

Listing out essentials to stop cardiovascular disease continuum

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COVID-19 has changed the future of cardiac monitoring with the growing emphasis on home-based care

According to WHO, 17.9 million people die each year from cardiovascular diseases (CVDs), an estimated 32% of all deaths worldwide. Out of these, 85% of deaths are due to heart attack and stroke, despite that most CVDs can be prevented by addressing risk factors such as tobacco use, unhealthy and sedentary lifestyles, and harmful alcohol use.

The World Heart Federation (WHF) initiated World Heart Day, celebrated every year on September 29, to create awareness about and combat CVD. The World Heart Day 2022 theme captures three important aspects: accessibility, environment, and self-care.

Early detection is the key to preventing CVD. The coronavirus impacted the cardiac monitoring clinical pathways by introducing more screening and diagnostic tests and increasing technology-enabled monitoring. Cardiac monitoring is shifting from pure product-based to technology-driven solutions, which will lead to strong screening solutions through predictive

analytics. However, access to treatment and support for CVD remains a concern. According to WHF, over 75% of CVD deaths occur in low- to middle-income countries.

Accessibility is expected to improve with the shift from the hospital- to home-based care for cardiac monitoring, driven by the growing adoption of technologies such as wearables and remote patient monitoring (RPM). RPM allows healthcare professionals to monitor vital signs, conduct virtual consultations, and provide patient education. It also has tools to track medication adherence for chronic disease management of home-based patients. RPM is increasingly finding applications in post-operative care, which helps in the early detection of health concerns after an operation, allowing for rapid response and saving significant patient lives and costs. However, low- to middle-income countries have a long way to go in adopting these technologies. Raising awareness will increase adoption and improve accessibility by driving demand.

According to WHF, air pollution is responsible for 25% of all CVD deaths, taking the lives of 7 million people every year. Environmental factors such as pollution and climate change can increase the risk of developing CVDs. Environmental sustainability is becoming the key theme across the pharmaceutical industry. Pharma production, supply chains, and disposal account for more than 70% of emissions. While pharma companies strive to reduce drug manufacturing timelines (especially during the COVID-19 pandemic), several initiatives and policies, including the European Due Diligence Act, 2021, The Carbon Border Tax, the Chinese Biosafety Law, 2020, and India's Business Responsibility and Sustainability Report (BRSR), support companies' efforts in aligning with their long-term net-zero-emission goals.

The COVID-19 pandemic had far-reaching consequences on businesses, societies, economies, and personal lives. Poor mental health is considered the next pandemic as people had to cope with loneliness, stress, and anxiety due to lockdowns and social distancing norms. Psychological stress doubles the risk of CVD. Thus, good behavioral health is necessary for good heart health. The shift in focus from curative to preventive care and a growing number of informed and connected consumers are creating a high demand for personalized self-health management mHealth tools. The proliferation of the internet and the extensive use of smartphones are spurring these changes.

COVID-19 has changed the future of cardiac monitoring with the growing emphasis on home-based care, and coronavirus affects the heart, leading to an increased patient pool. It positively impacts the screening, diagnosis, and monitoring of patients for cardiovascular conditions. The landscape for CVD detection, treatment, and rehabilitation looks promising for patients due to innovations in precision medicine, digital biomarkers, and home-based monitoring. Several companies continue to come up with RPM solutions for home-based cardiac monitoring. A huge amount of data from RPM helps develop machine learning algorithms and predictive analytics for accurate risk assessment, dynamic and comprehensive management of CVD, and real-time behavioral change techniques. Healthcare providers and patients need to invest in RPM solutions at home for improved care, cost containment, and cardiovascular rehabilitation.

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