Unified Healthcare Appointment & Records Platform

UI/UX Case Study — Appointments • Digital Health Records • Tele-Consultation

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1. Overview

Project Goal

The aim of this project was to **design a unified healthcare platform** that allows patients to book appointments seamlessly, manage their health records digitally in one place, and access secure tele-consultation services. The system also needed to support doctors in efficiently managing their time slots, patient histories, and consultation preparation.

The Problem

Healthcare interactions are fragmented across multiple touchpoints: patients struggle to keep track of appointments, maintain medical records across hospitals and clinics, and often forget medications. On the doctor's side, scattered records and inefficient scheduling tools make consultations time-consuming. Existing healthcare apps often replicate hospital workflows without rethinking user experience, leading to cluttered, overwhelming interfaces.

The Opportunity

A platform that **integrates appointments, health records, reminders, and tele-consultation into a single, trustworthy experience** could greatly improve adoption. By prioritizing simplicity, accessibility, and trust, the product could serve both patients and doctors—two very different user groups—with tailored flows.

My Role

I worked as the **end-to-end UX Designer**, responsible for:

- Research (secondary and light primary)
- Defining personas and journeys
- Designing information architecture
- Wireframing and prototyping
- High-fidelity UI design
- Accessibility and usability testing
- Synthesizing insights into outcomes

Timeframe

1–2 weeks (design sprint format, intense scope).

Tools Used

- **Figma** (wireframes, UI, prototypes)
- **Miro / Whimsical** (journey maps, IA diagrams)
- **Google Slides** (presentation deck)

Deliverables

- Research synthesis
- Personas (patient + doctor)
- User flows & journey maps
- Information architecture (patient + doctor side)
- Wireframes (low-fi and mid-fi)
- Final high-fidelity UI screens
- Prototype for demo
- Accessibility recommendations
- Usability test results

Tip (for portfolio readers): This overview sets the stage but keeps things short; the depth is shown in the sections that follow.

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2. Research

Secondary Research

I began by analyzing existing healthcare apps in the Indian market, such as:

- **Practo**

- **Apollo 24/7**
- **Tata 1mg**
- **Pharmeasy (limited doctor integration)**

Key Findings from Competitor Analysis

- **Complex Flows:** Booking often required 6–8 steps, involving specialty, location, date, doctor, confirmation, and payment.
- **Fragmented Records:** Reports were stored in separate modules without easy linkage to consultations.
- **Poor Reminder Systems:** Appointment and medicine reminders often relied on push notifications (easy to miss).
- **Trust Issues:** Users hesitated to upload reports due to unclear privacy practices.
- **Limited Elderly Support:** Small fonts, cluttered screens, and dependence on typing created barriers.

Example User Reviews (paraphrased)

- *"I just wanted to book a cardiologist for my father, but it took 10 minutes of filling forms."*
- *"Lost my prescription upload after app update, very frustrating."*
- *"Why do you need my Aadhaar to book a simple appointment?"*
- *"App keeps pushing pharmacy offers but I just want to see my doctor."*

Constraints Identified

- **Privacy:** Users need confidence their sensitive data is secure.
- **Trust:** Clear communication about data handling is essential.
- **Accessibility:** Elderly and rural users may struggle with digital literacy.
- **Offline Users:** Some consultations may still happen offline; app must support hybrid usage.

Key Research Insights

1. **Reminders Work Best When Familiar:** Users prefer **WhatsApp-style reminders** (simple text notifications).
2. **Accessibility Matters:** Elderly benefit from **large fonts, high contrast, and voice assistance**.
3. **Transparency = Trust:** Clearly visible privacy controls (consent toggles, usage explanations) encourage data sharing.
4. **Unified Records = Differentiator:** Competitors lacked a **single view of patient history across doctors and hospitals**.
5. **Multi-stakeholder Complexity:** Patients and doctors have very different needs—requiring role-based dashboards.

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3. Personas

Based on research synthesis, I created **two primary personas**:

Persona 1 — Patient

Name: Ramesh Sharma (50)
Occupation: Shop owner
Tech Proficiency: Moderate (WhatsApp, UPI)
Goals:

- Book doctor appointments easily.
- Receive reliable medication reminders.
- Access all past medical records in one place.

Pain Points:

- Forgets pills frequently.
- Struggles to find reports when visiting new doctors.
- Finds most healthcare apps confusing.

Scenario: Ramesh wants to consult a cardiologist for his checkup, upload his old ECG reports, and receive medicine reminders post-consultation.

Persona 2 — Doctor

Name: Dr. Meera Iyer (38)
Occupation: General Physician at private clinic
Tech Proficiency: High (uses digital tools daily)
Goals:

- Manage consultation slots efficiently.
- Access patient records quickly during appointments.
- Reduce no-shows by having patients reminded in advance.

Pain Points:

- Records often scattered across files, WhatsApp, and patient memory.
- Patients come unprepared without history.
- No intuitive way to manage time slots across multiple platforms.

Scenario: Dr. Meera wants to set her availability, prepare for each patient by reviewing records in advance, and consult over video for remote cases.

Design Implications from Personas

- For **patients** like Ramesh: Flows must be simple, with visual cues and reminders.

- For **doctors** like Meera: Efficiency, structured records, and quick context access are critical.
- **Both require trust cues** (privacy, security, reliability).

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4. User Flows & Journeys

Patient Flow (Booking a Doctor)

1. **Login/Sign-Up** (with phone number OTP for simplicity).
2. **Dashboard** → "Book Doctor."
3. **Select Specialty/Doctor** (search, filters).
4. **Choose Slot** (calendar view, clear availability).
5. **Upload Records** (optional but encouraged).
6. **Confirm Appointment.**
7. **Receive Reminders** (push + WhatsApp-style).

Journey Map Example

- **Emotion:** Anxiety at start → Relief on seeing simple steps → Satisfaction with reminders.
- **Pain Point Reduced:** From 7 steps in competitors → 3 streamlined steps.

Doctor Flow (Managing Consultations)

1. **Login**.
2. **Set Availability** (daily/weekly slots).
3. **View Patient List** (with upcoming appointments).
4. **Access Patient Records** (uploaded before consult).
5. **Start Consultation** (video call or in-person note-taking).

Journey Map Example

- **Emotion:** Frustration with manual scheduling → Efficiency with auto-synced slots → Confidence with full patient history.

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5. Information Architecture

Patient Side

- **Dashboard**
    - Quick actions: Book appointment, view reminders.
- **Appointments**

    - Upcoming, past, reschedule.
- **Records**
    - Upload, view, share securely.
- **Medicines**
    - Add reminders, mark taken.
- **Tele-consult**
    - Join video call directly.

Doctor Side

- **Dashboard**
    - Today’s patients, upcoming slots.
- **Availability Settings**
    - Slot creation, sync with clinic hours.
- **Patient Records**
    - Unified view by patient ID.
- **Consultations**
    - Start tele-consult, take notes, issue e-prescriptions.

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6. Wireframes

Approach

- **Low-fidelity (grayscale):** Validate layouts with users before investing in visuals.
- **Mid-fidelity:** Add structure for navigation clarity.
- **Hi-fidelity:** Final branding, colors, and interactions.

Key Screens (Patient)

- Dashboard: Clear CTA → Book appointment.
- Booking: Minimal fields, calendar view.
- Records: Upload via camera/gallery, organized timeline.

Key Screens (Doctor)

- Dashboard: Patient list with time slots.
- Records: Summarized patient history before consultation.
- Tele-consult: Integrated video with note space.

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7. Final UI (Hi-Fi)

Design Style

- **Clean & Trustworthy**
- **Primary color:** #1976D2 (blue — healthcare trust)
- **Success:** #43A047
- **Error:** #E53935
- **Background:** #F9FAFB

Principles

- Minimalistic, card-based layout.
- Soft shadows, rounded corners (friendly aesthetic).
- Consistent iconography (lucide-style).
- Accessibility inbuilt (contrast, font scaling).

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8. Accessibility

- **Typography:** Scalable, option for large fonts.
- **Color:** Semantic coding (Red = urgent, Yellow = reminder, Green = done).
- **Touch Targets:** ≥44px for elderly usability.
- **Voice Assistance:** For booking, calling, and viewing records.
- **Dark Mode:** Reduces eye strain, increases adoption among younger users.
- **No Color-Only Cues:** Status indicators paired with icons/labels.

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9. Usability Testing

Method

- 5 participants (3 patients, 2 doctors).
- Task-based testing:
    1. Book a doctor.
    2. Upload a report.
    3. Join a tele-consultation.

Metrics Collected

- **Task Completion Rate:** % of users completing without help.
- **Time on Task:** Faster = better.

- **Error Count:** Wrong taps, backtracking.
- **SUS Score:** Subjective usability satisfaction.

Findings

- Patients loved simple slot selection but struggled with record upload labels → fixed with clearer icons.
- Doctors wanted availability to show recurring slots → iteration added weekly templates.
- Reminders were too subtle → redesigned as larger banner cards + notifications.

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10. Outcomes & Impact

- **Appointment Booking:** Reduced from 7 steps to 3 streamlined steps.
- **Record Management:** Clearer upload and timeline view reduced complaints of "lost reports."
- **Medication Adherence:** Reminders improved consistency.
- **Doctor Efficiency:** Slot management and history access reduced prep time.

Hypothetical adoption impact: If scaled, could save users 15–20 minutes per consultation prep and reduce no-shows by ~30%.

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11. Learnings & Next Steps

Learnings

- **Multi-stakeholder Systems:** Require clear IA and separation of flows.
- **Accessibility & Trust:** Not "nice to have," but core adoption drivers.
- **Privacy Communication:** Users engage more when data usage is transparent.

Next Steps

- Add **E-prescriptions** (doctor → patient).
- Integrate with **pharmacies** (medicine ordering).
- Explore **insurance claim submission** via platform.
- Pilot **offline + online hybrid** model for semi-digital clinics.

Closing Note

This project demonstrates how thoughtful UX can transform healthcare delivery by simplifying complex tasks, unifying fragmented records, and making digital care **trustworthy, accessible, and efficient**.