



## HEALTH INFORMATION TECHNOLOGY (DIGITAL HEALTH / HEALTHTECH) START-UPS & COMPANIES IN INDIA – CHALLENGES FACED & WAY FORWARD

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### ABSTRACT

**BACKGROUND:** Despite being the 3<sup>rd</sup> Largest Startup ecosystem in the world, the number of Success among Health Information Technology (Digital Health / HealthTech) Start-ups & Companies in India is very low.

**AIM:** To understand the challenges that are unique to Indian Health care and how these hurdles lead to failure and also to give suggestions for a way forward

**SETTINGS AND DESIGN:** Data available in Public Domain Regarding various startups and companies in this field

**METHODS AND MATERIAL:** Various Causes are analyzed and explained.

**STATISTICAL ANALYSIS USED:** Not Used.

**RESULTS AND CONCLUSIONS:** Startups and companies have failed because they have failed to understand the cardinal tenets of this field and have guessed too much and arrived at wrong decisions.

**KEYWORDS :** Digital Health, HealthTech, Healthcare, Information Technology, India

### 1. INTRODUCTION

In 2018, there were more than 50000 start-ups in India and the number was growing at a healthy rate of 12-15 %. India is the country with 3<sup>rd</sup> largest startup ecosystem in the world is India<sup>1</sup>. In 2020, the healthtech sector recorded 77 deals raising \$455 Mn in funding in contrast to \$512 Mn funding in 62 deals in 2019<sup>2</sup>.

But the success stories are very few. This paper looked at the data available in the Public domain and found out that the challenges can be sorted into three main groups

1. Pilot Problems: Did not cross the Pilot Stage due to Wrong Design
2. (Vertical) Scaling Problems: Successful Pilot but Problems during Scaling Up due to
3. (Horizontal) Expansion Problems: Successful Scaling Up, but Problems during Expansion into other services and Products

### 2. HEALTHCARE SETUP OF INDIA

As mentioned in Chapters 2 and 3 of the Book<sup>3</sup> "HTTP 417 - Indian Healthcare IT Start-up's Guide" (available in Amazon at [www.pgmed.org/http417](http://www.pgmed.org/http417)), there are five levels of health care.

0. Basic Care which is available in sub-centers
1. Primary Care which is available in Primary Health Centres
2. Secondary Care available in Taluk Hospitals and District Hospitals
3. Tertiary Care available in Medical Colleges
4. Quaternary Care available in few specialized institutes

The above book gives more details about each of these levels and also the vastly different types of management (ranging from Union Government of India managing institutions like AIIMS, State Governments managing institutions like Tirunelveli Medical College, Trusts, Corporate Hospital, Single Doctor Clinics).

#### 3. Pilot Problems:

Many of the Startups were not even able to do a successful pilot of their products because their design had fundamental flaws. The requirement gathering was not done scientifically and systematically. The Promoter's or Founder's wish list became the Software Requirement Specification and the product was hurriedly built on that. They failed during the Pilot stage itself.

#### 4. (Vertical) Scaling Problems

Many companies, however, complete the pilot successfully and even implement the product in 10 to 20 places. But hit a roadblock at the vertical expansion of scaling. Analysis of these products revealed one or more of the following challenges

1. Utility: As explained in Chapter 9 of the book cited above, any product which was not designed keeping in the inherent variations in (a) level of care (b) types of management (c) Specialty (d) cadres will not have a wide utility. Many of the products analyzed failed to scale up because the initial design was based on a "niche" area
2. Increasing Workload: Unless there is end-to-end computerization, the doctors and nurses are forced to make dual entries – one in paper and another in the system. This serves as a deterrent in the implementation
3. Increasing Time Spent: As explained in Chapter 12 of the book cited above, one becomes proficient in something if he or she does it for at least 4000 hours. Bank Clerks and Railway Booking Counter Clerks work for 8 hours a day and all their work involves data entry. But doctors and nurses have more clinical work and data entry is a very limited part of their whole work. Hence, any system with a bad User Interface and User experience fails to scale up.
4. Increasing Money needed: There are differing priorities among the various types of management. Some can spend additional money for the software or HealthTech Product only if that saves them time and money. This is another reason for the difficulty in scaling up. A detailed description of this phenomenon is given in Chapter 15 of the book cited above

#### 5. (Horizontal) Expansion Problems

Few Companies had scaled up successfully but ran into problems when they tried to expand horizontally. For our case study, we will take a company that offered various products as listed below in Table 1

	What it is	Patient Pays	Patient Gets	Doctor Pays	Doctor Gets
1	Free Directory	Nil	Doctors Address and Phone and Qualification	Nil	Publicity
2	Telemedicine	Nil	Consultation	Nil	Goodwill Free Publicity The patient, if he is satisfied with the doctor, can get paid consultation subsequently
3	Telemedicine	Per consult Amount Fixed by Doctor	Consultation	Nil	Around 90% of Patient fees Paid regularly by NEFT

4	EHR	Nil	SMS, Mail of Appointments, Prescriptions, etc Cloud-based EHR which can be accessed in mobile, Tablet, Laptop and Desktop Browsers	Around Rs 13000 to Rs 14000 per year	A Very Good EHR and Appointment Scheduling Software
5	Paid Direct ory Listing	Nil	The patient gets Cheated by the company and the doctor who pays	Rs 10000 to 25000 per month dependin g on the area and specialty	Paid Publicity
6	Sending Patien ts to Docto rs / Hospit als	Enhanc ed fees to the doctor/h ospital since the hospital will inflate the bill to recover the cost	The patient gets Cheated by the company and the doctor who pays	Rs 200 per patient	Paid Publicity. Borders on the definition of "tout"
7	eCom merce	Cost of Drugs	Drugs	-	-
8	eCom merce	Cost of Drugs	Tests	-	-

They started with an Appointment Booking System (1) and expanded to Free Telemedicine (2) and Paid Telemedicine (3) and EHR (4) and were growing rapidly. Then they started to add more products/services to their portfolio and found that they are not able to expand. Worse still, even those doctors who had earlier using their services did not renew the subscriptions. As a consequence, products which have been doing well earlier too suffered.

In most domains, the Customer base widens when a company offers more products and services. But Indian Healthcare is a strange beast as explained in Chapter 6 of the book cited above. The customer base of the company started shrinking as they expanded horizontally. Their Paid Listing Services (5) was expensive and not many hospitals could afford them. Their venture at selling Drugs (7) and Lab Tests (8) ate into the revenues of the hospitals and clinics and hence even their other products were not favored.

Moreover, with each expansion, the company was changing the very DNA from being a software provider to an eCommerce platform to a marketing agency as described in Table 2

Company Selling	Is actually a
Product & Service	Software Company
Drugs & Lab Tests	Ecommerce Company
Doctors to Patients & Patients to Doctors	Public Relations or Advertisement or Marketing Company

## 6. CONCLUSION

To put it in a nutshell, almost all challenges being faced by Health Information Technology (Digital Health / HealthTech) Start-ups & Companies in India are due to them not understanding the Healthcare Delivery System of the country

and all of these could be solved if they engage a consultant well versed in these subject

## ACKNOWLEDGMENTS

- 1) I wish to thank all the HealthTech / Digital Health Companies for having made our life better.
- 2) No Financial Support or Grant was received or used for this study.

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