

Can wearables improve healthcare and the way it's administered?

Reading time 11 mins

Key Points

- Wearables improve healthcare by helping to prevent, diagnose, monitor and treat illnesses
- Millennials and baby boomers are the largest groups of wearables users
- The global market is expected to grow at a compound annual growth rate (CAGR) of 28.1% to reach an estimated value of USD 196.6 billion by 2030
- Market drivers include a demand for remote monitoring and therapeutic devices
- Device compatibility and difficulties synchronising multiple wearables are the biggest challenges



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Mazur, B, 21st November 2022, *Can wearables improve healthcare and how are they administered?*, Ignitec - Product Design, Research and Technology Consultancy - Ignitec, Bristol, viewed: 2nd December 2022,



<https://www.ignitec.com/insights/can-wearables-improve-healthcare-and-how-are-they-administered/>

Wearables are often associated with fitness trackers and other devices that help monitor our physical activity and sleep patterns. However, wearables improve healthcare and can diagnose, monitor, and even treat illnesses when used as medical devices. In addition, the majority of wearables:

- That focus on preventative care are predominantly used by millennials and baby boomers
- Diagnostic devices dominate the market and accounted for 62.2% of revenue in 2021
- Improve communication between patients and healthcare providers
- Help to streamline medication management
- Allow users to set their parameters for data collection and storage
- Empower users to be more proactive regarding their health

In addition, they're a significant improvement over traditional methods of tracking data. Results are generally more accurate and easier to interpret as they don't rely on patients to manually enter data - or truthfully answer questions.

"People can overestimate or underestimate on surveys how much and when they move, but wearable devices provide accurate data that cuts through the bias and guesswork," according to Jacek Urbanek, assistant professor of medicine at the Johns Hopkins University School of Medicine and a member of the research team [\[1\]](#).

While they have their critics (primarily concerning data protection and AI), the potential benefits are significant.

What the markets say about medical

wearables

The two largest groups of wearable users are on opposite sides of the age spectrum: millennials and baby boomers ^[2].

- Millennials are more geared towards healthier lifestyles and are 'digital natives'. They are more willing to embrace digital health technologies and remote contact (e.g. telehealth) with physicians
- Baby boomers, who are now hitting retirement, are equally keen to exploit wearables to improve healthcare as they age. However, they're more discerning about security and sharing personal data. This bodes well for IoT-based devices as a support for independent living

The global wearable medical device market is expected to grow at a compound annual growth rate (CAGR) of 28.1% to reach an estimated USD 196.6 billion by 2030 ^[3]. Some of the major market drivers include:

- A surge in demand for remote monitoring devices during the pandemic and increasing awareness regarding personal health monitoring
- A projected increase in lifestyle-related disorders (e.g. diabetes and hypertension) due to sedentary routines will require continuous monitoring
- A rising mortality rate due to chronic and non-communicable diseases (e.g. heart and lung disease) also increases the demand for personalised monitoring and care
- Diagnostic devices dominate the market and accounted for 62.2% of revenue in 2021
- As more therapeutic devices (e.g. smart inhalers, insulin monitoring, wearable pain relievers) enter the market, this segment is expected to experience the fastest CAGR

The benefits of preventative and diagnostic



devices

Wearables improve healthcare by helping us to focus on preventive care rather than just managing illness when it strikes. This is because wearables allow us to monitor our health more proactively.

While these devices can accurately monitor vitals such as heart and respiratory rates, their potential exceeds that. For example, wearable technology can effectively monitor sleep patterns, which is useful when deciding if there is any underlying cause for lethargy or mood swings during the day ^[4]. In addition to monitoring vitals and sleep patterns, wearables can also collect data about your environment, such as noise and light levels, which could indicate exposure to environmental hazards (e.g. excessive noise or bright lights) that contribute to stress.

By providing real-time data, wearables also help caregivers to understand and respond to the needs of their patients ^[5]. For example, if you're caring for a senior citizen with impaired mobility, you might not know they've fallen until it's too late. A wearable device could tell you if they've been still for too long or if their heart rate is elevated - all of which would indicate something is wrong and prompt you to take faster action.



Digital healthcare improves patient-caregiver communication

Wearables improve communication between patients and their care teams in several ways. Digital healthcare devices can help patients to articulate problems more effectively. For example, a patient might say, “I feel like my heart has been beating quickly”, which doesn’t tell a caregiver much. However, a wearable can digitise that feeling, provide a scientific result (i.e. beats per minute), and communicate in real-time whether that feeling is cause for concern.

Wearables will help overcome one of the biggest challenges in healthcare today: ensuring that patients receive treatment at the right time [\[6\]](#). Telehealth video conferencing and remote patient monitoring (RPM) make medical professionals and caregivers more accessible. It removes barriers such as consultation costs, travel time, and waiting times that patients find frustrating.



Streamlined medication management improves treatment efficiency

Human factors (e.g. forgetfulness, misunderstanding) are leading causes of inefficiency in most industries, and healthcare is no different. Wearables improve healthcare by helping to overcome human error by reminding us when to take our medication or when we're due for a checkup. Aside from this, [automated medication dosing](#) via an on-body-delivery system (OBDS) takes this a step further.

For example, [V-Go](#) is a 24-hour insulin delivery patch that helps to control the blood sugar in type 2 diabetics. This has shown promise, especially since it has a more prolonged action duration than traditional rapid-acting insulin (RAI) analogues [\[7\]](#).

If you're interested in learning more, read our article on how [wearable pharmaceuticals transform healthcare](#). From ingestibles (e.g. smart pills), biomedical devices, and GPS inhalers; to the role they play in clinical trials, there's a seemingly endless array of ways wearables improve healthcare.

Wearables improve healthcare, but what are their limitations?

One of the most significant limitations is that wearables often aren't compatible with other devices. They cannot easily share data with other wearables, digital devices, or electronic medical systems such as electronic health records (EHRs) [\[8\]](#).

Each device has its way of collecting information about what's happening in and around your body. People who use multiple wearables for different reasons (e.g. a diabetic person who is asthmatic and has a heart condition) - and possibly their healthcare providers - would find it



overwhelming, frustrating, and confusing to monitor data from three different devices constantly. Ideally, one would want their heart monitoring app to send a notification to the asthma device (as well as the user and their doctor) when their heart rate is elevated and could signal an asthma attack.

Then there's the issue of [consumer consent, privacy, and the ethics](#) of wearables. As consumers become more tech-savvy, they're more likely to be wary of how third parties use their wearable devices' data.

What's the future of wearables in healthcare?

While some may see wearables as a passing trend, they're already commonplace. Despite their limitations, these technologies significantly help millions of users and practitioners worldwide to manage health better.

Whether or not this will always be the case is hard to say. Technology and innovation are advancing so rapidly that it's difficult to predict what the healthcare landscape will look like in 20 years. Microscopic robot implants for diagnostics and repairs? Personalised genome-based medication?

What are your thoughts on the future of healthcare? Pop us a comment and share your predictions!

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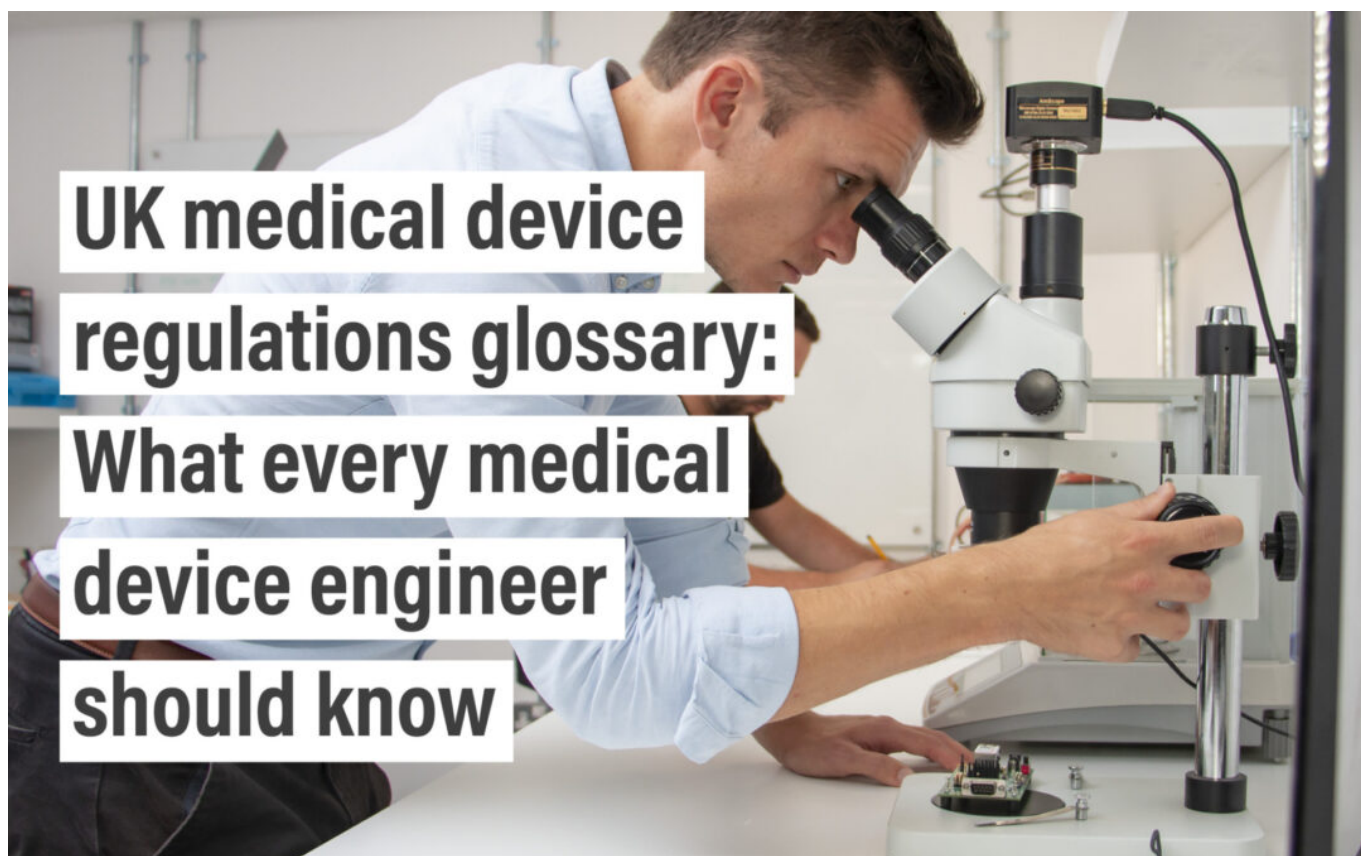
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