S_HIFT_TO_FUTURE OF HEALTHCARE BRIDGING THE CARE GAP

How to shape the informed patient journey through empathetic experiences and succeed in your healthcare digital transformation

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Technology is disrupting healthcare just as it has in so many other areas of life. New players and new approaches are proliferating but while the changes may seem dazzlingly diverse there is a single, underlying driving force. Digital transformation in healthcare has many elements: health data privacy, ethical AI, IOT solutions, many brought to the market by new disruptors. These are all valuable elements of transformation, but ultimately they are steering to a single goal; empathetic care of the empowered patient. In this increasingly patient-centric future it is the empathetic care, not the technology itself, that will prove to be the outstanding feature. The market leaders in this landscape will be those who embrace and explore its possibilities.

Living in a hyper-connected world, patients have never been so well informed or had so much decisionmaking power, at least when it comes to chronic diseases. Less dependent on their doctors for advice, increasingly able and willing to take greater control of their own health, they feel empowered by the vast amount of health information available online, on apps, and by the array of health and fitness wearables.

Such consumer digital empowerment is pushing rapid change in healthcare provision. Industry leaders across providers, insurers, medical technology and the pharmaceuticals industry, need to re-imagine the traditional spectrum of sales, marketing and commercialisation processes by developing empathetic engagement tools to accompany and support the patient on their personal journey. This digital transformation imperative becomes a huge challenge because of the complexity of the industry ecosystem and the varying models in APAC.

With widely varying reimbursement and access challenges across APAC countries, coupled with diverse social and cultural norms, it is important for pharma, insurance, and healthcare providers to work together with partners who have local, real-world expertise when it comes to understanding patient behaviours. Together those partnerships can deliver solutions that will impact patient lives positively. Across APAC the opportunities are considerable with a huge growing market for medication and care, but there are also significant cultural and financial hurdles to the uptake of treatments.

PATIENT CENTRICITY

New Needs And Challenges



Outcomes and value are becoming the gold standard for the Healthcare industry. Stakeholders around the globe are looking for innovative, cost-effective ways to deliver patient-centric, technology-enabled solutions to patients both inside and outside hospital walls. One core element of any digital transformation strategy is the shift to an outcome-based model in order to better serve the patient, and in doing so reduce healthcare expenditures and related economic burdens. Digital platforms and the growth of accessible data facilitate this shift. It is now down to the healthcare industry to deliver on the promise. This paper examines some of the latest trends and identifies the winning strategies in APAC.

APAC DIVERSITY IN A SNAPSHOT

- Urbanisation, sedentary lifestyles and obesity have ushered in Western-style chronic diseases
- Populations are ageing but not at the same rate
- APAC is home to nearly half of the world's population with dementia

in the world

INDIA

CHINA

MALAYSIA 13.3%

^{USA} 33.7%

VIETNAM 3.6% classified as obese and FASTEST rising rate of obesity

in 4 years

33% population > 60 est. 25.9% > 65 by 2050

JAPAN

SOUTH KOREA 46.5% > 65 in 2067 FASTEST ageing country in the world



INDIA • BANGLADESH • CAMBODIA

HIGHEST out-of-pocket expenditure

AUSTRALIA • NEW ZEALAND • MALAYSIA • JAPAN

UCWEST out-of-pocket expenditure



OPPORTUNITIES IN APAC AND CHALLENGES TO OVERCOME

WHERE ARE THE OPPORTUNITIES?

Asia's ageing population and fast-growing middle class offer a wealth of opportunity for healthcare stakeholders across the public and private sectors.

Ageing and lifestyle factors will see explosive growth in chronic and non-communicable conditions including diabetes, cardio-vascular problems, obesity, and other nutrition-related illness previously associated with the West.

The emerging middle class is booming. Many of these changes are driven by the explosive growth of the middle class, which in China, for example, is set to rise from 430m today to 780 million by 2025.¹The generation born post 90s (16 per cent of China's population and growing) is seen as the engine for consumption with its combination of wealth, digital fluency, and openness to western culture. The middle class values a healthy lifestyle as a core component of a good life and over 70 per cent of this group exercises regularly, buys organic, and sees well-being as both an individual responsibility and a critical element in the work-life balance.

Asia's ageing population will result in the elderly population more than doubling from 550m in 2017 to 1.3bn in 2050.ⁱⁱ

The impact will vary depending on such factors as whether countries have an 'out of pocket' system or state provided universal healthcare. Traditional cultural expectations of filial piety, as seen in China, may have inhibited the development of public welfare systems leading to a steep affordability gap. Countries with state backed healthcare, like Vietnam, will face an increasing public financial burden.



POPULATION PYRAMID OF THAILAND, 1980





Source: UN, Credit Suisse

Looking beyond finance there is also a growing and as yet unmet need for care

for geriatric depression. The societal shift away from families and communities taking care of the elders has left a trail of lonely seniors with dramatic results including Japanese seniors shoplifting in the hope of finding community in jail^{III}. A study from Sungkyunkwan University found that 25 per cent of Koreans aged over 65 ate every meal alone over the past year^{iv}. There is clearly a need and thus an opportunity for those providing support and community.

Female

Male

Asia is not immune to the global obesity epidemic. Societal shifts towards urbanization, rising incomes and sedentary lifestyles is taking its toll here as elsewhere with studies from 2017 showing an average rise in obesity across ASEAN nations of 28 per cent over four years. This will impact the rates of non-communicable and chronic diseases. As of July 2018, The Asian Development Bank found that NCDs are responsible for 71 per cent of all deaths across Asia^v.

THE MAIN CHALLENGES:

Before they can benefit from the market opportunities, healthcare providers and organizations have hurdles to overcome:

THE AFFORDABILITY GAP IS GROWING

Across Asia, affordability remains a key issue. Different countries have varying degrees of universal health coverage and various models of private reimbursement/insurance. Many patients can't get access to innovative medication due to financial constraints. The healthcare protection gap is growing with some treatments threatening to tip patients into poverty.

The health protection gap in Asia is estimated to have reached US\$1.8 trillion, which translates in real terms to 40 million households forgoing medical treatment to avoid financial stress, according to a study by Swiss Re^{vi}.

Unaffordable healthcare has a serious impact. Those that decide to spend face stress on household finances. Those that don't, through fears about affordability, simply do not present themselves for healthcare. Increasingly patients can research pricing themselves and shop around which also redraws the traditional patient/caregiver relationship with the patient as customer.

Most of the estimated gap – USD 1.4 trillion – originates from emerging Asia (China, India, Indonesia, Malaysia, the Philippines, Thailand and Vietnam) which are typified by large populations, low disposable incomes, high out-of-pocket medical expenses and low health insurance ownership levels.

Out-of-pocket healthcare spending in emerging Asian countries represents almost 18 per cent of net household income which is a significant source of financial stress. China has the largest health protection gap at USD 805 billion, followed by India with USD 369 billion, and Japan on USD 218 billion (figures from Swiss Re). The lowest gap is found in Thailand where a subsidised universal healthcare system has produced the lowest out-of-pocket medical expense rate in the region.

HYPER-ACCESS TO INFORMATION BY PATIENTS, DATA PROTECTION REQUIREMENTS, AND DATA DECLUTTERING (BATTLING MISINFORMATION)

With patients increasingly proactive in their healthcare journeys, observers such as McKinsey have reported that patients are increasingly likely to seek care outside the hospital. Some areas, such as vaccination services and minor procedures will migrate to retail clinics with over 80 per cent of consumers saying that is acceptable to them. 70 per cent of customers reported that they preferred digital to human interaction for many healthcare situations.

Googling symptoms is common globally but popularity (and accuracy of results) varies regionally. 99 per cent of Taiwanese use the web to find information but in Vietnam only 33 per cent of the population use the web to get health information. In this always-on and hyperconnected world patients are constantly exposed to unqualified and unverified sources offering healthcare advice. Fake news is rampant and digital clutter makes it hard to distinguish facts from background noise as the 'anti-vax' debate has made clear.



Disruption in this category is driven not only by technology but by patient expectations and new players entering the market to satisfy those expectations. The results are seismic shifts in the healthcare provision landscape.

RETAILISATION OF HEALTHCARE PRODUCTS AND SERVICES

As access to data has become more democratised and services are no longer centralised in the hospital, new players are entering the market from unexpected quarters. Ready to propose advanced personalised and hyper convenient healthcare services they are putting the "care" before the pill.

The old model of hospitals as stand-alone facilities that provide all services to all people is disappearing rapidly as healthcare migrates to clinics, pharmacies, online, and traditional retail facilities such as shops and malls. In China the government is actively shifting away from hospitals to a system of primary care from a network of physicians and community clinics. This has proved fertile terrain for new private sector players.

As in other areas of retail the advent of virtual and augmented services, plus 24/7 remote availability means patients will increasingly expect richer, more tailored services, customised to their needs.



THE RAPID RISE OF THE WELLNESS MOVEMENT

The hyperconnected patient is more empowered when it comes to personal health and available information. Sensors, wearables, and dedicated apps are driving them to become ever more proactive in treatment and lifestyle choices.

As explained in a recent Ogilvy white paper, wellness is fast moving from the fringes to the mainstream. It is changing how we live. As more of us turn to it wellness will only grow in importance. The wellness movement creates a new space for businesses and brands. But before they enter it they must understand why it matters.

Wellness is more than lifestyle treats such as spas or meditation. It is a coping mechanism for the challenges of modern lifestyles and potentially challenges traditional healthcare by emphasising the maintenance of healthiness rather than dealing with disease.

One example of the growth of wellness culture is China where the "Healthy China 2030"^{vii} initiative embraces diverse aspects including public healthcare infrastructure, the environment, medical industry reform, public exercise targets, and food and drug safety. The goal is to extend the average Chinese life expectancy to 79 by 2030. It will also have a huge knock-on effect on the healthcare and wellness economy.





WINNING STRATEGIES FOR HEALTH CARE PROVIDERS IN APAC



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TACKLING THE AFFORDABILITY GAP FINDING NEW TALENTS TO ENABLE THE TRANSFORMATION TO EMPATHETIC CARE

WINNING STRATEGY 1

COMPASSIONATE AND EMPATHETIC EXPERIENCES FOR BETTER CARE

For over a hundred years medical students have quoted Francis Peabody's maxim "**the secret of the care of the patient, is in caring for the patient**". Against a background of insufficient numbers of HCPs and infrastructure healthcare Asia struggles to provide the desired level of support. Digital therapeutics and tele-medicine undoubtedly offer partial solutions but only in a context of customised local knowledge, empowered communities, and empathetic care.

(A) USING DIGITAL TOOLS TO BRIDGE THE PATIENT-COMMUNITY GAP, DISPEL SOCIAL STIGMA, AND PROVIDE PATIENT-CENTRIC, COMMUNITY CARE

Digital therapeutics have a significant role to play in helping patient outcomes but to be truly part of the shift to empathetic care they need to go beyond monitoring and instead offer mental support and community related experience. Across Asia, the social stigma of starting treatments can have a direct impact with depression as a case in point. Interviews with doctors reveal that being diagnosed for depression in some Asian communities is challenging as patients are often looked upon with contempt and ridicule by family members, friends and workplace colleagues once they come to know about it. From rare conditions to chronic diseases, communities are springing up to help patients cope and the more agile healthcare companies need to be involved with creating those platforms.

Bringing the community together to rally around the patient is a key factor in providing **compassionate care** for the patients.

CASE STUDY 1

ONLINE COMMUNITIES DRIVING EMPATHETIC EXPERIENCES FOR PATIENTS

Migraine Buddy^{wii}, from Healint, a Singapore start-up, is an example where over 1.8 million migraine sufferers use the platform to track their condition from symptoms, triggers, medication management and receive support from fellow sufferers through community messages within the application. Realising the importance of such online community platforms, Novartis is working with Migraine Buddy to integrate a coaching program and disease education campaign that helps patients manage migraine more effectively.



CASE STUDY 2

POMPE COMMUNITY – THE IMPORTANCE OF A COMMUNITY GROUP IN STARTING NEW MEDICALTREATMENT



Traditional drug development sees patients and their advocacy groups as passive receivers of the results after the scientists and pharma companies have worked their magic behind closed doors. Sufferers of Pompe disease turned that on its head with the Pompe Model in which patients, scientists, doctors and the pharma industry have an equal voice.

The Pompe Model started with the formation of a patients' association which used an email **LISTSERV** to interact with each other, as well as with scientists researching treatments. The result was the development of Enzyme Replacement Therapy but in the process of finding a cure the medical community also saw the formation of a "group of people who were joining together to take charge of their own destiny" (O'Donnell K. Pompe Disease—the real story).^{ix}

(B) DESIGNING WELL-THOUGHT OUT AND HOLISTIC PROGRAMS THAT MEET THE SPECIFIC NEEDS OF ASIAN PATIENTS

Compassionate empathy requires the generation of emotionally remarkable experiences as part of the healthcare journey. It means combining the rationalism of healthcare provision with a creative depth not previously associated with this industry. In doing so, the healthcare industry needs to define what will help them stand out and makes leveraging the power of brands more important than ever.

People are experiencing brands differently today. They are choosing to interact with brands. We're no different. We are fooling ourselves if we don't think this applies to healthcare just because we're healthcare. We may not have the same type of business model, but we have to understand that consumers are more involved not only in the way they choose information but also how and when they interact with the brand.[×]

LINA SHIELDS Chief Media Officer Eli Lii

Crafting empathy requires greater consideration of patient behaviours and feelings and becomes another tool in the practitioner's armoury. This entails using available technology in a **culturally sensitive** way, taking into account factors such as social stigma, cultural references, and different diets across the region. This could also involve co-creating the patient solution with a start-up, university, or think tank.

There are excellent management apps for nutrition, and a variety of different conditions, but the successful ones will engage with patients through motivation techniques and gamification to do more than recommending drug dosage and intervals. This will enable patients to better understand and monitor their conditions and bring them the **mental support** they need in addition to the very practical medical one.

CASE STUDY 1



PERSONALISED DIABETES SOLUTION FOR PATIENTS

Roche has partnered with Wellthy Therapeutics, a digital therapeutics company, to offer personalized solutions for patients with Type 2 diabetes that go beyond the pill. The Roche Wellthy Care solution delivers evidence-based digital therapy based on globally developed clinical guidelines, while using behaviour change models to help patients learn new disease management skills and convert them into habits. The digital therapeutic offers a:

- **Diabetes educator** who uses the Wellthy Care platform to interact with, educate, monitor and motivate patients
- **Digital diary** to track and monitor progress on many biochemical parameters
- 24*7 digital companion, Carey, an artificial intelligence based companion who gives personalized real-time feedback and reinforces skills
- Magazine with patient centric updates, tips and tricks and much more

In a recent presentation of 833 patients who used Roche's Accu-Check with Wellthy Care Digital Therapeutic, it was shown that patients who were highly engaged with the digital therapeutic solution showed the best reduction in fasting blood sugar and resting blood sugar levels with an average reduction of Fasting Blood Sugar levels by 17 mg/dl and Post Prandial Blood Sugar levels of 33 mg/dl. ^{II}

LOOKING BEYOND TRADITIONAL

CHEMOCARE AND PROVIDE

MENTAL SUPPORT

CASE STUDY 2

Going beyond providing chemo for cancer patients, Tucker Medical, an integrated medical specialty practice in Singapore is looking to transform their post-chemo care. Working with Savonix^{xii}, a digital firm in **cognitive science**, Tucker Medical uses the Savonix Cognitive Assessment Platform to monitor chemo-fog, a mental cloudiness that affects the concentration of cancer patients. The platform conducts ongoing assessments across a broad spectrum of cognitive function, including working memory, attention, executive function, and processing speed.

From these results, Tucker Medical can determine the type of

CASE STUDY 3

REWARDING SLEEP TO PROMOTE INDIVIDUAL'S WELL-BEING

post-chemo care for each individual patient.



Realising that **sleep deprivation** is a common and endemic issue faced by Asians, AIA^{xiii} has rolled out a sleep challenge initiative under its Vitality program in Singapore. Through the sleep challenge, policy holders will be awarded for getting at least 7 hours of quality sleep a day through cash vouchers that they can redeem in popular stores. The idea behind the program is that patients need a nudge to move in the right direction and managing sleep can help bring various benefits.



It is important to consider co-creation of solutions with the healthcare ecosystem to provide tailored solutions for patients in Asia. Through co-creation, diverse insights can be brought in to understand patient motivation and behaviours better, enabling us to develop integrated and personalised programs that meet patient needs.



Head of Roche Diabetes Care Korea

The successful **co-created solutions** will focus on strategic differentiation, but also the platforms that need to be in place to accompany the patient on their journey.



CO-CREATING HOLISTIC PROGRAMS FOR HEALTHCARE ORGANISATIONS IN ASIA PACIFIC THROUGH PARTNERSHIPS

Business models are increasingly collaborative and the Ogilvy framework for healthcare imagines the healthcare ecosystem through 5 dimensions, from strategic to operational; an ecosystem comprising partners in each of these dimensions and enabling strong communication and collaboration across different partners.

This framework could be envisioned as a pyramid approach. At the bottom of the pyramid is the functional needs of the customers and healthcare consumers. This is the basics of what is needed for achieving successful winning outcomes for the business. The wants refer to aspirations that the customer needs to consider to deliver above and beyond solutions for their stakeholders. Moving to the next tier of the pyramid, it refers to the influence and channel areas that customers need to leverage for market outreach. At the top of the pyramid is the specific theme that the customer needs to focus on in order to strategically differentiate from the competition.

With our domain knowledge in co-creating and designing such ecosystems across APAC, Ogilvy Consulting can help make a significant leap in your healthcare customer strategy.

SPECIALISED FOR HEALTHCARE



5_HIFT 18

RELEVANT THEMES	EXTEND KNOWLEDGE BASE	EXPANDED OFFERING THROUGH NEW TOUCHPOINTS	NECESSITIES FOR YOUR CUSTOMERS	EXPERIENCES IN ADJACENT INDUSTRIES
Healthcare relevant themes that will help organisations differentiate their product and service offerings • Ageing/ Elderly Population • Diet and Nutrition • Holistic Well-being (Body, Mind, Spirit) • Medical Education • Mobility and others	Partner with sources of synergies to augment your offer • Key Opinion Leaders • Patient Associations • Policy Advocates and Makers	 Alternate channels of customer engagement to explore a shared value system Leading Universities (e.g. MIT) and Research Institutes (e.g. A*STAR) New Tech Platforms (e.g. Grab, Line, Go-Jek) Global Hospitals & Clinics (e.g. Mount Sinai) Coalitions (e.g. KICKS for HPV in Indonesia) Health-tech Communities (e.g. Healint) 	 What are the needs & desires which your customers will be inclined to receive from you, that you don't currently cater to Home Monitoring Equipment Relevant Medical Content (e.g. Hello Health) Transportation Assistance Financial Solutions (e.g. banking loans, micro-credit, insurance) 	 What are the wants that will fulfil the rest of the value chain above and below your current offering to your customers Digital Therapeutics (e.g. Biofourmis) Telemedicine (e.g. Mydoc) Digital Device & IOT Providers, Med-Tech companies (e.g. Philips)

Instagram Influencers

CASE IN POINT: ARTHRITIS PATIENTS FACING MOBILITY ISSUES

An elderly patient with rheumatoid arthritis suffers extreme pain and mobility issues. The clinical discussion will typically revolve around pain but the patient concerns will include the sense of independence and factors like the ability to drive. Knowing that symptoms deteriorate with time a successful support scheme would take into account not only pain relief but real world concerns like changing gear and looking over the shoulder; how can these be programmed to predict the onset of these problems and respond accordingly.

HOW CAN PHARMA ENVISION ADDRESSING THIS PATIENT ISSUE?

SEGMENT	POTENTIAL IDEAS
ТНЕМЕ	Mobility
INFLUENCE & CHANNELS	(1) Traffic associations for disease awareness campaigns(2) Remote coaching platform for occupational therapy exercises(3) Automobile companies for vehicle technology adjustments
NEEDS & WANTS	To continue driving by myself without depending on anyone

(C) EQUIPPING CAREGIVERS WITH THE RIGHT TOOLS TO PROVIDE ADEQUATE PATIENT CARE

It's always been a challenge for doctors to be sure that patients have adhered to their treatment protocols, and caregivers can find it hard to remember if there were any missed treatments. Marketplace disruptors are introducing digital solutions to this familiar problem.

CASE STUDY 1



PHARMACEUTICAL REMINDER SYSTEM TO HELP MANAGE DISEASE THERAPY

mClinica's Connect app^{xiv} is a white label app that reminds patients with personalised messages about medicine refills, treatment times, appointments and discount vouchers. In the process it supplies **real time feedback** to caregivers about compliance with therapy. It can be combined with tailored health education messages to educate patients about managing their conditions.

CASE STUDY 2



SMART MONITORING OF INSULIN THERAPY

Novo Nordisk has partnered with FlexHealth^{**} to launch the first **connected insulin pens** providing both patients and caregivers with the ability to monitor insulin dosage and schedules. Partnering with diabetes management provider, Health2Sync in Japan, patients can also receive targeted medical education to help work more closely with their doctors on personal disease management. There are many possible compassionate and empathetic approaches, but what they have in common is putting the patient back at the centre of their own healthcare journeys while simultaneously collecting data for different stakeholders. However, there is a double edge to the application of data in such instances, as instant access brings with it equally rapid transmission of false and even dangerous misinformation. Data decluttering becomes an issue for providers, caregivers, and industry alike.

KEY TAKE OUTS

EMPATHETIC CARE

Digital technologies can help extend healthcare to patients but the successful platforms will be those that identify with and address the human factor, not simply the disease.

- Healthcare providers need to foster services that surround the patient with a support community and can dispel the stigma that interfere with treatments
- The best therapeutic digital service will care for the person and their quality of life as part of the outcome
- Such tools don't replace carers, they empower caregivers, build trust, and bridge the communication gap
- Experiences matter and the smartest tool will fail if does not work within the context of the patient's local culture and lifestyle.



Data lies at the heart of digital transformation and healthcare providers sit on a wealth of data types. Aggregation, better handling of big data and AI are helping to break data out of its various organisational silos and put it to good use in analysing and predicting patient needs. Exploring and exploiting this data for empathetic care requires more than number crunching however; it requires the incorporation of **cultural and human factors** if it is to be truly patient-centric.

(A) EMBRACING NEW MODELS INCORPORATING ELEMENTS OF HUMAN BEHAVIOUR

Market share, market penetration, and brand awareness data were once the yardsticks of commercial and operational models. Now we need to take into account human behaviours, lifestyle elements, and real world care needs if we want to empower doctors and re-invent processes.

ENHANCING DOCTOR SERVICES WITH BEHAVIOURAL ELEMENTS:

Using AI to look for patterns in existing products that could be launched in future, aggregating patient data, pulling prescriber data to track treatment decisions - these are all happening now, but none of these things will tell you that a patient with depression is more worried about her fear of being ridiculed by bullies at her workplace than her actual anxiety attacks.

CASE STUDY



BUILDING OF THE LARGEST REAL-EVIDENCE PLATFORM FOR BEHAVIOURAL HEALTH

Holmusk is working at Johnson & Johnson^{xvi} labs in New York to build the largest real-world evidence platform for behavioural health. Through this platform, latest evidence from clinical trials and real-world evidence will be brought together, providing additional insights to the point of care.

Additionally, Holmusk is working on a digital therapeutic solution for **major depressive disorder**; a condition in which patients are often unable to articulate their condition. The solution harnesses AI to generate a psychological persona of the patient based on active and passive data, and to use that to predict their state and help enable human consultation.

BRINGING BEHAVIOURAL SCIENCE TO MARKETING AND OPERATION MODELS

Marketing and sales forces will deploy advanced analytics to better understand prescribing behaviour and potential patient profiles. The goal is more precise targeting of providers and increasing the number of prescriptions filed. From growth opportunity mapping to sales force empowerment it is critical to consider how we humans behave.

CASE STUDY 1



MSD AND THE GROWTH OPPORTUNITY MODEL

Healthcare providers need to look beyond traditional data sources when it comes to business modelling. In a world where outcome-based models are more important than ever, it becomes critical to consider additional human elements when designing commercial, business, drug efficiency models. For example, Ogilvy has worked with MSD to map key growth drivers across the APAC region taking into consideration specific cognitive bias which may highly impact the growth of their vaccine franchise and will vary from one market to another.



UNDERSTAND MARKET SPECIFICITY *e.g. distribution, government programs and others*

UNDERSTAND THE ACCESS *e.g. affordability, insurance access and others.*

COMPARISON WITH COMPETITION

INVESTIGATE DIFFERENT STAKEHOLDER BEHAVIOUR TYPES



Bias

CASE STUDY 2

FINDING UNDIAGNOSED PATIENTS TO PROVIDE SUPPORT FOR CAREGIVERS

"Patient finder" technology can use electronic medical records and claims data in order to identify sufferers of specific rare diseases, which might otherwise remain undiagnosed. This in turn enables pharmaceutical companies to focus on providing care solutions for the providers supporting these patients. HVH Precision Analytics, a US company used its data mining tool to identify patients suffering from hereditary angioedema, a rare disease featuring recurrent episodes of severe swelling. The technology was applied to the claims database, containing insurance data of more than 170 million. A three step process was applied, which resulted in 5000+ potentially undiagnosed patients with this disease being identified.¹

3-STEP IDENTIFICATION PROCESS OF PATIENT USING HVH PRECISION ANALYTICS SOLUTION

PATIENT DEFINITION

- Clinical/ natural histor
- Expert input
- Drug and diagnosi codes over time

MODEL CREATION

- Patient profile refined
- Machine learning
- Create disease mode

PREDICTION

- Apply disease model to the remaining population
- Identify the undiagnosed HAE patients



CASE STUDY 3

MOTIVATING AND NUDGING HEALTHCARE SALES TEAM



Worxogo, a Bengaluru head-quartered tech-startup uses neuroeconomics to drive employee work performance. The performance of the sales teams is integral to every organisation's success and Worxogo works on a **cognitive AI coach**. The AI coach analyses every performance of the sales person individually and uses nudges to modify behavior when intervention is needed. Such technology can potentially be applied to improve salesforce productivity and performance in the pharmaceutical space.^{xi}

CASE STUDY 4



ANALYSING BEHAVIOURAL CUES ALONG THE CONSUMER JOURNEY

To accompany the consumer's journey **Nestlé's** nutrition business interprets four types of data signals. The first is individual data that the consumer has given with permission. The second consists of behavioural signals that indicate what the consumer is doing at that stage. The third consists of contextual signals that indicate where and when the consumer is doing this. The fourth is the purchase signals that help them understand the stage of decision making. This helps them to orchestrate omni-channel journeys and experiences for consumers looking for support in managing weight, ageing and infant nutrition.

"

It is really integral for the patient to be at the heart of any solution that is designed. We need to truly understand the patient's pain points. This goes beyond the disease. One needs to take into account a patient's behaviour and motivation within the context of their environment. This combined with attention to UX & UI, will be fundamental if we want to drive adoption and make a positive impact on patient health.

DR. SUHINA CESENNI

Multi-Channel Engagement & Digital Innovation Lead, Asia-Pacific Sanofi-Aventis

(B) DEMOCRATISING DATA AND EMPOWERING STAKEHOLDERS

Data visualisation is about more than aesthetics; it's about making data meaningful to those with no background in data science – people who are more comfortable with people than spreadsheets. **Democratising** data, and this includes its visualisation, means any employee can and should benefit from advanced analytics, without having to be aware of the data analysis techniques involved. For instance, The National University Hospital system in Singapore has developed a data visualisation platform that helps monitor financial and quality performance across the board, helping teams to prioritise projects that improve healthcare outcomes while also lowering costs.^{xvii}

CASE STUDY



EMPOWERING THE PATIENT WITH THE RIGHT DATA CAPTURE

The BiovitalsHF[™] mobile platform monitors physiological data including heart and respiratory rate, based on various real-time FDA-cleared biosensors data, and combines it with AI and machine learning to build a personal biometric signature for the patient. This platform was **recently approved by the FDA**. It is dynamically updated and alerts caregivers to any changes in the patient's measured vital signs. That provides a precursor to events and gives the doctors time to take clinical steps in time to avert heart failure. It gives the physician time to act, and the patient a better understanding of their own condition. Effective data visualisation could give the patient a clear dashboard of how they're doing.^{xviii}



EMPOWERING EMPLOYEES WITH ACCESS TO DATA

Pfizer's cloud-based Virtual Analytics Workbench tool is enabling employees from diverse divisions to **collaborate** on finding undiagnosed patients of rare diseases. "While data science is a critical skill set in our company, you don't need a mathematician or data science expert to use it," says Jeff Keisling, Pfizer's chief information officer. With this platform, employees from different departments can share data across disparate data sets such as physician notes, lab reports and population demographics. The Al inbuilt in this platform will then analyse the insights from these different sources, enabling them to dig deeper into comorbidities where patients are affected by more than one disease concurrently?

When talking about becoming a data-driven organisation, leveraging data and AI to improve customer experience and internal process efficiency, most companies will focus on the tool. A study done by the leader in data visualisation shows that to achieve a successful implementation of data strategy relies 50% on the ability to develop a data culture, 30% on the implementation of process changes and only 20% on tech. As a first driver of change, it is paramount to democratise access to data to the overall organisation, raise awareness about the possibilities and benefits brought by AI as well as to upskill every employee with basic analytical skills. Mapping the changes in the task currently done by employees and bringing them towards their next role as an augmented employee should be the first focus of any company who wish to remain relevant in the years to come.

> **CELINE LE COTONNEC** Chief Data Officer AXA Insurance Singapore

(C) DATA PRIVACY; FRAMEWORKS AND THE HUMAN FACTOR

Building patient-centric care from data requires data privacy frameworks both to comply with international regulation and human expectations.

The arrival of wearables and their acceptance as part of illness prevention offers a fantastic source of data for doctors, and the combination of that data with AI and machine learning will create outcome solutions including pattern detection, and automatic treatment recommendation. As part of this the health industry will employ Electronic Medical Record data, Next Generation Sequencing analysis, and remote patient monitoring; all of which mean that governments will strengthen **compliance standards** for good warehousing practices including data warehousing.

Wearables in particular underline the degree of personalisation, even intimacy of available data, and make it important to distinguish data ownership from consent ownership, to reassure and re-empower patients in their health data ownership.

CONSENT IS THE NEW HOLY GRAIL

Patients need to own their decisions, sure in the knowledge that their privacy and data security is safeguarded and the nature of its eventual use is clear to them and agreed on. Digital consent platforms can help simplify complexity and personalise outcomes while dispelling fears about data sharing. That empowers the patient and helps caregivers retain the bond of **trust** when accessing high-value information.



Organisations like Hu-manity.co have specifically started to enable consumers to share personal information with companies using the model "consent as a service".

Hu-manity.co's privacy development kit will be launched in 2020 and will enable consumers to tag their data with personalised privacy choices with different partners.

CASE STUDY



GETTING PATIENT'S INFORMED CONSENT THROUGH A DIGITAL CONSENT SYSTEM

TrialConsent is a digital patient consent system being used for a trial in schizophrenia care by Shanghai Mental Health^{xx}, an affiliate of Shanghai Jia Tong University in partnership with Signant Health. Multimedia videos, knowledge quizzes, selfpaced content review and other patient-centric eConsent capabilities help people enrolling in the trial, as well as their families, to understand the expectations, risks and benefits.

DECENTRALISED MODELS AND SAFER SHARING

As data privacy is fundamental to health data, decentralised models leveraging **blockchain** ledger may be used to ensure **informed consent** of the patient and allow them to control access to their medical information and help foster data sharing through preservation of patient privacy.

Pseudonymisation of patient data, private or permissioned blockchain and recording sensitive data off-chain are solutions are all currently being considered.

Such technology could dramatically accelerate the use of health data across the R&D and Innovation process including therapy management and healthcare services optimisation. However, implementing the right legal framework is essential including allowing people to continuously review any decision made on any data sharing. The human factor means patients should not only have the right to change their minds but also retain the 'right to be forgotten'.

CASE STUDY 1



DATA MANAGEMENT IN CLINICAL TRIAL

Researchers at the **University of California** recently created a trial method for ensuring the integrity of clinical trial data using blockchain, whereby all data is recorded using a secure algorithm. Since blockchain records any changes in a tamper proof way this ensures verification of informed consent including all information about protocol and informed risks.^{xxi}

CASE STUDY 2



CENTRALISED DATA APPROACH FOR PERSONALISED TREATMENT

Even after 50 years of use levodopa is considered the most effective therapy for sufferers of Parkinson's disease but it is known that long term use leads to symptom fluctuations. Those aren't accounted for in the regimented approach to levodopa administration – treatment schedules are impersonal. So **Connected Life**, in conjunction with the National Neuroscience Institute of Singapore is conducting a

study using **wearable sensors** to monitor Parkinson episodes. Wearable sensors monitor individual patient movement and can detect bradykinesia, tremors, postural and gait problems. The data is confirmed with simultaneous video analysis and the findings are then centralised and interpreted by AI to calculate better dosage times and routines, provide warnings for caregivers and predicting future episodes as well as identifying those suitable for Deep Brain Stimulation surgery.^{xxii} Connected Life is partnering with **Ocean Protocol**, a decentralised data sharing technology provider which uses blockchain technology to store patients' consent and records of the origin of the data and associated services.

CASE STUDY 3

PARTNERSHIPS BETWEEN BLOCKCHAIN-POWERED PROVIDERS TO PROVIDE A SAFE ECOSYSTEM OF HEALTH AND WELLNESS PRODUCTS AND SERVICES FOR THE ELDERLY



HiNounou, one of the most recognised Chinese digital tech companies focussing on the elderly, is partnering with Walimai, a safe product retail channel. Walimai links digital assets with physical product through RFID labels. As the user scans the RFID label they will be informed if the product is genuine or not. The data is also fed into Walimai's blockchain, enabling it to keep track of any counterfeit issues. Through this partnership, participants of either service can use their loyalty tokens across both platforms - Nounou tokens from HiNounou and Wabi Tokens for Walimai. Cross-promotion of respective services on both platforms will happen as the elderly are also Walimai's key target demographic. This alliance helps to create a unique, safe and trusted environment as both providers use blockchain-powered data platforms that help secure customer data and limit fraudulent activity.^{xxiii}

KEY TAKE OUTS

MAKING DATA HUMAN

- Al and machine learning have enormous potential for interpretation in pharma R&D. The real promise lies in its use to drive growth in commercial models with the combination of human elements into data analysis.
- Advanced analytics and predictive modelling combined with behaviour science will contribute to generate outcome-based models having both an impact on the patient outcome and the business
- Nudge behaviour and predictive behaviour models can also help carers and sales staff handle their interactions with customers and patients better.
- Democratising data accessibility should be at the heart of any healthcare digital transformation in order to empower any stakeholder of the healthcare ecosystem with the power of health. This starts with new data visualisation platforms and requires a huge culture change agenda.
- New data governance frameworks and privacy models are required to manage health data consents. Decentralised models allowed with the blockchain can contribute to safeguarding data privacy, data sharing and consent management by leveraging the reliability and traceability of the pre-given consent.

WINNING STRATEGY 3

EMBRACING THE RETAILISATION AND CONSUMERISATION OF HEALTH



Go-Jek/Halodoc



The old model of hospitals as stand-alone facilities that provide all services to all people is disappearing rapidly. With the patient becoming more active and discerning around their own health, **customer experience** has become a key differentiator for disruptive providers such as Tencent, Go-Jek/Halodoc and Doc-Doc. These new entrants to healthcare are accelerating the availability, retailisation and delivery of care to patients.

Offering medical services on the WeChat messaging platform has put Tencent directly in contact with Chinese patients when it comes to new healthcare services and medical education^{xxiv}. In Indonesia, the link up of Halodoc and Go-Jek with pharmacy inventory systems is giving patients previously unheard-of speed of access to medication. Doc Doc is using a powerful AI model to match the unique patient need with the unique doctor needed by that patient.

Tencent

These disruptors have made the patient care journey easier by **identifying and simplifying critical touch points** in the process.

The growth of **cloud-based technologies** together with better connectivity has also enabled companies to disrupt the retailisation and consumerisation experience of patients, giving them additional access to healthcare services. HearX's hearScope^{xxv} puts a digital otoscope on a smartphone and can diagnose multiple common ear infections. In rural China patients who previously had a long journey to even reach a doctor can now use Jiangsu GAREA's Multifunction Healthcare Device^{xxvi} which integrates 65 detection indicators for daily examinations including electrophysiology, blood biochemistry, urine routine, and ultrasound.

Taking their inspiration from retailers and consumer goods companies, healthcare providers will need to consider using extended **omni-channel strategies** to reach out to patients. New virtual care technologies providing 24/7 ubiquity need to be deployed to enhance contact and consolidate the patient's role as an active and empowered consumer.





(A) VIRTUAL CARE TO IMPROVE THE EXPERIENCE FOR PATIENTS AND HCP ALIKE

Anytime, anywhere care is now possible thanks to **virtual care technologies**. Virtual care technologies includes augmented technology within the clinic as well as remote technologies that support patient diagnosis and treatment.

Virtual care means patients can be pro-active in the management of their disease which involves a critical behavioural shift to achieve successful healthcare outcomes. **Augmented technology** gives patients a clearer understanding of their condition and physiological changes which in turn helps doctors to have more meaningful conversations with them and work together on diagnosis and care management plans. Remote technologies offer faster diagnosis and greater access to specialists than previously possible especially in rural areas or countries with limited access to HCPs.

CASE STUDY

USING REMOTE COACHING TO MANAGE CHRONIC CONDITIONS

Noom, a nutrition and chronic condition care start-up, started by Koean Saeju Jeong is changing the way people tackle obesity and diet issues by encouraging **behavioural changes** with the support by a remote personal coach. Noom Weight Loss program helps pair users with two remote personal health coaches who give guidance based on behavioural and lifestyle preferences. The coach will guide the patient's weight loss journey by setting achievable weekly goals and make the patient accountable to achieve them through regular tracking and motivation. Noom uses Al to provide customised experiences for its users and has completed a successful eight-month pilot partnership with Novo Nordisk.^{xxvii}



REMOTE CARE, WELLBEING, AND INSURANCE



Prudential has joined forces with MyDoc to across 11 markets in APAC to see if **preventative well-being** solutions for policyholders can reduce patients' hospital admissions and claims. The offering includes remote wellness tracking, online consultations, symptom checking and disease education.^{xxviii}

CASE STUDY 1



RE-INVENTING DIAGNOSTICS AND CONSULTATION WITH AR

Ogilvy in Brazil has worked on a vaccine project to help reduce the fear of injections among children. Many children start feeling scared from the moment they walk into the doctor's room as they are not sure what is going to happen to them. The experiences faced by the parent and physician can be frustrating and disturbing as they hold the child down for an injection. Ogilvy worked on a **virtual reality system** that makes the injection experience completely novel to the point that the children do not realise that they have been injected during their virtual immersion. <u>https://www.youtube.com watch?v=9CPVOt7QjcM</u>

CASE STUDY 2



USING AUGMENTED REALITY IN DISEASE MANAGEMENT TOOLS

Mundipharma's breatherite[™] is a personalised asthma management tool to help correct a patient's inhaler technique. The app engages the front-facing camera for facial mapping, the different sensors to help track inhaler preparation, the microphone to analyse inhalation and exhalation, along with augmented reality to visualise correct inhaler orientation and head alignment. It also enables patients to set medication reminders, receive lifestyle tips, real-time weather and air quality information. Sharing that information with the doctors helps build better communication and trust.^{xxix}

(B) UBIQUITY AND 24/7 AVAILABILITY TO IMPROVE HCP-PATIENT AND PHARMA-HCP INTERACTIONS

In many parts of Asia seeing a doctor involves considerable outlay of time and money for patients. Regular appointments or follow-ups are consequently challenging and likely to be missed. Doctors find that high volumes of patients for diagnosis, treatment and management mean insufficient face-time with individuals.

This is why **chatbots**, with their **ease of access** and **24/7 availability** can help bridge the access gap. Sophisticated analysis of chatbots can allow pharma to identify and bridge gaps in education and monitoring as well as develop better tactics and solutions for timely intervention.

LEVERAGING NEW CONVERSATIONAL TOOLS IN PHARMA

Conversation Health^{xiivi}, a Canadian company has built a SaaS platform that uses Natural Language processing and a machine learning model to develop chatbots for pharmaceutical companies to communicate with different stakeholders in the healthcare space.

COMMERCIAL DISCUSSIONS WITH HEALTHCARE PROFESSIONALS	MEDICAL DISCUSSIONS HEALTHCARE PROFESSIONALS	PATIENT EDUCATION DISCUSSIONS	CLINICAL TRIAL CONVERSATIONS WITH INVESTIGATORS AND PARTICIPANTS
Text, voice, web- based information sent to HCPs	Full clinical support provided 24/7	Empathetic messages touching patients at different points of care journey	Supports subject eligibility testing and center recruitment, providing essential information to participants and investigators





HOSPITAL CHATBOT SERVICE

Singapore's Mount Elizabeth Hospital operates PAM^{xxx}, a chatbot that is taking care of basic front desk services to provide immediate support for those who need help. PAM understands keywords like "stomach pain" and makes appointments with the appropriate specialist. Chatbots like PAM can help with triage, facilitate appointments for treatments or screenings and send patient reminders. Singapore's Integrated Health Information Systems (IHiS) has officially accredited health chatbots for use in the system.

(C) ENHANCING OMNI-CHANNEL STRATEGIES TO BETTER ENGAGE PATIENTS ALONG THEIR CARE JOURNEY

Healthcare organisations can consider various **multi-partnership collaborations** that are leveraging patient online access and awareness and wellness movement interest to support different parts of their care journey, from education awareness, preventative health monitoring to disease management.

Social media penetration is extremely high, ranging between 60 to 80%^{xxxi} across different parts of Asia. With the ubiquity of social media, it becomes a very accessible and low cost channel solution for patients to receive information. But, social media can also be a double edged sword with the prevalence of fake news in the domain.

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The fact that everyone is online and connected on social media in this region works both in our favour and against us as the anti-vaccination lobby uses the same techniques and bots to move against vaccination. So what we struggle with is decluttering information to make sure the majority of messaging online and on social is balanced. We are seeing social media giants taking a stand against fake news and especially fake information around healthcare as this can be very harmful to people, but it remains something we still need to overcome.



YVES VANTHILLO

Regional Commercial Director Vaccines, Asia-Pacific at Merck Sharp & Dohme



Recently, fake news campaigns have emerged on platforms like WhatsApp and YouTube where anti-vaccine misinformation posts are shared. "Don't use vaccinations, Save the lives of your children" was a forwarded WhatsApp message in two regional languages in India. Such messages have caused schools in Mumbai to stop health officials from carrying out vaccinations.

To address this, BBC is partnering with tech companies such as Google, Twitter and Facebook to fight such disinformation^{xxxx}.

By engaging with different marketplace disruptors, healthcare organisations can find previously unidentified sweet spots in the patient care journey to maximise awareness of pre and post disease management.

ENGAGING WITH INFLUENCERS TO EDUCATE CONSUMERS

In India the influence and awareness of Bollywood celebrities is massive. Mankind Pharma, an Indian pharmaceutical company presented Amitabh Bachchan, actor and politician, as its brand ambassador in campaigns discussing health management^{xxxii}. Another well-received campaign on mental illness featured Deepika Padukone, the highest-paid actress in the country, sharing her personal struggles with depression.^{xxxiii}



In Indonesia the death of well-loved dangdut singer, model, and actress Julia Perez ('Jupe') put the spotlight on HPV vaccine and cervical cancer. Following her death, other celebrities such as Deddy Corbuzier encouraged Indonesian women to go for HPV vaccination. Doctors from the Indonesian gynaecological association started an online discussion about the need for more Indonesian women to go for HPV vaccination.

NEW PLATFORMS AND PARTNERSHIPS TO SIMPLIFY THE PATIENT'S JOURNEY

Marketplace disruptors are finding new opportunities to collaborate and offer better options for patients. Singapore digital healthcare provider WhiteCoat enables an e-consultation with a GP. Following the diagnosis and prescription, patients would be sent their medication through GrabExpress within 90 minutes. This saves time, but also reduces stress and offers a sense of reassurance.^{xxxiv}







LEVERAGING THE WELLNESS MOVEMENT FOR PREVENTATIVE HEALTH SOLUTIONS

Riding the wellness trend, disruptors like Smartfuture are taking wellness into the workspace. Mobile kiosks at workplaces across APAC will help patients in awareness and management of their health condition throughout the day.^{xxxv}

Retailisation and consumerisation strategies enhance the patient care journey and enable healthcare providers to connect more closely with patients. However to consolidate the gains from these collaborations in Asia the affordability issue has to be addressed.

KEY TAKE OUTS

RETAILISATION AND CONSUMERISATION

New platforms have moved the point of care out of the clinic and into the workplace, the home, and even the pocket with dramatic implications for communication between carers and patients, as well as the empowerment of the patient.

- Virtual consultations, life coaching, and nudge behaviour can put patients in touch with needed care at appropriate moments in their care journey.
- This has time as well as infrastructure implications since patients can be reached much earlier in the progression of an illness rather than seeing care as a last resort. Proactive wellness, coaching, and nudge behaviour platforms will help create more positive outcomes and reduce both sufferer numbers and costs.
- Augmented reality platforms enable treatment to be motivating and informative for patients and caregivers. Also enables non-sufferers to better understand what the patient is going through.
- As services are available 24/7, consultation and treatments happen as per patient convenience.
- Borrowing from retail tactics, healthcare can benefit from endorsers and influencers in the community to spread their message, and counter misleading or ill-informed messaging.

WINNING STRATEGY 4 TACKLING THE AFFORDABILITY CHALLENGE

The lack of insurance coverage is a major challenge in APAC that plays a huge part in the healthcare protection gap. Public reimbursement can subsidise some treatments (c.f. the Medication Assistance Fund in Singapore) but they don't do enough to reduce the **financial burden** for new therapies. Pharma companies have already tried to bridge this gap through discounted and volume-based **Patient Access Programs**.

The shared contribution model or PAP is the most common program in the Asia-Pacific region, while several disease-specific or outcome-based insurance and financing programs are emerging in the market. Combined with digital platforms these models will usher in new levels of affordability and convenience.



(A) REIMAGINING THE INSURANCE MODEL WITH OUTCOMES-BASED APPROACHES

Retailisation brings an expectation of lowered costs and this may be partly achieved as a natural follow on from the other trends discussed here. The democratisation of information and increased amount of connected data can reduce development cycles in conjunction with AI. Through better understanding of the disease and the therapy plan, insurers can develop new prediction models to evaluate success rates and price their products accordingly.

CASE STUDY 1

TARGETED HEPATITIS C INSURANCE PROGRAM

In China Shanghai Pharma and Huatai Insurance combined to create the Meixin Plan. Asunaprevir/Daclatasvir therapy has a 95% success rate among hepatitis C patients with a certain genotype, so eligible patients were insured for low rates but required to upload test results monthly to ensure compliance. If the outcome was not favorable Huatai compensates. If patients drop out of the treatment cycle they forfeit the right to claim.^{xxxvi}

CASE STUDY 2



PAY FOR PERFORMANCE INSURANCE PROGRAM

Pfizer has launched a **pay for performance** program for its breast cancer drug, Ibrance, together with People's Insurance Company of China, and MediTrust, a Shanghai financing company. Under the program, called Bo'ai' Xin'an, Pfizer will reimburse 33.5% of the costs if an enrolled patient's disease progresses within 4 months.^{xxxvii}

(B) BRINGING BETTER HEALTHCARE TO PATIENTS THROUGH PARTNERSHIPS

Working together with partners in the region, pharma companies have been able to break new ground in creating better access to new therapies.

CASE STUDY 1



COLLABORATING WITH NGOs TO EMPOWER THE POOREST

Bristol-Myers-Squibb recently announced an extension to their partnership with Max Foundation to support 45 per cent more patients in low-income countries using Sprycel to treat chronic myelogenous leukemia.^{xxxviii}

CASE STUDY 2

JOINT PARTNERSHIPS TO DEVELOP DIGITAL PAPS

Bayer has worked with Zuellig Pharma in Malaysia to create a web-based patient assistance program for liver cancer treatment. Under this programme, patients earning less than RM150,000 per annum and citizens of Malaysia who are being treated with sorafenib or regorafenib, are qualified for assistance. Through this platform, patients will also get reminders about taking their medication and track their upcoming doctor appointments and medical records.^{xxxxx}



COMING TOGETHER TO LOWER THE COST OF DISEASE MANAGEMENT

For patients with chronic diseases that have high comorbidity and require significant spending beyond medication, the total cost of payment can be exorbitant. For example, Type 2 diabetes patients require not only medication for treating diabetes and its comorbidities but also a special diet and regular clinical diagnostic tests. Partnerships between drug manufacturers, insurers, medical facilities and other players including nutritionists and gyms could help lower the total cost of care as well as supporting changes in a patient's lifestyle to minimise additional treatment costs.

CASE STUDY



PARTNERSHIP WITH MED-TECH TO LOWER BLOOD GLUCOSE MONITORING COSTS

Indian pharmaceutical company **Eris Lifesciences** announced a partnership with Medtronic. Eris will provide Medtronic's latest Guardian-connect device, a smart continuous glucose monitoring, at its target clinics. Patients will get real time glucose level data to their smartphones plus predictions of high and low blood glucose levels, based on their glucose trends and user behaviours.^{xl}

INSURANCE PARTNERSHIPS ACROSS NEW PLATFORMS

Partners will also play an essential role in redefining standards of service in the insurance category and deliver better protection to the un-served

CASE STUDY



AXA – PAYER TO PARTNER SERVICES

Realising that healthcare journeys taken by its policyholders are complicated, **AXA** is planning to ease this by launching their own medical centres, linked to their insurance services. Through this package offer, patients will have easier access to speciality consultations and diagnostics services, enabling more convenient and increased access. This initiative augments AXA's position to become an end to end solution provider for patients.^{xii}

(C) REDUCING THE COST OF TREATMENT FOR PATIENTS THROUGH CROWDFUNDING



In India, crowd-funding platforms like Milaap are used by friends and family to support critical care treatments such as late stage cancer and emergency treatments. More than 20,000 patients have benefited through the crowd-funding initiative since setting up.

Crowd-funding solves two issues simultaneously – hospitals get immediate access to cash on acceptance of crowd funding proposals, which helps cash flow and will typically accept crowd-funded projects even if only partially funded, helping to drive down the cost of treatment.^{xlii}

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Based on our analysis, less than 5% of the hospitals reject the crowd-funding amount even if it does not cover the full costs. The insurance reimbursement system in India is long and complicated and hospitals are looking at ways to get access to immediate cash. As we work with the same hospitals over time, economies of scale work and hospitals become more accustomed to our crowd-funding model.

> **ANOJ VISWANATHAN** Founder of Milaap

(D) STAGGERED PAYMENTS AND LOAN SOLUTIONS

Offering new financial solutions is key to improving take-up in a region with a burgeoning middle class.

When an HPV vaccine costs as much as a Samsung 9 and the cost of an oncology lung cancer treatment could represent up to 30 times the price of your house, competition for healthcare services and therapies are high.

With a growing and increasingly prosperous middle class that is still not able to fully pay for healthcare the answer may lie with new models to increase the duration of payment and leverage credit-related financial solutions. By working with financial institutions, healthcare providers would be able to break the cost down into smaller instalments. This may be applied to high-cost non-chronic therapies or vaccines, as well as for inpatient services, even spreading payments beyond the duration of the therapy.

CASE STUDY



PARTNERSHIPS BETWEEN BANKS AND HEALTHCARE PROVIDERS FOR DISCOUNTS AND INSTALLMENT PROGRAMS

There is increasing **collaboration between credit cards/banks and healthcare institutions**. Apollo Hospitals, the leading chain of integrated healthcare service providers in India has partnered with State Bank of India to launch the Apollo SBI credit card ^{xiivii}. This credit card is targeted for the user and the family. Through this card, users will get access to a complimentary OneApollo membership, enabling them to enjoy 10% discounts for health check-ups, diagnostics services and pharmaceutical products.

In Thailand, Bangkok Bank has partnered with Siriraj Hospital for its healthcare-focused credit card, called Visa Platinum Rabbit card xiviii. With this credit card patients can get different discounts for procedures at Siriraj Applied Thai Traditional Medicine as well as spreading their payments through the "Be Smart" instalment program. Through this instalment program, patients can pay back their expenses at interest rates between 0 to 0.79% over a period of up to 10 months.

FINANCING NEW THERAPY THROUGH DEVELOPMENT IMPACT BONDS

A development impact bond was developed by Kois Invest in collaboration with Roche and Tata Memorial Hospital to help provide access in India. Through this bond the per patient cost of treatment is reduced and covered for the patient either by payments or through insurance. The bond enables each **social investor** to fund between five and six hospitals, helping to contribute to the success of HER2+ breast cancer treatment at these hospitals by at least 70%.^{xiix}



MULTI PARTNER COALITION TO PROVIDE FINANCIAL SOLUTION AND ACCESS OF NEW HEALTHCARE SOLUTIONS AND SERVICES

Being able to afford high-cost vaccines in Indonesia is a challenge for women from the emerging middle class. In Indonesia, a coalition consisting of a pharmaceutical company, Halodoc, a tele-consultation provider, and Blibli, an e-commerce player came together to offer a credit solution via the GoJek platform and tele-consultation from Halo Doc. In doing so, the coalition simplifies access to healthcare providers and doctors and addresses the huge **affordability challenge** for young Indonesians.



CREDIT CARD PARTNERSHIP BETWEEN DIGITAL HEALTH TECH FIRM AND BANK

Digital health tech firm Practo has partnered with RBL Bank in India to provide the first ever healthcare focussed credit card. This card, powered by Mastercard, will enable consumers to get subsidies for healthcare services on the Practo platform, including unlimited consultations with doctors, 24/7 chat services and free health check-up for the user. When using the card for transactions the customer racks up 'Healthcash' rewards that can be converted into healthcare services.^{xiii}

KEY TAKE OUTS

THE POINT OF PAYMENT – TACKLING THE AFFORDABILITY CHALLENGE

As universal healthcare and insurance get stretched with ageing populations and exploding NCD growth, exorbitant out-of-pocket treatment costs in Asia can tip patients over the poverty line and many patients do not consider treatments that could benefit them.

- Financial partnerships mean pharmaceutical companies can offer staggered payments and new loan schemes through 3rd parties.
- The growth of disease-specific insurance is a starting point for how insurers need to consider more flexible solutions for therapy access.
- Outcomes based insurance helps manage the financial risk and increase the likelihood of favourable outcomes for patients.
- Partnerships with NGOs and multi-party collaboration will lead to broader solutions
- Credit as a service is introduced via new platforms that reach previously unsupported patients.
- Looking beyond credit cards, healthcare providers need to work alongside new players such as Grab or some telecommunication companies that are leading the local e-money agenda. These must satisfy patient needs for end to end integrated experiences including both the healthcare and financial support.

WINNING STRATEGY 5 NEW TALENTS – THE INDIVIDUALS AND PARTNERSHIPS REQUIRED TO ENABLE AND MANAGE THIS EVOLUTION

As patient centricity becomes vital to healthcare organisations, the need to appoint talent **outside of the traditional space** is as important as developing the internal existing talent. With digital channels and connectivity increasing daily in the healthcare sector, incorporating talent with an advanced understanding of connected consumer experiences is now central to the success of all healthcare organisation strategies.

Within retail and consumer sectors the **automation of customer experiences** via (for example) omni-channel marketing has been a standard engagement model for several years with regional strategy being complemented by localised in-country execution which allows for variances in customer trends and fulfilment models.

The B2B2C marketing approach has penetrated the healthcare industries, where the new reality is that they need to brand themselves on both levels, with B2B branding addressing both the expert and consumer markets.

The retail and consumer industries have been early adopters of e-Commerce and digital strategies leading to a wealth of talent within the customer and user experience.

The emergence of e-Commerce platforms such as Lazada have led to closer B2B2C channels with data and analytics at their centre which gives organisations a clearer line of sight to the consumer. This tightening of the channel has led to the emergence of talent profiles where the lines between marketing and technology have become blurred. Integrating traditional internal functions such as IT and marketing with emerging partners within JVs are seeing positive results.

The leaders within emerging digital businesses are those skilled at communicating a vision of the future so as to harmonise innovative potential across the whole organisation and the wider connected market. Digital strategy is not an internal infrastructure-led approach but an **E2E transformation** incorporating all areas of the healthcare ecosystem. A continuing learning approach and innovative mindset are critical. Today's organisations need to acquire, retain, and develop the right kind of talent.

Technology and internet corporations along with pharmaceutical, financial services and device manufacturers have been **developing E2E digital platforms** outside of traditional structures which address the consumerisation of patient care and attract talent by offering challenging and innovative problems to solve within **flexible collaborative environments**.

These approaches have been incorporated through a variety of structures and methods, for example within the Chinese internet companies. Tencent have developed WeChat Intelligent Healthcare which included the design and connecting of a platform which allows patients to connect to over 38,000 medical facilities in China and **incorporates payments and online consultation/support**. Ping An's health ecosystem reportedly has over 265 million healthcare portal users, 3000 participating hospitals and over 500 technology providers. These ecosystems require advanced data engineering and analytics functions with the necessary B2B experience to develop connected infrastructure across numerous businesses and groups. Telenor Healthcare is using the same platform and approach in Bangladesh.

At the centre of all this is **advanced data analytics** and **machine learning** solutions.

The leading e-Commerce platforms such as Alibaba in Greater China and Lazada in South East Asia are developing big data and analytics services which are in turn driving organisational requirements for talent. That talent needs the advanced analytics capabilities that can devise and implement strategy based on data-supported reasoning. Many leading consumer organisations now view becoming pure digital organisations as a functional reality within five years. With that the talent that originally started by developing the front-end customer experience is seen as being its future leadership. With the exponential growth of data comes the requirement for organisations to be capable of assimilating and processing it (often in real-time) to be able to make informed decisions on strategy in areas such as patient care.

Whereas the Chief Digital Officer is often seen as the creator of the customer experience the Chief Data Officer is now pivotal to the scalability of organisations' data infrastructure and to the development of strategy in critical areas such as patient confidentiality. Regulatory requirements of healthcare providers differ across the region and must be incorporated in data policy across the provider and its connected ecosystem.

As **blockchain technology and AI** start to become increasingly applicable to areas within the healthcare supply chain, and the connectivity between provider and ecosystem becomes greater, the requirement for talent in the advanced data and analytics space will also increase. With that comes the need for **mobility of talent** from both inside and outside of Asia. Markets such as financial services which have been at the forefront of payment models across e-Commerce will become talent pools for payers within the connected healthcare space. This means the need to position the provider as an employer of choice in an ever-competitive sector will become greater.

Digital is opening new frontiers; the medical business needs a strong appreciation of the impact of digital technology, and technology workers need a strong appreciation of the medical elements of the business in patient care.

By embracing the power of big data and digital, **Medical Affairs**^{xiv} can jump from a state of constant evolution to a transformation in which highly credible scientific data, digital tools, and experiential learning all improve the engagement between the healthcare industry and HCPs. This requires professionals who are **proactive innovators** able to identify abstract correlations and causal connections that can propel the business forward ahead of the competition (as opposed to reactive innovators who are primarily just reacting to buzz).

The new medical landscape will depend on people with diverse backgrounds: for instance, digital design leaders, data scientists and experts in communications and engagement, however the core element of being a qualified medical doctor is still important. Medical Affairs leaders will also need to **strengthen foundational skillsets** such as focus on quality, and leadership skills, as well as competences including strategic thinking, emotional intelligence, and communications skills. Given the limited talent in this space, leaders need to follow a three-pronged approach: proactive hiring of this type of talent; rotating existing talent geographically; and finally building structural training modules that have the above capabilities. One such example might be an internal and mandatory "Medical Affairs Academy" with adult-learning courses in (online) design, coding, customer insights generation, data science/analytics, and RWE.

KEY TAKE OUTS

NEW TALENTS

- Developing successful patient-centric approaches demands key talents from outside the traditional healthcare skill pool.
- The emergence of ever closer B2B2C channels gives organisations both a better line of sight to the customer blurring the lines between marketing and technology, and the talents required for the task.
- As organisations become digital the talent originally hired to develop the front-end customer experience is now seen as being its future leadership.
- The Chief Data Officer is now pivotal to the scalability of organisations' data infrastructure and to the development of strategy in critical areas such as patient confidentiality.
- The need for talent in the advanced data and analytics space is growing and will lead to competition bringing mobility of talent from both inside and outside of Asia. Markets such as financial services which have been at the forefront of payment models across e-Commerce will become talent pools for payers within the connected healthcare space.
- As much as medical qualifications remain important the future medical landscape will be staffed by a diverse group of digital design leaders, data scientists and experts in communications and engagement.

CONCLUSION

WHAT COMES NEXT?

With no sign that the pace of technological development is slowing we can imagine fantastic future progress in the Digital Therapeutics (DTx) and biohacking space. Evidence-based therapeutic interventions like smart pills, backed by better use of data and cognitive computing will prevent, manage, or treat medical disorders with success that was un-hoped for only a generation ago. Doctors and healthcare providers will be more empowered; a process that will help feedback to healthcare research and development.

Delivery systems and the way customers/patients interact with them will become dramatically more convenient.

Reimbursement models will naturally change, and the entire healthcare value chain will rely more than ever on the patient's economy and data which will continue to produce disruptive business models.

Data accessibility, continuous therapy and adherence control as well the rise of financial inclusion solutions, will foster new affordability models.

In this context, it is crucial to continue fine-tuning existing customer/patient experience strategies in order to fulfil the patient needs. This could be done through regular checks of the patient/consumer journey to understand what has changed, improved, or worsened from the patient's perspective. By gathering data internally with employees as well as externally with customers and stakeholders, companies will be able to pull together insights that will help prioritise patient pain points and address them in a more agile manner. That way the gaps on the journey can be continuously addressed and bridged.

This transformation is dependent on the continuing move toward outcome-based models and strategies. Such a change can only happen if healthcare providers put the patient at the centre of any transformation, if they embrace new agile and collective working process, attract new talents from outside, and design new decision-making processes and related systems based on patient outcomes.

APPENDIX

- ⁱ Global Wellness Summit https://www.globalwellnesssummit.com/2019-global-wellness-trends/china uncovering-wealth-in-wellness/
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