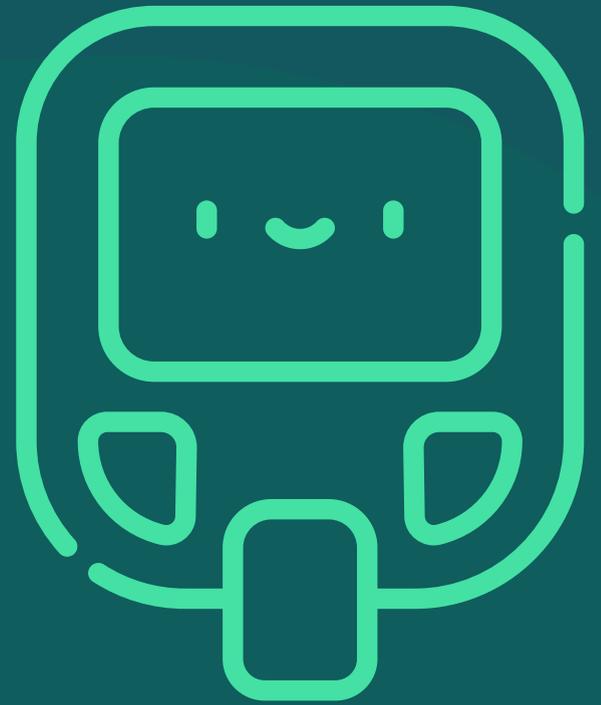
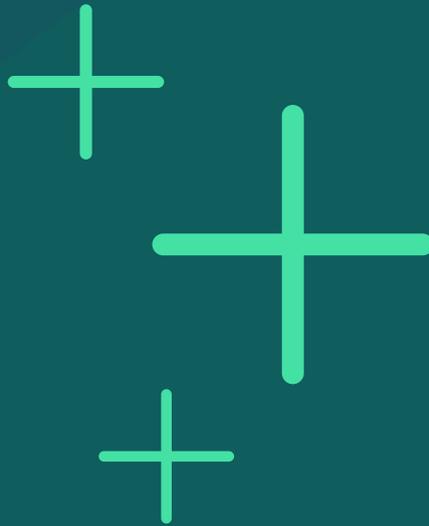
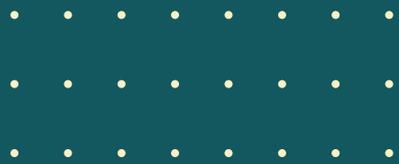


CHRONIC CARE

SOLVING FOR THE PERVASIVE
CHRONIC DISEASE SCOURGE IN INDIA



Digital health, by many, is still considered a nascent sector. However, in several ways it has already proven to be a fast-growing, and a valuable space. Recently, in digital health, **Teladoc** and **Livongo** deal created a combined entity worth \$38B, a proof that the space is no longer nascent and has tremendous future ahead.

Livongo is a health-tech company that provides a set of tools, analytics, and coaching to manage diabetes. Prior to the acquisition, Livongo was clocking 115% YoY revenue increases, valued at over \$11B in the stock market. The value proposition to customers was a no-brainer. With Livongo, diabetic patients could get high-quality, real-time tracking and feedback, that would improve their healthcare outcomes and reduce their medical costs.

Beyond public companies, VC-backed private Digital Health companies have created enormous value across US, UK, and China.



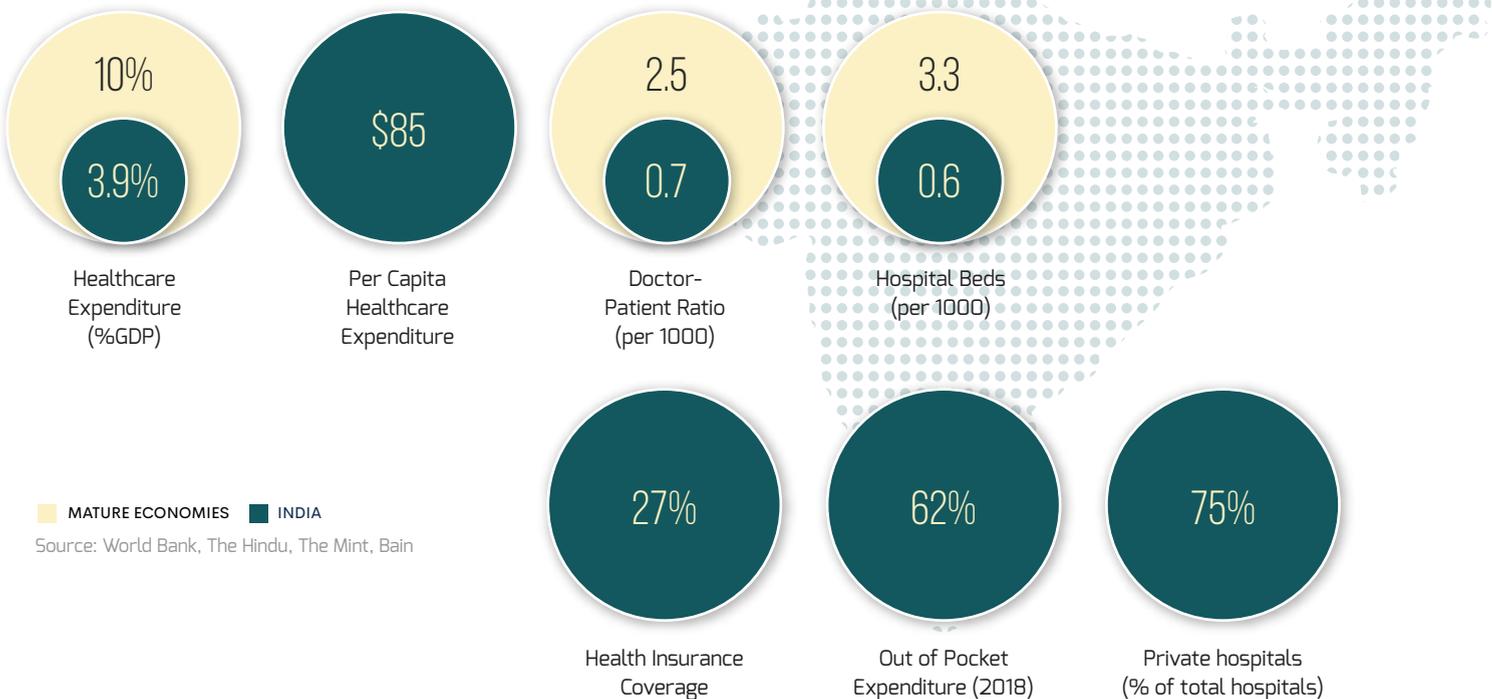
In India too, lack of access to quality healthcare is a mounting problem. The **overall healthcare spend in India stands at \$140B+ annually**, growing at 15% CAGR.

Digital penetration in Healthcare in India is still low. **At a ~\$5B market size, digital health accounts for <4% of the overall market.**

As shown below, across metrics for effective healthcare delivery, India substantially lags global standards. We believe that technology can play a key role to bridge the gap, and that the time for Digital Health in India is not tomorrow but here and now.

\$140B

Annual healthcare spending



Within digital health, solving chronic care challenges using technology can be a massive opportunity. High stress levels and improper diet are leading to a marked increase in lifestyle and chronic diseases. **WHO predicts ~70% of deaths in India by 2030 will be due to chronic diseases.** Chronic conditions lead to ~40% of all IPD cases, and ~80% of e-pharmacy sales.

Indian Chronic care market is unique and substantially different from the US market. Following are the prominent challenges in India:



Willingness to pay

While India has 70M diabetic patients (2.3x of US), they have a very low willingness-to-pay. To put this in perspective, diabetes devices market in India is **\$800M growing at 1.5% CAGR, versus US which is at \$9B and growing at 9% CAGR.** Thus, despite being essential products, their adoption is dismally low. This is also evident in a high ~60% patient drop-off from chronic disease incidence to treatment. Primary reason is India's out-of-pocket healthcare expense is 62% of total versus 11% in the US, making it expensive for middle-class India.



Market organization

US is a highly organized market when it comes to healthcare professionals. Through formal organisations like ADA (American Diabetes Association), or businesses, **one can reach out to 10K+ diabetologists in a capital-efficient manner. In India, there is a lack of similar platforms, making the process inefficient.** Simultaneously, startups who can crack these partnerships at scale, create as strong moat. Share of organised players across pharma retail, healthcare delivery, and diagnostics is <10% in India, v/s ~60% in US and China.



Wary of the opportunities and challenges, entrepreneurs are taking different approaches to solving chronic care. To develop and refine our understanding of the space, we asked the question below on LinkedIn and Twitter:



Vani Kola  • 1st
Managing Director at Kalaari
1w • Edited • 

In **#India**,
70M suffer from diabetes
60M hypertension &
55M from cardio-vascular diseases

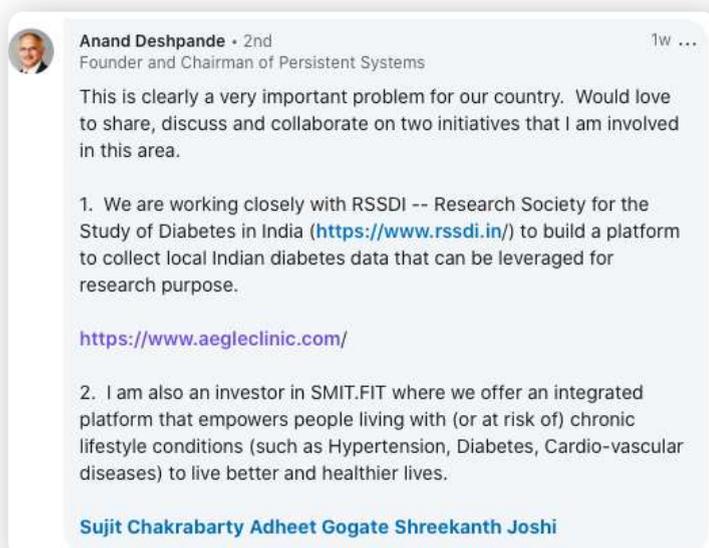
Comprehensive chronic disease management is underserved. Massive **#digitalhealth** opportunity.

Livongo, a US company in chronic care management, grew from \$4.5B to ~\$13B market cap in 2020.

Any indian **#startups** focused on digital chronic care solutions?

   1,576 • 340 Comments

We received overwhelming response and made a promise to share our insights and inputs. Sharing below a sample of the responses we received -



Anand Deshpande • 2nd
Founder and Chairman of Persistent Systems
1w ...

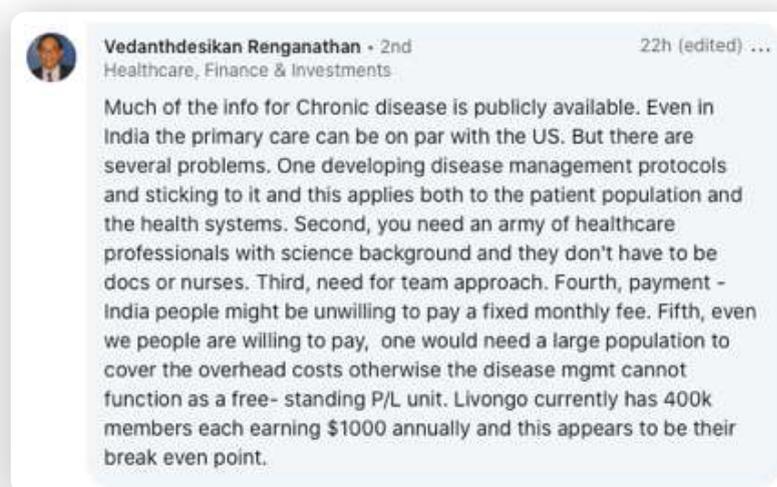
This is clearly a very important problem for our country. Would love to share, discuss and collaborate on two initiatives that I am involved in this area.

1. We are working closely with RSSDI -- Research Society for the Study of Diabetes in India (<https://www.rssdi.in/>) to build a platform to collect local Indian diabetes data that can be leveraged for research purpose.

<https://www.aegleclinic.com/>

2. I am also an investor in SMIT.FIT where we offer an integrated platform that empowers people living with (or at risk of) chronic lifestyle conditions (such as Hypertension, Diabetes, Cardio-vascular diseases) to live better and healthier lives.

Sujit Chakrabarty Adheet Gogate Shreekanth Joshi



Vedanthdesikan Renganathan • 2nd
Healthcare, Finance & Investments
22h (edited) ...

Much of the info for Chronic disease is publicly available. Even in India the primary care can be on par with the US. But there are several problems. One developing disease management protocols and sticking to it and this applies both to the patient population and the health systems. Second, you need an army of healthcare professionals with science background and they don't have to be docs or nurses. Third, need for team approach. Fourth, payment - India people might be unwilling to pay a fixed monthly fee. Fifth, even we people are willing to pay, one would need a large population to cover the overhead costs otherwise the disease mgmt cannot function as a free- standing P/L unit. Livongo currently has 400k members each earning \$1000 annually and this appears to be their break even point.





vikram sood • 2nd
'Hungry Wheels' (Mobile Restaurants As A Service)

2d (edited) ...

Great to see that you see a demand gap here.

India's NCD (disease burden is 200million, the CAGR is 25%, and they contribute to 80% to insurance claims). These ratios stay static globally, and I expect a mega boom in 5 years thanks to behaviour during Covid19. Also, what's unaccounted for is C-sections and the marketing of many cellular disorders under Cancer.

Having spent 5 years researching this along my teams of PhDs from Oxford, Harvard, Indian state governments - I found the gap was not in technology, rather in intent.

Almost all treat them as diseases, almost all treat them like a goal oriented weight loss programme, almost all don't deliver anything which Google does not already give.

That said, many of us are hunting for the solution globally.

After having seen many companies and startups attempt it, I have come to the conclusion that ones who last will be the ones who find access to patient capital. The ones who will last will have to live and grow old with their patients, anything else is simply - a valuation play, not value at work.

From the responses we received, and the ensuing conversations we had, we realised the below -



Chronic diseases require a comprehensive approach to treatment and management that spans across various lifestyle choices such as dietary habits, exercise, mental wellness, along with tracking and clinical solutions.

In order to create and capture massive value, a chronic care platform needs to deeply integrate with various stakeholders - hospitals, clinics, insurance companies, and employers. While being tough to crack, these partnerships can become a strong moat.



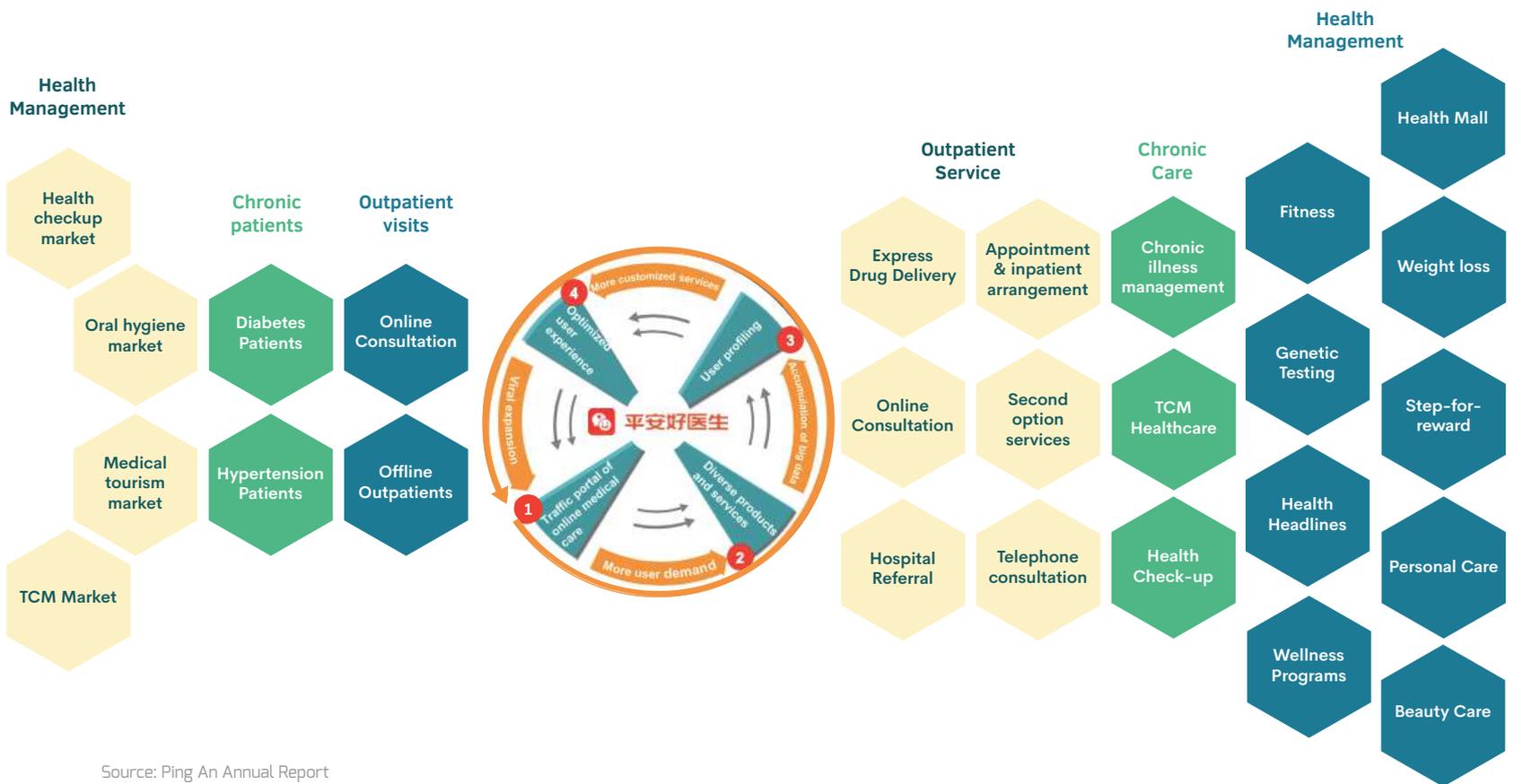
**CASE STUDY
OF A
COMPREHENSIVE
AND SUCCESSFUL
HEALTHCARE PLATFORM**

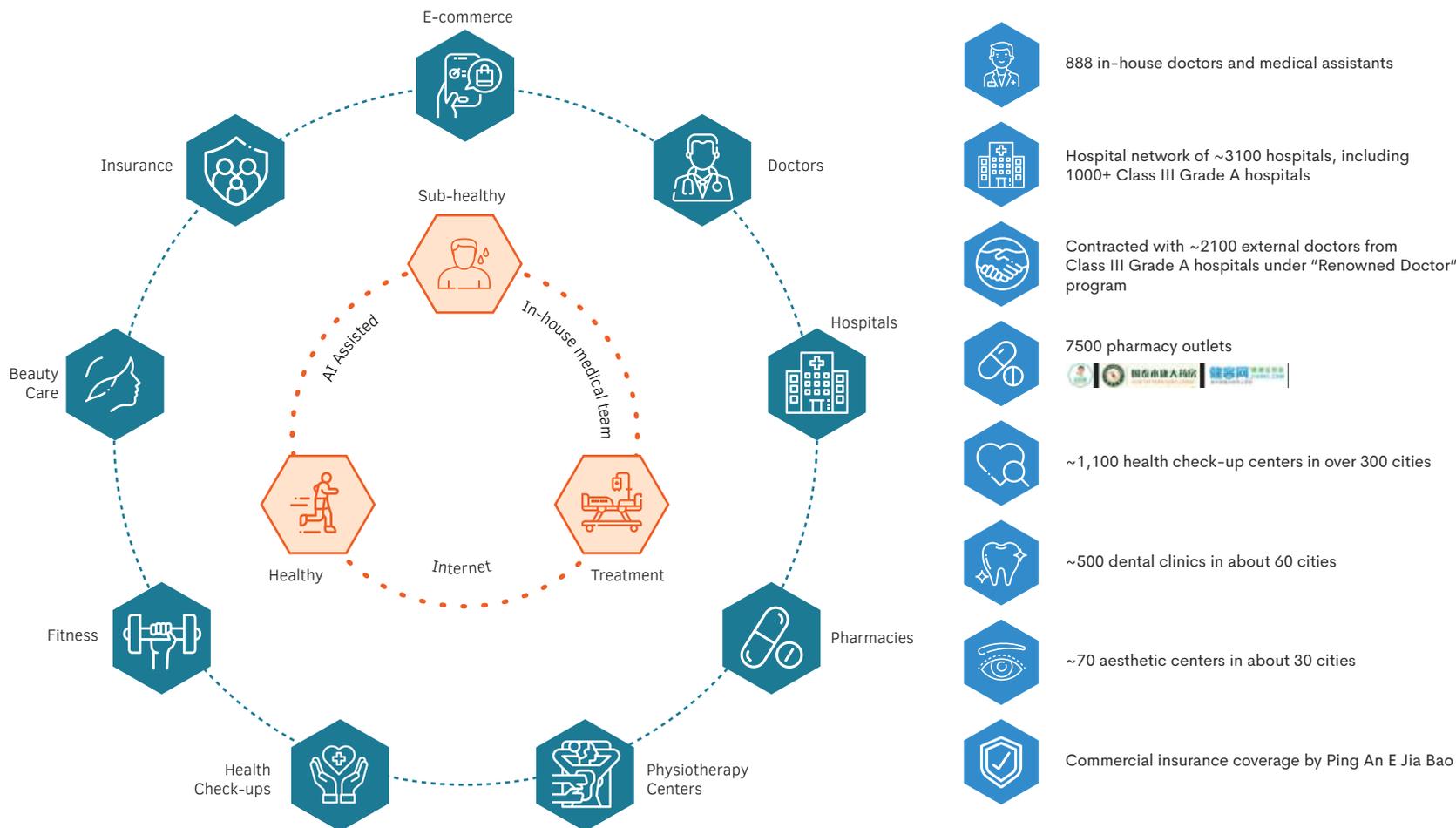
The Ping-An model

Established in 2015 and having gone public on the Hong Kong Stock Exchange in 2018, Ping An Good Doctor's services span health mall, consumer healthcare, online medical services, and health management and interaction.

With revenues of ~\$600M and 60M DAU, Ping An currently has a market cap of ~\$15B, achieved in under 5 years.

At the core of Ping-An's healthcare services is a network of partner medical institutions, hospitals, medical professionals, and pharmacies, which is scaling exponentially with more partnerships.





Note: Class III hospitals are multi-regional hospitals with large capacity that provide multiple regions with high-quality professional medical services, undertake higher education and scientific research initiatives, which are designated as Class III hospitals by the NHFPC hospital classification system. Date as of December 31, 2017.

Source: Ping An Annual Report

Monetization model:

Customer acquisition: Complimentary services such as Health management plan, health community, and AI triage are low-CAC hooks. PingAn also offers deep promotions on products in online mall to attract consumer traffic and engagement.

Specific services such as online consultation, and hospital reservation are offered on a no-fees-charged basis to consumers. However, PingAn secures healthy commission from providers. Structure of commissions is ~20% from online doctor consultancy service and ~20% from providers of online shopping mall & medical service.

Ping An's success has shown that large scale chronic care platforms can be built by integrating all stakeholders on a single platform to ensure smooth delivery of healthcare while ensuring that payments and data collection happen effectively.



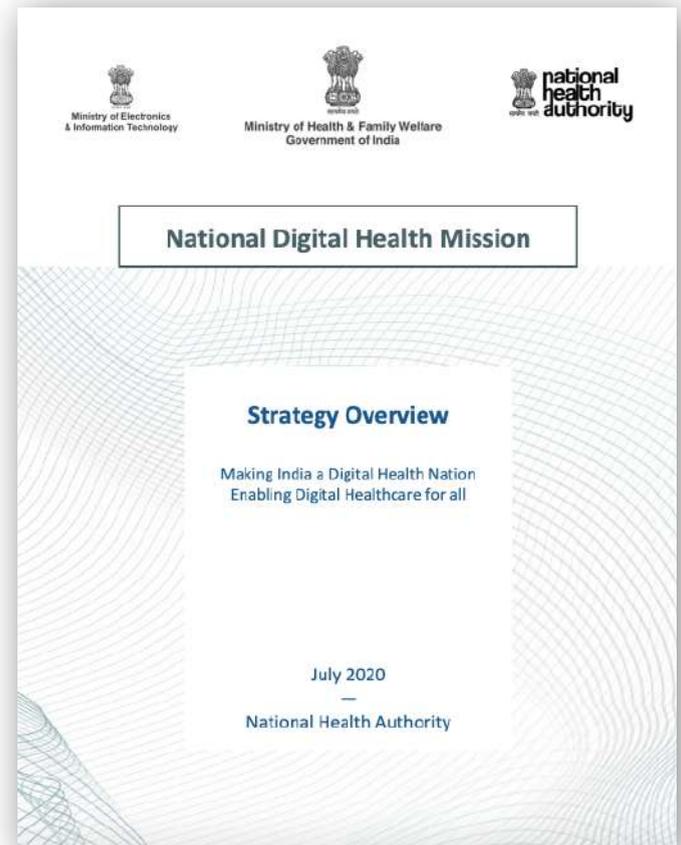
INFRASTRUCTURE EFFORTS

The best of technology innovations and interventions can fail without the support of a forward-looking public infrastructure. The Indian Government has realized the importance of combating chronic diseases and has taken several initiatives to accelerate the digital healthcare landscape in India. The two most notable initiatives are the National Digital Health Mission and Ayushman Bharat. These initiatives are aimed at the two-pronged problems of Approach, i.e. lack of structured data to undertake long-term initiatives, and Affordability i.e. ability to pay for chronic care treatment.

National Digital Health Mission

The stated vision of the National Digital Health Mission is -

To create a national digital health ecosystem that supports universal health coverage in an efficient, accessible, inclusive, affordable, timely and safe manner, that provides a wide-range of data, information and infrastructure services, duly leveraging open, interoperable, standards based digital systems, and ensures the security, confidentiality and privacy of health-related personal information.



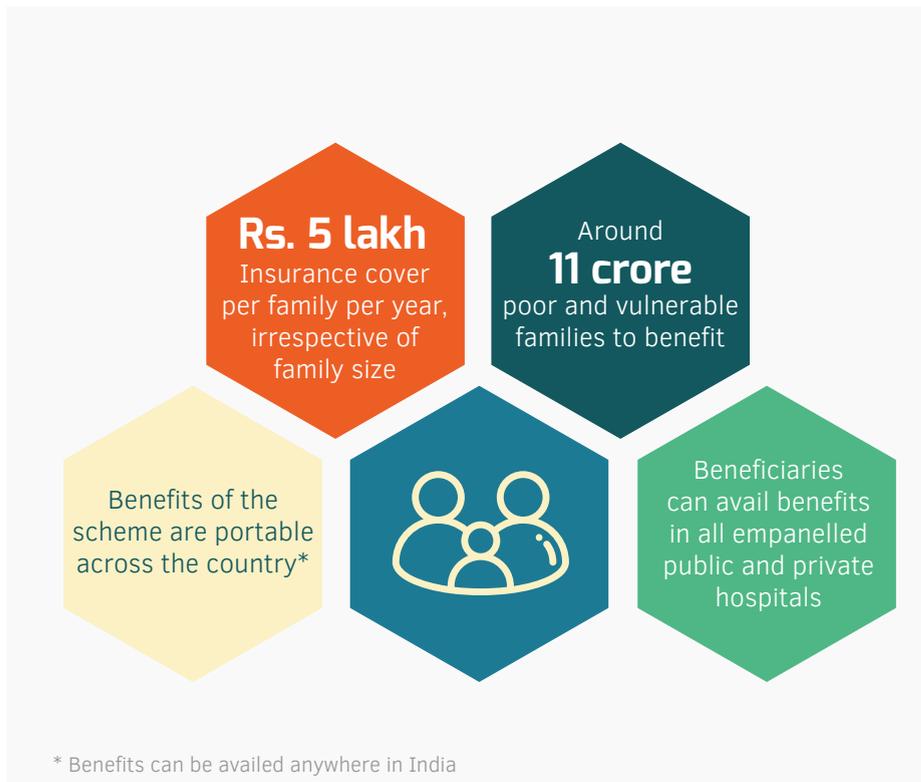
The implementation of NDHM is expected to significantly improve the efficiency, effectiveness, and transparency of health service delivery overall. Patients will be able to securely store and access their medical records (such as prescriptions, diagnostic reports and discharge summaries), and share them with health care providers to ensure appropriate treatment and follow-up. They will also have access to more accurate information on health facilities and service providers.

Further, they will have the option to access health services remotely through tele-consultation and e-pharmacy. NDHM will empower individuals with accurate information to enable informed decision making and increase accountability of healthcare provider.



Ayushman Bharat

Ayushman Bharat - The National Health Protection Mission (AB-NHPM) is the largest health plan of the Indian government.



Source: Ayushman Bharath | Read more: <http://bit.ly/AB-NHPM>

The aim of this programme is to provide a service to create a healthy, capable and content New India. It has two large goals:

GOAL 1

To **create a network** of health and wellness infrastructure across the nation to deliver comprehensive primary healthcare services.

GOAL 2

To **provide health insurance cover** to at least 40% of India's population which is deprived of secondary and tertiary care services.

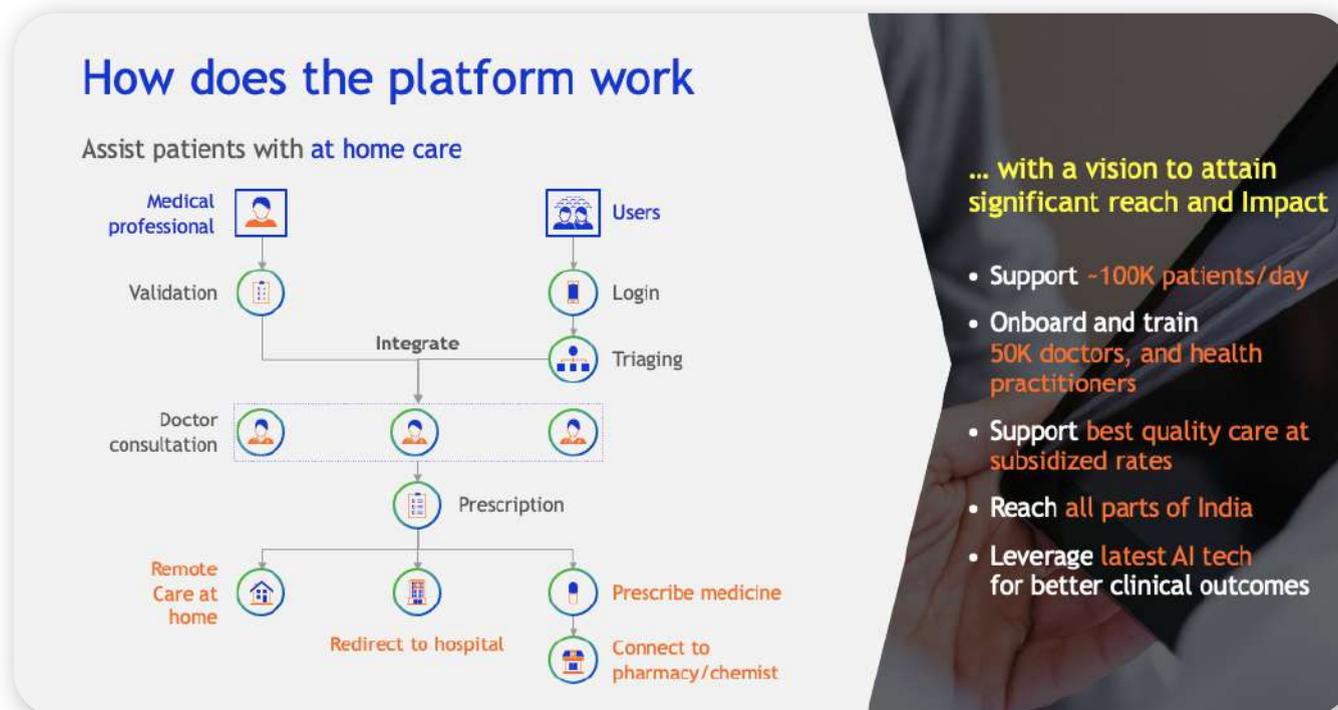


Swasth

Building on the framework given by the NDHM and the vision of Ayushman Bharat, the startup ecosystem came together to co-create Swasth. Swasth is a non-profit initiative with the vision of creating the digital backbone for health care delivery in India. It was created with the following features in mind:

- **Wider Reach for Doctors/ Providers:** Access to standardized health records for accurate diagnosis and treatment.
- **Patient Benefits:** Single platform for managing health records, avail healthcare services and seek payer support.
- **Interoperability:** Open source software license.
- **Data Security & Fraud Prevention:** Fool-proof verification of users, doctors & providers to reduce quackery.
- **Unified Ecosystem:** Seamless interconnection of patients, doctors, diagnostic labs, pharmacy chains, hospitals, insurance providers and other stakeholders.

How does Swasth plan to do this?

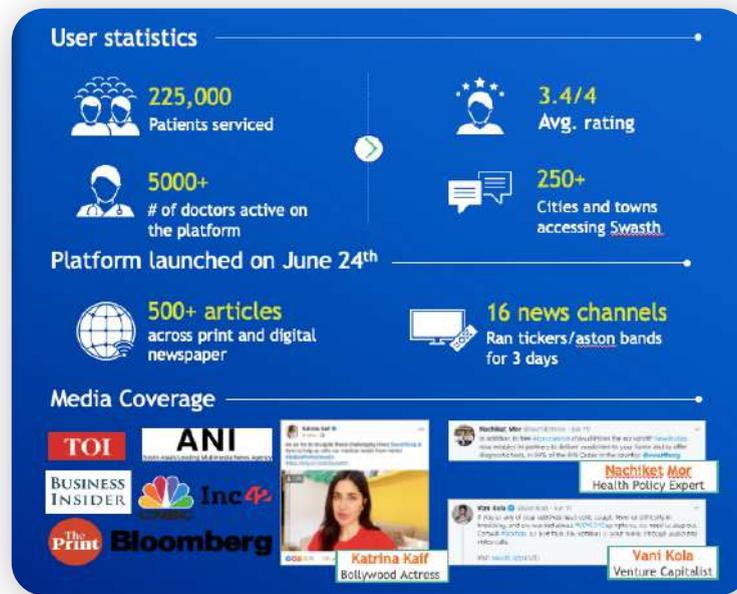


Source: Swasth Presentation



Swasth is building a comprehensive home care solution which has a spectrum of services across the patient journey:

- **Teleconsultation platform:** High quality doctors available over audio/video in <30 min, speaking 14 Indian languages.
- **Pharmacy & Diagnostics integration:** Pharmacy network with 95% pin-code coverage.
- **Remote Monitoring:** High quality service offered at subsidized price.
- **Hospital Integration:** Single point-of-contact for hospitalization exigencies.



The solution was presented to the Prime Minister and key dignitaries of the Indian government

Non-Exhaustive



“ This is a great initiative and the right direction for the country to move in - we will be supportive and provide all help that is needed ”



Attendees in the meeting

Prime Minister Modi	MoHFW
Amitabh Kant	Secretary, Youth Affairs
K VijayRaghavan	Secretary, Labor
NHA	Swasth leadership



Key highlights

- PM very happy with progress on Swasth
- Keen on extending support to private sector
- Need to broad base use cases and expanded offering
- Further details on NHA adoption to be worked out

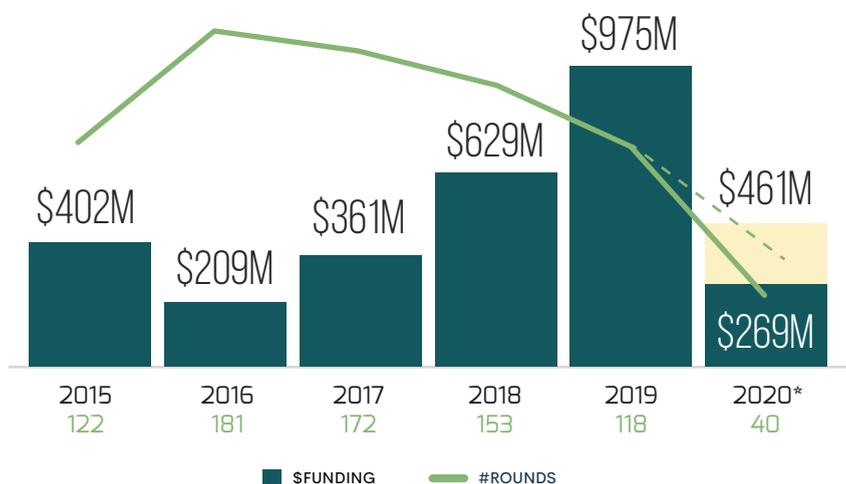
Source: Swasth Presentation



INVESTMENTS IN DIGITAL HEALTH

Over the last 6 years, India has seen c. **\$3B invested in the Digital Health** opportunity, across 600+ promising startups. Leading up to 2020, the **funding raised by Indian startups, grew 4.7x over a period of 3 years**. This highlights the strong and growing promise of the sector to entrepreneurs and investors alike. Despite early disruption in deal-making with the ongoing pandemic, HealthTech startups **raised \$269M** by Jul-20.

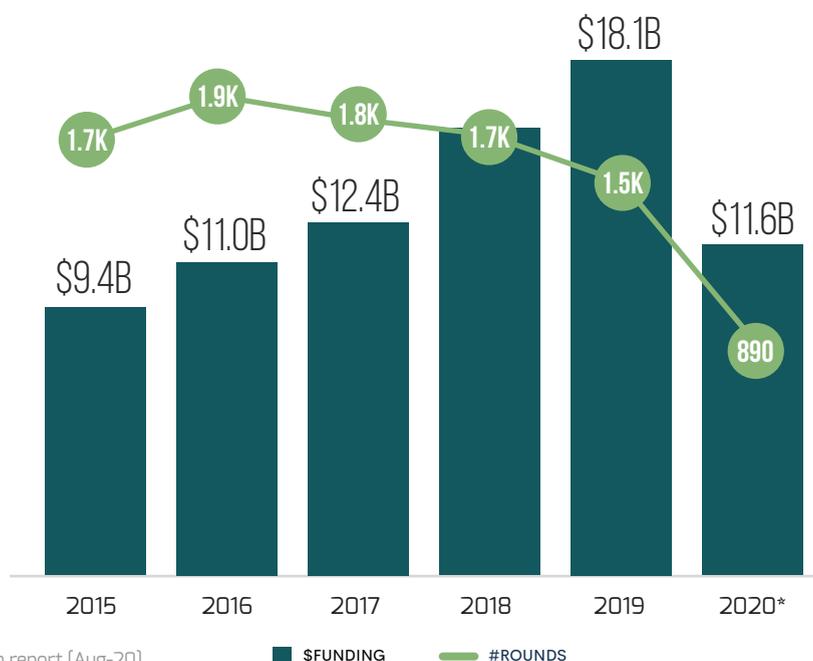
HealthTech Funding Trend (India)



Source: Tracxn HealthTech report (Jul-20)

Globally, **HealthTech startups have raised north of \$78B**, driven primarily by startups building in US (69% contribution), China (7%) and India (4%) markets.

HealthTech Funding Trend (Global)



Source: Tracxn HealthTech report (Aug-20)

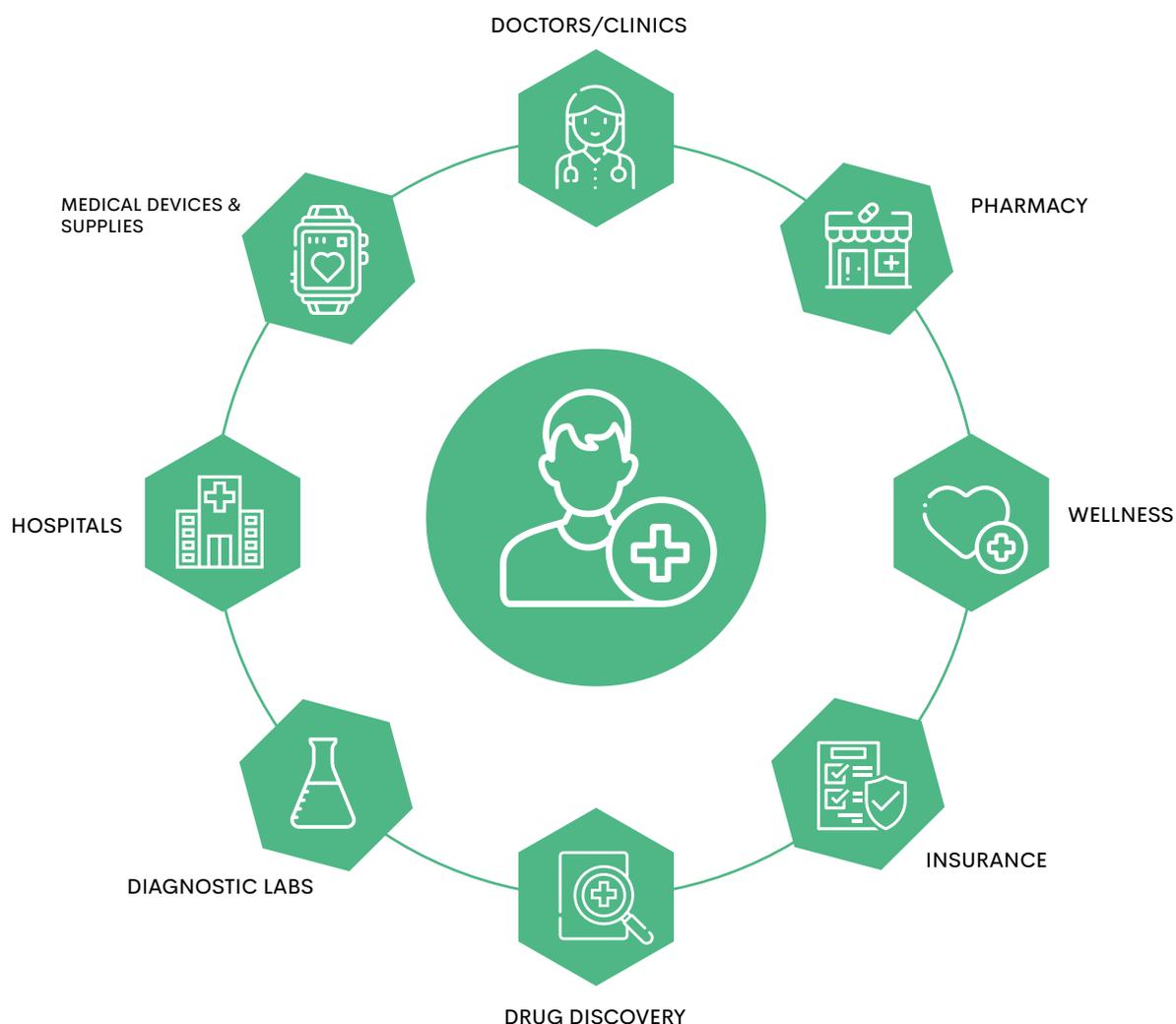


INDIA'S CHRONIC CARE PLATFORM

For digital platforms, chronic conditions are far more suitable than acute conditions due to the higher customer life value. We believe that the biggest companies coming in the space will create digital-first ecosystem that spans across an individual's journey in a single chronic disease. The platforms can have a sticky product hook to acquire users and then leverage partnerships to deliver other value-added services.

What would the characteristics of successful chronic care companies be?

- **Holistic ecosystem approach:** Platform will have to integrate various stakeholders in the healthcare journey of the consumer, acting as a one-stop platform, counselling on lifestyle aspects, offering information, and as an EMR center.



Source: Kalaari Research



- **Building global products from onset:** India is a low ARPU market. Thus, startups need to think about scaling globally from Day one. There is an increasing incidence of lifestyle diseases in MENA, SEA regions that can be capitalized on given similar characteristics with the Indian market.

- **Monetization strategy:** To start off, startups need to choose chronic care diseases offering high AOV and CLTV such as cancer, kidney diseases, or diabetes. Healthcare delivery via providers has high value accretion. Over time, platform has to evolve to solve multiple chronic care diseases as they cannot be evaluated in isolation. 89% diabetic patients have atleast 2 co-morbid conditions such as hypertension, obesity, kidney, or cardiovascular diseases. Having multiple providers on the platform can help improve customer stickiness and retention.

- **Insurance linkage:** Only ~40% Indians are currently insured, and <10% have private insurance. At sufficient scale and data access, startups can explore insurance linkage. While most healthtech players are sub-scale for insurer's interests today, we expect that to change over the coming years.

- **Integrate health and wellness:** The nature of chronic diseases requires a comprehensive approach to treatment and management that spans across various lifestyle choices such as dietary habits, exercise, mental wellness, and tracking along with clinical solutions. Health and wellness are not distinct categories. Sometime, startups focus on either health through diagnostics, or wellness through lifestyle interventions. Former provides a higher AOV, while latter helps create higher engagement. At the intersection of both, is where models like Livongo thrive and succeed.



**HEALTHCARE
STARTUPS
REFERRED ON
SOCIAL MEDIA**

Within the comments on social media, we saw entrepreneurs share about their start-ups, and learnings from the journey. On the other hand, there were also happy customers of health-tech startups that shared some interesting companies. We captured the details of these startups and benchmarked them on three parameters.

Problem:

The key problem the startups are solving within healthcare. Some companies are tackling several healthcare-related issues (Horizontal - Healthcare), some are focused on the segment of chronic diseases (Horizontal - Chronic), while the remaining are laser-focused on a particular chronic care or healthcare problem (such as Diabetes).

Business Model:

Business models are either facing hospitals/clinics & corporates (B2B) or end consumers. Within consumer-facing solutions, some startups are focused on curative healthcare (Care delivery) including diagnostics and consultations, some are focused on preventative healthcare (Lifestyle), while a few models are doubling down on trackers (Hardware). A small set of solutions span across these three categories (Full stack).

Offerings:

These are the set of offerings to the end consumer.

The list of companies is by no means exhaustive. These are companies suggested to us on our social media channels.

What follows is a snapshot of the companies -



REFERRED STARTUP	PROBLEM	BUSINESS MODEL	OFFERINGS
Curefit	Horizontal - Healthcare	Full-stack	Fitness + Mindfulness + Consultations
Call Health	Horizontal - Healthcare	Care delivery	Consultation + Diagnostics + Pharma
Portea	Horizontal - Healthcare	Care delivery	Healthcare services at home
CareMe Health	Horizontal - Healthcare	Care delivery	Consultation + Pharma
iCardin	Horizontal - Healthcare	Care delivery	Teleconsultations
Jiyyo	Horizontal - Healthcare	Phygital Care Delivery	e-Clinics with Teleconsults for Rural areas
Fitterfly	Horizontal - Healthcare	B2B	Content + Tracking
Cura.tech	Horizontal - Healthcare	B2B	SaaS
Phable	Horizontal - Chronic	Full-stack	Tracking/Analytics + Consultation + Lifestyle Coaching
Wellthy	Horizontal - Chronic	Full-stack	Content + Tracking/Analytics + Consultations
Livealtlife	Horizontal - Chronic	Full-stack	Food delivery + Fitness + Consultations + Diagnostics
Rhealth.in	Horizontal - Chronic	Care delivery	Diagnostics + Consultation + Pharma + Food/Insurance Advisory
Smit Fit	Horizontal - Chronic	Lifestyle	Content + Lifestyle Tracking
Nutripal	Horizontal - Chronic	Lifestyle	Content + Consultations
Heka Solutions	Diabetes	Full-stack	Content + Tracking/Analytics + Consultations
Aegle Clinic	Diabetes	Phygital Care Delivery	Clinic + online physiotherapy
CureOS	Diabetes	Phygital Care Delivery	Network of clinics + consultations
Twin	Diabetes	Phygital Care Delivery	Network of clinics + Tracking/Analytics + Consultations
Cora Healthcare	Diabetes	Lifestyle	Content + Lifestyle Tracking
Breathe Well-being	Diabetes	Lifestyle	Content + Community + Lifestyle Tracking
PCOS Club India	PCOS	Care delivery	Consultation + Diagnostics

contd.



REFERRED STARTUP	PROBLEM	BUSINESS MODEL	OFFERINGS
Maasika	PCOS	Phygital Care Delivery	Content + Consultation + Diagnostic
LamiFit	Nutrition	Full-stack	Content + Consultation + Diagnostic + Supplements
23BMI	Nutrition	Lifestyle	Content + E-commerce + Diet Plans
Snoozfit	Sleep Management	Hardware	Sensor
YourPhysio	Physiotherapy	Phygital Care Delivery	Network of clinics + online physiotherapy
EndoQure	Endocrine Care	B2B	SaaS
Healthkon	Critical Care	Hardware	Remote Monitoring device + Tele-OPD
PurpleRibbon.Health	Cancer	Phygital Care Delivery	Network of daycare centres

*Disclaimer - The data in the table is interpreted based on publicly available sources.
If you feel there is a mis-categorization, please write a note at health@kalaari.com, and we will make the necessary correction.*



KALAARI VIEWPOINT

Chronic care diseases is a large, unaddressed, and growing problem. It is often attributed to a confluence of Increasing urbanisation, aging population, air pollution and changing lifestyles. Solving for India's pervasive chronic care scourge is an imperative. The positive impact is not just limited to better healthcare for millions of Indians, but goes beyond to strengthening India's economy. A Bain report estimates, **chronic care diseases to cost India \$6.2T between 2015-2030.**

The intervention of technology in chronic care is inevitable, due to the following reasons:

- It is an attempt to solve for a massive challenge through a scalable and capital-efficient model.
- The patients need constant vitals monitoring, and a ready access to the healthcare ecosystem (physicians, pharma) regardless of their offline access.
- With low but growing awareness, there is a need for elements of gamification to drive irreversible behavior shifts.

There are several approaches that have emerged to solve for either preventive or curative chronic care challenges. Taking diabetes as a base example, below is a summary of the approaches, opportunities and challenges faced by tech-first players:

Solving for ~70M diabetics	Solving for ~90M pre-diabetics						
<p>Approach 1: Diabetes reversal Using only lifestyle (non-pharma) interventions</p> <table border="0"> <tr> <td data-bbox="156 1437 469 1559">Opportunity Irreversibly improving lifestyle of patients, avoiding taking meds and injections</td> <td data-bbox="520 1437 851 1559">Challenges Delivering solution at affordable price-point; resistance from the ecosystem</td> </tr> </table> <hr/> <p>Approach 2: Adherence Driving complete adherence to doctor recommendations</p> <table border="0"> <tr> <td data-bbox="156 1749 396 1871">Opportunity Collaborating with the ecosystem for comprehensive care</td> <td data-bbox="520 1749 862 1871">Challenges Figuring means of monetisation; ensuring platform retention and engagement</td> </tr> </table>	Opportunity Irreversibly improving lifestyle of patients, avoiding taking meds and injections	Challenges Delivering solution at affordable price-point; resistance from the ecosystem	Opportunity Collaborating with the ecosystem for comprehensive care	Challenges Figuring means of monetisation; ensuring platform retention and engagement	<p>Approach 1: Lifestyle Intervention Goal-based gamification for lifestyle improvements</p> <table border="0"> <tr> <td data-bbox="960 1437 1270 1589">Opportunity Personalised life plan spanning content, diet, exercise, sleep, supplements and tracking</td> <td data-bbox="1324 1437 1652 1618">Challenges Awareness and intent to avoid severe-risk diseases; monetisation beyond e-commerce; tech for true personalisation</td> </tr> </table>	Opportunity Personalised life plan spanning content, diet, exercise, sleep, supplements and tracking	Challenges Awareness and intent to avoid severe-risk diseases; monetisation beyond e-commerce; tech for true personalisation
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Opportunity Personalised life plan spanning content, diet, exercise, sleep, supplements and tracking	Challenges Awareness and intent to avoid severe-risk diseases; monetisation beyond e-commerce; tech for true personalisation						



At the intersection of progressive Government initiatives, pandemic-induced digitisation, and a massive underlying market, Digital Health in India is at a tipping point. We are committed to collaborate on the future of chronic care and creating a meaningful impact.

Kalaari values the opportunity to work with missionary early-stage founders with deep customer insights and a long-term mindset, as they build the enduring enterprises of tomorrow.

If you have suggestions of entrepreneurs we should talk to, we would love to hear from you at health@kalaari.com.





Phone: +91 80 6715 9600

Email: info@kalaari.com

Website: kalaari.com

Kalaari Capital, Ground Floor,
Unit-2 Navigator Building, ITPB,
Whitefield Road, Bangalore,
Karnataka - 560 066

twitter.com/kalaari

facebook.com/kalaaricapital

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