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International Journal of Recent Innovations in Medicine and Clinical Research

Journal homepage: https://www.ijrimcr.com

Editorial

Smart wearable devices: Transforming patient health care and chronic disease management

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Keywords: Artificial intelligence, Disease management, Health technology, Vital parameters

Received: 01-03-2025; **Accepted:** 25-03-2025; **Available Online**: 10-04-2025

There is a revolutionary change in the health sector driven by the swift growth in the wearable health technology. Smart watches, fitness trackers, and biosensors are no longer peripherals but are powerful tools that offer real-time monitoring of health, directly persuading patient outcomes and chronic disease management.

The advantages of wearable health technology are that it can monitor the vital parameters around the clock such as blood pressure, oxygen saturation, heart rate, blood sugar, and even electrocardiograms (ECGs). The technologies are the early indicators to the patients, especially those with chronic diseases like diabetes, hypertension, and cardiovascular disease, to deviations in their health. Providing early warning signs, such devices allow individuals to take immediate actions in managing their conditions, reducing hospitalization and emergency admissions.

Physicians are able to review real-time trends of information, which allows for early intervention before the onset of complications. This is especially useful in chronic disease management, where constant monitoring and timely intervention in changes of treatment protocols can effectively improve quality of life.

Wearable technology also encourages preventive healthcare culture. By encouraging the wearer to track physical activity, sleep, and stress, these technologies encourage individuals towards healthier lifestyles and thereby reduce the burden of chronic diseases. Artificial intelligence and big data use also expand wearable's possibilities by enabling predictive analytics that can predict threats to one's health and develop tailored care plans.

Although promising, there are challenges and concerns about data protection and patient confidentiality are very important due to the sensitive nature of the health data these devices capture. Maintaining strong encryption and compliance with regulatory requirements are key to safeguarding patient trust. The affordability and cost of sophisticated wearable technology could also cap its full adoption, especially among low-income groups.

However, the prospects for wearable health technology are promising. As technology advances, the devices will be more advanced, cost-effective, and integrated into the health system with ease. If there are mechanisms of regulation and ethical practices are in places, wearable health technology can transform patient health care and management of chronic diseases. Eventually lead to a healthier and interdependent world.

Cite this article: Silvia WD. Smart wearable devices: Transforming patient health care and chronic disease management. *Int J Recent Innov Med Clin Res*. 2025;7(1):1

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http://doi.org/10.18231/j.ijrimcr.2025.001