E-Commerce and Healthcare Solutions in the Digital World



Preamble

The Healthcare Industry has been evolving at a snail pace over the last many years, however advent of the global pandemic has forced the industry to look at alternate operating models to be able to serve patients who are becoming more empowered to consider healthcare options for themselves and their families. Moreover, the global pandemic has also proved a dire shortage of qualified and experienced healthcare providers worldwide and unfortunately this gap cannot be closed anytime soon. The industry and all its stake holders cannot wait for the next pandemic which may be just around the corner and must move out of their comfort zones to consider out of box solutions as otherwise the world will be forced to relive the horrific scenes of COVID 19.

Innovations in Digital Health including the use of AI, Mobile Application, Telehealth Digital Platforms, and their extensive expansion is giving many opportunities for both patients as well as Healthcare Providers to improve access to healthcare. The health sector is growing exponentially to meet patient and other stakeholders' expectations using advancements in technology. With the increased usage of medical applications, the global digital healthcare market is expected to expand to over 110 billion USD by 2021

Contents:

- Top Trends in Digital Health
- Tele Health Platforms virtually connecting patients to doctors
- Mobile Applications
    - Applications for Doctors

    - Applications for Patients
    - Administrator's Features
- Types of Healthcare Mobile Application Solutions
- Types of Healthcare Mobile Applications for HCP's (Healthcare Providers including Doctors, Diagnostic Laboratories as well as Pharmacies)
- Types of Healthcare Mobile Applications for Patients

Developments in Digital Health has also allowed people to have better access to the healthcare system. With a click of a button, patients can get access to their desired healthcare service providers. Furthermore R&D in home diagnostics is likely to bring down the costs of many simple diagnostic tests, the results of which can be stored in the medical records of patient's handsets.

Innovative and easy to use digital applications is bringing a revolution of sorts in access to health. The whole patient journey is changing rapidly and improving patients' direct involvement in their own health. This is likely to improve prevention measures, reduce load on doctors and hospitals and reduce burden of disease longer-term.

Healthcare requirements may be versatile. This will need the ability to provide virtual healthcare using digital platforms for mostly primary healthcare issues to streamline patient flow in healthcare facilities. Moreover, the global pandemic has proved the alarming gap between clinical practioners and patients. Since Healthcare providers cannot be manufactured overnight hence the necessity to use AI Tools for diagnosis as well as counselling.

The Digital Health Revolution
Handsets or Mobile Applications are becoming more important for all stakeholders primarily for their simplicity in use. The Handset market for Healthcare (or for that matter even for any other category) has exploded especially following the global pandemic. Advancements in Handsets Technologies is important for all stakeholders to evaluate its growth trends and develop better applications to supply a seamless user experience.

Wearable Technology – While still expensive and out of reach for millions of patients, its growth is phenomenal, and R&D spends is likely to bring down costs over time

1. Smart Watches
2. Head Mounted Displays
3. Ear-Worn
4. Sports Watches
5. Wrist Bands
6. Smart Clothing

Total consumer spending in all the above reached over 65 Billion USDs by 2021.
Wearable technologies primarily assist users in lifestyle changes to improve their overall wellbeing and reduce dependency on healthcare by preventing or prolonging disease occurrence by keeping track of various health activities while maintaining data in real-time.

Cloud-Based Data

Maintaining patient data is especially important as communities come to terms while living in a pandemic world. It helps contact tracing, checking the whereabouts of infected people, their travel history, etc. Many governments in the quest to restore normalcy have used cloud-based solutions in their healthcare system.

AI in Digital Healthcare

Artificial Intelligence is playing a pivotal role and leading the revolution in providing affordable healthcare as well as streamlining patient flow in healthcare institutions.

AI will be vital in extending affordable access to healthcare not only in developing countries but also worldwide. AI can help in scheduling prompt checkups, CT-scans, and other such things without human intervention. Thus, there is no chance of human error and the patient will never miss their doctor's appointment or miss a dose of his/her prescribed medicines, in other words it increases patient compliance through automatic reminders.

Due to its ease of use and exquisite features, Artificial Intelligence will hold a prominent position in the expansion of affordable healthcare for all.

Telemedicine Platforms

Telemedicine platforms has witnessed exponential growth during the pandemic when HCP's and patients were both quarantined. However, such platforms are dependent upon the availability of HCPs around the clock which can only be possible through Virtual Assistants driven by Artificial Intelligence to identify patients' primary healthcare needs, be able to suggest diagnostic tests, evaluate test results without human interaction and counsel patients specially those who are suffering from primary health issues while referring those who are suffering from more severe disorders. This can also assist HCP's to quickly move towards providing solutions as it reduces the time for diagnosis and provide instant medical information. In short it provides efficiencies in the overall healthcare system and provides the most economical way of connecting with the most appropriate HCPs for consultation.

Perhaps the greatest advantage of Telemedicine Platforms that it makes healthcare services easier to access in remote areas 24/7.

Features for a simple Healthcare Mobile Application

To develop a '**FULL CIRCLE'** digital health platform, consider three distinct aspects:

- Features in the patient's handset application
- Features in the doctor's handset application
- Features for the admin to ensure Medical Records security and access to both patients and HCPs.

Only after careful evaluation of these features can a Healthcare Provider move forward and provide Handset Applications to patients as well as HCPs.



Handset Healthcare Applications for Patient



Registration

The user should be able to register easily either with their email or social media account or directly by downloading the application on his/her handset.

Consult an Artificial Assistant
The user can consult with an AI Assistant (speech as well as text), to determine his/her primary condition, acquire a unique ID, schedule diagnostic tests if required and collate medical information even before consulting an HCP for additional services if required.

Doctor's Mobile Applications

Scheduling appointment
The user can select a preferred HCP, his/her availability, schedule an appointment and even share their medical records before visiting the HCP.

Getting e-prescription
If the user opts to consult with the doctor online, the doctor can generate their prescription online without any error. In addition, it saves time and helps in keeping excellent communication.

Using E-Rx users can also have access to E-Pharmacies, payment, and delivery platforms.

The HCP Mobile Applications can also assist doctors to connect with their colleagues and discuss the questions related to a patient's medical issue.



Registration
Like the patient the doctors too can register by downloading the application on their Mobile Handsets

Profile generation
The doctor can input his/her credentials right from their academics to their experience. Moreover, they can add their specialization so that it will become easier for the patients to find them.

Apart from it, the feature will give immediate contact details and location and timings of the doctors. Add a review/rating column to justify the credibility of the doctor.

Dashboard of the patients
The dashboard will display an overview of the patient to the doctor. Moreover, it will also help them in keeping a track of the patient's visit and their prescription in a synchronized manner.

Patient time management
An in-built calendar will help the doctors to keep their appointments easily. Besides this, it will save them from any overlapping of the schedule and run the diagnosis without any hassle.

Like the patient's, the doctors can also reschedule or cancel an appointment citing valid reasons. This helps in keeping the communication clear between the patient and the doctor.

E-prescription
Similar from the patient's end, the e-prescription feature will help the doctors to send prescriptions online into the patient's application. Moreover, this feature can be a decision tool as the HCP will get access to the patient's medical records and can remold the medicines or change them according to the requirement.

Admin Features
The admin features of the app will include all the management system. These features of the healthcare service supplying application help the respective department to oversee the smooth running of the application.

Patient management
It keeps the records of the patient according to their ailment and the diagnosis. The system is directly integrated with the health management system of the hospital or the HCP.

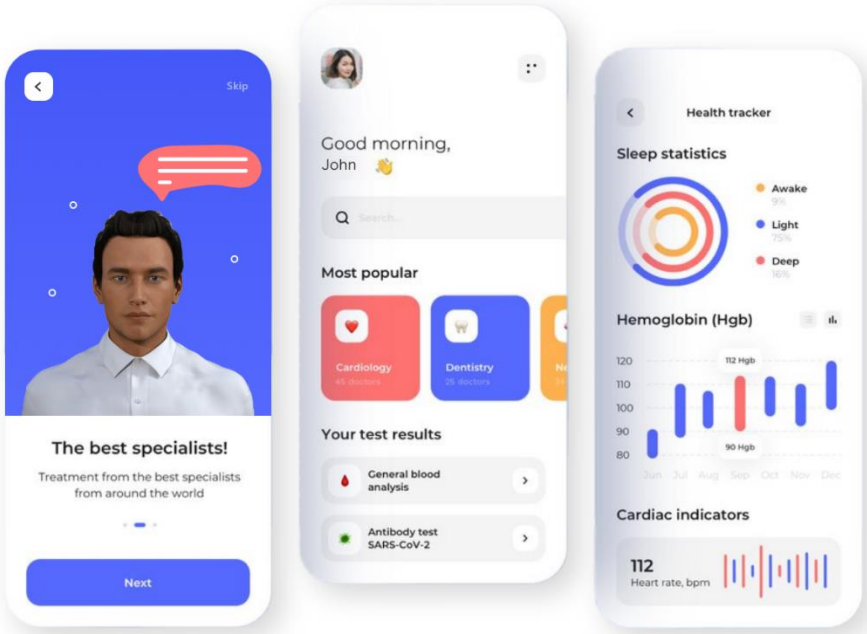
Inventory management
If the HCP/Hospital is not equipped with the necessary instruments, both patients and doctors will face problems. Right from the availability of beds to medicines and other sanitization equipment's, this feature keeps the admin department updated.

Doctor Management
This feature allows to keep a track of the availability of the doctors and other paramedical staff as well. As the doctors register through their application, each of their detail gets saved in the system. Thus, in case of emergency, the admin department can guide the patients so that they can get their treatment.

Broadly, the healthcare mobile applications are managed through a back-office web application driven by Artificial Intelligence, while all management services are provided round the clock.

Types of mobile apps for patients

Health monitoring
Like it is for the doctors, the digital application provides health monitoring, which is useful for patients, especially those who are suffering from chronic diseases. This health monitoring keeps a check on their vital signs around the clock and helps the patients to take necessary precautions in time.



Appointment/Medicine reminder
The application reminds patients to take adequate rest, dietary controls and comply with prescribed medicines on time by sending on-line reminders.

Disease Awareness/User Education
This feature keeps the patients updated about symptoms of new diseases and precautions on how to prevent them via lifestyle and dietary changes. In addition, the application is supported by a Patient support Platform (Call Center) staffed by qualified Healthcare Professionals to guide patients in managing their healthcare issues. As Patients become more aware of healthcare issues, they can minimize escalation of disease and take prompt actions.

Nutrition and healthy living
This app will help the user to support a good diet and follow a good schedule to have a healthy lifestyle. Be it exercise, fitness or eating mindfully, the app keeps everything in check.

We offer Exciting web and Mobile Applications for various business models. Digitize your business today and start growing!

Our ability in latest development frameworks and technologies has enabled us to use a variety of suitable technology stacks that businesses may need.

1. <u>Consulting Service</u>
DL's consultants are ready to help your business by developing a strategy that aligns with your technical and commercial requirements in E-Commerce, ERP Systems, HRMS, FinTech, Healthcare, Search Engine Optimization, Data Analytics, Web, and Mobile Engagement with your stakeholders. DL's Trusted Advisor Network expands the professional services offerings to supply assessments, strategic planning, consulting, and outcome-based engagements for clients to help drive transformation and optimization for business processes. Our consultants have broad experience and

ability in many business domains, technologies, and industries and can supply valuable insight to clients looking for a competitive edge in creating speed to value. (“Digital Landscape (Pvt.) Ltd.”)

2. Managed Team Extension

With the Team Extension Model, our developers become an integral part of your team during the entire project. We carefully select each team member based on the requirements and ability you need. They immerse themselves in your project, keeping your company culture and working in line with your strategic goals.

3. Agile Squads

It is easy to hand over the requirements to a ready-to-go Agile Squad and check in with them periodically. Get a time and effort estimate for your requirements and let us assemble an Agile Squad, (“Digital Landscape (Pvt.) Ltd.”)