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Data and Behavioural Science:

The key to reducing claims and costs in health insurance?

In this first edition of our Industry Perspectives series, Alex Holdsworth, Executive Strategy Director at Monstarlab and William Trump, Head of the iptiQ Office of the Customer at Swiss Re, discuss practical steps insurers can take to harness the power of data and behavioural science.

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Introduction

Healthcare costs are rising across the world. As well as underlying inflationary pressures, healthcare faces its own distinct inflationary forces, notably in the development of new technology and treatments.

At the same time, consumers' expectations are changing fast. The digital environment is now all-embracing, and users want greater engagement with product and service providers, as well as personalisation and ease of use. Sectors such as retail and online services have led the way and arguably healthcare is lagging behind current expectations by a decade or more.

Faced with rising costs and consumer demands, there is widespread expectation that big data, machine learning and artificial intelligence (AI) can help. By leveraging data insights, insurers can play a role in encouraging healthy behaviour to ultimately reduce insurance claims and provide customers with the experience they increasingly expect. The potential benefits extend across the value chain, from sales and underwriting through to policy administration, as well as claims and asset management.

But to achieve the full potential of big data and AI in this sector, digital technology needs to be supplemented with behavioural science. Behavioural analytics allows insurers to monitor, analyse, measure, and interpret people's actions, intentions, and characteristics from users' footprints across devices.

To explore the potential and the challenges of these disciplines, we spoke to Alex Holdsworth, Executive Strategy Director at Monstarlab, a global digital consultancy focused on helping companies effectively leverage technology, and William Trump, who leads the Office of the Customer at iptiQ, the digital insurer owned by Swiss Re. His team is focused on improving customer experience in insurance through rigorous research and analysis by applying consumer insights and behavioural science.

The discussion explored the importance of combining big data and behavioural science to improve customer experience, reduce claims, cut costs, and increase renewal rates, and covered two themes: the key challenges of bringing behavioural science to bear in the insurance industry; and the practical steps insurers can take to turn that potential into a reality.

I. The challenge of embedding Behavioural Analytics within the insurance operating model

The consumer marketplace is overwhelmed with health-related apps with more than 350,000 products available in the Apple App Store. But how many people are actively using them regularly, and more importantly, how many people are changing their lifestyles?

Gathering, analysing, and providing data to consumers is an extremely valuable tool that can help reduce insurance costs. But an even greater potential value lies in leveraging that data to change behaviour, including both lifestyle changes that will reduce claims, and more cost-effective interactions between the consumer and their insurer. Monstarlab's Alex Holdsworth is in no doubt about the potential benefits.

"The opportunity available by combining big data technologies and AI with behavioural science is significant. From our conversations with clients and others across the industry, we estimate that these disciplines can reduce health insurance costs ratios by 3-5%."

Achieving these cost reductions will require the industry to address 4 distinct challenges.

1   Building solutions for complexity and security

The first challenge is building systems that can truly leverage data as a tool for change, whether for consumers, medical professionals, or an insurer keen to use technology to enable data-driven decisions.

It is essential from the outset to recognise the restrictions and sensitivities surrounding health data. Data security, strong governance and protocols around data access and use are vital to meet legal requirements and to ensure consumer trust and therefore engagement.

The practical challenges involve three steps: gathering data, typically through a device; analysing that data to generate actionable insights; and, crucially, designing a strong customer engagement strategy that will turn 'actionable' behaviour into real action.

The ultimate objective is to build complex and holistic health assessments, covering day-to-day lifestyle but also monitoring chronic diseases such as diabetes or high-blood pressure. Alex explains:

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> The technical ability to gather data is not in doubt – modern smartwatches are already equipped with different sensors and collect up to 200 data points. At the same time, the tools used for behavioural analytics are constantly developing and will need to ingest an increasingly complex number of inputs from multiple devices and data models.
>
> **Alex Holdsworth**
> Executive Strategy Director, Monstarlab

2   Effective health data systems must be truly scalable

Numerous pilot schemes and consumer tests have been undertaken using smart technology in healthcare, either to encourage healthier lifestyles or to address specific clinical conditions, including by the UK's National Health Service.[1]

Pilot schemes are an essential step in demonstrating the potential of combining technology and behavioural science. But inevitably pilot projects involve individuals with already diagnosed conditions or early adopters of technology who are already highly engaged with their own health.

The greatest potential in these systems, however, lies in their scalability. To be truly effective, these systems and models must reflect as closely as possible the medical 'population' and be free from sample bias.

This population scale is also vital if it is to lead to changes in behaviour among enough people to deliver the maximum possible cost benefits to health insurers. Engaging with the cohorts outside the early adopters, therefore, is a key barrier to overcome.

3   Behavioural change must be lasting

Behavioural science emerged as a distinct discipline in the 20th century and in the last twenty years has been widely adopted in business and public policy. Data is the starting point, but the essential step is communicating in ways that change behaviour.

Swiss Re's William Trump explains: "Advanced data analytics can help filter the amount of data down to be manageable, and behavioural science can help in the packaging and presentation of this information in a way that can encourage the right behavioural change. For example, AI models can be trained to use variables such as someone's age, height, weight, and gender to generate recommendations on the number of calories they should eat on any given day. But humans do not know what this means. They are more likely to act if given information about the type of meals that would be suitable for them, for insurance - by developing a traffic light colour coding system to help someone with their meal choices. So behavioural science comes in when you need to package the insights and turn it into a change in behaviour."

One of the core tools of behavioural science is 'nudge theory' – made famous by Richard Thaler and Cass Sunstein in their 2008 book Nudge: Improving Decisions and Health Wealth and Happiness. Nudge theory promotes small interventions or reminders to encourage desirable behaviour and has proved successful at inducing single actions by populations, for example, completing a tax return, or insulating a loft to save energy.

However, in the realm of health, the behavioural changes desired are often long-term and ongoing. It is one thing to nudge someone to exercise today. But to nudge them into going for a run three times a week, every week, is quite a different challenge.

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1 www.theguardian.com/society/2022/apr/16/nhs-smartwatch-for-parkinsons-patients-hailed-as-lifechanging

> " Behavioural change is hard, but getting sustained behavioural change is even harder. This applies to everything including exercise, eating, and smoking. How many Fitbits have been bought, used for a short period of time, and then never used again?

William Trump
Head of the iptiQ Office of the Customer, Swiss Re

Nudges are useful for encouraging single actions 'in the moment' – steering people to ensure they don't miss an appointment for a health check-up, to take their pills, or even just to channel switch and go online. The challenge is how to develop these individual steps into a broader habitual change in health behaviour.

4 Customers must be engaged but not overwhelmed

Healthcare messages can easily overwhelm consumers, and this can inhibit rather than encourage action. In developed markets, most of the population already knows the actions they should be taking for their own health benefit – such as eating less saturated fat, reducing salt and sugar, doing more exercise and so on.

Repeating these messages through a digital medium is unlikely to lead to significantly greater engagement. It risks becoming intrusive and giving the consumer too much information and too many choices.

To integrate big data and behavioural science into their strategy effectively, an insurance company will have to cut through the noise, some of it created by competitors, and use the plethora of healthcare data to focus on the most relevant insights generated by their model.

Big data technologies can help with this by filtering the data, while AI can help turn insights into actionable recommendations. In doing so, organisations will need to consider what specific form these should take. Automating some processes and decisions may be desirable to reduce the cognitive load on the customer, while other insights may be more suitable for nudges or other more active responses.

Generating value for customers and ensuring the optimum level of engagement will require a balance between various techniques.

II. Unlocking the benefits of technology and behavioural science: a three-point guide for how insurers can prepare for accelerating changes

There is enormous potential to combine technology and behavioural science in far-reaching and holistic solutions. But this is a final objective, not the starting point. In practice, the most successful approaches will be those that identify tangible and immediate benefits in reducing claims and costs.

In setting up a successful Digital Programme, we think there are three critical building blocks:

1 Focus on small high-value steps and learn to walk before you jog

Starting the journey with large and over complex solutions risks overwhelming the user and trying to induce long-term or wide-ranging changes in behaviour overnight is likely to fail.

A far more effective approach is to start with one or two low-complexity behaviours where a single action nudge can be effective. These individual steps can be bundled with different types of value to the customer, combining health benefits with financial benefits or other incentives.

William suggests two examples of low-complexity behaviours that can be influenced through digitally enabled engagement with the user:

▪ Encouraging users to attend medical appointments is beneficial to both the insurer and the consumer. Postponed appointments increase health risks and have a knock-on effect in terms of claims and costs. Missed appointments are also a cost to the medical provider, which rebounds on the insurer.

▪ Helping consumers take medication on time and as prescribed also improves health outcomes and again reduces costs for all stakeholders.

Completing these actions can be incentivised simply and directly, for example with vouchers giving discounts at retailers or service companies. Bundling health benefits with financial incentives will not only drive the desired behavioural change (and reduce claims), but it will also demonstrate a tangible value to the customer and help improve customer retention.

The tweaks to processes and engagement that derive from behavioural science are often remarkably simple and yet have dramatic effects. William provides an example from Swiss Re, which advised an insurer client to change the phrase used on its portal from 'register your account' to 'activate your account.' Changing that single word led to a significant rise in the number of customers completing that process. A second example of a simple nudge interaction is to contact customers regularly throughout the year reminding them of the cover provided by their policy and updating them on extra features. This resulted in a 2.5 percentage point rise in renewal rates.

2   Timing is everything – deliver the right intervention at the right time with personalisation

Health insurance is one of the insurance verticals where personalisation can deliver the greatest added value to both the insurer and the consumer. Understanding the health issues or risks faced by different customers allows interventions and nudges to be more closely tailored.

Prioritising specific health issues can bring focus and reduce the risk of overwhelming the user with less relevant insights and behavioural nudges. AI has enormous potential in this field, but it is essential to remember that AI is the tool and not the product. Alex says, "The theoretical capability of AI should not lead to over-complexity in personalisation. An obvious solution is to develop a simple 'jobs-to-be done framework' that allows an insurer to combine the insights of big data but targeted at important customer actions."

Big data and AI can also enable an insurer to monitor and understand their customers' health journey over time and allow interventions to be targeted at the optimum time. Knowing when a user has been to surgery or has undergone a test or scan means nudges to take medication, book a follow-up appointment or submit their claim can be delivered at the optimum time for both improved health outcomes and cost-effectiveness.

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> The key thing is nudging people in the moment of the decision – use technology to nudge people in the right moment, in the right context, with the right information.
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> **William Trump**
> Head of the iptiQ Office of the Customer, Swiss Re

3   Set a realistic path to quickly realise value

These initial steps are a starting point. Executed well they will allow the consumers to see, over time, the value in shifting behaviour. At the same time, insurers can benefit from significant efficiencies. Leveraging the data collected across the portfolio could improve the assessment of portfolio risk and lead to better reinsurance pricing.

From these individual customer interactions, a wider suite of digital health insurance services can then be built, transforming behaviour over the long term. This habitual change and transformation in the core 'customer-insurer' relationship will take time, but with focused objectives linked to measurable key performance indicators the immediate benefits in customer health and insurers costs will be apparent.

In the coming years, the combination of technology and behavioural science will have led to a paradigm shift in customer behaviour, insurance claims, and costs, but this will only be achieved one step at a time. While there is a significant opportunity in using big data and behavioural science together to improve health outcomes and lifestyle, claims will still happen. But here too that combination of disciplines could help reduce the costs of meeting those claims.

Behavioural science techniques can encourage users to submit claims online and do so promptly for each medical event such as a visit to their doctor. Again, the claimant benefits from a more efficient service, while the insurer's costs of processing are reduced.

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Digital technology and behavioural science – the key differentiators for health insurance

Traditional insurers run the risk of being easily commoditised, competing principally on price and at razor-thin margins. Digitisation, including the combination of big data and behavioural science, can help insurers break out of this model and will be a defining feature of the industry's future winners.

A greater understanding and engagement with customers on their health will reduce costs throughout the insurance process, allowing a more accurate assessment of portfolios to lower reinsurance costs, cutting claims volumes by encouraging healthier lifestyles and reducing the costs of meeting claims when they do arise through more effective interactions with claimants.

Technology and behavioural science are also the key to 'decommoditising' health insurance. Building engagement through the customer's experience and interaction with their insurer will build an ongoing relationship between customers and insurers – one that goes beyond an annual renewal letter.

Deeper engagement that combines different types of value from health benefits to financial incentives is the key to improving renewal rates.

Working together, behavioural science and data are a powerful combination that can help insurers and their clients meet the challenge of rising healthcare and health insurance costs.

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Alex is a director in Monstarlab's consulting practice, with over thirteen years' of experience in helping organisations understand and drive value from digital technologies. Alex is a proud 'quant' with a focus on how organisations can use their data more effectively and crucially - how they can realise value. He has worked across a range of sectors including banking, insurance, and the public sector, and previously, within Accenture's ecosystem business, working with fintechs and other incubated companies.

William Trump

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With a background in predictive analytics, William pioneered the application of behavioural science within Swiss Re 10 years ago. By using rigorous experimentation methods, he has helped insurers around the world optimise their products and customer journeys, achieving significant uplifts in sales and customer retention. He now works in Swiss Re's primary insurance division, iptiQ, where he leads the Office of the Customer with responsibility for consumer insight, CX and the application of behavioural science.
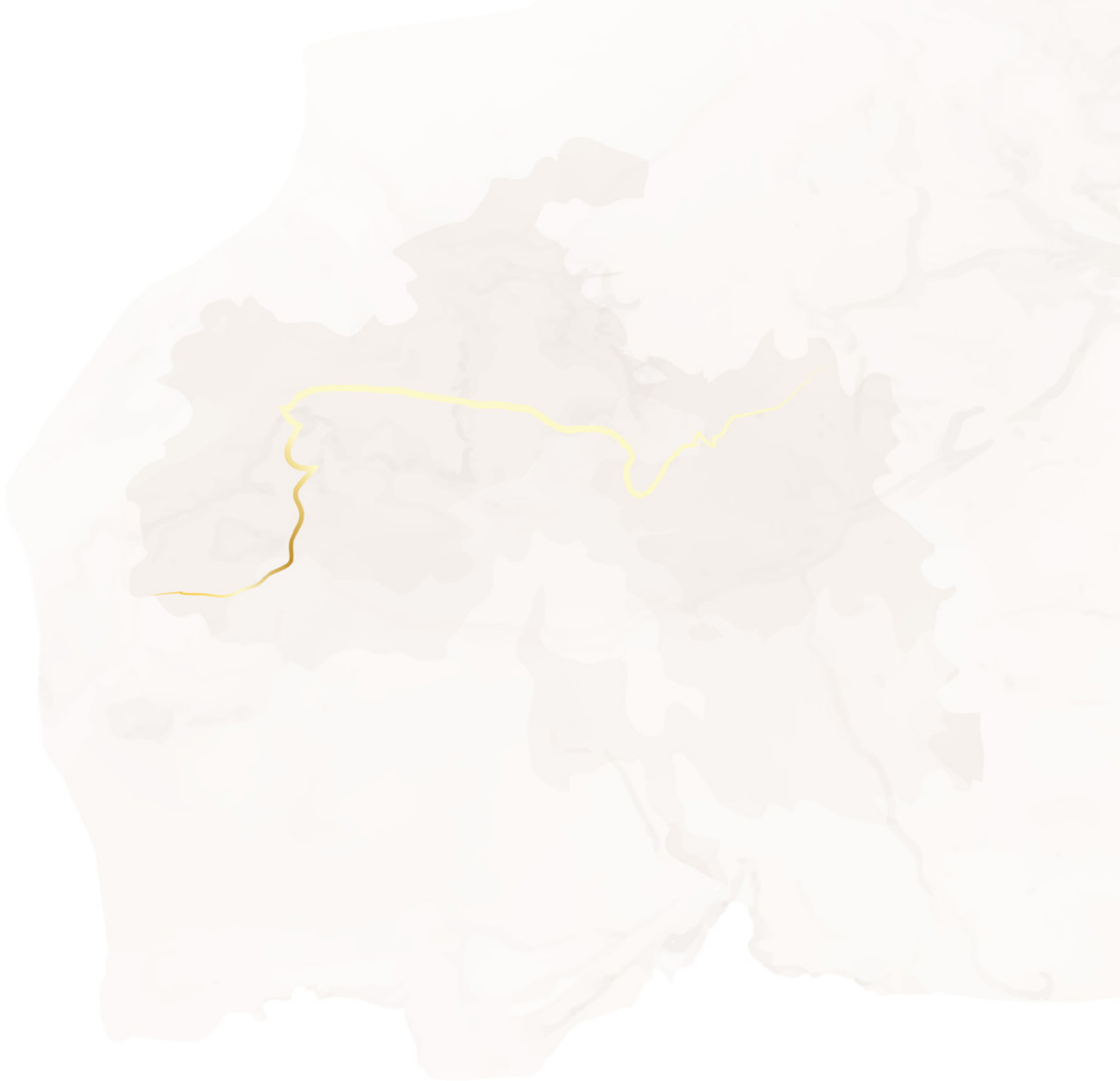
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