

# The future of healthcare is here now



Healthcare's new technological frontiers may be closer than thought, with online medical diagnosis; possible use of genetic data for underwriting; and social robots as companions for the young and elderly, said *Asia Insurance Review's* 12th Asia Conference on Healthcare and Health Insurance.

By Ann Toh



Imagine this: You have a cough and visit your regular clinic for treatment. There, a nurse practitioner asks you to fill up a form online. As you do so, an artificial intelligence system assesses your input data in real time, asking you additional questions to plug any information gaps and ascertain correlations. Analysing your data, it generates a diagnosis for your cough and submits it to a remote physician. The physician reviews the diagnosis and either signs off on it or overrides it. He may prompt the nurse practitioner to probe you further to confirm his diagnosis.

Sounds futuristic? This is already possible today, thanks to AkēLex, an online medical diagnosis firm based in the US. The AI company's solution and a host of others from the US and Australia were cited by Dr Milind Sabinis, Director, Healthcare Practice, Asia Pacific, Frost & Sullivan, to illustrate to insurers that the future of healthcare innovation is already here, and it is up to them to figure out who their partners in the new era of open innovation are, and how they can work with the plethora of digital health platform providers and technology companies (see Figure 1).

Mr Danny Yeung, CEO of Prenetics, which



Mr Danny Yeung

## Highlights

- Insurers should waste no time in applying digital health innovations already making waves in the US to their own consumer segments in Asia;
- To contain healthcare inflation, insurers must re-focus their health insurance products from treatment to prevention; and
- The right value exchange will encourage consumers to share data with insurers.

provides genetic testing, said that over time, the cost of genetic sequencing has dropped dramatically, which brings the prospect of insurers using genetic data to influence underwriting not too far away.

"I believe we can potentially use genetic data to influence underwriting on a cohort level...for instance, we can identify 50,000 people within a specific population, use data from that 50,000 people to more accurately underwrite for the next 50,000 people. Certainly that's going to take time and a lot of effort but it's definitely going to come our way as we are already having discussions with top insurance companies," he said.

The cost of genetic sequencing has dropped dramatically from US\$100 million in 2000 to under \$1,000 today, and

**Figure 1: Emerging business models in retail healthcare**

Business Models	Major Services/Solutions	Examples of Selected Companies in Healthcare Space
On-Demand Health	Doctors (in-house visits/Telemedicine), at home pathology service, Medicine delivery, Medical Transport, etc.	Iggbo, Medicast, Teladoc, Stat, Your.MD, Qliance, zipdrug, Postmeds, heal, Doctor On Demand
Healthcare Marketplace	Online Health Communities and Sites, Online Health Markets	Health Gorilla™, ZocDoc, Homehero, Medigo, HomeTouch, Doctolib, HealthUnlocked
e-Commerce/m-Commerce	Web portals and mobile apps enabling healthcare shopping online for anywhere	Practo, WebToMed, PillPacks, HealthKart, Amazon.com
Servicisation Models	Product-as-a-Service, Data-as-a-Service, Platform-as-a-Service, Managed services	physiQ, Medtronic Hospital Solutions, Specialist On Call Inc., uMotif
Product/Process Digitisation	Digital Medical Devices, Wearables, Biosensors, Clinical Workflow, Digital Therapeutics	Augmedix, Syncera, Philips Lumify, omada, Hocomo AG's, Valedo
Peer Sharing and Crowdsourcing	Doctors Network, Patient Network, Open Source, Open Innovation, Crowdfunding	TrialReach, patientslikeme, Game for Health Europe, HelpAround, ClinCapture, BioMed Central, BioDatomics (open-source platform)
Shared Economy	Collaborative Buying (GPOs), Collaborative consumption, Shared models	Cohealo, MedAssets, Amerinet

Source: Frost &amp; Sullivan

Mr Yeung predicted that in the next three to five years, many of Prenetics' tests can be done for \$100, from \$200-\$300 now, presenting a "massive opportunity" for insurers.

### Social robots

In a panel discussion on the roles of different healthcare ecosystem players in ensuring affordability, accessibility and sustainability, the audience learned of a new ecosystem player that might radically change the face of healthcare services – social robots – again another reminder that change might be here faster than we think.

Nadine, a social robot created by Prof Nadia Thalmann, Director of the Institute of Media Innovation, Nanyang Technological University, is a doppelganger of Prof Thalmann, with a unique personality and memory that remembers conversations and people she has met.



Prof Nadia Thalmann

Prof Thalmann said: "Nadine and such social robots are powered by intelligent software similar to Apple's Siri or Microsoft's Cortana, and can be used as social companions for the young and elderly as countries worldwide face challenges of an ageing population and shrinking workforce."

### A glass half-full

For health insurers to rise up to the challenge of becoming interconnected insurers, consumers need to be willing to divulge health data and share their health information with insurance companies.

But only 49% of consumers are willing to share health data with insurers, said Mr Tony Estrella, Managing Partner and Head of Health Innovation, MetLife Innovation Centre, LumenLab, citing a Deloitte study conducted in 2015.



Mr Tony Estrella

However, Mr Estrella saw the 49% as a glass half-full rather than half-empty. "A value exchange has to take place in the digital world before your consumers are willing to share data with you, and you have to ask yourself what that value exchange is," he said. He cited San Francisco-based Omada Health's digital diabetes management programme as providing the right value exchange for health data sharing.

Mr Damian Delaney, Chief Commercial Officer, Now Health International Group, believed millennials are more willing to give away data in exchange for simple incentivisation, such as gaining



Mr Damian Delaney

a FitBit.

"They also wish to see the benefits of sharing their data with the insurer. This could be by way of seeing the data tracked, monitored and used over time to devise products and services and insurance premiums. Our challenge is to get the glass fuller than the half there is at the moment," he said

### What data can do

On what these data can do, Mr Estrella said: "The data can help you answer questions you can define about your business, increase the complexity of the questions you can ask about your business, and finally, predict the questions you should be asking about your business."

Meanwhile, Mr Philipp Kristian Diekhöner, SEA Innovation Partner, Die Denkfabrik, warned insurers that if the complexity of their product offerings and customer interface do not start to change, they may be displaced by InsurTech companies.



Mr Philipp Kristian Diekhöner

The 12th Asia Conference on Healthcare and Health Insurance was held in Singapore at the end of March, with a theme "Strategic, Defensive & Inclusive Health Covers from Cradle to Grave". About 120 participants attended the event.▲

## Reining in healthcare inflation

*In a panel discussion on best practices for containing healthcare costs, especially for an ageing population, panellists stressed the need for insurers to devise products that incentivise an ageing population to seek treatment earlier and that keep them out of hospitals.*

“Ninety percent of insurance spend today focuses on treatment, and 10% on diagnostics and prevention. It should be 90% on diagnostics and prevention, and 10% on treatment. If you wait to treat an old person by the time he or she is sick, it’s too late,” Dr Ramesh Rajentheran, Group CFO, Fullerton Health, reminded insurers.



Dr Ramesh Rajentheran

In 2016, the average cost per head to treat an elderly person was US\$9,000. In 2030, for the same condition, the cost will quadruple to \$37,000, he said. Across its six managed-care populations across Asia, the Group sees a 10%-20% annual rate of healthcare cost inflation.

Reining in healthcare costs will also entail cutting wastes, such as fraudulent prescriptions. “One in five prescriptions is fraudulent. Fraud takes many forms, such as prescribing three anti-biotics when the patient needs only two,” said Dr Rajentheran. Enforcing and restricting choice will also keep a lid on inflation by lowering long-term drug costs and keeping patients out of hospitals.

Historically, healthcare costs were measured by how much insurers paid out. But Ms Kitty Ching, EVP, Cathay Financial Holdings, said that the total disease burden for patients has to take into account metrics such as opportunity and social costs incurred by children having to stay home to look after aged parents in Asia.



Ms Kitty Ching

### Cost control – we are getting there

Dr Rajentheran sees cost control as a possible scenario in 10 to 20 years’ time. He advised insurers to use data science and predictive analytics to eliminate waste and fraud, to predict claims experience and better price risk, and even in identifying and executing work flows around risk management, such as identifying and matching the right physicians with patients.

Panel moderator Dr Ogan Gurel, Founder & CEO, NovumWaves, said wearables and IoT can play an important role in medical cost containment. “Most medical diagnosis is made through low-tech means – such as doctors talking to their patients to find out their medical histories. If we could have wearables and IoT capture that data – not



Dr Ogan Gurel

just medical history but genetics, lifestyle habits and living environment - to the extent that IOT contributes to history not just medically but actuarially, that can radically change the cost curve in medicine.”

Mr Raymond Ng, Head of Distribution, Global Health Benefits, Asia Pacific, Cigna, said his company was studying widening pooled risk, such as writing risk for chronic disease sufferers like diabetics. “Using IoT devices and wearables, insurers can start tracking and maintaining a level of risk that is within our tolerance. This is better risk than unknown risk,” he explained.



Mr Raymond Ng



Mr Jeff Cook

Mr Jeff Cook, Head of Underwriting & Claims, Pacific Life Re, highlighted that world diabetes cases are expected to jump 55% by 2035, and made a case for insurers to take a bet on diabetes and carve their niche in pricing for that risk.

### Not a single-handed task

Dr Rajentheran believes healthcare insurance costs can be tamed by healthcare insurers, the government and managed care players coming together to tailor products in a “more co-ordinated fashion”.

In Singapore, a Health Insurance Task Force (HITF) Working Group was formed by the Singapore Life Insurance Association (LIA) in February 2016. Mr Richard Wyber, its Chairperson, said the HITF is one example of coordinated action to study the national issue of escalating claims costs for Integrated Shield Plans, which continues to place an upward pressure on health insurance premiums. The partners in the HITF include LIA, the Consumers Association of Singapore, Singapore Medical Association, Ministry of Health and the Monetary Authority of Singapore.



Mr Richard Wyber

The HITF’s recommendations include introducing medical fee benchmarks, escalating inappropriate medical treatments to relevant authorities, enhancing product features (eg preferred healthcare provider panels, co-insurance or deductibles, and preauthorisation for treatments), as well as more education for consumers.



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