

Patient generated health data and the future of wearable technology

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Mobile health apps and connected devices, including sensors, wearables, as well as emerging technologies, like ingestibles and implantables, are enabling consumers to proactively track and manage their health anywhere, anytime, and from any device.

Previously geared towards consumer health enthusiasts, healthcare practitioners are now beginning to adopt these technologies for patient monitoring and to drive improved health outcomes.

This panel looks at the emerging tech in this space. What are the benefits of patient generated health data? Where does it create complications, and what do people need to know about using them, including implications for their data? What does this technology mean for the future of health?

Meet Our Panellists

- **Dan Draper (Moderator), VP Engineering, MedicalDirector**
- **Brittany Schoeninger, Principal, IQVIA**
- **Harry Gasiamis, Head of Sales – B2B Health, Garmin**
- **Robert Read, Chief Executive Officer, MedAdvisor**

Key insights

Today's consumers are taking an increasingly proactive approach to managing their health and wellness, and technology is playing an important role in this. [One in six Australians](#) use mobile apps and wearable technology to track nutrition, exercise, sleep patterns, energy levels and stress. And with the [number of connected wearable devices worldwide](#) expected to grow to over 1.1 billion in 2022, this trend is set to rise.

Increased access to our own health data is having a positive impact on our health literacy, says **Robert Read, CEO at MedAdvisor**. He points out that [health literacy levels in Australia](#) currently sit at around 41%, which is worryingly low.

“Flipped around the other way, six out of 10 people aged 18-74 don't have the adequate health literacy to understand what their healthcare practitioner is telling them. That's a problem that needs solving and that's where we've seen some really big insights in terms of being able to connect patients with information that's directly relevant to them.”

These devices are also providing us a way to connect, especially important during the COVID-19 pandemic when many traditional forms of connection are out of reach, says **Harry Gasiamis, Head of Sales – B2B Health at Garmin**.

“People are contributing more data and engaging with their friends because it’s the only way they can connect at the moment. They can’t go out for a run together, cycling events have been cancelled. Social engagement is a key driver of the success of the individual and the outcomes they want to achieve.”

Democratisation of data ultimately a positive

We have more access to our own healthcare data than ever before with wearables and mobile health tracking apps delivering health related data right into our hands. According to [researchers at IBM Watson](#) the average person is likely to generate more than 1 million gigabytes of health-related data in their lifetime. Will this unprecedented access to our own data pose safety risks to consumers? Not necessarily, says Read.

“I don’t think as an industry we should be concerned about consumers knowing more. Typically the democratization of data leads to better outcomes, better solutions and certainly happier and more satisfied patients and healthcare practitioners.”

While Gasiamis acknowledges this risk, he says tech providers have a responsibility to educate consumers on the proper use of wearables to ensure patient safety is maintained.

“I think it’s incumbent upon app developers and wearable manufacturers to let consumers know that if they exhibit symptoms that might be concerning, they need to consult with a medical professional.”

Data reliability is vital for research applications

For **Brittany Schoeninger, Principal at IQVIA**, having access to an interconnected data ecosystem is “massively exciting” from a research point of view.

“You can imagine the possibilities if you were able to access a database that contained information almost in real time on a patient’s activity levels and vital signs. This could be massively powerful in enabling us to understand a patient’s health in a way that would never be possible through a cadence of clinical trial visits alone.”

While these types of data hold massive potential from a research perspective she says we’re still in the early days of figuring out how to use it in a meaningful way.

“One of the main reasons we haven’t seen more widespread use of these types of technologies in research to date is the fact that we still need to remain true to our core principles of evidence generation.”

When asked if we should be integrating this data into electronic health records, Schoeninger believes it could be beneficial, but it come with some heavy caveats.

“If you’re collecting data for a very specific purpose, for example if you want to make sure a patient is following a specific exercise regimen and you give them a wearable device to track their activity levels, that could be quite helpful for the physician.”

“But I think data just for the sake of more data is less helpful or even potentially dangerous because it becomes difficult to sift through the wealth of information to figure out what’s actually relevant.”

PGHD: Opportunity or burden for GPs?

The use of patient generated health data can provide a more holistic view of a patient’s health and quality of life over time, increase visibility into a patient’s adherence to a treatment plan, and enable timely intervention before a costly care episode. However, there’s been some concerns from the GP community that this “anywhere, anytime” monitoring may come with increased responsibility for GPs and health professionals to monitor and act on this information.

This is a reality that Gasiamis acknowledges is a challenge, but he believes that patient generated health data is ultimately a valuable asset, especially for time-poor doctors.

“We’re not saying, ‘Here, this is a medical device and it’s being used for diagnosis’, but if I came in to see my GP and he could quickly have a look to see that I hadn’t been sleeping well for the proceeding four weeks, that my activity was really low, that my stress levels were really high, I think that could be quite meaningful.”

Reed backs up this view, adding that increased patient engagement is ultimately a positive, but it’s going to take both sides to come together to decide on appropriate levels of support.

“Patient expectations of their healthcare practitioner are on the rise and it’s certainly a challenge for the healthcare industry to keep up with that. Over the next five years, as more information becomes available to consumers about what’s going on in their body and how they can advocate for themselves most appropriately, this issue is going to emerge as key.”

He says this should be a “pull” scenario rather than a responsibility for GPs to monitor data.

“If I’m about to see a patient I might just check their medication adherence, as opposed to getting data every fortnight and having to dive into it. I think that’s the distinction that’s going to make it work in the industry more broadly.”

The future of wearable tech

This technology has huge potential to not only improve health literacy and wellness levels, but also to reduce the global healthcare bill. [According to one estimate](#), remote patient monitoring might save nearly \$200 billion across all conditions over the next 25 years.

“Being able to remotely monitor patients in their home is a significant opportunity for caregivers and for the industry alike, and most importantly for the patient,” Reed says. He points to the mounting evidence that says in-home monitoring of patients reduces recovery time as well as cost to the healthcare system.

“I think this is a trend that’s going to keep growing, and therefore, the systems that are around it to support it are going to be critical.”

From a research point of view, Schoeninger believes while there's room to grow in this space, it's not going to be a one-size-fits-all approach.

“As we become more comfortable analyzing and interpreting this type of data, there will be increased applications moving forward. I think this kind of data will continue to be used in addition to our more tried-and-true traditional sources of data and evidence.”

For the providers of this technology, this area is ripe for innovation, and significant investment is being poured into developing new products. Gasiamis says we will soon start seeing consumer wearable brands releasing [wearable medical devices](#) and that health professionals need to start thinking about how they're going to use this data.

He points out this is not an “if” but “when” situation and wraps up the panel with this question, “How prepared will the medical fraternity be to start working with that data when it becomes available?”