



MS 499

Project Course Report

Analysis of the Digital Healthcare Industry

Under the guidance of

Prof. Perna Wadikar

Group Members

Rahul Kumar Singh	21110174
Hitesh Jaiswal	21110079

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1. Comparative Analysis of India, Kenya, and the USA

To effectively evaluate the strategic direction for launching a healthcare app similar to Practo, we conducted a comparative analysis of key healthcare and market indicators across India, Kenya, and the USA. The goal is to assess which market provides the most relevant benchmarks and insights for Indian entrepreneurs. This table presents a data-driven comparison focusing on physician availability, healthcare spending, technology adoption, regulatory environments, and investment trends. These factors directly influence the scalability, market fit, and potential success of digital health solutions like telemedicine and e-health platforms.

Comparative Table: Entrepreneurial Insights

Factor	India	Kenya	USA	Entrepreneurial Insights
Physician Density (per 1,000 people) (2021)	0.9 [1]	0.1 [2]	2.6 [1]	India's physician density is higher than Kenya's but significantly lower than the USA's, indicating a potential market for telemedicine solutions.
Healthcare Expenditure (% of GDP) (2021)	3% [3]	5% [3]	18% [3]	Lower healthcare spending in India suggests opportunities for cost-effective healthcare innovations.
Out-of-Pocket Expenditure(% of Current Health Expenditure) (2021)	62% [4]	22% [4]	10% [4]	High out-of-pocket expenses in India highlight the need for affordable healthcare services.

Smartphone Penetration (% of Population) (2022)	46% [5]	67% [6]	81% [5]	Growing smartphone usage in India supports the feasibility of mobile health applications.
Internet Penetration (% of Population) (2024)	52% [7]	40% [8]	97% [9]	Moderate internet penetration in India suggests that offline functionality in health apps could enhance accessibility.
Digital Health Market Growth (CAGR) (2025-30)	24% [10]	4% [11]	20% [12]	Rapid growth in digital health markets in India indicates a favorable environment for health tech startups.
Regulatory Environment	Governed by bodies like the Medical Council of India	Guided by the Kenya Medical Practitioners and Dentists Council	Regulated by entities such as the FDA and HIPAA	A moderately regulated environment in India may facilitate faster deployment of health tech solutions.
Venture Capital Funding in Health Tech (2024)	\$12.65 bn [13]	\$0.68 mn [14]	\$23 bn [15]	While VC funding in India is lower than in the USA, the growing investment trend indicates increasing opportunities in the health tech sector.

The comparative analysis highlights that Kenya shares more similarities with India than the USA in several critical dimensions, such as healthcare infrastructure gaps, out-of-pocket healthcare expenses, and the need for affordable, mobile-first health solutions. Both India and Kenya face constraints in healthcare accessibility and physician availability, making frugal and digital innovations highly relevant. In contrast, the USA's mature healthcare ecosystem, robust infrastructure, and regulatory complexity make it less

aligned with emerging markets like India. Therefore, Kenya presents itself as a more practical and insightful comparative market for designing and implementing scalable digital healthcare solutions for India.

2. Top healthcare providers in Kenya

Phillips Healthcare Corporation (Phillips Pharma)

- **Founding Year:** 1991 [16]
- **Headquarters:** Kenya [16]
- **Services Provided:** Phillips Pharma is one of the largest importers, marketers, and distributors of pharmaceuticals, medical devices, and surgical devices in Sub-Saharan Africa.
- **Total Customer Base:** Not publicly available
- **Total Partnered Hospitals and Clinics:** Partners with over one hundred of the world's leading healthcare companies.
- **Target Audience:** Healthcare providers and patients across Sub-Saharan Africa
- **Business Model:** Phillips Pharma operates as a distributor of healthcare products, leveraging partnerships with global healthcare companies to expand its business in the region.
- **Notable Achievements:**
 - In January 2025, Marubeni Corporation made a strategic investment in Phillips Pharma to support and facilitate its continued growth and expansion in Sub-Saharan Africa. [16]

Mydawa

- **Founding Year:** 2017 [17]
- **Headquarters:** Kenya [17]
- **Services Provided:** Mydawa is a telemedicine company that provides affordable, high-quality healthcare products and services across Africa. It operates an online platform that connects pharmacies, healthcare providers, and patients.
- **Total Customer Base:** Not publicly available
- **Total Funding:** \$20 million as of 2025 [17]
- **Target Audience:** Patients seeking affordable and accessible healthcare products and services in Africa
- **Overall Pricing:** Affordable, focusing on providing high-quality healthcare products at accessible prices
- **Business Model:** Online marketplace connecting pharmacies, healthcare providers, and patients.
- **Notable Achievements:**
 - Acquired Guardian Health, a Ugandan retail pharmacy chain, to expand its reach [17]

Zuri Health

- **Founding Year:** 2020 [17]
- **Headquarters:** Kenya [17]
- **Services Provided:** Zuri Health is a telehealth provider offering consultations with doctors, medication purchases, diagnostic test scheduling, and in-person appointment arrangements through its mobile app.
- **Total Funding:** \$1.3 million in seed capital over five rounds as of 2025 [17].
- **Target Audience:** Patients seeking comprehensive healthcare solutions through digital platforms in Africa
- **Overall Pricing:** Not publicly available
- **Business Model:** Digital healthcare platform offering various services through a mobile app
- **Notable Achievements:**
 - Secured funding to develop its digital platform, expand product offerings, and commence operations in additional areas across Africa [17].

3. Top healthcare providers in India

Tata 1mg

- **Founding Year:** 2015 [18]
- **Headquarters:** Gurugram, Haryana, India [19]
- **Current Valuation:** Valued at \$1.25 billion (6th Sept 2022) [20]
- **Services:** Online pharmacy, lab tests, online doctor consultations, and health-related content. [18]
- **Total Customer Base:** 260m+ Visitors, 31m+ Orders Delivered, 1800+ Cities [18]
- **Total Partnered Hospitals and Clinics:** Collaborates with 120+ top verified labs such as Dr Lal Path Labs, SRL Diagnostics, Thyrocare & more. [21]
- **Target Audience:** Individuals seeking accessible and affordable healthcare services online in India.
- **Business Model:** Operates as a B2C digital healthcare platform offering various services, including medicine delivery, diagnostic tests, and telemedicine consultations.
- **Notable Achievements:** [21]
 - BML Munjal Award for 'Business Excellence through Learning & Development'
 - Best Online Pharmacy in India Award
 - Top 50 venture in The Smart CEO-Startup50 India.
 - India's only ISO/IEC 27001 & LegitScript certified online healthcare platform
 - VC Circle Award for the "Most Promising Healthcare Startup"
 - Ranked Top App in Medical Category in India - android & iOS
 - We have been selected as the only company from across the globe for SD#3, "Health & Well Being for All", by Unreasonable Group, US State Department.

NetMeds

- **Founding Year:** 2010
- **Headquarters:** Chennai, Tamil Nadu, India
- **Current Valuation:** Acquired by Reliance Industries in August 2020 for approximately \$83 million. [\[22\]](#)
- **Services Provided:** NetMeds operates as an online pharmacy, offering a wide range of prescription medicines, over-the-counter (OTC) products, wellness items, vitamins, diet and fitness supplements, herbal products, pain relievers, diabetic care kits, baby and mother care products, beauty care products, and surgical supplies. [\[23\]](#)
- **Total Customer Base:** A choice of over 26 million+ satisfied customers - PAN India. Delivering to over 20,000 pin codes across the country. [\[24\]](#)
- **Total Partnered Hospitals and Clinics:** Specific numbers are not publicly disclosed.
- **Target Audience:** Individuals across India seeking convenient access to a wide range of pharmaceutical and healthcare products online.
- **Business Model:** Operates as a B2B and B2C online pharmacy platform, facilitating the sale and home delivery of medicines and healthcare products.
- **Notable Achievements:** [\[24\]](#)
 - Ranked as 'Asia's Most Promising Brand 2018' by Int+ WCRC International. Named 'Best Digital Healthcare Start-up' by ET Now World Health and Wellness Congress in 2019.
 - Recognised by ET Now World Health and Wellness Congress as 'Digital Healthcare Company of the Year' in 2019.
 - Voted one of the 50 Most Influential e-Commerce Professionals of India by E-commerce Summit and Awards 2019. Won Global Adjustments India Living Award – named 'Business Innovator of the Year 2018'.
 - Winner of the Zee Business Dare to Dream Award - Emerging Company of the Year 2018.
 - Awarded 'Game changer of India ' by the Economic Times in 2018. Named as 'Asia's Most Promising Brand' – WCRC in 2018.

PharmEasy

- **Founding Year:** 2015
- **Headquarters:** Mumbai, Maharashtra, India
- **Current Valuation:** As of December 2024, the online pharmacy PharmEasy was valued at around \$456 million, a 92% drop from its previous peak valuation of \$5.6 billion. [\[25\]](#)
- **Services Provided:** PharmEasy offers online delivery of prescription and OTC medicines, diagnostic test bookings, and teleconsultation services. [\[26\]](#)
- **Total Customer Base:** Serves over 2.4 million Transactional customers across India in 2021. [\[26\]](#)
- **Total Partnered Hospitals and Clinics:** Collaborates with over 80,000 pharmacies and 6,000 doctors and diagnostic centres nationwide. [\[27\]](#)

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- **Target Audience:** The primary audience includes urban middle-class families, tech-savvy professionals accustomed to digital solutions, and elderly customers needing convenient medication access. [28]
 - **Business Model:** PharmEasy is an online pharmacy company that offers a variety of pharmaceutical products. It provides services such as delivering products through delivery personnel, leasing software and hardware, and warehousing, and earns commissions from facilitating diagnostic tests through its marketplace. It offers services like ordering medicine, healthcare products, and lab tests, along with a PharmEasy Plus membership that provides benefits like extra cashback, free delivery, and doctor teleconsultation. [29]
 - **Notable Achievements:**
 - IBLA Young Turk of the Year Award
 - PharmEasy won this award at the 17th Indian Business Leader Awards (IBLA) in 2022.
 - Digital Dragon Awards
 - PharmEasy won two gold and one bronze award at the 2021 Digital Dragon Awards.
 - Amrutanjan's Best Strategic Growth Partner Award
 - PharmEasy won this award in the e-commerce vertical in 2020-21.
 - mCube Awards
 - PharmEasy won the Gold award for Best Engagement through Mobile Marketing at the 2021 mCube Awards.
 - PharmEasy was named one of Fortune India's 40 Under 40 in 2021.
 - PharmEasy became the first Indian e-pharmacy to join the "unicorn club" in April 2021.

Pristyn Care

- **Founding Year:** 2018
- **Headquarters:** Gurugram, Haryana, India
- **Current Valuation:** Valued at \$1.4 billion as of December 2021. [30]
- **Services Provided:** Pristyn Care specializes in secondary care surgeries across various specialties, including proctology, gynecology, urology, vascular surgery, ENT, laparoscopy, and ophthalmology.
- **Total Customer Base:** As of December 2021, Pristyn Care had facilitated over 1.7 million patient interactions. [31]
- **Total Partnered Hospitals and Clinics:** Operates over 100 clinics and has partnered with more than 700 hospitals across 40 cities in India. [32]
- **Target Audience:** Individuals seeking specialized surgical care with end-to-end support, including consultations, surgery, and post-operative care.
- **Business Model:** Operates an asset-light model by partnering with hospitals and clinics, providing patients with a seamless surgical experience from consultation to recovery. [33]

Mfine

- **Founding Year:** 2017
- **Headquarters:** Bengaluru, Karnataka, India
- **Current Valuation:** Approximately \$347 million as of August 2021. [34]
- **Services Provided:** Mfine offers a range of healthcare services, including online doctor consultations, lab tests, medicine orders, X-rays, MRIs, scans, and corporate outpatient department (OPD) benefits. [34]
- **Total Customer Base:** Specific numbers are not publicly disclosed.
- **Total Partnered Hospitals and Clinics:** Collaborates with over 1,000 hospitals and has a network of more than 5,000 doctors. [35]
- **Target Audience:** Individuals seeking accessible and comprehensive online healthcare services in India.
- **Business Model:** Operates as a digital healthcare platform connecting users with a network of hospitals and doctors, facilitating various medical services through its app.

MediBuddy

- **Founding Year:** 2013
- **Headquarters:** Bengaluru, Karnataka, India
- **Current Valuation:** Approximately \$418 million as of August 2023. [36]
- **Services Provided:** MediBuddy offers a wide range of healthcare services, including inpatient and outpatient care, wellness and fitness services, online doctor consultations, lab test bookings, and medicine delivery. [37]
- **Total Customer Base:** Specific numbers are not publicly disclosed.
- **Total Partnered Hospitals and Clinics:** Partners with over 7,000 hospitals and clinics, 90,000+ doctors, and 4,000+ diagnostic centers, covering over 95% of all pin codes in India. [38]
- **Target Audience:** Individuals seeking comprehensive digital healthcare services across India.
- **Business Model:** Functions as a digital healthcare platform providing a multitude of services through partnerships with healthcare providers, aiming to offer end-to-end

Apollo 24|7

- **Founding Year:** 2020
- **Headquarters:** Hyderabad, Telangana, India
- **Current Valuation:** Specific valuation details are not publicly disclosed.
- **Services Provided:** Apollo 24|7 provides online doctor consultations, online pharmacy services, diagnostic lab test bookings, chronic condition management, and COVID-19 care solutions.
- **Total Customer Base:** Specific numbers are not publicly disclosed.
- **Total Partnered Hospitals and Clinics:** As a part of Apollo Hospitals, it leverages the extensive network of Apollo's hospitals and clinics across India.
- **Target Audience:** Individuals seeking reliable and comprehensive online healthcare services backed by a trusted hospital network.

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- **Business Model:** Operates as a digital extension of Apollo Hospitals, offering a wide range of healthcare services through its online platform, integrating various healthcare needs into a single interface.

4. About Practo

Launched in 2008, Practo is an Indian-based online healthcare company founded by Shashank ND and Abhinav Lal. Their mission is to make quality healthcare affordable and accessible globally.

Some other significant facts about Practo include:

- Headquarters: Bangalore, Karnataka
- Number of Employees: 501-1000
- Total funding: \$228.2million

Practo bridges the gap between doctors or health professionals and patients. They offer seamless services to customers by providing amazing features. Practo has provided patients with easy access to manage multiple functions hassle-free.

4.1. Operational Structure

Practo operates as an integrated healthcare platform connecting patients with healthcare providers. Its structure includes:

- Online appointment booking system
- Telemedicine services
- Practice management software for healthcare providers
- Electronic health records system
- Pharmacy and diagnostic services partnerships

4.2. Practo Offerings

For Doctors and Clinics

Practo enables doctors and clinics to register with the platform and offer services.

- **Practo Ray:** A comprehensive practice management software for healthcare providers, offering features like appointment scheduling, electronic medical records, and billing.
- **Practo Consult:** An online consultation platform connecting patients with doctors for video, audio, or chat-based medical consultations across various specialties.
- **Practo Reach:** A marketing tool that enhances visibility for healthcare practices by displaying targeted information cards to potential patients searching for doctors on Practo.
- **Practo Health Feed:** A platform for doctors and health experts to publish articles and health tips, reaching millions of readers and showcasing their expertise.

For Hospitals

Practo enables hospitals to manage digital payments, appointments, and hospitals' financial aspects.

- **Practo Qikwell:** An appointment scheduling system for hospitals that helps reduce patient wait times and optimize hospital operations by synchronizing patients, doctors, and front office staff.
- **Practo Insta:** A cloud-based hospital information management system used by healthcare centers to automate clinical, operational, and financial processes, including patient management, billing, electronic medical records, and inventory control.
- **Practo Querent:** An advanced analytics platform that provides actionable insights for healthcare enterprises using complex mathematical and statistical models, enabling hospital executives to optimize their business in real-time and make data-driven decisions.

4.3. Revenue Model

Practo generates revenue through multiple streams:

A. Commission-based model:

- a. Fees from online consultations
- b. Commission on medicine sales and lab test bookings
- c. SaaS solutions for healthcare providers:
- d. Subscription fees for clinic management software and EMR systems
- e. The tiered pricing structure for clinics and hospitals

B. Subscription services (Practo Plus):

- a. Monthly or annual fees from subscribers

C. Medicine Delivery:

- a. Practo also makes money from selling medications at various drug and chemical stores, both directly and indirectly.

D. Sponsored listings:

- a. Revenue from healthcare providers for prominent display on the platform

E. Acquisition Proceeds:

- a. Practo has purchased several businesses, including Qikwell (SaaS online reservation software), FitHo (resilience management platform), InstaHealth (hospital administration software), and Genoo (a software development app).

4.4 USPs and Key Differentiators

- No third-party data from Practo without consent.
- Integrated healthcare ecosystem offering multiple services
- User-friendly interface and extensive database of healthcare providers

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- AI-powered solutions for enhancing healthcare delivery
 - Focus on improving healthcare outcomes while building a sustainable business

4.5. Target Customers and Preferred Healthcare Providers

A. Target Customers

- a. Urban millennials and tech-savvy individuals
- b. Working professionals seeking convenient healthcare solutions
- c. Frequent travelers requiring access to healthcare services
- d. Expats and foreigners facing language barriers in healthcare
- e. Senior citizens benefiting from teleconsultation services

B. Preferred Healthcare Providers

- a. Individual doctors and specialists
- b. Clinics and hospitals
- c. Diagnostic centers
- d. Pharmacies and wellness centers

4.6. Customer and Doctor Onboarding

A. Customer Onboarding

- a. Users can download the Practo app or visit the website
- b. Create an account using email or mobile number
- c. Browse and book appointments or consultations

B. Doctor Onboarding

- a. Download Practo Pro app and login
- b. Complete verification process by providing necessary documents
- c. Add bank details for payments
- d. Enable practices for online consultations
- e. Complete mandatory training

4.7. Operational Challenges

- A. Intense competition in the m-health industry.
- B. Regulatory compliance in the healthcare sector.
- C. Building and maintaining user trust with sensitive health information
- D. Scalability to handle increasing demand
- E. Integration of new technologies like AI and IoT

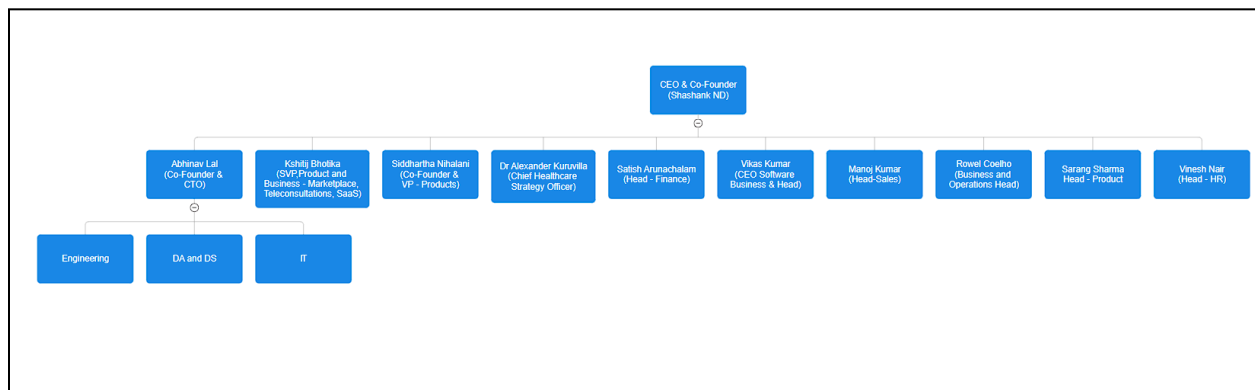
4.8. Outreach Model and Marketing/Sales Strategy

- A. Targeted digital marketing efforts
- B. SEO optimization for higher visibility
- C. Social media marketing to engage with a target audience
- D. PPC advertising campaigns
- E. Email marketing for nurturing relationships
- F. Content marketing to establish authority in the healthcare industry
- G. Strategic partnerships and collaborations
- H. Expansion of services to new geographies

4.9. Significant Mentions and Awards

- 1. First digital healthcare company to receive QAI Accreditation for telehealth services (April 2023)
- 2. Recognized by Karnataka Ophthalmic Society for contributions to Indian ophthalmology (September 2019)
- 3. Achieved profitability in Q4 FY'24 with 22% year-over-year revenue growth³
- 4. Delivered a GMV of INR 3,000 crore in FY'24
- 5. Audited over 661 healthcare establishments against international and national standards

4.10. Organisational Structure



(Source: <https://www.practo.com/company/leadership>)

5. About Tata 1 mg

Launched in 2015, Tata 1mg is an Indian-based online healthcare company founded by Prashant Tandon, Gaurav Agarwal, and Vikas Chauhan. Their mission is to make quality healthcare accessible and affordable across India. citeturn0search2

Headquarters: Gurugram, Haryana

Number of Employees: 4376 (as of 2024) [39]

Total Funding: \$231 million over 10 rounds from 39 investors [39]

Tata 1mg bridges the gap between healthcare providers and patients by offering a seamless platform with various services, enabling users to manage multiple healthcare functions effortlessly.

5.1. Operational Structure

Tata 1mg is an integrated healthcare platform connecting patients with healthcare providers. Its structure includes:

- **Online Pharmacy:** Users can order prescription and over-the-counter medicines through the platform, which are delivered to their doorstep.
- **Diagnostics Services:** Offers at-home sample collection for lab tests, with reports accessible online.
- **E-Consultation:** Provides online consultations with certified doctors across various specialities via chat or video.
- **Health Information:** Maintains a comprehensive database of medicines and health content to educate users about various health conditions and treatments.

5.2. Tata 1mg Offerings

1. For Patients

- **Medicine Ordering:** A user-friendly interface allows patients to upload prescriptions and order medicines online.
- **Lab Tests:** Enables booking of diagnostic tests with home sample collection and online report access.
- **Doctor Consultations:** Facilitates online consultations with healthcare professionals through chat or video calls.
- **Health Articles:** Provides a repository of articles and tips on various health topics to educate and inform users.

2. For Healthcare Providers

- **Practice Management Software:** Offers tools for appointment scheduling, patient management, and electronic health records.
- **Digital Presence:** Assists doctors and clinics in establishing an online presence to reach a broader patient base.
- **Analytics Tools:** Provides insights into patient demographics and engagement to help optimize services.

5.3. Revenue Model

Tata 1mg generates revenue through multiple streams:

- **Commission Fees:** Earns commission on medicine orders and lab tests.
- **Ad Spaces:** Charges healthcare brands for ad placements based on impressions or clicks.
- **Premium Subscriptions:** Offers 1mg Care Plan for exclusive discounts and free consultations.
- **Data & Analytics:** Sells healthcare insights to pharmaceutical companies, insurers, and hospitals.

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- **Featured Listings:** Charges for priority listing of pharmacies and medicines.
 - **Commercials:** Generates revenue from advertisements and healthcare partnerships.
 - **Partnerships & Tie-ups:** Collaborates with hospitals, healthcare providers, and pharma companies.

5.4. USPs and Key Differentiators

- **Comprehensive Healthcare Platform:** Combines pharmacy services, diagnostics, and doctor consultations in a single platform.
- **User-Friendly Interface:** Simplifies the process of accessing healthcare services online.
- **Extensive Network:** Collaborates with various certified healthcare providers and diagnostic centres.
- **Focus on Data Security:** Prioritizes the protection of user data and maintains confidentiality.

5.5. Target Customers and Preferred Healthcare Providers

5.6. Target Customers

- **Urban Residents:** Individuals in metropolitan areas seeking convenient healthcare solutions.
- **Tech-Savvy Users:** People comfortable with using digital platforms for their healthcare needs.
- **Elderly Population:** Senior citizens requiring regular medication and health check-ups.
- **Chronic Disease Patients:** Individuals needing ongoing medical support and easy access to medicines.

5.7. Preferred Healthcare Providers

- **Licensed Pharmacies:** Ensuring the availability of a wide range of medicines.
- **Accredited Diagnostic Labs:** Providing reliable and timely test results.
- **Certified Doctors and Specialists:** Offering professional medical consultations.

5.8. Customer and Doctor Onboarding

Customer Onboarding

- **Account Creation:** Users can sign up using their email or mobile number.
- **Profile Setup:** Entering personal details and health information for personalised services.
- **Service Exploration:** Browsing available services like medicine ordering, lab tests, and consultations.
- **Placing Orders:** Upload prescriptions and schedule services as needed.

Doctor Onboarding

- **Registration:** Healthcare providers can sign up on the platform, providing the necessary credentials and certifications.
- **Profile Creation:** Setting up a professional profile highlighting specialties and experience.
- **Service Listing:** Offering available consultation slots and services.
- **Engagement Tools:** Utilizing the platform's tools for patient management and consultations.

5.9. Operational Challenges

- **Regulatory Compliance:** Navigating the complex regulations governing online healthcare services in India.
- **Logistics Management:** Ensuring timely delivery of medicines and sample collection across diverse geographies.
- **Data Privacy:** Maintaining the confidentiality and security of sensitive patient information.
- **Market Competition:** Standing out in a competitive market with multiple players offering similar services.

5.10. Outreach Model and Marketing/Sales Strategy

A. Digital Marketing

- a. Targeted online ads, email campaigns, and influencer partnerships to increase brand visibility.
- b. Implements SEO strategies to rank higher in search results for healthcare services.

B. Content Marketing

- a. Publishes informative blogs, health tips, and videos to educate users and attract organic traffic.
- b. Collaborates with healthcare professionals to provide credible insights on medical conditions and treatments.

C. Referral Programs & Discounts

- a. Provides discounts to first-time users and loyalty benefits for returning customers.
- b. Encourages existing users to refer friends and family for added incentives.

D. Partnerships with Hospitals and Clinics

- a. Forms alliances with healthcare providers to integrate services and increase credibility.
- b. Offers exclusive discounts on medicines and lab tests for partner hospitals.

E. Expansion into Tier 2 & Tier 3 Cities

- a. Focuses on reaching underserved areas by expanding logistics and partnerships with local healthcare providers.
- b. Uses vernacular content and multilingual customer support to cater to regional audiences.

F. Grandmaster Series Campaign

- a. Highlighted veteran medical professionals to build trust.
- b. Hosted online events with expert insights on health and wellness.

G. Opening Multiple Franchises

- a. Launched the "Sehat Ke Sathi" franchise model for entrepreneurs.
- b. Enabled local partners to expand 1mg's reach affordably.

5.11. Significant Mentions and Awards

Tata 1mg has received several accolades:

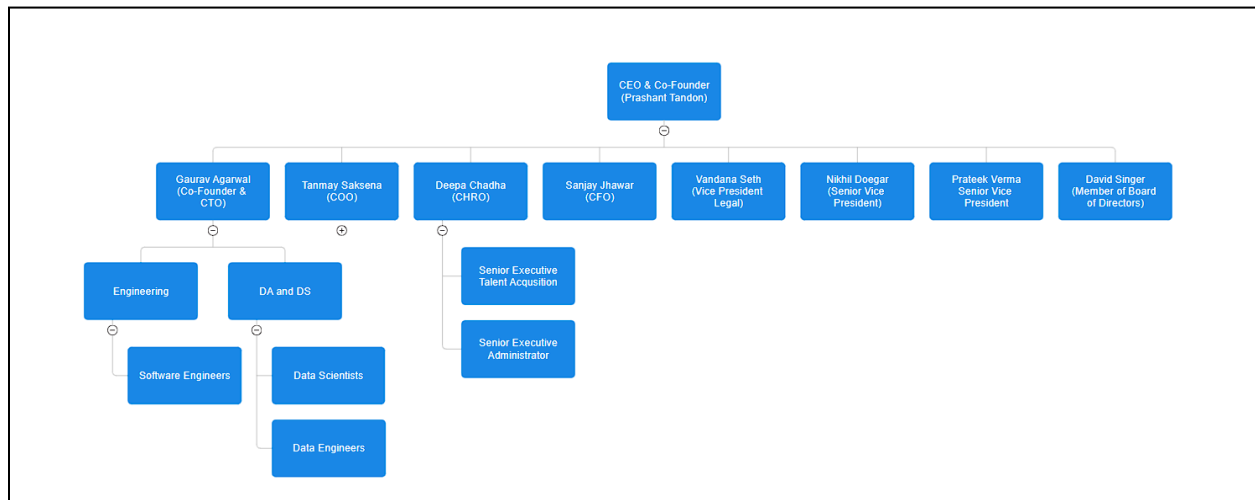
- **2014:** Won the m-Billionth Award for m-Health in South Asia.
- **2016:** Recognized as the Best App in the Medical Category by GMASA.

- **2018:** Received the BML Munjal Award for Business Excellence through Learning and Development.
- **2018:** Awarded Best Mobile Innovation for Health at the India Mobile Congress.

Funders and Shareholders

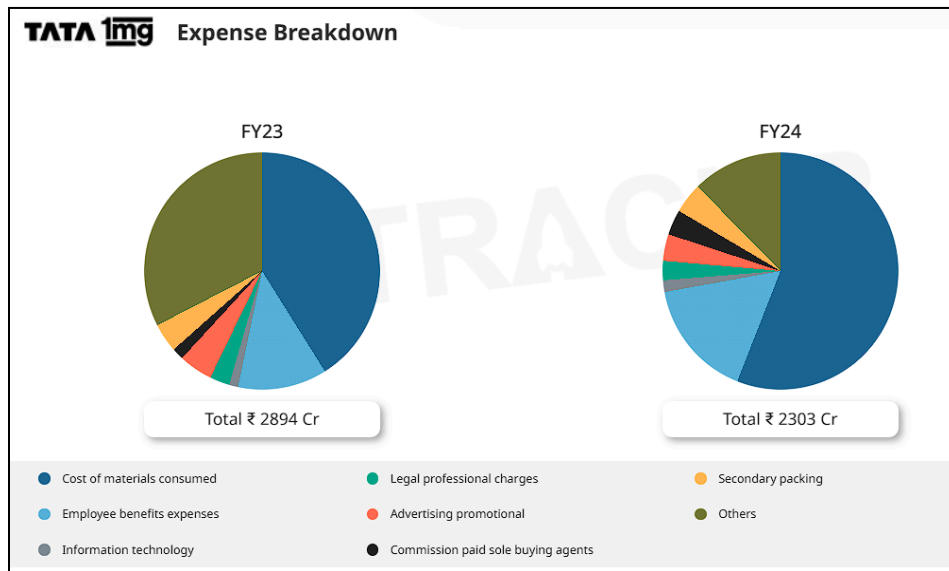
In June 2021, Tata Digital Ltd., a subsidiary of Tata Sons Private Ltd., acquired a 55% majority stake in 1mg, leading to its rebranding as Tata 1mg. This strategic acquisition has bolstered the company's resources and market presence.

5.12. Organisational Structure

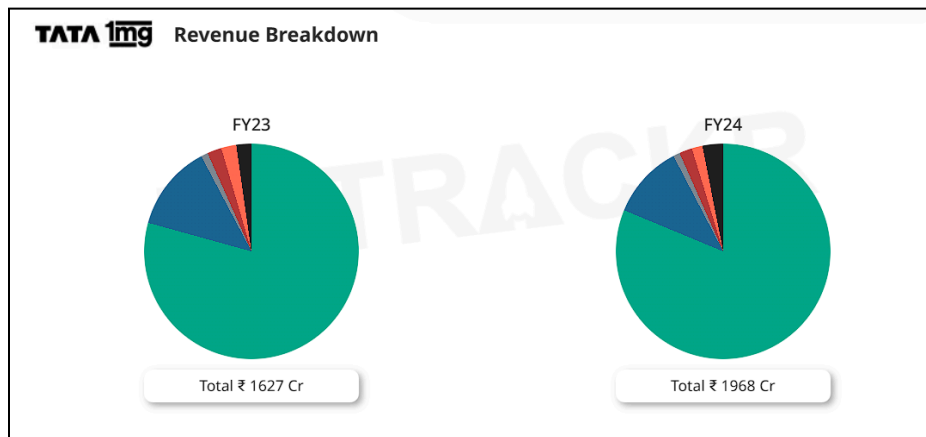


(Source: <https://theorg.com/org/1mg>)

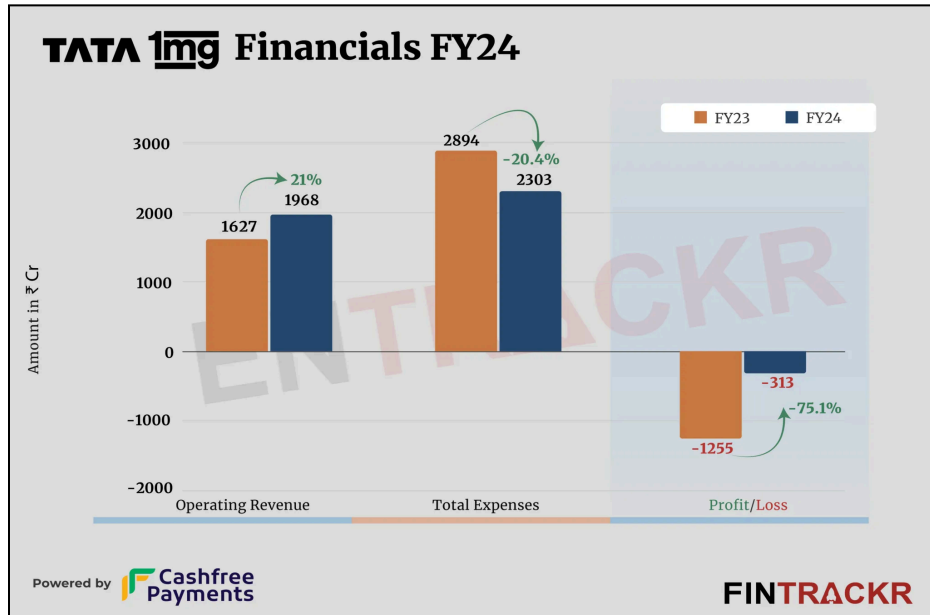
5.13. Revenue and Expenses breakdown of Tata 1mg



(Source: <https://entrackr.com/2024/07/tata-1mgs-revenue-nears-rs-2000-cr-in-fy24-losses-down-by-75/>)



(Source: <https://entrackr.com/2024/07/tata-1mgs-revenue-nears-rs-2000-cr-in-fy24-losses-down-by-75/>)



(Source: <https://entrackr.com/2024/07/tata-1mgs-revenue-nears-rs-2000-cr-in-fy24-losses-down-by-75/>)

6. Stakeholder Overview

6.1 Who needs it?

Patients & Consumers

- Urban and semi-urban patients looking for quick and reliable healthcare solutions, especially in metro areas.
- Patients from Tier-2/Tier-3 cities and rural areas, where physical access to quality healthcare is often limited.
- Language-friendly, location-agnostic healthcare with multi-language support and a pan-India doctor network for foreign expats and travelers.
- Chronic Disease patients, who require convenient subscription plans offering discounts on regular medication and lab tests.

Healthcare Providers

- Doctors, clinics, and hospitals seeking digital platforms to reach a broader patient base.
- Laboratories and diagnostic centres aim to ensure seamless appointment scheduling and higher test volumes.
- Pharmacies need an online presence and streamlined logistics to manage medicine deliveries.

6.2. Why They Need These Solutions:

- **Accessibility:** Digital platforms like Practo and Tata 1mg overcome geographic barriers. They make it easier for patients, especially from remote areas, to access appointments, consultations, and medicines without needing long travel.
- **Convenience & Time Savings:** With integrated appointment bookings, teleconsultations, and home delivery of medicines, these platforms save significant time and effort.
- **Enhanced Service Delivery:** Providers benefit from digital record management, appointment scheduling, and advanced analytics to boost efficiency and patient engagement.
- **Cost-effectiveness:** Both patients and providers can reduce costs; patients avoid travel and waiting time, and providers streamline operations to reduce overhead.
- **Supply Chain Improvements:** The majority of labs and diagnostic centres require a specific volume of test samples to be sent for better supply chain management, and by collaborating with these platforms, they can get the necessary volumes and also help Tata 1mg to reach a more extensive customer base.

6.3. What Is Present in the Market

Digital Health Ecosystem Components:

- **Telemedicine & Online Consultations:**
 - Platforms like Practo have pioneered online consultations by connecting patients to doctors and enabling symptom screening before recommending specialists.
- **Online Pharmacy & Diagnostic Services:**
 - Tata 1mg leads online pharmacies, offering medicine delivery, lab test bookings, and specialised features such as subscription-based care plans.
- **Data Availability:**
 - Platforms like Practo and Tata 1mg generate vast healthcare data, enabling personalised recommendations, predictive analytics, and efficient service delivery. This data helps providers optimise decisions, resource allocation, and patient care trends while ensuring secure digital records for better continuity and informed health decisions.

6.4. Identifying Gaps between Business Services and Market Needs

Tier-2/Tier-3 and Rural Areas:

- **Gap:** Tier 2/3 cities drive 50% growth and contribute 40% of business, but supply chain challenges cause delivery delays. [\[40\]](#)
- **Opportunity:** Enhanced localisation strategies, multilingual support, and tailored service models could expand their reach.

Holistic & Alternative Medicine Integration:

- **Gap:** While Tata 1mg has started integrating AYUSH (Ayurveda, Homeopathy) products, there is room for broader integration of holistic and preventive health services that many patients demand.
- **Opportunity:** Expanding product lines and service offerings in preventive care, wellness, and alternative therapies.

Personalization and Predictive Analytics

- **Gap:** Patients expect personalised health recommendations and predictive insights based on their medical history, but current systems have limited personalisation.
- **Opportunity:** Leveraging AI-driven analytics to offer tailored health advice, medication reminders, and early disease detection.

Aftercare and Follow-Up

- **Gap:** Post-consultation follow-up and continuity of care remain underdeveloped, especially for chronic conditions.
- **Opportunity:** Implementing automated follow-ups, treatment adherence tracking, and integrated care coordination for long-term patient engagement.

Integrated Payment and Insurance Solutions

- **Gap:** Limited integration of health insurance systems leads to a fragmented user experience and difficulty accessing insurance benefits.
- **Opportunity:** Strengthen collaborations with insurers to streamline insurance workflows, enable cashless treatment options, and simplify claim processing, ensuring a more seamless and supportive insurance experience for users.

Increasing User Engagement on the Platform

- **Gap:** Lack of community-driven features limits user interaction and ongoing engagement with the platform.
- **Opportunity:** Create a professional networking space similar to LinkedIn, tailored for the healthcare ecosystem. This would connect patients, doctors, healthcare providers, and industry experts, enabling knowledge sharing, peer-to-peer support, reviews, and discussions, ultimately fostering a vibrant healthcare community and driving sustained user engagement.

7. Creating an alternative healthcare platform

7.1 Current Digital Healthcare Landscape in India

The digital healthcare market in India has witnessed substantial growth, driven by increasing smartphone adoption, rising healthcare costs, and growing demand for convenient access to healthcare services. Key players like Practo and Tata 1mg have established significant market presence, but several gaps remain unaddressed.

In the previous section, after our analysis, we came to the interpretation that India's healthcare ecosystem is undergoing a digital transition, yet a large segment of care delivery particularly through small and medium-sized clinics and diagnostic centers — remains technologically under-equipped. At the same time, patients struggle with non-transparent pricing, long wait times, and difficulty finding verified healthcare professionals, especially in Tier 2 and Tier 3 cities.

Drawing lessons from existing players such as **Practo** and **Tata 1mg**, the proposed solution synthesizes the strengths of these platforms and introduces innovative features tailored to the Indian healthcare landscape. To design a solution that is both relevant and impactful, a comparative study of existing healthcare platforms was undertaken. The focus was on two dominant players in the Indian market:

Practo

- Known for doctor appointment booking, online consultations, and clinic management tools.
- Offers services such as **Practo Ray** (for doctors), **Practo Consult**, and **Practo Health Feed**.
- Limitations observed: Lack of rush-hour management, weak cost transparency tools, and limited rural presence.

Tata 1mg

- Excels in diagnostics, e-pharmacy, and teleconsultation services.
- Strong presence in tier-1 cities and metros; offers wide access to medicines and tests.
- Limitations: No dynamic clinic optimization tools, limited interface for small clinics to manage operations.

7.2 Problem Identification

7.2.1 Challenges Faced by Clinics

Manual Record Keeping: Clinics largely rely on physical registers, which leads to inefficiencies, data loss, and error-prone operations.

Lack of Predictive Tools: No systems exist to predict patient flow, leading to overcrowding and long wait times during peak hours.

Limited Visibility: Small clinics often lack an online presence, making it difficult for them to attract new patients or compete with larger hospital chains.

7.2.2 Challenges Faced by Patients

Difficulty in Finding Verified Providers: The absence of a unified platform displaying qualified and well-reviewed practitioners causes delays in treatment.

Non-transparent Pricing: Patients are unaware of treatment or diagnostic costs until after the consultation or test, leading to financial uncertainty.

Inefficient Visit Timing: Lack of data on clinic rush hours results in long waits and poor patient experience.

7.3 Objectives of the Proposed Solution

The core objective is to design a **comprehensive, accessible, and data-driven healthcare platform** that simultaneously:

- Enhances clinic-level efficiency through digitization and forecasting tools.
- Empowers patients with cost transparency and smart provider matching.
- Promotes evidence-based health education and preventive care.

7.4 Features of the Platform

7.4.1 Doctor Dashboard

A unified dashboard where practitioners can:

- Manage appointment scheduling and patient data.
- View financial insights (e.g., revenue trend graphs, consultation volumes).
- Track seasonal spikes in patient inflow and adjust accordingly.

Inspired by: *Practo Ray*, but simplified and mobile-compatible for small practices.

7.4.2 Rush Hour Forecasting (Wait hour)

Utilizes historical consultation data to:

- Predict peak patient load times.
- Allow clinics to plan staff schedules effectively.

-
- Display *recommended visiting times* for patients (based on lower traffic slots).

7.4.3 Optimal Visit Time Recommendations

A patient-facing feature that uses the Rush Hour Engine to recommend the best time for non-urgent visits, improving:

- Wait time management
- Overall satisfaction and convenience

The system ensures these recommendations are continuously updated based on usage data.

7.4.4 Treatment Cost Database

Significant Diagnostic estimated costs as per city (5-6 major cities, 3-4 tests)

Enables patients to estimate costs for:

- Doctor consultations
- Common diagnostic tests

This is based on:

- Regional pricing averages

7.4.5 Verified Medical Blogs & Podcasts

Collaborating with existing content makers to:

- Educate patients on preventive care and treatments.
- Provide answers to commonly asked health questions.
- Establish trust with the platform.

Modeled after: *Practo Health Feed*, but includes audio/podcast format for better engagement in semi-literate regions.

7.4.6 Provider Suggestion System (Doctor & Diagnostic Centers)

Patients can discover providers based on:

-
- Location
 - Fees
 - Experience
 - Ratings
 - Availability

Powered by two composite indices:

- **Doctor Quality Metric**
- **Diagnostic Center Quality Metric**

We would discuss in detail about these metrics in the next section.

7.5 Quality Metrics

7.5.1 Doctor Quality Metric (DQM)

The **Doctor Quality Metric (DQM)** is a comprehensive scoring framework designed to evaluate a doctor’s overall quality and performance. It combines objective credentials with subjective patient experience to create a transparent, data-driven decision-making tool for patients and healthcare platforms.

Metric	Weight	Description
Years of Experience	15%	Captures medical practice depth
Patient Feedback	30%	Reflects real-world experience including cleanliness, staff behavior, and waiting time
Consultation Fees	15%	Measures affordability

Qualifications & Specializations	20%	Indicates level of expertise
Waiting Time	20%	Reflects time efficiency and appointment punctuality

1. Years of Experience (15%)

The experience of a doctor plays a significant role in the depth and maturity of clinical decision-making. A tier-based scoring system ensures fair benchmarking.

Scoring Scheme:

- 0–5 years: 40 points
- 5–10 years: 60 points
- 10–20 years: 80 points
- 20+ years: 100 points

Final Score = Experience Points × 0.15

Example:

A doctor with 12 years of experience receives 80 points. Final score = $80 \times 0.15 = 12.0$

2. Patient Feedback (30%)

Patient feedback reflects the holistic care experience beyond clinical treatment, encompassing both tangible and intangible aspects. Feedback should include the following dimensions:

- **Doctor communication** and listening skills
- **Clinic cleanliness**
- **Staff courtesy and professionalism**
- **Ease of booking and consultation process**

- **Overall satisfaction**

Feedback is gathered via app-based reviews. Each feedback form should prompt rating on individual aspects to improve granularity and reliability.

Scoring Formula:

Average Star Rating (out of 5) \times 20 = Feedback Points

Final Score = Feedback Points \times 0.30

Patient Engagement Strategy: To enhance feedback rates, we will offer:

- Reward points redeemable for future consultations
- Entry into healthcare giveaways
- Digital health badges for active reviewers

Example:

A doctor rated 4.5/5 receives 90 points. Final score = $90 \times 0.30 = 27.0$

3. Consultation Fee (15%)

Pricing plays a vital role in accessibility. Affordability is assessed relative to the city-wide average for a given specialization.

Scoring Formula:

Formula: Fee Points = $100 - ((\text{Doctor Fee} - \text{Avg Fee}) / \text{Avg Fee}) \times 50$

(Values capped between 0 and 100)

Final Score = Fee Points \times 0.15

Example:

Doctor's fee = ₹500; City average = ₹600

Fee Points = $100 - ((500 - 600) / 600) \times 50 = 108.33 \rightarrow$ capped at **100**

Final score = $100 \times 0.15 = 15.0$

4. Qualifications and Specializations (20%)

Academic and clinical qualifications signify a doctor's capability and depth of expertise.

Scoring Scheme:

- General MBBS: 50 points
- Specialist (e.g., Dermatologist, Orthopedic): 80 points
- Super-specialist (DM, MCh, multiple certifications): 100 points

Final Score = Qualification Points × 0.20

Example:

A Cardiologist with an MD and DM degree receives 100 points. Final score = $100 \times 0.20 = 20.0$

5. Waiting Time (20%)

Efficiency in time management is a key factor in patient satisfaction. Measured as the average waiting time beyond scheduled appointments.

Scoring Tiers:

- <10 minutes: 100 points
- 10–20 minutes: 80 points
- 20–30 minutes: 60 points
- 30+ minutes: 40 points

Final Score = Waiting Time Points × 0.20

Example:

Doctor has an average waiting time of 15 minutes. Final score = $80 \times 0.20 = 16.0$

Final DQM Score Calculation (Example):

Component	Value	Weighted Score
Experience	80	12.0

Feedback	90	27.0
Consultation Fee	100	15.0
Qualifications	100	20.0
Waiting Time	80	16.0
Total DQM Score	—	90.0

7.5.2 Diagnostic Center Quality Metric (DCQM)

The **DCQM** evaluates the operational and service-level performance of diagnostic centers, incorporating availability, affordability, feedback, certifications, and efficiency. This helps patients choose centers that ensure high-quality and timely diagnostics.

Metric Components and Weights

Metric	Weight	Description
Availability of Services	30%	Reflects range of tests and equipment
Pricing Competitiveness	20%	Measures how affordable the center is
Patient Feedback	20%	Includes staff behavior, efficiency

Cleanliness	10%	Cleanliness and Hygiene of the centre
Certifications/Accreditations	10%	Captures NABH or equivalent quality marks
Waiting Time for Reports/Tests	10%	Reflects operational speed

1. Availability of Services (30%)

The breadth of services offered determines the diagnostic center's comprehensiveness.

Scoring Scheme:

- Basic (e.g., X-ray, Blood Test): 60 points
- Moderate (e.g., CT, MRI): 80 points
- Comprehensive (e.g., PET, advanced imaging): 100 points

Final Score = Service Points × 0.30

Example:

A center with MRI and CT receives 80 points. Final score = $80 \times 0.30 = 24.0$

2. Pricing Competitiveness (20%)

This measures the affordability of tests compared to the city average.

Scoring Formula:

Formula: Fee Points = $100 - ((\text{Test Fee} - \text{Avg Fee}) / \text{Avg Fee}) \times 50$

Capped between 0 and 100

Final Score = Price Points × 0.20

Example:

Center price is ₹2,000, city average is ₹2,200

Price Points = $100 - ((2000 - 2200)/2200) \times 50 = 118.18 \rightarrow$ capped at **100**

Final score = $100 \times 0.20 = \mathbf{20.0}$

3. Patient Feedback (30%)

This includes:

- Behavior of diagnostic staff
- Cleanliness of facility and equipment
- Ease of registration and billing
- Clarity and timeliness of results
- Comfort and hygiene in waiting areas

Rating Scale:

Average star rating $\times 20 =$ Feedback Points

Final Score = Feedback Points $\times 0.30$

Patient Incentive Ideas:

- Discount coupons on next test
- Health points or wallet cashbacks
- Periodic wellness giveaways

Example:

A 4.3/5 rating yields 86 points. Final score = $86 \times 0.30 = \mathbf{25.8}$

4. Certifications & Accreditations (10%)

Quality assurance through formal accreditation enhances trust.

Scoring Scheme:

- No certification: 50 points
- Basic (e.g., ISO): 70 points
- NABL/NABH Certified: 100 points

Final Score = Certification Points × 0.10

Example:

A NABH-certified lab scores 100 points. Final score = $100 \times 0.10 = 10.0$

5. Waiting Time for Reports (10%)

Measures turnaround time from sample/test to report delivery.

Scoring Tiers:

- Same-day reporting: 100 points
- 1 day delay: 80 points
- 2 days delay: 60 points
- 3+ days: 40 points

Final Score = Waiting Time Points × 0.10

Example:

Center provides reports within one day. Score = $80 \times 0.10 = 8.0$

Final DCQM Score Calculation (Example):

Component	Value	Weighted Score
-----------	-------	----------------

Service Availability	80	24.0
Pricing Competitiveness	100	20.0
Patient Feedback	86	25.8
Certifications	100	10.0
Waiting Time	80	8.0
Total DCQM Score	—	87.8

7.6 Revenue Model

Revenue Stream	Description	Contribution
Subscription	Monthly/annual fee paid by clinics and diagnostics for access to dashboard and analytics. Tiered pricing model.	1500/pm/pc
Platform Fee	Per-transaction fee for appointment bookings.	5% of the transaction amount
Ads / Featured Listings	Clinics and diagnostics can pay for promoted placement.	Variable

Insurance Integration (Future)	Commission from successful insurance claim processing.	Future Prospect
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7.7 Financial Projections

For a clinic paying ₹1,500/month for Pro Tier. With 10% increase in bookings/month (due to better visibility and smoother flow):

- **Extra 30–60 patients/month**
- Avg consultation: ₹500
- **Monthly Revenue Boost: ₹15,000–₹30,000**
- ROI in less than 1 month

Diagnostics:

- Avg test: ₹600
- 100 extra tests = ₹60,000/month boost

Using conservative projections:

- **Clinic Subscriptions** at ₹1,500/month
- 1,000 clinics onboarded in Year 1 → ₹1.8 crore/year
- Transaction Fees (5%) on bookings at 2 lakh monthly users
- Diagnostic Centers generate ₹60,000–₹1,20,000/month extra revenue
- Platform can become profitable within **18–24 months** with exponential network effects beyond Year 2.

8. Preliminary Platform Prototype

a) Login/Registration Portal

The figure displays two side-by-side web forms. The left form, titled 'Login to HealthConnect', features two input fields: 'Enter your email*' and 'Enter your password*'. Below these is a blue 'Login' button and a link 'New user? Register here'. The right form, titled 'Register for HealthConnect', includes input fields for 'First Name*', 'Last Name*', 'Age*', 'Email ID*', and 'Password*'. It also has a 'Select Gender*' dropdown menu. A blue 'Register' button is at the bottom, with a link 'Already a user? Login here' below it.

Figure 1: Login Portal (Left) & Registration Portal (Right)

New users can register using the registration portal, and the login portal can be accessed by existing users, this is important as the whole website involves payments and bookings thus, contact information is important for credibility.

b) Home Page

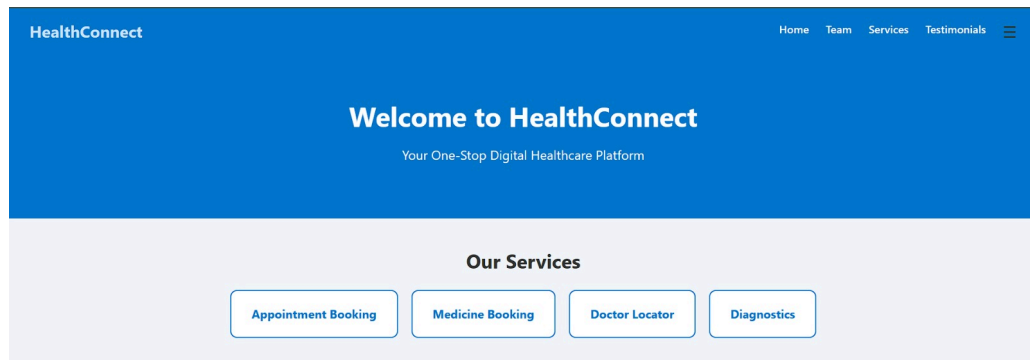


Figure 2: Home Page (a)

The first interface (a), after login, gives information about the various services available on our platform.

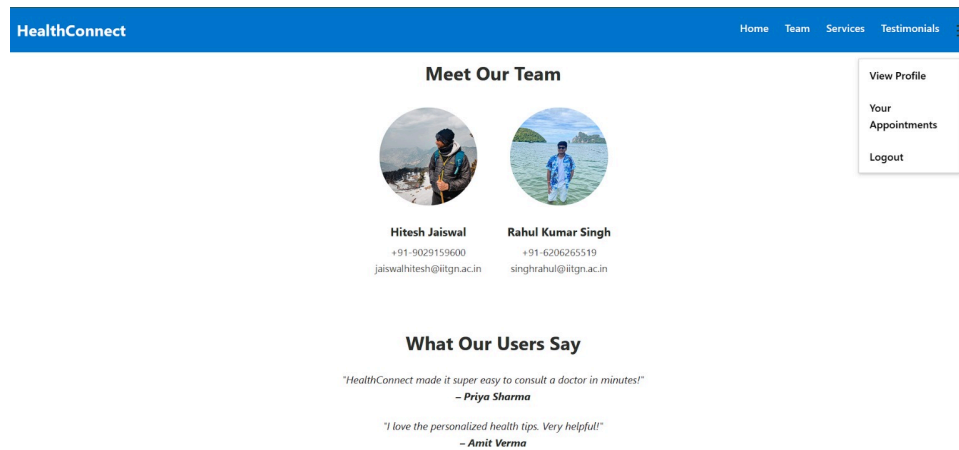


Figure 3: Home Page(b)

This page gives information about our team and the testimonials which we will record in the future, with the menu option displayed on the right top corner to check profile, reports, appointments, etc.

c) Book an appointment feature

Figure 4: Appointment Booking Portal

This feature allows you to book an appointment with the listed doctor and gives you an estimated waiting time for your checkup. This feature can save many people's time by creating dynamic waiting times.

d) Doctor Locator

The screenshot shows the 'Doctor Locator' page of the HealthConnect website. The header is blue with the 'HealthConnect' logo on the left and navigation links (Home, Team, Services, Testimonials, Login, Register) on the right. The main title 'Doctor Locator' is centered in white, with 'By HealthConnect' below it. Below the title is a filter bar with a dropdown menu set to 'Neurologist', a 'Price: low to high' dropdown, and an 'Apply Filter' button. The main content area is a table with 6 columns: Specialization, Name, Consultation Fees (in Rs), Years of Experience, Hospital (in Ahmedabad), and Location. The table lists six neurologists with their respective details.

Specialization	Name	Consultation Fees (in Rs)	Years of Experience	Hospital (in Ahmedabad)	Location
Neurologist	Dr. Mahendra Singh Chauhan	800	17	Shalby Hospital	https://maps.app.goo.gl/aa7lKkNZxYPaw1yDA
Neurologist	Dr. Arvind Sharma	800	0	Zydus Hospital	https://maps.app.goo.gl/aa7lKkNZxYPaw1yDA
Neurologist	Dr. Shailesh Darji	800	10	Care Neuro Clinic	https://maps.app.goo.gl/aa7lKkNZxYPaw1yDA
Neurologist	Dr. Jignesh Prajapati	800	10	Vedas Cadio and Neuro Clinic	https://maps.app.goo.gl/aa7lKkNZxYPaw1yDA
Neurologist	Dr. Dinesh S Saini	1000	15	Satya Neuro care	https://maps.app.goo.gl/aa7lKkNZxYPaw1yDA
Neurologist	Dr. Shuchit Pandey	1200	16	Axon Neuro care	https://maps.app.goo.gl/aa7lKkNZxYPaw1yDA

Figure 5: Doctor Locator Feature

This feature will provide users with credible information about doctors and also help people who are new in the city or are tourists. There would be multiple factors given in this search like experience, fees, location and also reviews from the patients.

e) Diagnostic Price Checker

The screenshot shows the 'Diagnostic Price Checker' page of the HealthConnect website. The header is blue with the 'HealthConnect' logo on the left and navigation links (Home, Team, Services, Testimonials, Login, Register) on the right. The main title 'Diagnostic Price Checker' is centered in white, with 'By HealthConnect' below it. Below the title is a filter bar with a dropdown menu set to '2D Echo', a 'Cost: low to high' dropdown, and an 'Apply Filter' button. Below the filter bar, the text 'Average Cost: Rs 1740.00' is displayed in red. The main content area is a table with 4 columns: Test, Hospital, Cost (in Rs), and Location. The table lists ten '2D Echo' tests at various hospitals with their respective costs and locations.

Test	Hospital	Cost (in Rs)	Location
2D Echo	Laxmi Hospital & Diagnostic Center	1200	West
2D Echo	Scientific Diagnostic Center (Chotila)	1200	Central
2D Echo	Spectrum Healthcare	1400	North
2D Echo	Trisha Multispeciality Hospital	1500	West
2D Echo	Sangini Hospital	1500	West
2D Echo	Exo Path Labs (Maninagar]	1500	North
2D Echo	Stay Well Health Solution	1500	Central
2D Echo	Mfine Diagnostic	1500	West
2D Echo	Sal Hospital	1500	South
2D Echo	Sal Hospital	1500	South

Figure 6: Diagnostic Price Checker

This feature works similarly to the doctor locator, but instead of doctors, this is for diagnostic centers.

f) Medicine Booking

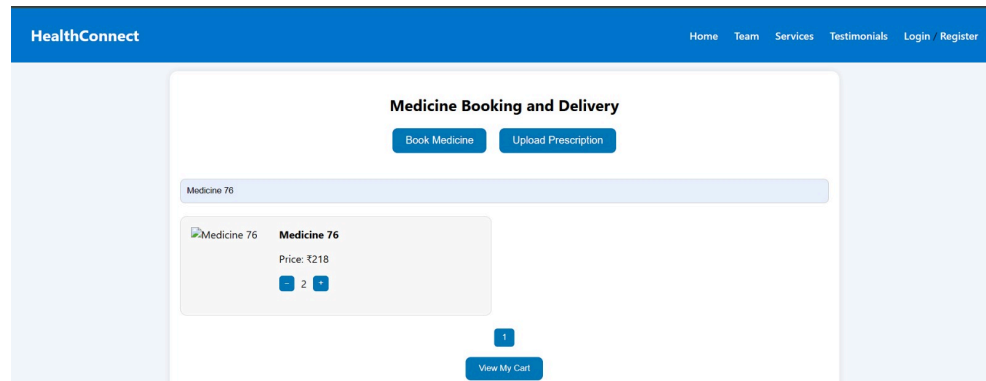


Figure 7: Selection page of Medicines

This is the opening page of this feature, where the person can select what medicines he wants to order.

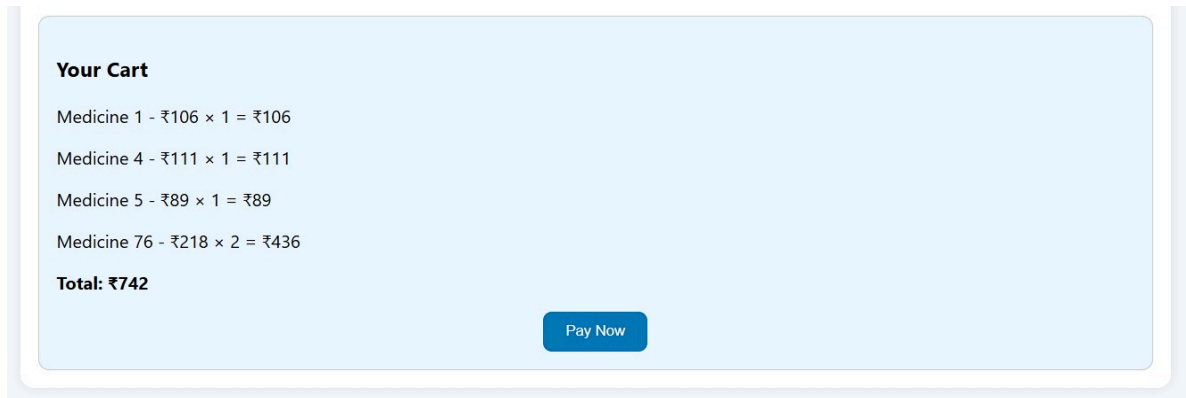


Figure 8: Cost Estimation of the Medicines

The price of the selected medicines is displayed.

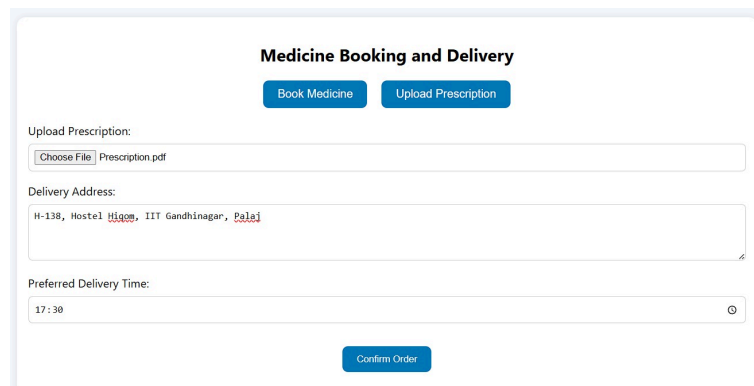


Figure 9: Delivery & Prescription details

On this page, users can finally upload their prescriptions and select their delivery address.

9. Future Work

While the project lays a solid foundation, many features right now are built as demos or basic mockups. In the future, we plan to work on the following:

Expanding Database: Right now, most of the information is only based out of a few cities. We plan to build a proper backend with real-time data storage for doctors, diagnostics, bookings, etc.

Dynamic Predictions: The rush-hour feature and optimal visit time suggestions are currently based on assumptions. Later, we want to use actual patient flow data and maybe even ML models to give real-time suggestions to both doctors and patients.

Real-Time Functionality: Features like appointment booking, wait time estimates, and diagnostic price comparison should work in real-time and reflect actual data from clinics and labs.

Doctor and Diagnostic Center Onboarding: Currently, the providers listed are just examples. We aim to develop a working onboarding system where real doctors and labs can register, verify their credentials, and start offering services.

User Accounts and Logins: Login and registration pages are made, but they're not connected to anything. In future versions, users will have personalized dashboards, saved reports, and access to previous bookings and feedback.

Payment Gateway Integration: Right now, we've skipped real payment functionality. Adding UPI/Netbanking/Cards support for bookings and consultations is a future goal.

Mobile App Version: Although this is designed for the web, we aim to create a lightweight Android app version to reach more users, especially in Tier 2/3 cities.

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