the higher the chances that he/she will cancel or not show up. According to the research done by, 31 percent of the 5901 samples cancelled or did not show up at their appointment with doctor. These appointments are mostly scheduled for a few days after the making the appointment. Thus, asking the patients to come right away or make appointment requests on the day they want to be seen is the solution.

#### C) Earlier Arrival

Most of the patients tend to arrive earlier even though they already book consultation time with doctor. This is usually happening on those who need follow-up consultation. Scheduling is very important to make sure a smooth and fast consultation process and to decrease waiting times. A research study found that those patients who had an appointment time and arrived at the appropriate time had shorter waiting time than those who came in without an appointment .

#### D) How the Online Booking System can help

The significant help of online doctor's consultation time system is able to reduce the waiting time of patients. By using the proposed system, the patients can choose their desired time to consult with a doctor and book the time from the system. This can reduce the registration step at the counter. Thus, for the patients that looking for follow up consultation, they can book the consultation time for a future time. Those patients who need faster consultation from doctor like having fever can check for nearest doctors available time and book that slot and reach there on time to avoid long waiting time.

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## IV. Methodology

**Define project goals:** Clearly define the goals and objectives of the online doctor consultation project, including any targets for patient satisfaction, health outcomes, or cost savings.

**Assess resources:** Assess the resources required for the project, including personnel, equipment, and funding.

**Develop a timeline:** Develop a timeline for the project, including milestones for key activities such as platform development, recruitment, and launch.

**Identify the target population:** Determine who the target audience is for the online doctor consultation project, considering factors such as location, age, and health conditions.

**Select a platform:** Choose a platform for the online doctor consultation service, such as a website, app, or telemedicine software.

**Setting up the backend:** The first step is to set up the backend using Node.js and Express.js. This involves creating a RESTful API to handle requests from the frontend.

**Setting up the database:** The next step is to set up the database using MongoDB. This involves creating a schema for the data and defining how it should be stored and retrieved.

**Setting up the frontend:** The next step is to set up the frontend using React. This involves creating a user interface for the application, including pages for registration, login, and medical consultation.

**Authentication and Authorization:** Implement authentication and authorization features for users to securely access their accounts and health records.

**Medical Consultation:** Implement the features for medical consultation between doctors and patients. This includes features such as video consultation, chat, audio calls, and file sharing.

**Payment Integration:** Implement payment integration features so that patients can pay for medical consultations, medicines, and other services offered.

**Testing and Deployment:** Test the application thoroughly and deploy it to a server or hosting platform.

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## V. Result Discussions

**Improved accessibility to medical care :** Online doctor consultations are designed to make medical advice and treatment more accessible, particularly for patients in remote or underserved areas.

**Reduced cost of healthcare :** By providing a cost-effective alternative to traditional in-person appointments, online doctor consultations are expected to reduce the overall cost of healthcare for patients.

**Increased patient satisfaction :** Online doctor consultations are expected to increase patient satisfaction by providing a more convenient and accessible way to receive medical care.

**Improved health outcomes :** By allowing patients to receive medical advice and treatment more quickly and easily, online doctor consultations are expected to improve health outcomes and reduce the risk of complications.

**Increased patient engagement :** Online doctor consultations are expected to increase patient engagement in their own healthcare, encouraging patients to take an active role in managing their health and wellness.

**Improved healthcare efficiency :** By streamlining the process of connecting patients with medical professionals, online doctor consultations are expected to improve the efficiency of healthcare delivery, freeing up time and resources for more complex cases.

Overall, the expected outcome of an online doctor consultation project is to provide a more convenient, accessible, and effective way for patients to receive medical care, leading to improved health outcomes and a more efficient healthcare system.

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## VI. Conclusion

The system has been implemented and tested successfully. It meets both functional and non-functional requirements. The system has been designed keeping the present and future requirements in mind. The system is made very flexible. But still there are some limitations of the system. Proper consideration has been given for a wide range of new enhancements. The system is developed in a user-friendly way. In future, if it is required to add new functionality in the system new module can be added without affecting the design of the system. Furthermore, the maintenance of the project will become easy in future and transparency will be maintained. The proposed system is also tested with different types of users in order to make sure that there are no bugs and user interface is friendly enough to use the system. The system's main function is for users to be able to book a consultation through the online system, therefore they don't have to go to the clinic or hospital to book it and then waiting there for their turn. They can just sit at home and go there when the time is scheduled for their appointment

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