



DIGITAL HEALTHCARE DISRUPTION IN INDIA

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Whitepaper

Executive Summary

Healthcare industry is one of the world's largest & fastest growing industries. This sector works through collaboration of 5 major segments, i.e. hospitals, pharmaceutical, diagnostics, medical equipment and supplies, and medical insurance.¹ Technology has influenced nearly every sector of Indian economy to achieve Digital India vision but healthcare technology is still at nascent stage.

A lack of connectivity and continuity within the medical infrastructure are some of the major issues challenging the Indian health care system. Nowadays, patients want the healthcare services to be digital and fast with more self-involvement, just like all other services. These concerns are important & interrelated.

Healthcare issues cannot be solved by “status-quo” approach. There is a need for radical change in the healthcare industry to reinvent, rethink, and redeliver in better, faster, and cheaper way. This calls for an immediate need of integrating digitalized technology into the existing healthcare system.

This white paper sets forth a framework for digital healthcare. With strong emphasis on the changes necessary to bring Digital Healthcare Disruption in India and the role that KareXpert is playing to connect all healthcare providers.

The framework will enhance the experience of care, improve the health of population and reduce per capita costs of healthcare.

Major Challenges in Indian Healthcare:

- ❖ With a total population of 1256 million and an increasing number of aging population (65 million in the year 2015 and expected to increase to 76 million by 2020)², India is facing big challenges on the healthcare front
- ❖ According to the World Health Report 2000 (World Health Organization [WHO]), India ranks at 112 out of 191 countries in terms of health system performance³
- ❖ India lags behind in terms of physicians' density, pharmaceutical personnel density, and bed density when compared with WHO standards (*Figure 1*)^{4,5}
- ❖ While the healthcare expenditure in India is lesser as compared to the other low and middle-income countries (LMICs) (4.0% vs. 5.7% of gross

domestic product [GDP]), out-of-pocket expenses are much higher (61% vs. 37% of total health expenditure [THE])

- ❖ Situation is further complicated by biased healthcare access among different states and unregulated growth of the healthcare sector⁵
- ❖ According to a recent study reported in the *Journal of Medical Practice Management*, poor communication, indifferent staff, unorganized administration, excessive waiting time, and billing problems are the main reasons for patients' dissatisfaction⁷
- ❖ Further patient dissatisfaction is arising due to ongoing digitization in all other industries⁸

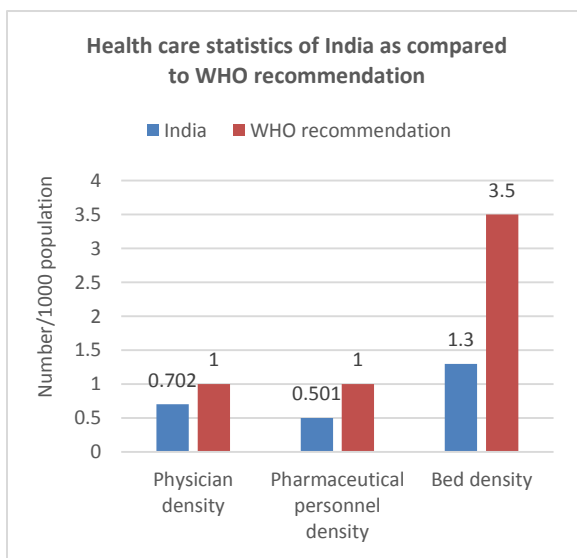


Figure 1: Current healthcare status of India

Overall, healthcare system in India is complex and unstructured with infrastructure gaps, inadequate, underutilized health workforce, and lack of integration, lack of transparency, system inefficiencies, poor management, and poor delivery services^{1, 5, 6, 7, 8}

Need for Healthcare Digitization in India:

India, it is expected to rank among the top three healthcare markets by 2020 (in terms of incremental growth). Increased income levels, rising population, and growing health awareness are expected to boost the demand for healthcare services in India (Figure 2). Moreover, low cost of medical services in India has led to rise in medical tourism.¹ the healthcare demand is so high that it is impossible to create enough quality providers.

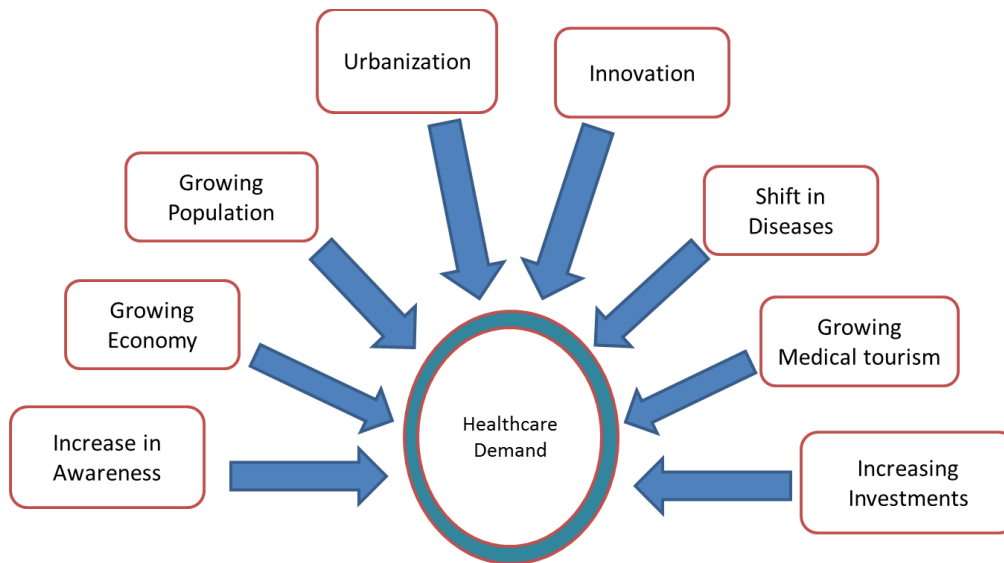


Figure 2: Healthcare Demand Drivers

All these factors highlight the need to digitize the healthcare services ranging from hospitals to pharmacies, diagnostic labs to imaging centers, blood bank to ambulance services etc.

Moreover, India is projected to have 750 million smartphone users by 2020, including 230 million with 4G/LTE (Long-Term Evolution) connectivity.⁹ This has changed the patients' expectations as they want the healthcare services to be digitized just like the other industries. As a result, there is a demand for an interactive, simple, accessible and secured digital platform for healthcare services.

On the positive note, this is a big opportunity for healthcare providers to use this connectivity for better healthcare delivery at nominal prices.

Digitization would re-define patient-physician relationship and will change the definition of what healthcare actually is and how it will be delivered and experienced. It is the future which guarantees high quality healthcare for future

generations. Service providers should choose either to digitize and get a strong market foothold or get disrupted. In case, healthcare providers choose not to digitize, they will lose out to the providers who are ready for this change. Thus, digitization is no longer an option, but a mandatory requirement today.

Considerations for Healthcare Digitization:

Healthcare digitization redefines healthcare services and makes healthcare integrated, predictive, personalized, proactive, and coordinated. It helps in connecting all the segments of the healthcare world (*Figure 3*). Patients can do online chats to receive health services, information can be shared to multiple locations, patient records can be centralized and integrated, and digital data collection and analysis can be done, thereby reducing the costs and improving the quality of information shared amongst the healthcare providers and patients. Digitization standardizes the healthcare system, stream-lines the workflow, eases the information sharing, and connects hospitals and primary care physicians to coordinate patient care with a single click.⁹

Look for a Health App that:

- ✓ Facilitates Social Presence
- ✓ Right balance of online, physical services
- ✓ One stop app connecting all healthcare providers
- ✓ Cloud for digitization of documents
- ✓ Highly Secured
- ✓ Low upfront costs
- ✓ High ROI
- ✓ Excellent Support

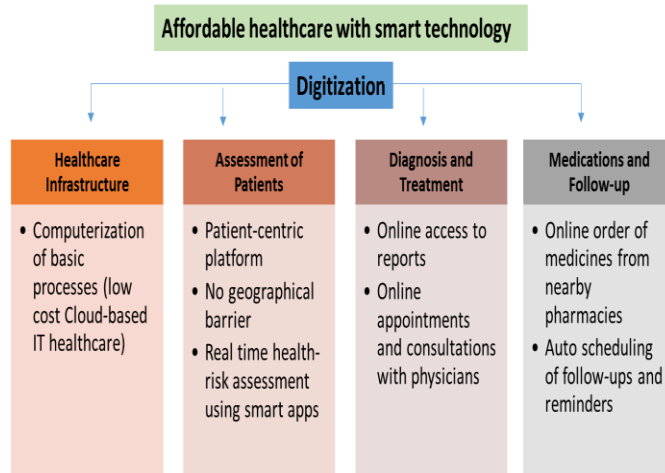


Figure 3: Healthcare & Digitization

Ways to Healthcare Digitization

- ❖ **Electronic records:** Data unification and homogenization via electronic patient records can improve the communication between various healthcare providers and patients and thus, quality of patient care in a much secured manner.
- ❖ **Health at Home:** Patients can connect online with physicians and other healthcare service providers sitting at home. This is a cost-effective, safe, and viable alternative, especially for the aging population with chronic conditions.
- ❖ **Telemedicine:** Healthcare can be delivered over long distances using information and communication technologies for exchange of information related to management of diseases and education for healthcare providers.
- ❖ **Technologies and Devices:** Smartphone apps, cloud computing, pocket monitoring devices etc. can help in better management of patients and reduce infrastructure requirements.
- ❖ **Big data analytics:** Big-data analytics, predictive analytics and cloud computing can provide real time analysis of disease conditions, and help in addressing various health disparities.

Role of KareXpert in Patient Centric Healthcare Digitization:

KareXpert redefines healthcare digitization connecting all the segments of the healthcare world (**Figure 4**), and empowers both the patients and healthcare providers. KareXpert brings in patient continuity via a patient-centric health approach by digitizing healthcare and making the patient more empowered, active, and participatory in his own healthcare.¹²

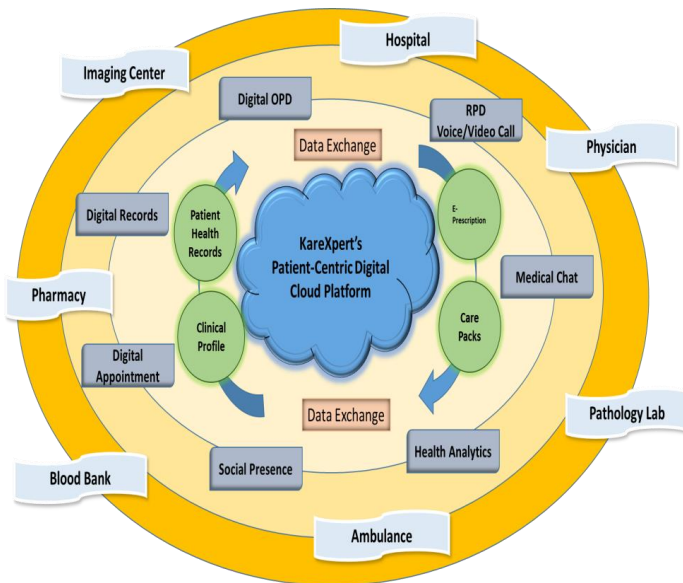


Figure 4: Role of KareXpert in Healthcare Digitization

How KareXpert can help doctors to Transform into Smart Doctors

In today's modern world, your medical practice needs an online presence to meet the ever growing patient demands. And to deliver the best quality healthcare services you can use our cutting edge technologies based on secured health cloud. The great thing about our App is that you can use it on any device that you have access to, to provide the consultation at no overhead

KareXpert Smart Doctor App:

- ✓ Social Presence
- ✓ Mobile & Web app compatible
- ✓ Various mode of consultations- Audio, Video, Medical Chat, Physical OPD
- ✓ Digital Appointments
- ✓ Multiple Clinic Management
- ✓ Documents Digitization Cloud
- ✓ EPrescription
- ✓ Access Patient Profile
- ✓ Digital Review shared reports
- ✓ Highly Secured
- ✓ Low upfront costs
- ✓ Digital Patient Engagement
- ✓ Care Packages

Cost, you can use your Smart phone, Tablet, laptop or even desktop.

With KareXpert, get a free listing of your profile on our app to expand your reach to millions of patient. With this service, you have the ultimate flexibility in deciding practice hours when & where & how you practice. Doctors can continue to practice physical consultation, start online consultation and be connected with the Patients of their Clinics, Hospitals. Online Consultation is enabled using RPD, KareXpert technology -Remote Patient Department facilitating online visits either through Audio Call; real time video consultations or secured chat. You can actually continue to deliver follow up care & be paid for these services. On Your Screen You can view complete list of patients who are waiting in digital queue & connect with them as per their booked appointment; Patients can send you photos, lab reports, digital health records & profiles in advance before consultation. At the end of consultation you can send electronic Prescription. Here is the opportunity to use your medical experience and judgement to reach more people & help them to feel good by educating them with articles on healthy lifestyle.

With KareXpert you can grow your practice, increase income & delight patients as they can now be online connected to you anytime anywhere.

How KareXpert can help Clinics to Transform into Smart Clinics

Concept of Smart Clinic is designed to enhance patient engagement by delighting them with the help of easy to use technology. Streamline your existing clinic practice management at Zero cost & Pay only when user consumes digital healthcare services.

Your patients can now take electronic appointments with your panel doctors

Continue to deliver physical consultation, start online consultation and be connected with your Patients

KareXpert Smart Clinic App:

- ✓ Social Presence
- ✓ Mobile & Web app compatible
- ✓ Various mode of consultations-
Audio, Video, Medical Chat,
Physical OPD
- ✓ Digital Appointments

Online Consultation is enabled using RPD – Remote Patient Department; facilitating online visits either through Audio Call; real time video consultations or secured chat.

Smart Clinic gives your patients the information they need on any smart device either on Smartphone, Tablet, laptop or even desktop. Connect & consult with patients as per digital queue & send electronic Prescription & share documents over the chat during or post consultation.

You may decide to Engage with your patients & help them feel good by educating them with articles on healthy lifestyle. You can offer Customized health packages to your patients

Earn recommendations through feedback & digital Word of mouth.

You can also invite your patients on app.

Let KareXpert transform your clinic to Smart Clinic by harnessing the power of technology.

- ✓ Multiple Doctor Support Cloud for digitization of documents
- ✓ EPrescription
- ✓ Access Patient Profile
- ✓ Digital Review -shared reports of Patients
- ✓ Highly Secured
- ✓ Low upfront costs
- ✓ Digital Patient Engagement
- ✓ Care Packages

How KareXpert can help Hospital to Transform into Smart Hospital

In the digital era everything is interconnected as part of healthcare ecosystem; Patient, Doctor, Nurse, OPD, IPD, Emergency, ICU, Ambulance, Pharmacy, Diagnostics, Imaging and blood banks.

Challenges:

- No Online Presence
- Physical Storage of paper files is expensive & consumes space
- Medical records are prone to damage and loss
- Time wasted due to poor resource management
- Patients feel anxious & helpless while waiting in hospital
- The growth of hospital limited to infrastructure constraints
- Disconnected inter department exchange
- Limited Patient History
- Retaining Patient Connectivity for lifetime

KareXpert Smart Hospital Solution:

- KareXpert Health Cloud offers hospitals a consistent, secure & centralized way of digitizing all medical records for anytime, anywhere access
- Hospitals can upload, digitize all data, documents, reports in any format

KareXpert Smart Hospital App:

- ✓ Social Presence
- ✓ Mobile & Web app compatible
- ✓ Various mode of consultations-
Audio, Video, Medical Chat,
Physical OPD
- ✓ Digital Appointments
- ✓ Multiple Doctor Support
- ✓ Cloud for digitization of
documents
- ✓ EPrescription
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- ✓ Digital Review -shared reports
of Patients
- ✓ Highly Secured
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- ✓ Digital Patient Engagement
- ✓ Care Packages

- Create Online Profile of Hospital highlighting facilities, treatments offered, accolades etc. for millions of patient traction including medical tourism
- Invite doctors & patients to App
- Mobile & Web app compatibility
- Zero Infrastructure cost
- Eliminate long waiting queues with the help of digital queue
- Embrace RPD- Audio/Video Consultation & Medical Chat to avoid unnecessary OPD Visits
- Continue OPD Visits
- Easy to use technology for improved Patient Experience
- High data security & ensured compliance
- Improves patient flow
- Complete access to patients shared clinical profile & documents before/during consultation

KareXpert can be your ONLY partner for all digital healthcare needs to achieve optimized clinical outcome with high patient satisfaction.

KareXpert's cost-effective patient-centric cloud platform provides:

- ✓ Access to health services anytime and anywhere (online appointments and consultations)
- ✓ Real-time and low-cost data sharing among healthcare providers and patients (patient health records, reports, diagnostic scans and images etc.)
- ✓ Remote diagnosis, treatment, and monitoring (telemedicine)
- ✓ Online search pharmacy & order medicines
- ✓ Auto scheduling of follow-ups and reminders
- ✓ Proactive health monitoring by individual patients for B.P, Diabetes, Weight management

All of these exclusive services are enabled on easy to use mobile/web app which can be accessed on smart phones, tablets, or laptops.

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For more information

To learn more about smart healthcare services, please visit www.karexpert.com

DIGITAL HEALTHCARE DISRUPTION IN INDIA

KareXpert is pioneer company providing digital healthcare services and aims to bring '*universal health right*' for every citizen. With the '*Advanced Health Cloud Technology Stack*', it promises to bridge the gaps in Indian healthcare sector by providing a unique cloud platform fortified with health analytics which provides assistance to the patients and providers.

With a noble vision of '*Easy and Quality Access Care for ALL*' and a Smart Business model, KareXpert promises to transform: Clinic to "Smart Clinic", Doctor to "Smart Doctor", Patient to "Smart Patient", Hospital to "Smart Hospital", Pharmacy to "Smart Pharmacy", Path lab to "Smart Path lab", and Imaging Center to "Smart Imaging Center".

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