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Article

Precision or Peril?

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How AI is reshaping personalised medicine

In the age of digital transformation, healthcare is undergoing a seismic shift from generalised treatment to precision care. Artificial Intelligence (AI) is at the heart of this evolution, enabling medicine to be tailored to the individual. But while the potential is enormous, so are the risks.

One size fits all - outdated and costly

Traditional medicine often relies on standardised treatment plans. But what works for one patient may be ineffective or even harmful for another, and the old trial and error approach can delay recovery and drive up costs for healthcare providers and patients.

AI is changing that. By analysing genetic data, AI can predict how a person is likely to respond to specific drugs. This is especially valuable in fields like oncology, cardiology, and psychiatry, where treatment outcomes can vary widely. The result? Fewer adverse reactions, more effective therapies, and better patient outcomes.

Our Digital Health and Wellness survey undertaken in 20241 results underscores this shift to the use of AI with **86%** of the healthcare companies surveyed planning to increase their use of generative AI, and **81%** focusing on AI for diagnosis and treatment.

Beyond DNA

Personalised medicine isn’t just about genetics. AI can also pull data from wearables to provide insight on diet, exercise habits, and environmental exposures to build a 360-degree view of a patient’s health. It can even analyse electronic health records (EHRs), lab results, and imaging to create real-time, dynamic health profiles.

This holistic approach allows healthcare providers to not only treat illness but also predict and prevent it. For patients, it means more proactive care. For public health systems, it means reduced strain and smarter resource allocation.

AI is also enhancing diagnostic accuracy in radiology and lab testing, reducing human error by using pattern recognition and anomaly detection, enabling personalised chronic disease management for illnesses such as diabetes and heart disease via remote monitoring and predictive analytics. Additionally, AI is enabling gut microbiome mapping to tailor nutrition and supplements for optimal metabolic health. These are just a few of examples of the exciting ways AI is transforming healthcare, and with new developments emerging almost daily, the possibilities continue to expand.

Innovation = risk

Tech transformation can bring risk, and AI in healthcare creates some serious concerns. Patients need to be able to trust that their information is secure and used ethically, making privacy and consent a particular issue due to the sensitive nature of data involved in healthcare.

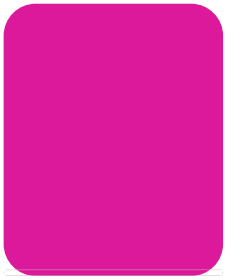
Healthcare data is of specific interest to cyber criminals seeking to steal and sell it and use it as leverage to extort money. Making it not surprising that our Digital Health and Wellness research revealed that **35%** of healthcare practitioners surveyed ranked cyber risk as a top risk, up from **27%** in 2022.The issue of algorithmic bias is also a concern. If AI systems are trained on non-diverse datasets, they may deliver unequal care across gender, race, or age groups. This can lead to misdiagnosis or ineffective treatments for underrepresented populations. Our survey revealed concerns over this risk with **78%** of firms concerned about bias in AI.

New risk landscape

AI-driven personalised medicine is an excellent example of healthcare's broader tech transformation. Healthcare organisations are now facing a new type of risk, one that includes cyber, operational, and ethical challenges. This is where insurance can step in. As AI becomes more embedded in clinical decision-making, the need for specialised coverage grows.

For healthcare organisations, the challenge is to harness the power of AI responsibly and to manage the risks it creates responsibly.

For the insurance industry, the opportunity lies in helping our healthcare clients to navigate this new frontier and ensure that they have appropriate and suitably tailored insurance protection in place.



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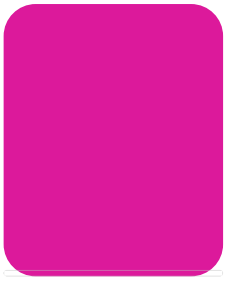

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