

The actuarial approach to making healthcare sustainable

Despite rapid advancements in technology, healthcare costs have continued to increase at an alarming rate. At the Joint SAS-IAAHS Health Conference, the brightest actuarial minds came together to talk about how this issue can be addressed, as well as other major trends currently shaping healthcare and insurance.

By Amir Sadiq



Over the years, there has been much innovation in healthcare and in recent times, that has only accelerated. And yet, the escalation of healthcare costs has continued to outpace overall inflation rates.

This problem, and the role actuaries can play in solving it, were the main focus of Santa Barbara Actuaries president Dr Ian Duncan's keynote address as he kicked off the Joint SAS-IAAHS Health Conference.



Dr Ian Duncan

He pointed out that in most other sectors, advancements in technology have transferred activity to consumers, such as in banking where bank tellers have been replaced by ATMs or in supermarkets where customers now pick up their own groceries instead of relying on a

retail assistant to get their requested items from a storeroom.

Generally, this has reduced cost and increased efficiency and consumer choice and satisfaction. As to why this change has not been seen in healthcare, he suggested that it is in part due to the way medicine is financed.

"It's either financed by large insurance companies in countries like the US that have large insurance systems, or it's financed by national health systems. But in both cases, decisions are made for the consumer, not by the consumer," he said.

And at the end of the day, the billions of dollars that have gone into developing healthcare technology is still a cost incurred. "Somebody has to pay for all this enhanced technology. The venture capital and private equity firms that are funding these start-ups are not philanthropists ... they expect to be paid," he said.

Actuaries in a good position

To get healthcare to move in the same direction as other industries, Dr Duncan believes that three change agents are needed in medicine:

Payment reform, data analytics and behavioural economics. And he believes that actuaries are well-positioned to lead in these changes.

"Actuaries combine the three components that I said were necessary for successful change – data analytics, payment reform and behavioural economics," he said. "These are things that we are trained in."

Actuaries also comply with ethical and professional standards and understand the business and risk context in which medicine and healthcare operate, he said.

"To do so, however, requires a new kind of health actuary with upgraded statistical, clinical and economic knowledge. Fortunately, a lot of this kind of training and education is

being offered now by the actuarial societies and probably by this conference,” he said.

“The future is very bright for actuaries if we can combine these necessary components to change healthcare.”

Making healthcare more sustainable

Healthcare around the world today faces a twin set of challenges – a rise in communicable diseases and an increased prevalence of chronic conditions, said Sheares Healthcare chief corporate development officer Khoo Ee Ping.



Mr Khoo Ee Ping

As COVID-19 has shown, having a higher mortality rate among those suffering from underlying chronic conditions, the two are intertwined. This, in turn, drives the increased utilisation of healthcare services, making the need to address rising medical costs even more urgent.

During his presentation, Mr Khoo said there are a few ways to do this:

- Taking an ecosystem approach – an ecosystem is required to have a network of points of care, so that care can be right-sited, and the delivery of care can be coordinated
- Defining populations – the industry needs to define the populations that it wants to address, whether by age brackets and chronic conditions
- Taking an holistic approach to care – a lot of chronic disease management is very medically-focused and as a result there is not enough time to address the psychosocial or lifestyle aspects of care. A lifestyle-anchored and medically supported approach to care could be much more effective in helping patients master their chronic conditions
- Providers going at-risk for performance – having a system where contracts, payments and incentives are aligned with outcomes
- Being able to measure outcomes properly – having the right systems in place to track the metrics and measure the outcomes

that will contribute towards the overall lowering of cost

COVID-19 lessons for ORSA

There is still much uncertainty surrounding the COVID-19 pandemic. Milliman principal and consulting actuary Kevin Manning discussed some of the lessons learned from COVID-19 that insurers can apply to their own risk and solvency assessment (ORSA) processes.



Mr Kevin Manning

He brought up how pandemic risks that are normally assumed to be fairly straightforward turned out to be much more complex due to the widespread impacts it has had across the entire insurance business all being interconnected.

“This underpins the importance of involving a wide group of stakeholders in discussions of risk and ORSA scenarios,” he said. “If you do that you can then start to build a strong narrative around potential risk impacts informed by a wide range of views and that can really inform strategy and the ORSA can start to be a powerful framework for facilitating this.”

This allows for more informed scenario analysis and makes for better understanding of solvency and liquidity impacts.

“For insurers really to get the full benefit of an ORSA, they need to invest in ORSA processes, allow more real-time assessment of impacts of moving key variables in the business plan and they need to build the capacity to generate bespoke scenarios in real time,” he said.

Considerations around genetic testing

Another growing trend in healthcare is the increased research into genetics which has led to direct-to-consumer (DTC) genetic testing becoming more accessible and affordable to the general public.

Gen Re Life/Health Asia chief underwriting and claims officer and Gen Re Singapore and Labuan principal officer Irene Ng highlighted how the global DTC genetic testing market is predicted

to grow at a CAGR of 17.3% in the next decade and is estimated to reach \$6.6bn by 2021, based on BIS research data.


She added that even though most people are likely to use these DTC genetic tests for their novelty factor and for fun, they are still able to detect genetic mutations that increase an individual’s chance of developing certain diseases, including various forms of cancer.

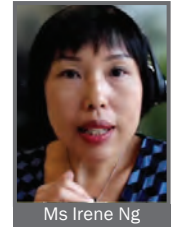
“With more and more people taking an interest in this form of genetic testing, it is important for us in the insurance industry to consider how this might affect us, whether negatively or positively,” she said.

Looking at how different markets around the world approach the use of genetic test information in insurance differently, she said that they can be classified into four broad categories:

- Countries with no regulation or restriction on the use of such information, where insurers can safely use that information at this time for underwriting. (e.g., India, Spain, Hungary, Slovakia, Slovenia)
- Countries with self-regulation, where there is no regulation prohibiting the use of such information, but the industry regulates itself with or without a written code of conduct. (e.g., Greece, Japan)
- Countries in moratorium. (e.g., UK, Australia, Hong Kong, Singapore)
- Countries with the strongest restriction via legislation. (e.g., Most European countries, Canada, USA, China)

Ms Ng noted that Singapore will be joining the countries in moratorium soon and that the US and China only apply their legislative restrictions to health insurance and not to life insurance.

The Joint SAS-IAAHS Health Conference was organised by the Singapore Actuarial Society and the International Actuarial Association Health Section with *Asia Insurance Review* as the official media partner and took place online from 20-21 September 2021. 



Ms Irene Ng