

# Telehealth and its application

## TLDR Description of Product

Our Telehealth platform revolutionizes healthcare by offering secure, virtual consultations with healthcare providers, accessible anytime, anywhere. It caters to many users, from remote residents to busy professionals, with features like flexible scheduling, integrated health records, and instant communication.

Spec Status: **Draft** / Peer Review / Mentor Review / Complete

PM Name: Preeti Anubolu

Last Updated:

Peer Reviewed by:

Mentor Reviewed by:

I want to move forward to build this product with a cross-functional team in the Co.Lab Program

Yes, I am interested in exploring telehealth

No

## Summary

*What is it? Think of this as your elevator pitch for your product. Limit it to a few sentences.*

"Imagine a world where quality healthcare is just a click away, regardless of where you live or how busy your schedule is. Our Telehealth platform bridges the gap between patients and healthcare. Our Telehealth platform revolutionizes healthcare access by connecting patients with providers through secure, convenient online consultations. Designed for busy lifestyles, remote areas, and those managing chronic conditions, it makes quality healthcare accessible anytime, anywhere. We're making healthcare flexible and patient-centered with features like easy appointment scheduling and seamless access to health records. Join us in transforming healthcare delivery for everyone."

*Who is the customer, and what is the need or problem we're addressing? Why should we address this problem now? What are all of the things we know? How do we know this is a problem?*

The customers for the Telehealth platform are twofold:

- **Patients** seeking convenient, timely, and accessible healthcare services.
- **Healthcare Providers** including doctors, nurses, and therapists looking to expand their reach, streamline their services, and offer flexible care options to their patients.

The primary problems being addressed are:

- **Limited Access to Healthcare:** Geographic and logistical barriers that prevent patients from accessing timely medical care.
- **Inconvenience and Scheduling Conflicts:** The difficulty of fitting healthcare appointments into busy schedules and the need for more flexible healthcare options.
- **Public Health Risks:** Minimizing physical contact during health crises like pandemics is necessary.

## Why should we address this problem now?

Our research methodology involved engaging with over 200 participants. These included patients from both rural and urban settings, busy professionals, elderly individuals, healthcare providers, and caregivers. Among all adults aged 18 and over, 37.0% used telemedicine in the past 12 months (Figure 1). Women (42.0%) were more likely than men (31.7%) to use telemedicine. The percentage of adults who used telemedicine increased with age, from 29.4% among adults aged 18–29 to 43.3% among adults aged 65 and over.

**Technological Advancements:** The current state of technology, including widespread internet access and the availability of secure video conferencing tools, makes this the ideal time to implement Telehealth solutions.

**Changing Patient Expectations:** There's a growing demand for digital health services that offer convenience and personalization.

To structure a comprehensive response to these questions, let's break them down in the context of the Telehealth platform:

## **What is the need or problem we're addressing?**

The primary problems being addressed are:

### **The Challenges which the patients face in their healthcare are:**

- **Limited Access to Healthcare:** Geographic and logistical barriers that prevent patients from accessing timely medical care.
- **Inconvenience and Scheduling Conflicts:** The difficulty of fitting healthcare appointments into busy schedules and the need for more flexible healthcare options.
- **Public Health Risks:** Minimizing physical contact during health crises like pandemics is necessary.

### **The Challenges and Problems for the Doctors.**

Doctors face several pain points in traditional healthcare settings, many of which have driven the adoption and offer of Telehealth services as viable solutions. Here are some of the key challenges that Telehealth aims to address for healthcare providers:

## **1. Overcrowded Schedules**

- **Pain Point:** Doctors often deal with back-to-back appointments, leading to long hours and limited time per patient.
- **Telehealth Solution:** Enables more flexible scheduling and can reduce no-shows through easier cancellation and rescheduling options, optimizing the doctor's time.

## **2. Geographic Limitations**

- **Pain Point:** Physicians in specialized fields may have patients traveling long distances for consultations, limiting access for those in remote areas.
- **Telehealth Solution:** Expands the reach of healthcare providers beyond geographical constraints, allowing them to serve patients nationwide or even globally.

## **Why should we address this problem now?**

- **Technological Advancements:** The current state of technology, including widespread internet access and the availability of secure video conferencing tools, makes this the ideal time to implement Telehealth solutions.
- **Changing Patient Expectations:** There's a growing demand for digital health services that offer convenience and personalization.
- **Healthcare System Strain:** Many healthcare systems are overburdened, and Telehealth can alleviate some of this pressure by offering an alternative to in-person visits.
- **Public Health Imperatives:** Recent global health crises have underscored the need for remote healthcare options to ensure continuity of care while minimizing the risk of spreading infections.

## **What are all of the things we know?**

- **User Demand:** There's a significant demand for more accessible and convenient healthcare options.
- **Technological Feasibility:** The technology needed to securely and efficiently deliver Telehealth services is readily available and increasingly affordable.
- **Market Growth:** The Telehealth market is experiencing rapid growth, indicating a strong interest and willingness to adopt such services among both patients and providers.
- **Regulatory Support:** Many regions are seeing a relaxation of regulations around Telehealth, facilitating its adoption and integration into mainstream healthcare.

## **How do we know this is a problem?**

- **Surveys and Studies:** Numerous surveys have shown that patients and healthcare providers are interested in Telehealth for its convenience, accessibility, and potential to reduce healthcare costs.
- **Market Analysis:** The number of Telehealth startups and expanding existing healthcare providers into Telehealth services indicate a clear market need.
- **Feedback from Healthcare Providers:** Many providers have expressed a need for better ways to offer care remotely, especially for managing chronic conditions and providing mental health support.
- **Patient Testimonials:** Stories from patients who have struggled to access timely care due to geographical barriers, mobility issues, or scheduling conflicts highlight the need for Telehealth solutions.

# Goals

*Talk about the general high-level goals of doing this work. What are we trying to accomplish by solving the problem?*

## **Goals to achieve using this Product.**

Addressing the problem with a Telehealth platform is driven by several high-level goals, each aimed at transforming and improving aspects of healthcare delivery and access. By solving the identified problems, the initiative seeks to accomplish the following:

### **1. Enhance Access to Healthcare**

Make healthcare services more accessible to a broader population, including those in remote or underserved areas, individuals with mobility issues, and those with time constraints that make traditional in-person visits challenging.

### **2. Improve Healthcare Convenience and Flexibility**

Provide patients with the ability to schedule and attend healthcare appointments more conveniently, fitting healthcare into their lives rather than rearranging their lives around healthcare.

### **3. Increase Healthcare System Efficiency**

Alleviate the strain on healthcare facilities by reducing the number of non-emergency in-person visits

### **4. Enhance Patient Engagement and Satisfaction**

By offering more accessible and convenient healthcare options, increase patient engagement in their health management, leading to higher satisfaction with healthcare services and potentially better health outcomes.

### **5. Support Continuity of Care**

Facilitate better management of chronic conditions and long-term care through easier follow-ups and improved communication between patients and their healthcare providers, ensuring that patients receive consistent and coordinated care over time.

## User Stories

*Put 3-5 user stories here. Keep it high level. As a <type of user>, I want to <goal to be accomplished>, so that <reason for the goal>.*

- As a patient living in a rural area, I want to easily schedule and attend consultations with healthcare providers via video call, so that I can access quality healthcare without the need to travel long distances.
- As a busy professional, I want to quickly find and book appointments with specialists that fit into my hectic schedule, so that I can maintain my health without sacrificing work or personal time.
- As a healthcare provider, I want to efficiently manage and conduct remote consultations, so that I can extend my services to more patients while maintaining a high standard of care.
- As an elderly patient, I want to use a simple interface to communicate with my doctors and manage my health records, so that I can take an active role in my health management without relying heavily on family members.

## Proposed Solution

*What are you proposing is the solution to the problem being tackled? Keep this to a few sentences, again focusing on the WHAT, not the HOW.*

The proposed solution is offering a comprehensive telehealth platform to individuals that enables patients to connect with healthcare providers for consultations, follow-ups, and health management through a secure, user-friendly online interface. This solution offers convenient access to medical services for individuals regardless of their location or schedule, aiming to enhance healthcare accessibility, improve patient engagement and satisfaction, and support the efficient delivery of healthcare .

## Scenarios

What are your key scenarios (based on your user stories)? What is the definition of done (or acceptance criterion) for each of them? Note: This should be finalized as a team.

### Scenario 1: Scheduling and Attending Video Consultations

- User Story Reference: Patient living in a rural area.

- Scenario: The user should be able to easily schedule a video consultation with a healthcare provider and attend the session through the platform.

## **Scenario 2: Finding and Booking Appointments**

- User Story Reference: Busy professional.
- Scenario: The user wants to find and book appointments outside of regular working hours.

## **Scenario 3: Managing Remote Consultations**

- User Story Reference: Healthcare provider.
- Scenario: The provider needs to manage their schedule, conduct remote consultations, and access patient health records securely

## **Measuring Success**

### **Co.Lab Success Metrics**

What would you consider success to look like by Demo Day for your team? What would be the definition of done for your product by that point? Note: This should be finalized as a team.

Delivering a user interface for a telehealth platform to connect patients and healthcare professionals to take care of their medical needs and well-being. Success by Demo Day for the Telehealth platform team would be defined by achieving a set of key milestones that demonstrate the platform's viability, user engagement, and readiness for broader deployment. The product created by Demo Day should encompass both functional and non-functional requirements, ensuring the platform is not only operational but also delivers a positive user experience and meets compliance standards

### **Product Success Metrics**

Consider metrics you'd want to measure to consider the product a success. How would we know if we've solved the problem? What are the things we'd want to measure?

The success of the product depends on these factors

## Success Metrics for Patients

1. **User Adoption Rate:** A significant number of active users (both patients and healthcare providers) have registered and are actively using the platform for healthcare consultations.
2. **User Satisfaction:** Positive feedback from early users, with high satisfaction scores in usability, convenience, and overall experience.
3. **Operational Efficiency:** Demonstrated reduction in administrative overhead for healthcare providers and ease of access for patients, as evidenced by usage metrics and qualitative feedback.
4. **Consultation Time** This operations metric measures how fast healthcare providers are able to respond to each consultation request. It's important for the time to be faster and shorter, but without compromising the quality care provided.
5. **Accuracy Of Diagnoses:** As indicated earlier, a faster response rate should not come at the expense of an accurate and thorough diagnosis. Provide your healthcare staff with an efficient platform that's easy to operate access, and allows them to be present when communicating with the patient.
6. **Time And Travel Saved For Doctors:** Patients aren't the only ones who want to avoid traveling distances. Your doctor's efficiency also measures your telemedicine's effectiveness. Since they see patients at home, then they gain more time from not having to drive or travel to the hospital or clinic. See if there has been an increase in patient consultations.
7. **Patient And Clinician Retention** This metric is particularly crucial for telehealth services targeting rural communities. You want to target and sustain the market that will benefit the most from telemedicine. It goes two ways, as you also need to ensure all clinicians stay on board to help establish brand loyalty among the community. If you're an urban-based hospital or clinic, you can look at the travel time or distance that patients save with your telehealth services.
8. **Treatment Plan Adherence:** Patients recovering after a surgery or suffer from chronic conditions can be given remote patient monitoring platforms to assist them in their treatment plans. The monitoring system can provide them all the necessary information, such as reminders and checklists they can easily refer to. Access to the device allows you to track and measure the patient's adherence to the treatment plan.

## Success Metrics for Healthcare providers

Success metrics for doctors using a Telehealth platform can be multifaceted, reflecting improvements in clinical outcomes, operational efficiency, patient satisfaction, and personal well-being. Here are key metrics that could indicate

success for healthcare providers on a Telehealth platform:

## **1. Patient Satisfaction Scores**

- Metric: High ratings and positive feedback from patients regarding their Telehealth experiences, indicating satisfaction with the convenience, quality of care, and communication.

## **2. Reduction in No-Shows and Cancellations**

- Metric: A decrease in the rate of missed appointments and last-minute cancellations, demonstrating improved patient engagement and accessibility of care.

## **3. Increased Patient Volume**

- Metric: The ability to see more patients within the same time frame compared to traditional in-person visits, facilitated by the efficiency of Telehealth services.

## **4 Operational Efficiency**

- Metric: Streamlined administrative processes leading to reduced paperwork, quicker billing cycles, and more efficient patient intake and documentation.

## **5. Patient Retention and Acquisition**

- Metric: An increase in patient retention rates and new patient registrations, indicating trust and value in the Telehealth services provided.

## Milestones & Timeline

*What are the milestones and project stages within Co.Lab? How will you consider your roll-out plan? What about extending beyond?*

The Milestones and project stages for developing a product in Co.lab comprise of these Project Stages and Milestones

### Stage 1: **Ideation and Research**

- Milestone 1: Define problem space and project scope.
- Milestone 2: Complete market research and user interviews to validate needs.
- Milestone 3: Develop user personas based on research findings.

### Stage 2: **Planning and Design**

- Milestone 4: Create a feature list and prioritize based on user needs and technical feasibility.
- Milestone 5: Develop initial wireframes and user flow diagrams for key features.
- Milestone 6: Finalize the product design, including UI/UX elements.

### Stage 3: **Development and Testing**

- Milestone 7: Set up the development environment and select appropriate technologies.
- Milestone 8: Develop a Minimum Viable Product (MVP) with core functionalities.
- Milestone 9: Conduct user testing with MVP and iterate based on feedback.

### Stage 4: **Launch and Evaluation**

- Milestone 10: Prepare and execute a launch plan for the MVP.
- Milestone 11: Collect and analyze user feedback and usage data.

## Roll-Out Plan

- Initial Launch: Start with a limited release focusing on a specific geographic area or user group to manage scalability and monitor performance closely.
- Feedback Loop: Establish a robust mechanism for collecting user feedback and monitoring system performance to inform iterative improvements.

## Extending Beyond

- Scaling Up: Based on initial feedback and success, gradually expand the service to new regions and user groups, adjusting the platform as needed to cater to diverse needs.
- Feature Expansion: Introduce additional features and services based on user demand and technological advancements, such as AI diagnostics or integration with wearable health devices.

With the help of these steps, we can create and add new features to the product to meet the demands and requirements of the users.

## Open Questions / Appendix

*Self explanatory?*

Open questions in a Telehealth project are critical for guiding research, development, and strategic decisions. These questions can help identify areas that require further exploration, potential challenges, and opportunities for innovation. Here are some open questions that could be pertinent to the Telehealth project:

## User Adoption and Engagement

1. What are the key factors influencing user adoption of Telehealth services among different demographics?
2. How can we ensure sustained engagement from patients and healthcare providers on the Telehealth platform?
3. What are the main concerns or barriers to entry for users new to Telehealth, and how can we address them?

**Useful Resources**

[Telehealth Interventions to Improve Chronic Disease | cdc.gov](https://www.cdc.gov/telehealth/)

<https://telehealth.hhs.gov/patients/understanding-telehealth>