

# Bharati Vidyapeeth's College of Engineering for Women, Pune

# Preliminary Report On

# "Case Study Of Medical Apps"

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### **Abstract**

With a rise in Medical facilities, there is a significant rise in the use of technology to avail these facilities. Not only have they enhanced our style of living, but they have also now become a substantial part of our lives. Medical apps contribute a significant amount to the GDP of the nation. The market for such apps has increased exponentially over the last few years. Not just for availing facilities at ease, but also to ensure safety for one and all. Just after the onset of the pandemic, accessibility to several medical facilities had become difficult and scarier. As a result, healthcare has become more complex and less organized. During this course, several Mobile Medical Apps were introduced, which made access to healthcare facilities easier and made it more manageable to organize and consolidate their medical records in one place. Online consultation, medicine orders, and medical data management features refrained people from traveling, which helped them stay safe during the pandemic. However, there are several loopholes in such apps. It is vital to understand that its audience need not belong to urban areas only. Such apps need to be helpful in rural areas as well. Numerous other aspects of these apps need to be analyzed further to make them more useful to everyone. Thus, it has excellent potential to be explored further and to be worked on.

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# **Chapter 1: INTRODUCTION**

#### 1.1 Overview

Technology is transforming every life and every business sector today. Every industry is going mobile with the apps and facing a huge profit in their business. The same goes for medical apps development for any healthcare provider. Hence, people are moving in the direction of medical health today.

In today's technology-based time, people are adopting the trend of mobile apps for their individual businesses. Medical apps are becoming very popular. Healthcare system is expanding in the field of mobile applications as now there are more than 1 lakh apps in the app store. People are using these medical and healthcare apps to fulfill their respective needs. Medical students can use mobile health apps as well.

Digital health is introducing new approaches to the management of health conditions. Research has demonstrated significant growth in the impact that digital health is having on patients and healthcare overall. The adoption of digital health tools, such as mobile health apps, holds great promise with evidence of these tools playing a positive role in both patient outcomes and the costs of care.

Digital health refers to the use of connected mobile devices, such as mobile phones and tablets, to improve health. Thanks to the research published in the new report from the IQVIA Institute – *The Growing Value of Digital Health*, there is increasing evidence of the value of these digital health tools.

#### 1.2 Motivation

The Research and Development activities in the medical field are expanding in a multi fold manner. There are numerous specialties arising in the healthcare industry on a regular basis. Information explosion has become a phenomenon in this field. Numerous medical apps have come into the market recently over the past few years. Not only have they impacted the well-being of people, but they have also helped the economy boom at an exponential rate. In recent times, we felt the need to use these apps more frequently. Not only to get medicines online but also to consult doctors over an online platform. Practo is in the process of disseminating quality medical information to the public in general and the patients in particular. This app made it much easier to receive initial medical help for 'not so serious' patients. Moreover, when several medicines were unavailable in nearby pharmacies, we felt the need to use such platforms to purchase essential medications. They have made accessibility of medical facilities on the tip of our fingers. Thus, it was necessary to study such apps and understand their mechanisms keenly.

#### 1.3 Problem Definition

There are numerous apps for medical services available for the general public. Not only these apps have gained popularity in recent times, they look very convenient and hassle-free to the public. Observe and understand these apps better by doing a case study on a medical app so as to know its existing features, its availability to the general public, and its authenticity. Also, try to devise new features that can be added to such apps to make it more efficient and user-friendly.

### 1.4 Objectives

To observe and understand the working and accessibility of several medical apps available in the market by performing a detailed study. Furthermore, to understand the business model and revenue generation of such apps.

## 1.5 Scope of the project

In this project we have done a detailed study on the medical app 'Practo'. So we have conducted one survey which helps us trying to understand the usability of such apps among people. The scope is to see if any feature is redundant to the general public or needs any improvisations and if needed then which are those. We tried to study the new details or features that can be added to these apps. We also tried to ensure that good and authentic facilities are available or not .Practo business has smaller geographically concentrated clusters. In specific areas where Practo has not expanded, we can connect with local pharmacies, thus it will lead to expanding Practo in those areas quickly. Pharmacies should be connected in the same cities so that medicines can be bought in person quickly and easily. Live tracking mechanisms can be introduced in affiliated pharmacies so that medicines can be provided to the person on time. Mainly inconsistency is found in the drugs delivered by the online pharmacies and for this live tracking of the pharmacies can be proved helpful. Security and privacy of the user can be developed and for this the chats between employer and carer can be initiated only when both of them accept their respective request then and only then they can talk with each other and the user will feel secure related to that individual privacy.

## 1.6 Methodology

Practo is a SaaS (Software as a Service) product that uses emerging technologies to revamp clinical functioning across India and enhance the patient experience by creating a software solution for doctors and patients to manage their appointments, medical records, and prescriptions efficiently. This app has removed the administrative work of doctors to help manage their practice so that they could focus on their expertise. In addition, this app provides users(both patients and doctors) a hassle-free experience, from booking appointments to receiving their prescriptions at home.

We have studied apps like 1mg, Practo, Netmeds, Pharmeasy, which are available in the market, and their features like Practo cloud, which stores all the users' prescriptions and medical reports. We have understood their working, business model, and revenue generation by performing the case study on such apps. A survey was conducted to collect primary data and understand user experience. Simple questions related to using these apps were asked, like do they know about such apps by people of different age groups(18-73). Questions on how well they remember to carry their old prescriptions and medical reports along. To avoid arranging and taking their reports every time they visit hospitals, mobile apps which could store data were a suitable alternative. And to avoid picking their lab test reports from the labs, people prefer getting the reports online on their phones.

This project mainly focuses on a detailed study of medical apps. It suggests necessary changes that can make such apps more effective and user-friendly. Ameliorating several other features, medical apps can become a healthcare companion for anyone, thus improving the quality of health in masses.

# **Chapter 2: LITERATURE**

Sr. no.	Author name	Paper name	Findings (with technique used)	Scope available
1.	Sushmita Sahu	PharmEasy - Case Study 16 Dec 2020		<ul> <li>Reminder feature is not useful when customer &amp; patient is different</li> <li>Easy refill ordering</li> <li>Storing all medical prescriptions</li> </ul>
2.	Shweta Surve	Descriptive Analysis of quality of information on drugs on online based Indian online pharmacy applications: A preliminary analysis	Inconsistency found in the drugs delivered by the online pharmacies (studied by ordering medicines from these apps & conducting laboratory tests to check their consistency)	<ul> <li>Connect to pharmacies in the same city so that medicines can be bought in person</li> <li>Live tracking mechanisms for medicines in affiliated pharmacies</li> </ul>

3.	Saivihar Panthangi	Practo - Case study Business Model 16 Sept 2017	The study showed that the first listing showed on a search is sponsored listing and the doctors, clinics and hospitals have to pay for the listing price to keep them on the top	•	Get ratings and feedback from the users and on the basis of ratings the user gets the search result.
4.	Mayank Gupta	Case study - Practo care 16 March 2020	About security and privacy of users.	•	Chat between employer and carer can be initiated only when both of them accept their respective request. As there are high chances that someone can misuse the users address and phone number. So, a chatbox is a better option for both.
5.	Trishim	Practo – India's home for health 24 march 2020.	Practo business has smaller geographically concentrated clusters	•	In specific areas where Practo has not expanded, we can connect with local pharmacy, thus expanding

				quickly
6.	Poonam	How Practo Increased Call Center Efficiency by 60% with LeadSquared	Use of LeadSquared software that helps in managing incoming patients calls, map the complete journey of patients and communicate between both the patients and the doctor.	

# Chapter 3: SOFTWARE REQUIREMENT SPECIFICATION (SRS)

# 3.1 Project Scope

- Detailed study on medical apps.
- Survey to understand current usability of such apps.
- Seeing if any feature is redundant to the general public or needs any improvisations.
- New details/features that can be added to these apps.
- Ensuring good and authentic healthcare facilities are available to all.

# 3.2 Assumptions And Dependencies

This document will provide a general description of the project, including detailed analysis, future scope, and general constraints. In addition, it will also offer improvements on the existing features, simultaneously suggesting new features that could be added to make the app more helpful to the user.

# **Chapter 4: CONCLUSION**

Mobile medical apps are changing the way the world and health consumers handle their personal health care. These applications allow the health consumers to track their own health such as heart health and make their adjustments according to their lifestyles. The future possibilities of these apps are endless especially since clinicians are going to use these apps as well. Thus, the main determination of an apps value may ultimately be its ability to provide accurate, timely information and guidance to the end user inorder to serve the vital purpose of improving patient outcomes. This project was an interesting challenge, requiring the well-thought balance of clear visual concepts corresponding to the theme of the healthy life.

## 4.1 Survey Result

According to our survey, among 120 responses, 28% of them are not aware about the doctors and physicians in their locality. Approximately 12.7% of them are not aware about the medical apps like practo, pharmacy, netmeds. And only 34% of them rely on consulting a doctor online.

# 4.2 Future scope

Several improvisations can be made like the medicine reminder feature is not helpful when the customer & the patient is different. Easy refill ordering and storing all medical prescriptions can be done to organize the medical data better and ensure hassle-free medication. Along with this, live medicine tracking mechanisms can be made available for affiliated pharmacies. In specific areas where such apps have not expanded, we can connect with a local pharmacy, thus expanding the same quickly.

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 Sushmita Sahu. PharmEasy-Case study. A deep study on PharmEasy medical app. Dec 2020.

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 Asian Journal of Pharmaceutical And Clinical Research 13(5),
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 Drugs On Android-based Indian Online Pharmacy Applications:
 A Preliminary Analysis. May 2020.

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 Saivihar Panthangi. Case Study on Practo: Business Model, Revenue and Funding. Talks about the business aspects and revenue generation of the Practo app. Sept 2017.

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4. Mayank Gupta. Case Study - Practo Care. An app which focuses on providing caretakers for the elderly and babysitters in India. March 2020.

#### Linked here

5. Trishim11. Practo – India's home for health. A brief overview about the Practo app, involving its model, expansion strategies and future scope. March 2020.

#### Linked here

6. Siddhartha Nihalani, the VP of Product at Practo talks about their journey, How Practo Increased Call Center Efficiency by 60% with LeadSquared.

#### Linked here

Gantt Chart for "Case Study of Medical Apps"																			
			Febr	uray		March			April			May				June			
Sr. no.	Activity	Week 1	Week 2	Week 3	Week 4	Week 1	Week 2	Week 3	Week 4	Week 1	Week 2	Week 3	Week 4	Week 1	Week 2	Week 3	Week 4	Week 1	Week 2
1	Ideation																		
2	Problem Definition																		
3	Problem Statement																		
4	Objectives																		
5	Motivation																		
6	Defining scope of project																		
7	Methodology																		
8	Literature																		
9	Survey																		
10	Survey Output																		
11	Result																		
12	Conclusion																		
13	Report																		
14	SRS Document																		
15	Discussion with supervisor																		
16	Final Documentation & submission																		