A study on impact of digitalization of the healthcare sector in India: Process Flow of Health-Tech companies in it CREDIHEALTH

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ORGANIZATION-

CREDIHEALTH Pvt. Ltd.

Aapka Health Partner

Simplifying Healthcare for your family

INTRODUCTION

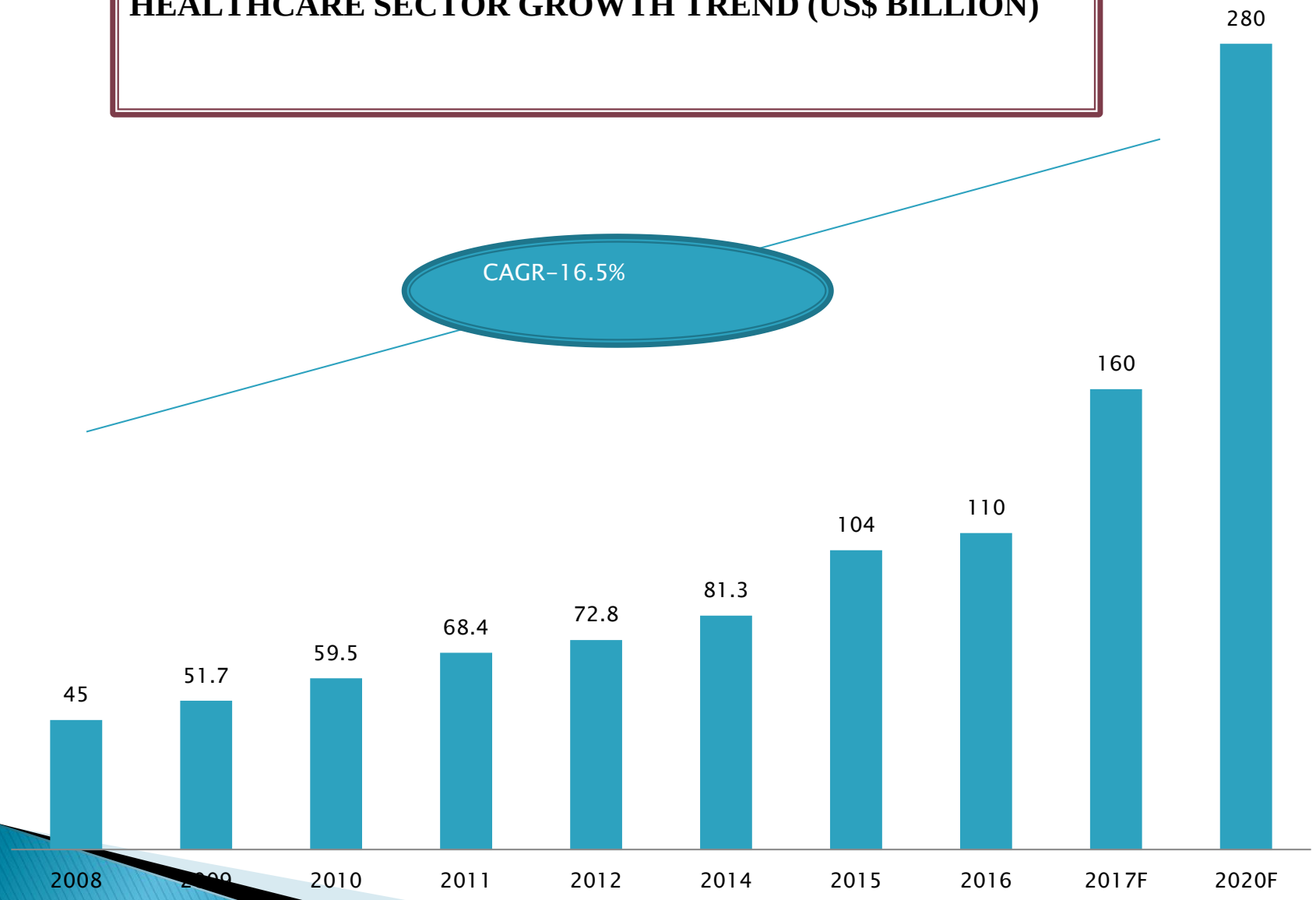
- Gurugram-based **Credihealth** , started in 2014, is an online healthcare marketplace that provides end to end services including information on various medical ailments, hospitals, treatments and their implications and post treatment care.

- ‘’Digital” this word has reshaped the health-care delivery in India. In the present scenario both private players as well as the government departments are recognizing the importance of efficient patient engagement and clinical proficiency in Healthcare system

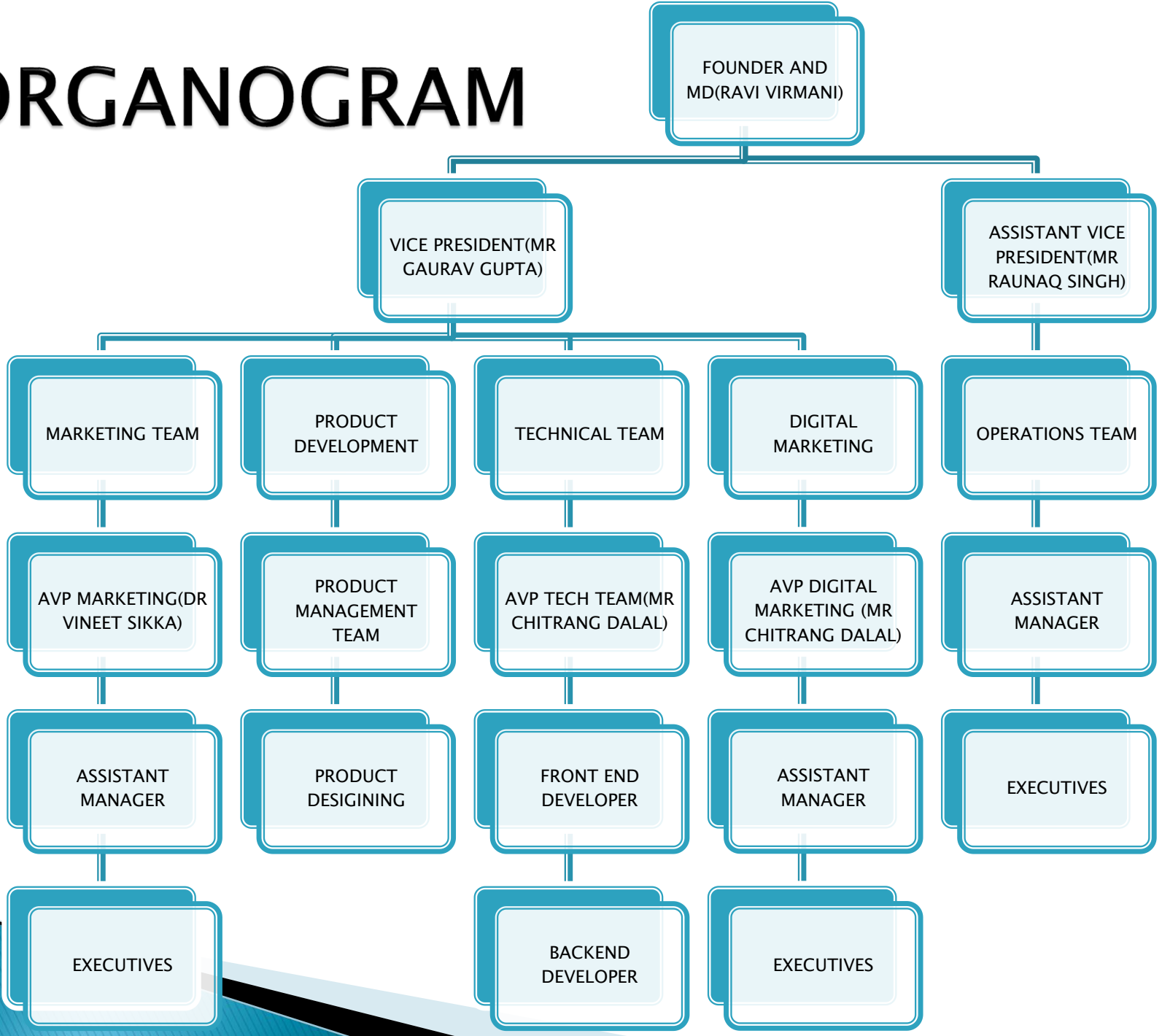
- Also with the emergence of these health care startups like 1mg, Practo, medfinder ,Portea, Credihealth to name a few has provided patients worldwide a digitalized platform to get healthcare solution by just clicking a finger and has shown a huge opportunities but the other aspect to it are the gaps that such firms face in conversion rate to IPD.
- According to a Gartner report Healthcare providers in India are expected to spend $1.2 billion (USD) on IT products and services in 2016, which includes spending by healthcare providers on internal servces, software, IT services, data centre systems, devices and telecom services.
- Healthcare industry is growing at a tremendous pace owing to its strengthening coverage, services and increasing expenditure by public as well private players.
- During 2008-20, the market is expected to record a CAGR of 16.5 per cent, with medical tourism experiencing 22-25 percent growth.
- The total industry size is expected to touch US$ 160 billion by 2017 and US$ 280 billion by 2020.

Figure 1

HEALTHCARE SECTOR GROWTH TREND (US$ BILLION)



ORGANOGRAM


FOUNDER AND MD(RAVI VIRMANI)
VICE PRESIDENT(MR GAURAV GUPTA)
ASSISTANT VICE PRESIDENT(MR RAUNAQ SINGH)
MARKETING TEAM
PRODUCT DEVELOPMENT
TECHNICAL TEAM
DIGITAL MARKETING
OPERATIONS TEAM
AVP MARKETING(DR VINEET SIKKA)
PRODUCT MANAGEMENT TEAM
AVP TECH TEAM(MR CHITRANG DALAL)
AVP DIGITAL MARKETING (MR CHITRANG DALAL)
ASSISTANT MANAGER
ASSISTANT MANAGER
PRODUCT DESIGINING
FRONT END DEVELOPER
ASSISTANT MANAGER
EXECUTIVES
EXECUTIVES
BACKEND DEVELOPER
EXECUTIVES

THE CREDIHEALTH SOLUTION

Discovery & Search - Online

- Provide extensive information to help users make an informed decision on their treatment
  - Comprehensive database of Hospitals & Doctors
  - Pre-recorded Doctor interviews, Articles and patient feedback on hospitalization and treatment

Quality & Trust - The Personal touch:

- In-house Doctor team provides reliable inputs & clarifications
- Transparent comparison of procedure pricing across hospitals

Convenience - Offline:

- Project manage the entire hospitalization process for the user / patient through to post-op care and regular follow ups.

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CREDIHEALTH

RESEARCH QUESTION

- Inspite of the fast spreading digitalized healthcare sector.What remains the gap in the process flow of health-tech companies (Credihealth) ?

AIM OF STUDY

- The main aim of the study is to analyze the process flow of the health-tech companies in bringing about the digitalization of the healthcare system, also the gaps in conversion rate of the patients from generating request to consulting the hospitals.

OBJECTIVES:

Objective 1	• **To study the process flow of e-healthcare companies**
Objective 2	• **To assess the gap in the digitalized healthcare system.**
Objective 3	• **Role of Health-tech companies in leveraging these opportunities and bridging the gaps.**

REVIEW OF LITERATURE

- The Digital healthcare Leap,David Mckeering, FEBRUARY 2017 states that over the past few years, few industries have seen such dramatic changes as in healthcare. On the one hand, the healthcare sector is strong and growing, with a value of $3.2 trillion in the United States and it is estimated that Indian healthcare market to hit $372 billion by 2022.

- Indian healthcare on the cusp of a digital transformation, PWC India, Year 2017 reports that the gradual popularity of e-Health systems across the globe has emerged the need of extensive analysis for the identification and rectification of related issues. So that. High quality e-Health systems could be invented for the improvement of communal health. Hence, the main objective of this paper is to point out some of the challenges, opportunities and gaps related to e-Health systems which are identified during this study.

- In e- Health a new perspective on global health(journal of evolution and technology),Gurjit kaur, Neena Gupta, Year 2006 it identifies and highlights the opportunities and gaps related e-Health systems and working of e-health companies that would be applied for system development in near future. So that, more reliable, user oriented and demand specific systems could be invented in near future.

- In The economic times , Mr Venkatadari Bobba JULY 04 2017 states that the Indian Healthcare market is expected to grow at a CAGR of 23% to USD 280bn by 2020 from USD 100bn in 2015. This growth is being driven by lifestyle diseases, an ageing population, rising income levels, increasing access to insurance and growing health awareness. This rapidly increasing need and demand for healthcare services puts immense pressure on various stakeholders to efficiently manage the scarce human resources and inadequate infrastructure while controlling the increasing cost burden on consumers and simultaneously providing better quality care and increased accessibility.

  Some key issues which stakeholders have to solve in addition to efficient and effective utilization of the scarce resources being-accessibility, affordability, quality of care, telemedicine, smart health monitors, mobile health apps etc.

- In Digitalization of healthcare industry: Using technology to transform care a CISCO study YEAR 2016,Cisco survey showed that 45 percent of companies still do not view digital disruption, as a board-level concern, and only 25 percent consider that they are willing to disrupt them-selves to compete. To address these challenges, companies are increasingly investing in digital transformations that connect and enable analysis of every piece of data across channels, operation, and patient outreach. From providing personalized care options to gathering insights to addressing new care formats such as telemedicine and outpatient care, digital technologies are a crucial tool for providers, insurance and medical service industries

- Health IT in Indian Healthcare System: A New Initiative , Kalpa Sharma MARCH 27th 2012 states that the purpose of this paper is to assess the current status of information system specifically in the areas of health sector, role of health information technology (HIT) and its importance in improving the delivery of health care services; to assess the challenges/issues faced and future recommendation to improve the status of health IT in India. Secondary data is used. Various articles and research papers published in national and international journals are used. India is hub of IT and its use is increasing in health sector. Currently HIT is used through electronic health records (HER); telemedicine; digital health knowledge resource; hospital information management system; e-learning technologies, health informatics etc.

CONCLUSION OF STUDIES

- By the various research papers books and journalist can be estimated that Indian Healthcare market is expected to grow at a CAGR of 23% to USD 280 bn by 2020. This growth is because of lifestyle diseases, an ageing population, rising income levels, increasing access to insurance and growing health awareness.
- This rapidly increasing need and demand for healthcare services puts immense pressure on various stakeholders to efficiently manage the scarce human resources and inadequate infrastructure while controlling the increasing cost burden on consumers and simultaneously providing better quality care and increased accessibility, role of health information technology due to digitalization of this sector has its importance in improving the delivery of health care services; to assess the challenges/issues faced and future recommendation to improve the status of health IT in India.
- Also, this study has helped in highlighting gaps related e-Health systems and working of e-health companies that would be applied for development of a better system in near future.

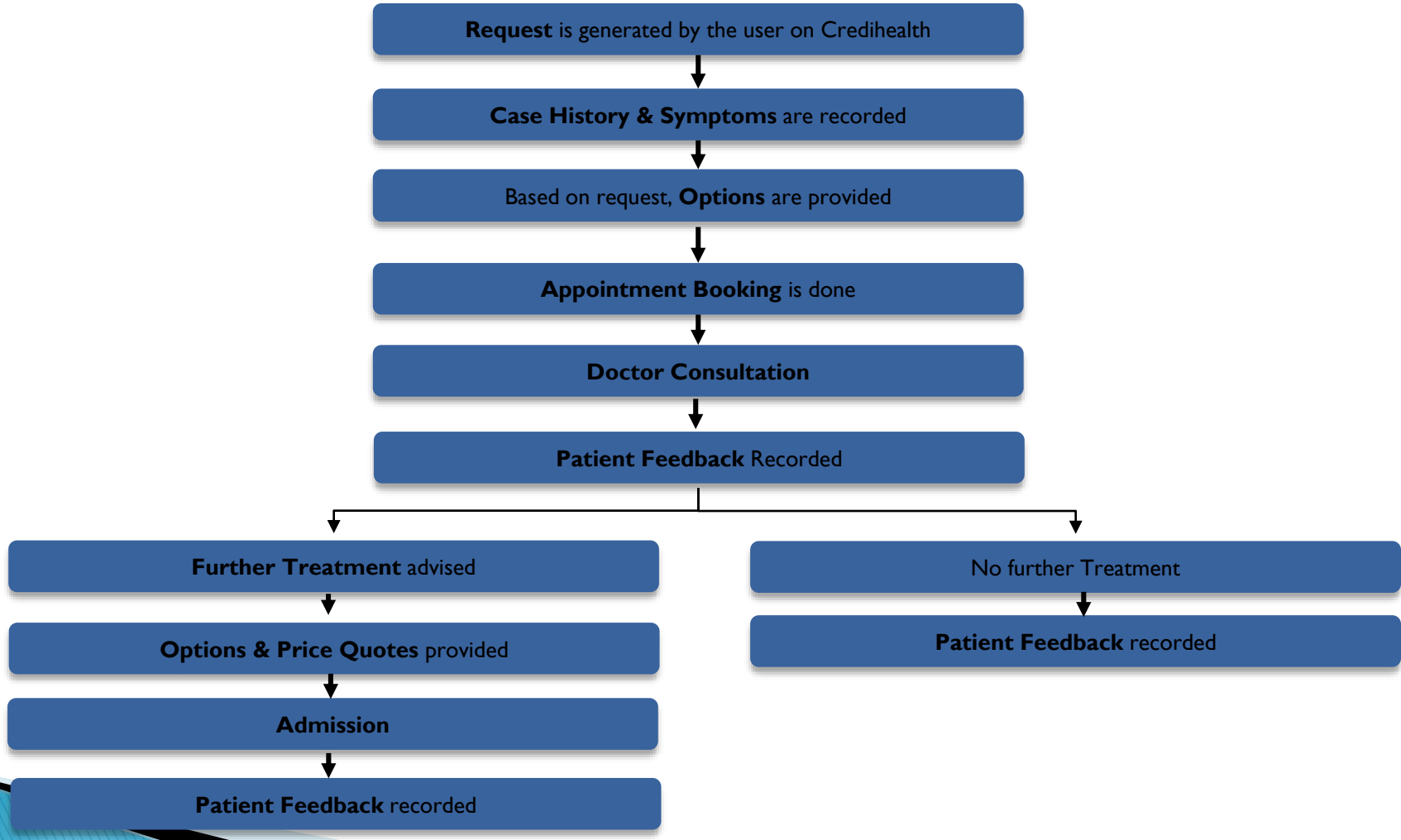
METHODOLOGY

Study design	• **Descriptive study**
Study Area	• **Bangalore, Chennai, Delhi-NCR, Hyderabad, Kolkata, Mumbai, Jaipur, Ranchi, Indore and Pune. And online data of international patient requests from SAARC nations coming in the portal.**
Study Period	• **3 months (February- April 2018)**
Sample Size	• **Distant online data of 20478 people who visited the digital platforms of Credihealth was tracked.**
Sampling Method	• **Taken the population who requested for booking through credihealth portal.**

METHODOLOGY

Data Type	• Secondary data
Data Collection Tool	• Structured Process through CRM Technology (Website, Android app, telephonic, Google search, social media campaign leads)
Limitati-ons	• Missed CRM requests • Non-responding Users • Untracked CRM Request
Data Analysis	• The data analysis is done in MS Excel

CREDIHEALTH PROCESS FLOW



STEPS OF PROCESS

1. The traffic generated at the Credihealth website is the team effort of the marketing or digital marketing team, through various sources of channels to reach Credihealth.
2. It is supported by the product and IT team. The request can come in any of the three way-appointment requests, call backs or tele-consultation.
3. This reaches the medical experts, who are the direct point of contact with the patients (Credi Consumers). The doctors assist the patient to the appropriate specialist or hospital of choice, which is confirmed by the patient care executives.
4. The same patient is followed up by the medical professionals, the next day of the appointment, which decides if patient requires further line of treatment or not.
5. The discovery team‘s role begins here to find out the admissions.

PROCESS MAP OF CREDIHEALTH

USER JOURNEY	PAIN POINT ADDRESSED	CHANNEL DELIVERED	PLANS GOING FORWARD
User has a specific need / symptom to check			
Log into credihealth.com & research articles / information	**Discovery** of information to address user concerns	Web / Mobile app	Continued focus on **online** content
Search and compare Doctors & Hospitals providing relevant consults /solutions	**Search** of **quality** healthcare providers to offer solutions	Web / Mobile app / Chat / Telephonic	**Automate** to provide max information online
Log a query for a call back from Crediheath's Doctor team	Availability of additional inputs from **in-house Doctor** team	Telephonic / Chat	Maintain **personal touch** & trust
Discuss and decide way forward based on information, feedback & pricing	**Trust** based on transparent information & reliable inputs	Telephonic / Chat	Maintain **personal touch** & trust
Schedule Appointment with Doctor & take 2nd opinion if required	**Convenience** of scheduling appointments & follow ups	Telephonic / Chat / In Person	**Automate** to bring process online
Perform any diagnostic tests required	**Convenience** of scheduling any diagnostic tests	Telephonic / Chat	**Automate** to bring process online
Undergo hospitalization procedure	**Complete the transaction**	N/A	N/A
Follow up after procedure for post-op care	**Convenience** of follow-up and scheduling post-op care	Telephonic / Email / Chat	Telephonic / Email / Chat

CONVERSION RATIO

The overall analysis is made on the following basis:

- Total No. of Requests generated= 25000-30000
- Out of these requests, Sixty seven percent of cases were booked.
- Out of these cases booked, Fifty-one percent of the patients actually consulted.
- Further, out of these OPD consultations, Thirteen percent of the patients were admitted (IPD) for further treatment plan.

CONVERSION RATIO(CITY WISE) FOR IPD VS OPD

- **Interpretation:**

- Booking Percentage = No. of appointments booked / Total No. of requests *100

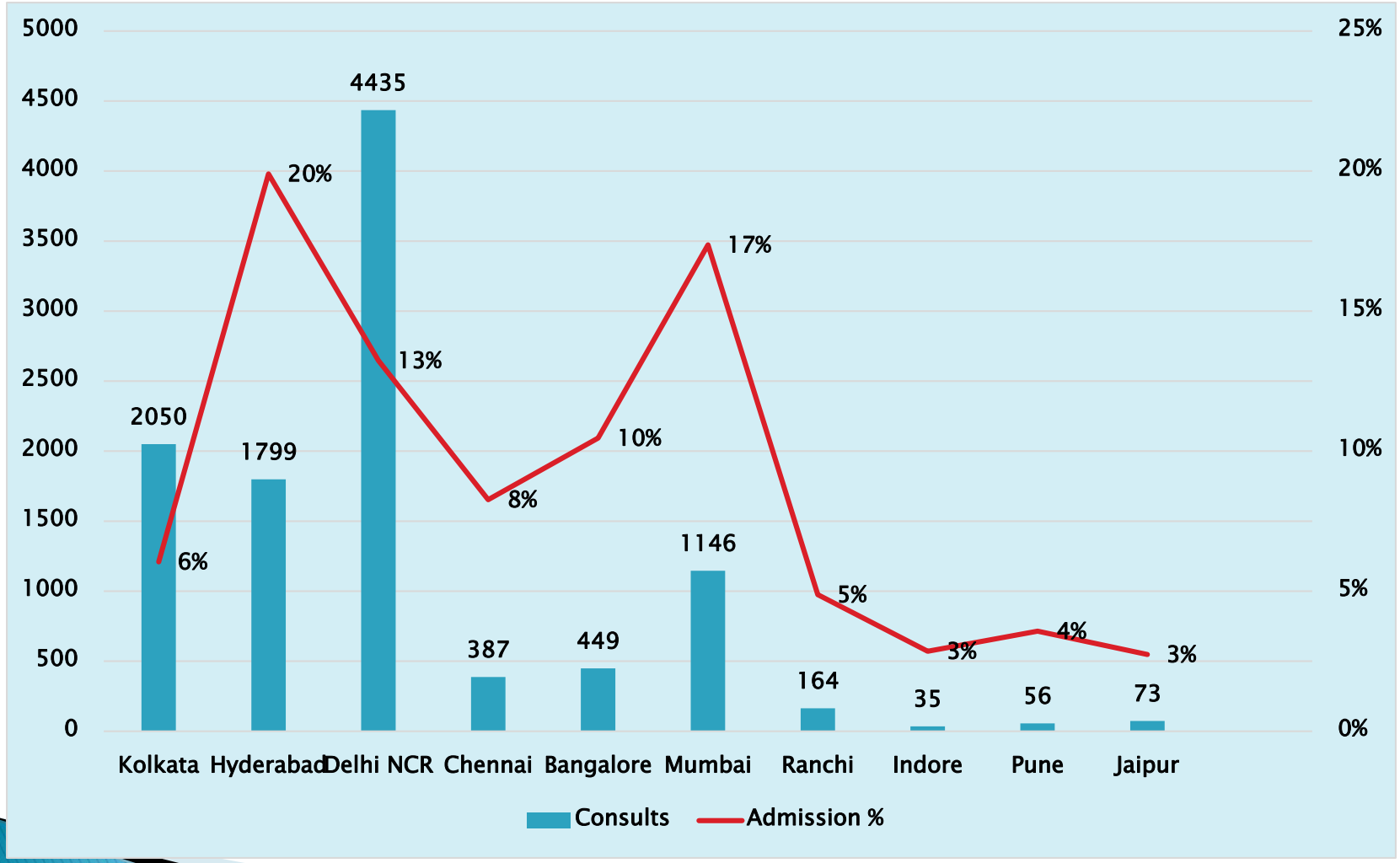
- Consultation (OPD) Percentage = No. of Patients Consulted/ Total No. of appointments booked *100

- Admission Percentage (IPD) = No. of Admissions/ Total No. of Patients consulted *100

Conversion Ratio is the change in the status from new request to booking, from booking to consultation (OPD) and from consultation to admissions (IPD).

City wise Comparison between the Conversion Ratio

Figure 2



City wise comparison of Search Attribute- Profile of doctors

Figure 3

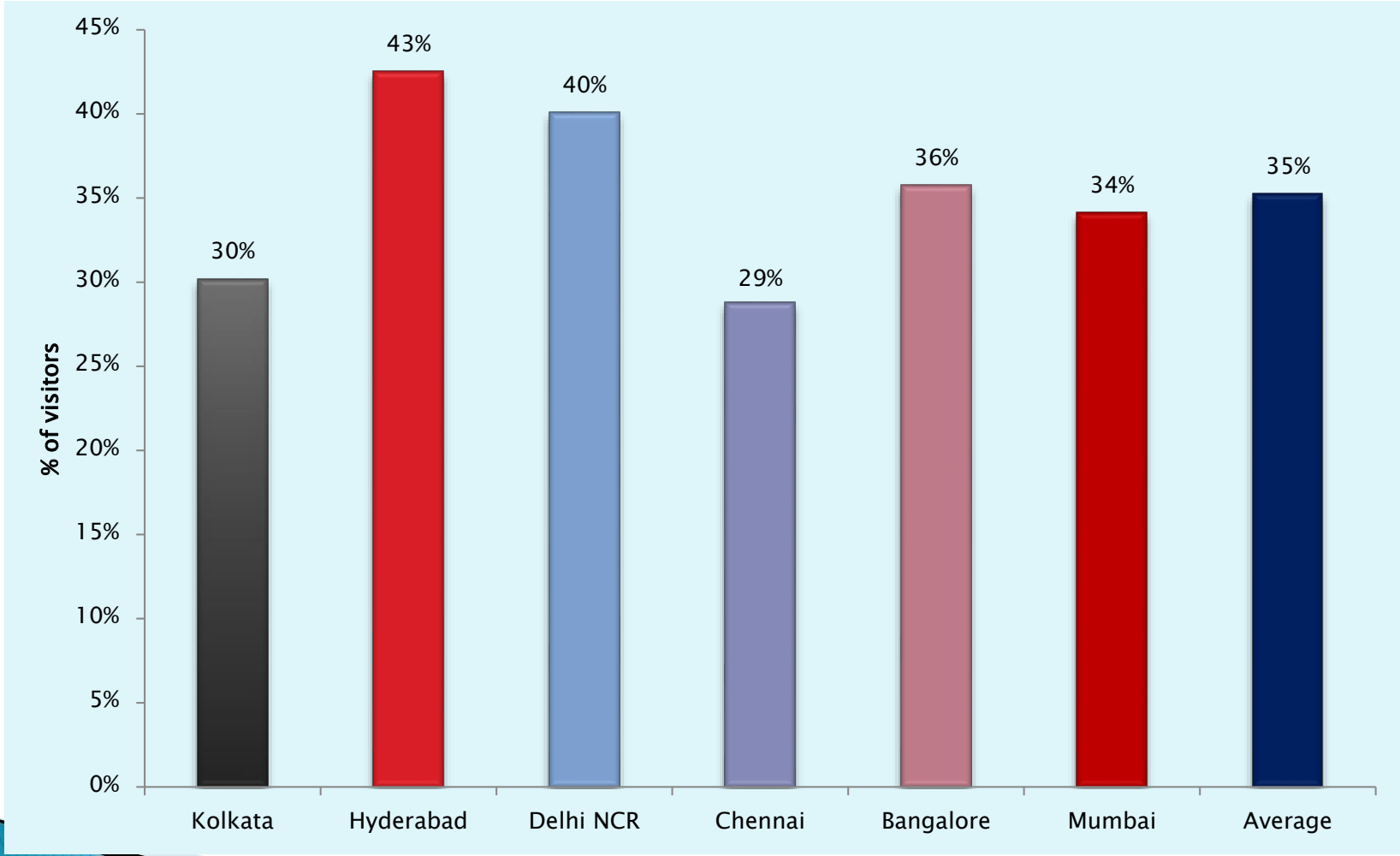
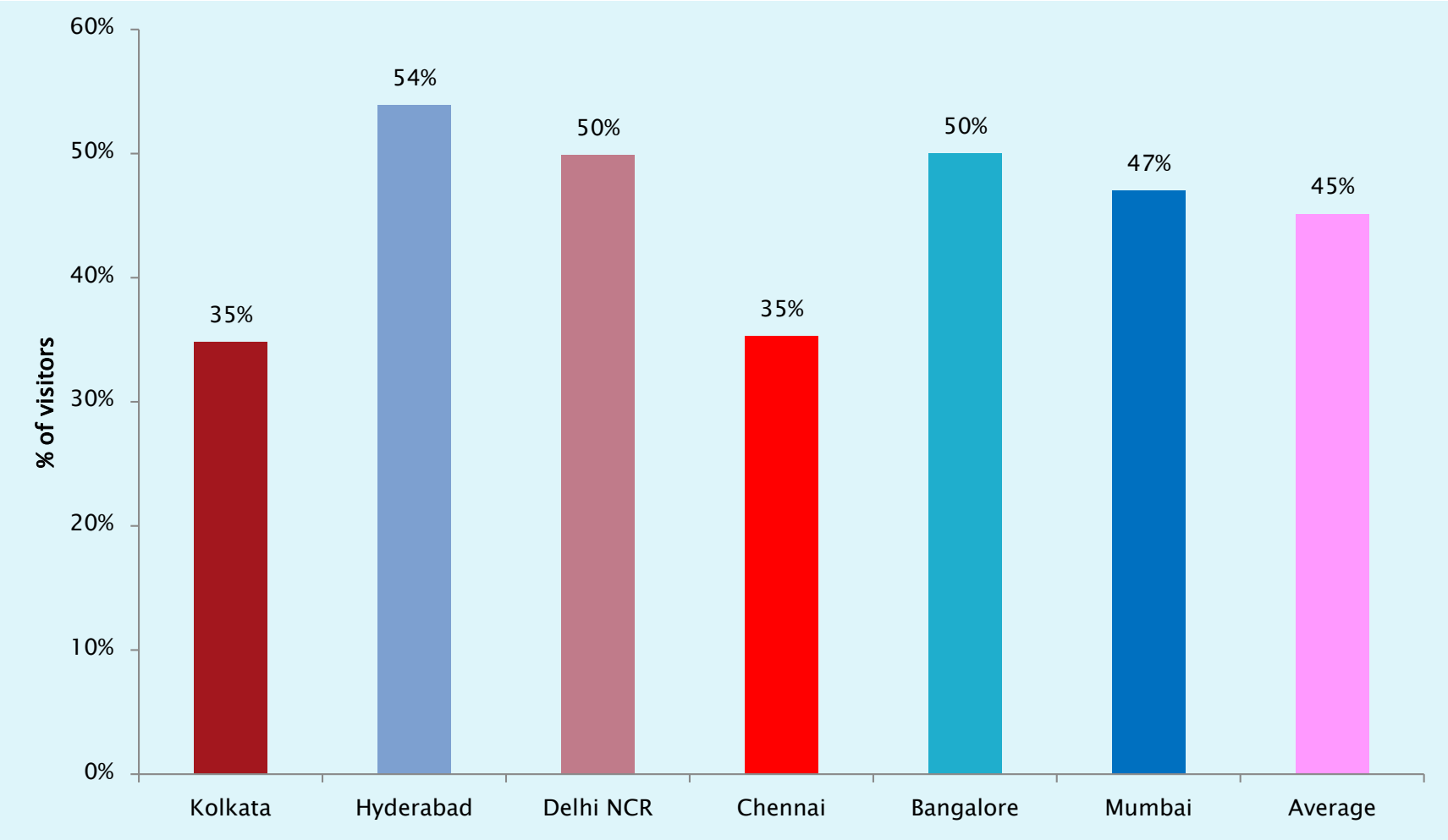


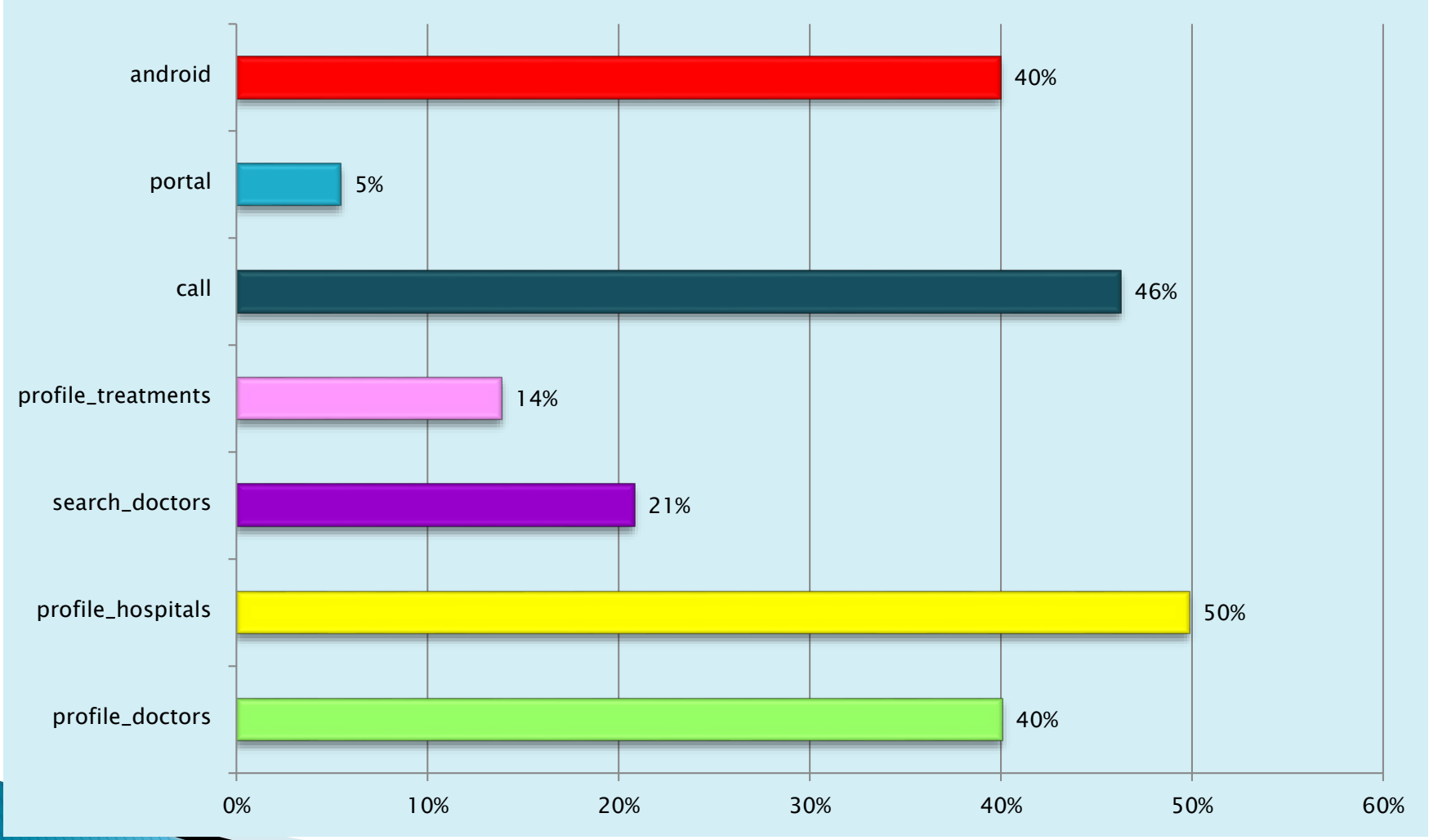
Figure 4

City wise Comparison of Search Attribute- Profile of hospitals



Sources of Request for Delhi- NCR

Figure 5



RESULTS–

- The overall OPD conversion ratio is half (51%) of the total appointments booked, so half of the requests are filtered out of the funnel and merely 13% comes out as admissions (IPD).

CHALLENGES–

- Security, privacy, and confidentiality are major concerns in e-Health solution due to its significance.
- Insufficient accessing ratio is another challenge, which comes in the way of e-Health Systems.
- Users especially patients are not well aware regarding e-Health Systems
- Illiteracy of patients is another important obstruct in the case of Indian e-Health Systems.
- Unavailability of internet connectivity in rural and remote areas.
- Lack of supportive infrastructure (like high band width special equipment), funds, basic knowledge of computer among health workers, uniformity in clinical protocols, training for health care professional, patients knowledge about technology, employment of appropriate technology, quality control mechanism integration between systems and organizations

CAUSE AND EFFECT DIAGRAM

- The causes for less conversion was analyzed through Fish Bone Diagram.

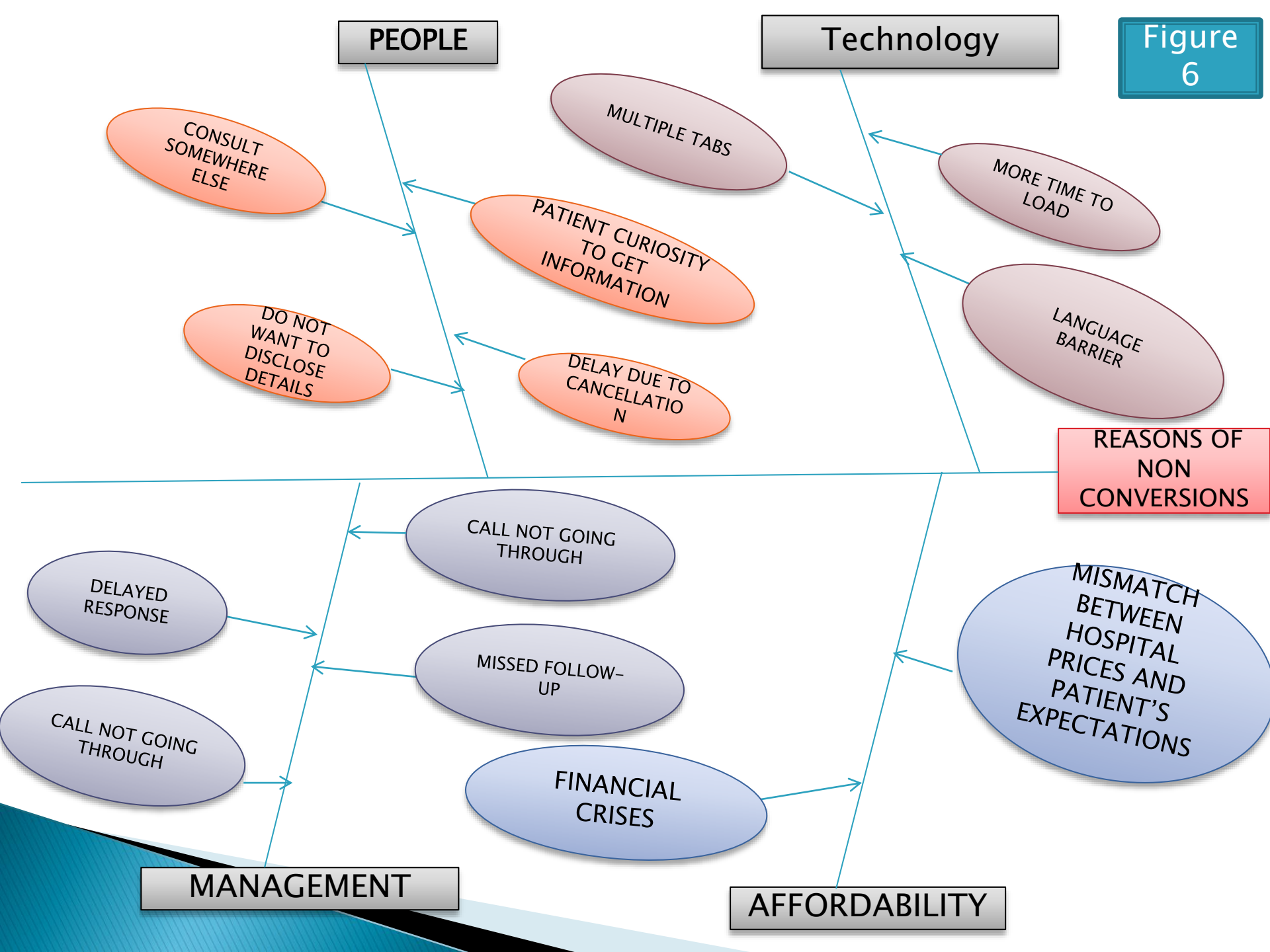


Figure 6
PEOPLE
Technology
CONSULT SOMEWHERE ELSE
MULTIPLE TABS
MORE TIME TO LOAD
PATIENT CURIOSITY TO GET INFORMATION
LANGUAGE BARRIER
DO NOT WANT TO DISCLOSE DETAILS
DELAY DUE TO CANCELLATIO N
REASONS OF NON CONVERSIONS
CALL NOT GOING THROUGH
DELAYED RESPONSE
MISMATCH BETWEEN HOSPITAL PRICES AND PATIENT'S EXPECTATIONS
MISSED FOLLOW-UP
CALL NOT GOING THROUGH
FINANCIAL CRISES
MANAGEMENT
AFFORDABILITY

REASONS OF DROP-OFFS

The major reasons for the drop-offs observed were-

1. Missed traffic to the site due to site not opening, high loading time, heavy load on website etc.
2. Delay in attending the cases
3. Missing the calls
4. Improper guidance to the patients- Difference in the information provided by Credi employee and the healthcare facility
5. Incomplete follow-ups- Maybe due to negligence of the employee or no interest of the patient to share the details.
6. No information or incorrect information for the admissions

OPPORTUNITIES

- Increases health awareness of the general public, utilization of new technologies, availability of remote health professionals, availability of staff exchange programme, collaboration and international exchange of experience.
- Provides new careers requiring professional skill for delivering information and communication technology literacy.
- Delivers enhanced medical services in the remote areas.
- Reduces hospitalization rate, waiting time, travel cost of patients.
- Provides facility of e-Learning for professional development.
- Provides the facility of generating medical history of patients and patient-doctor communication.
- Improves patient treatment and follow-ups, healthcare assistance to remote location, diagnosis from primary care, patient's satisfaction and quality of life.

SUGGESTIONS–

- The requests should be handled according to the priority and the appointment time required—Admin Queuing System. (e.g.: the Cardiac cases get the high score than the derma case. The surgical case is scored higher than the case requiring medical management. The less the time between the request made and the appointment requested, the more is the score.)
- Tracking of the missed calls on the systems. So the effort can be made to track the case and get them go through the channel of Credihealth.
- Use of artificial intelligence to automate the time-consuming and unnecessary process. (Example- Automation of the message sent to the patient on putting the request that they will be reached soon by a medical professional to guide them, Automation of the country codes of the international patients.)

- Separate tabs to track the cases by symptoms or procedures done. This will make the process easy to track the cases in follow-up, that which case need to be followed up. To allow timely follow-up of cases requiring tertiary care. (E.g.: A cancer patient needs to be followed not only till its operated but also for chemotherapy or radiotherapy)
- Introducing local languages. (E.g.: The site and app were earlier only in English language, can introduce languages like Hindi, Bengali, Tamil, Telugu).
- This encouraged us to understand the drop-offs or gaps between the process flows. These gaps can be filled by re-engineering of the current process flow utilizing the recommendations provided. Some of the recommendations have been implemented too and results show increase in the number of cases attended per day.
- The joint effort of the Credi team can make the e-Heath company to pioneer the technologically driven healthcare industry.

You are a wonderful
Teacher
Who proved that
Learning can be
A Joyous
and
Pleasant Experience