

# How wearables are transforming healthcare

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In recent years, wearables such as smartwatches and fitness wristbands have grown in popularity among consumers and gained traction within the healthcare industry as hospitals have put greater focus on improving patient care levels and clinician productivity.



Wikipedia

Not surprisingly, the wearable health market is set to experience strong growth in the coming years. According to insights from [Fortune Business](#), revenues are projected to grow to \$139bn globally by 2026. With this type of planned growth, wearables and smartwatches are poised to dramatically transform the future of healthcare.

## Growing adoption of smartwatches in healthcare

Over the past few years, we have seen an increasing number of healthcare facilities and their patients adopt smartwatches for a variety of uses. For patients, smartwatches give them the ability to track their vitals and sleep quality, set reminders for medications and even allow them to report symptoms to their physician. For clinicians, smartwatches can provide access to patients' electronic health records (EHR) on the go and real-time notifications ensuring the best possible patient care. In fact, according to a [survey](#) of hospital executives, 47% of hospitals are currently offering wearables to patients with chronic diseases. The possibilities are endless when it comes to wearables like smartwatches and in the future, we can expect to see new use cases for smartwatches and wristbands continue to improve the quality of care and physician workflows.

## Emergence of new form factors and biosensing capabilities

Smartwatches are not the only type of wearables used by healthcare professionals today. In fact, new form factors like smart earbuds, smart rings, smart patches, smart augmented reality (AR) glasses and even smart t-shirts are available. Smart patches capture hydration levels, core body temperature and heart rate among other biometric data. Another emerging market is smart earbuds which can measure patients' health while providing feedback via a digital coaching system. Smart rings are capable of measuring patients' heart rate, sleep quality, heart rate variability (HRV), respiration rate and body temperature. Smart glasses are increasingly used by physicians in hospitals to help them access patient EHR data or for transcribing important clinical information from patient visits. In hospitals, we are also seeing the emergence of wearables with more advanced biosensing capabilities. Gone are the days when wearables could only measure heart rate, steps, and calories. Some wearables are now capable of measuring hydration, electrolytes,

electrocardiogram (ECG), blood pressure, muscle load, human power, or fatigue level. In fact, the world's first blood pressure monitoring solution for wearables in the form of earbuds was announced at this year's CES. This is a key milestone as it will enable physicians and nurses to measure patients' blood pressure continuously and in a non-invasive way.

## **Advanced analytics and patients' health insights are improving**

Companies are improving the biosensing capabilities of their wearables and also patient health insights. Due to advancements in machine learning (ML) and algorithms, some wearables can now assess the biometric data of a patient and provide health insights to patients. For example, the Apple watch can now detect and notify a patient if his/her heartbeat is showing signs of an irregular rhythm suggestive of atrial fibrillation. Other wearables such as smart t-shirts can tell users that their heart rate is "too elevated" and they "need to slow down." Wearables are not meant to replace nurses or physicians, rather, they are meant to augment preventative care and inform patients about potential health issues so they can take the proper action needed.

## **Future outlook**

In the coming years, wearables with new biosensing capability will become more ubiquitous in healthcare settings. Technological advancements in ML and AI could even make it possible for wearables to help detect early signs of chronic diseases such as Alzheimer's and Parkinson's. Wearable health devices will also continue to play a key role in reducing the cost of healthcare and preventing patients' readmissions over time. Today, [McKinsey and Company](#) estimates that 20 percent of all healthcare costs result from lack of daily exercise, adequate sleep and addiction to drugs and alcohol. By using wearables to encourage patients to exercise more and be engaged in creating better habits, the number of patients readmitted each year will decline and reduce the strain on healthcare providers. Insurance companies not already taking advantage of wearables will likely start to offer them to members and reduce premiums for those who choose to use them to achieve their fitness goals. Ultimately, the growing adoption of wearables in healthcare will be a win-win-win situation for patients, healthcare professionals and the healthcare industry.

## **ABOUT THE AUTHOR**

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