

AN UNOSQUARE GUIDE

Medical & Life Sciences in 2024: 8 Digital Trends and Outlooks



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8 TRENDS & PREDICTIONS

Medtech lies at the intersection of the most fast-changing and innovative industries—healthcare and technology. Over the past several years, telemedicine, wearables, and artificial intelligence (AI) advancements have transformed the Medical and Life Sciences industries. With the healthcare market projected to reach [\\$665.37 billion globally by 2028](#), designing and developing effective healthcare solutions that enhance user experiences and outcomes has never been more critical.

As we look ahead to 2024, several key trends are poised to reshape how we design, develop, deploy, and manage Medical and Life Science digital solutions. Let's explore eight trends and outlooks:

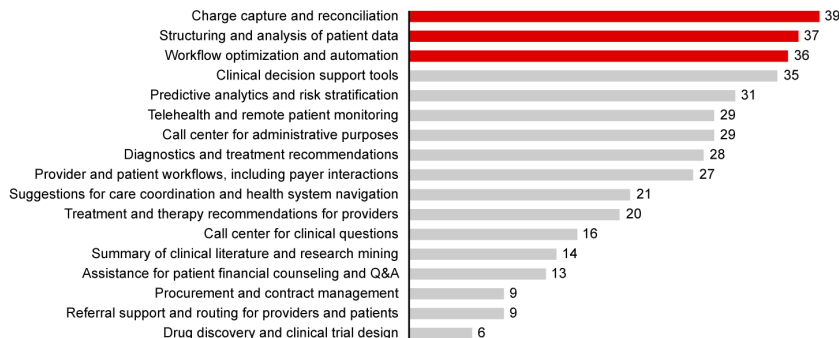
01

Artificial Intelligence (AI) & Generative AI

In a recent [Deloitte Medtech Digital Innovation survey](#), 80% of MedTech leaders said their organization's most significant digital investments were going toward AI, with the most prominent short-term opportunities to reduce staff's administrative burden and enhance operations via generative AI.

Which use cases for generative AI are the highest priority for your health system in the near term (within the next 12 months)?

Number of responses by use case



Source: Bain Health Systems Survey (N=94)

Generative AI has been gaining momentum, and in 2024, we expect to see more support for highly focused, low-risk generative AI. Solutions that improve clinical documentation, structure and analyze patient data, and optimize workflows will be the most sought-after opportunities health systems will look to invest in when it comes to leveraging generative AI.

02

Digital Therapeutic Usage

Digital therapeutics deliver evidence-based therapeutic interventions to patients. High-quality software programs drive these interventions to treat, manage, or prevent a disease or disorder independently or with medications, devices, or other therapies to optimize patient care and health outcomes.

[According to Deloitte](#), 63% of MedTech leaders agreed that digital therapeutics will significantly impact the industry over the next ten years.



03

Integrated Diagnostics

Despite the widespread integration of electronic health records (EHRs) and advancements in precision medicine tools, the process of diagnosis remains fragmented and suboptimal for both clinicians and patients.

[More than 7 billion diagnostic examinations](#) are performed annually in the United States, influencing 70% of healthcare decisions. The possible convergence of laboratory, pathology, and imaging test results within the same medical report via Integrative diagnostics could facilitate collaborative decision-making and more accurate clinical diagnosis.

In 2024, we expect significant advancements in integrated diagnostics to enable different healthcare specialists to exchange patient data both timelier and more accurately.



04

Biometric Technology and Wearables



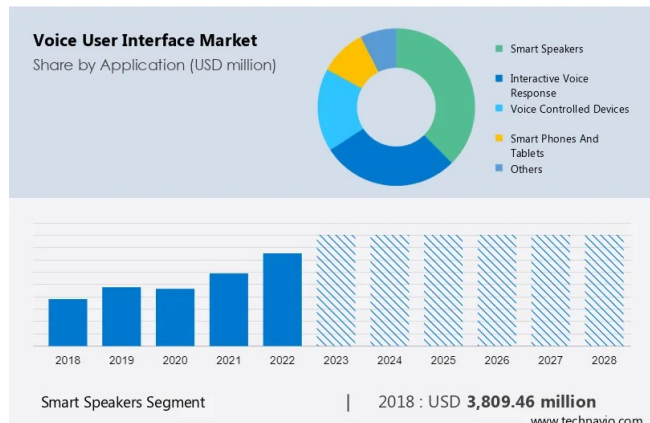
In a time when economic pressures are exacerbating discrepancies in healthcare access, healthcare providers and payers are facing increasing economic challenges. To bridge the gaps of cost pressures, labor shortages, and funding challenges, consumer devices and diagnostics are prime for innovation. Wearables enable healthcare providers to maintain a higher quality of patient care while combating the previously mentioned obstacles.

In 2024, wearables and consumer devices that allow patients to manage their care and lessen dependence on healthcare institutions will be a significant focus. With consideration to future growth, the patient advantages to using wearable tech are driving a projected growth of [\\$161 billion Over the next ten years, creating a 6% CAGR.](#)

05

Voice User Interface (VUI)

VUI design plays several roles in healthcare processes, including prompting patients to schedule appointments, helping them prepare for procedures, standardizing care information provided before or after treatment, and asking questions during care.



The increasing adoption of VUI technology in the healthcare sector is the key factor driving the market's growth. [Technavio reports](#) that the Voice User Interfaces (VUI) Market size is estimated to grow at a CAGR of 23.39% between 2023 and 2028, with the market size forecasted to increase by USD 50,731.16.

06

Sustainability

Currently, sustainability is a crucial focus for most industries and investors, and MedTech is no exception. Did you know that the healthcare industry is responsible for [generating over 5% of greenhouse gas emissions globally](#)? Medical devices and technology are responsible for a large portion of that.

Key focus areas for sustainability transformation 2024 will include single-use plastics and devices, product packaging and recycling, manufacturing infrastructure and processes, and supply chain network design. Companies accelerating their environmental, social, and governance (ESG) ambitions can lead to sustainability and build enterprise value.

07

Cloud-Based Interoperability

The reliance on a network of interconnected medical devices and healthcare systems is intensifying in the medical sector. Interoperability refers to the capability of different applications and systems automatically and securely exchanging data. This is of particular interest in the medical and life sciences sectors as organizations depend on data-derived insights for informed decision-making and operational efficacy.

A pertinent example is the implementation of electronic health records (EHR) systems. These systems facilitate sharing accurate patient information among healthcare providers. Despite their advantages, these systems present certain limitations that hinder interoperability. Challenges include vulnerability to technical issues or downtime and limited compatibility with specific devices or software.

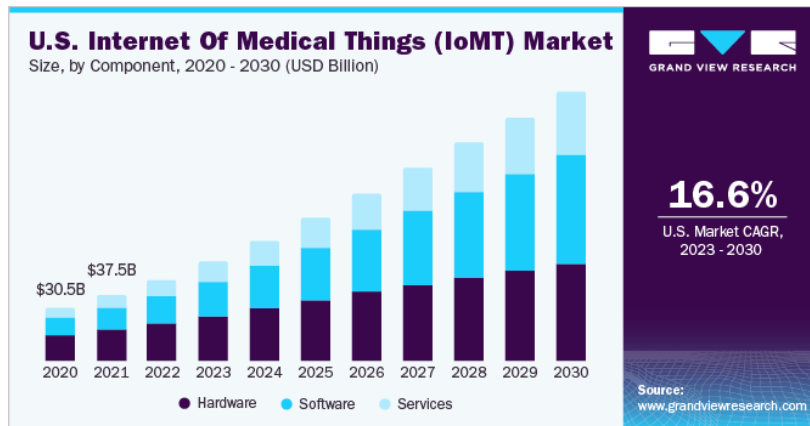
It is anticipated that advancements in cloud-based EHR systems will significantly enhance interoperability. These advancements are expected to diminish the prevalence of data silos and foster industry-compliant communication across organizations. Such progress in EHR technology will be instrumental in streamlining data exchange and enhancing the overall efficiency of healthcare delivery systems.



08

IoMT (Internet of Medical Things)

From MRI scanners to pregnancy testing kits, artificial joints, and surgical instruments, technology allows these devices to generate, collect, analyze, and transmit data, creating the Internet of Medical Things (IoMT)— the connected infrastructure of health systems and services.



Although the Internet of Medical Things (IoMT) holds promise in addressing various challenges such as cost, accessibility, and care coordination within the healthcare sector, the mere generation of data points through countless connected medical devices will be of minimal consequence unless this data is transformed into actionable insights.

Strategies and solutions that harness the data provided to make business and operating models relevant and competitive will be the most sought after.

Onward...

As we enter 2024, the adoption of new cutting-edge technologies will pave the way for innovative treatments and solutions across the entire health care system. Shaped by technology enabled connectivity, patient-centric design, and strategic uses of AI and Generative AI, solutions that ensure compliance, expand reach, and improve processes for all players will have the highest chance of widespread adoption.



About Unosquare

Unosquare has extensive experience in patient-centered medical solutions, including diagnostics, patient monitoring, chronic disease management, insurance, and Electronic Health Records. Whether you are working on patient-centered solutions, medical devices, drug discovery, or laboratory solutions, Unosquare can be your one-stop shop for your digital research, strategy, design, and development resources. Contact us if you need help with a digital medical solution.

With proven experience Financial Services, Medical and Life Sciences, Digital Products and Tech Enabled Solutions, Unosquare is a full-service product development firm with end-to-end capabilities that include Design, Development, and Engineering Services. Learn more at www.unosquare.com.

