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# The Future of Underwriting With Neil Sprackling, President, US Life & Health for Swiss Re

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**Peter Kelley (PK): In the simplest analysis, how has technology influenced the underwriting process ... and how is it changing it?**

Neil Sprackling (NS): Insurers are developing ways to make underwriting easier, faster, and more convenient for consumers through automation, triage models, risk scores, and the use of alternative data sources, like electronic health records. Insurers are offering a seamless process with accelerated underwriting programs that provide instant approval for qualified applicants at the point of sale. They are also looking for ways to streamline processes for customers who still require full underwriting. All together, these tools are intended to improve the customer experience of purchasing insurance.

Underwriting tools are enabling a faster decision and generally come in two forms: acceleration and automation.

Analytics tools are being introduced to process vast quantities of data as we begin to see their proliferation. This opens more opportunities for insurers to streamline decisions and identify new evidence-based approaches that may complement traditional approaches. Mortality models such as LifeScore360 and underwriting models such as Swiss Re's Lab Requirements are examples of this.

**PK: How has technology altered our perception risk, and then how we analyze and assess it?**

NS: Through research, we learn more about drivers of risk, and as new data become available, we can research what protective



Neil Sprackling

value those data or that underwriting tool provides. One of the more significant changes in how we analyze and assess risk is around the difference between causation and correlation. For example, medical literature tells us that high blood pressure causes a higher risk of death, or smoking is the primary cause of lung cancer. Predictive models tend to show correlations to mortality, leading to insights that might not be as clear using traditional methods and frequently involve connections across multiple factors. However, it is still essential to provide a valid explanation (i.e., with actuarial justification) of drivers of mortality and to explain that those drivers can be used legally and ethically for risk selection. Thus, a combination of methodologies continues to be valuable.

**PK: With technology like GPS/tracking, the ability to gather post-underwriting data that further assesses risk opens a wholly deeper ability to manage risk. What are the implications of this phenomenon for the industry?**

NS: I expect this will lead to material product innovation. Life insurance products can be structured to reward policyholders who actively manage their health. A great example of this is John Hancock's Vitality product, where policyholders can earn statuses (e.g., Platinum, Gold, Silver) that lead to premium discounts. Optimistically, this should not only have a positive impact on the industry but more broadly, positively influence individuals' overall health. It could also help mitigate some of

the lapse anti-selection we see when healthy policyholders lapse their policy to buy a cheaper product.

The real opportunity presented using post-sale data is that the underwriting functions move away from a pure segmentation and pricing of risk to potentially actually influencing those risks. For example, can we motivate our customers to make healthier life choices through financial and other incentives to their benefit and society as a whole? The nature of single time frame underwriting also means we must reflect future uncertainties in the price, which by its nature must include some reflection of those uncertainties. We can underwrite people with diabetes with current moderate levels of control and offer a price that considers the risk of some such patients' control deteriorating and others improving their disease control, with estimates of proportions in each direction. If we know we have the capability to adjust the price to risk at a later point in time to reflect those future fluctuations, then we can support more accurate, cheaper pricing at the outset.

**PK: What, if anything, has substantively changed with time-tested mortality tables?**

NS: Mortality ratings evolve continually over time as new medical studies become available to form the evidence behind ratings. Data and technology are shaping and changing medical practice, and new types of medical studies are available, which will continue to develop the way mortality tables are built and evaluated. There will continue to be a select and ultimate mortality curve after underwriting. With post-underwriting data being collected and used, it should flatten the mortality curve for those that actively manage their health. Those that do not maintain their health will have a relatively steeper mortality slope. In effect, anytime new, positive underwriting information is collected after issue, it will create some new selection to the mortality curve.

**PK: What are the practical applications for Predictive Modeling and the use of proxy data in the underwriting process of something as simple as, say, a life insurance policy?**

NS: Predictive models are being used to identify cohorts of people that can bypass one or more traditional underwriting steps (triage), replace or augment information used in the underwriting process, as well as identify cohorts of people that could be at risk of policy lapse.

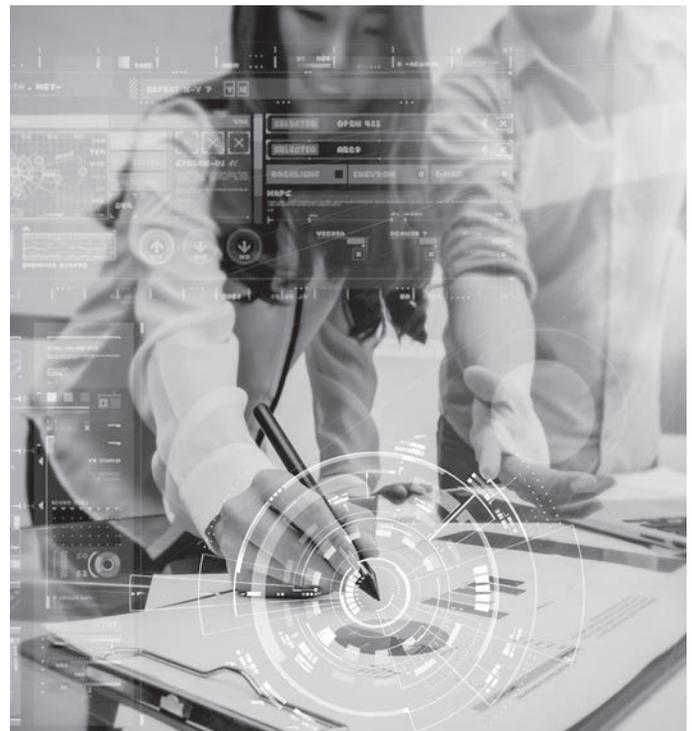
Today there is interest in evaluating and potentially using additional data sources on applicants that could provide information on their future health trajectory. That information might either be overtly clinical in nature, such as a history of prescriptions an applicant takes or perhaps be a continuous measurement on

the applicant obtained from biosensors related to things like heart rate or step counts. How these alternative information sources augment or replace traditional underwriting requirements continues to evolve in the industry, with some companies and regulators embracing these alternative information sources more than others. Since these new sources are not yet universally available on all applicants, there remains a need to be able to assess risk using traditional methods. So in the case of something like blood pressure that in the distant past was collected by a licensed physician employee of an insurance company, there are various downstream alternatives companies are evaluating that offer varying degrees of value, availability, and ease of use.

**PK: How effective, and how accepted, is the emergence of “wearables” as a post-underwriting risk management solution?**

NS: There's a growing trend where consumers are increasingly aware of the value of their own data and want something in exchange for them. Our industry can deliver on that. With the quality of health data getting better and better, we can provide information about their personal health risks that they can't get anywhere else.

Currently more common than the use of wearables is the ordering of post-issue APS. By using post-issue risk management tools in conjunction with accelerated underwriting tools, insurance companies can audit the accuracy and fairness of those tools.



The insurance company of the future could serve as a “personal risk manager” for insurance customers. With additional information about the health of existing customers, insurance carriers can alert customers to changing health (and financial) risks and help support them with interventions as well as risk mitigation tools. Swiss Re has taken this idea and developed a new product concept that we believe can help make insurance more accessible for people with diabetes and those with mild chronic conditions, who typically find it intimidating to purchase insurance.

**PK: Is the basic insurance model, “ex-ante compensation” based on predictive outcomes, actually changing? If so, how are products changing amid these technological advances?**

NS: Knowing the trends and the challenges, Swiss Re is looking to create new opportunities that enable our clients to 1) make better, faster decisions (e.g., accelerated UW, simplified issue); 2) create tailored products (e.g., modifiable risks); and 3) build smarter and more engaging connections. Behavioral economics shows us that people don’t want to pay now for an uncertain future benefit. That’s the fundamental premise behind insurance. The more we can help insurance owners realize benefits today, the more people will want to buy our products. Historically, companies have added benefits such as acceleration for critical illnesses, while Living Will and other services are available today to assist those with dementia. One example of how technology has enabled active risk management to prevent or mitigate risk is through wearables that provide heart rate monitoring, which in turn may detect risks of stroke sooner and may recommend intervention.

**PK: Your research identifies that, even in the face of such momentous technological advances, the role of the underwriter remains critical, the “fulcrum of the process” as your report states. Care to elaborate on this?**

NS: Humans are complex beings, and as a result, there will always be individuals with health profiles that will require human intervention. Part of our role as insurers is to protect lives. Channels that support new technologies that leverage different data sources generally decline applicants with complex health histories. In contrast, a human underwriter can provide a fair risk assessment to those who need us most and, equally, to niche markets like the high sum assured business and foreign national lives.

The changing landscape presents an interesting paradigm. We need to ensure that we continue to build the next generation of underwriters so that the expertise that has protected the underlying risk is not lost. However, we know that they will mostly deploy their knowledge differently. The Underwriters of the Future will need new skill sets in data analytics and will need to embrace collaboration, innovation, and technology. They will consult and build rules to accelerate and automate the process and will take a “portfolio view” of the risk vs. a single view of individual risks. To become future-ready, how we transition and upskill our underwriters is central to our industry’s success. To this end, Swiss Re is engaged in strategic workforce planning with an external consulting company, using workforce and industry trends, as well as listening to our clients. ■



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**REFERENCE**

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