mHealth Solutions

Market Scenario and Competitive Landscape

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Disclaimer

Introduction and Methodology

“Market Scenario” is a customized and organized analysis to gather information about target markets and competitive landscape in a particular sector.

“Market Scenario” provides relevant information to identify and analyze market needs, market size and competition in the fields of interest of the customer. A technology or a product developed by the customer can be characterized according to the sectors and potentiality of application, target market, competitive advantages and potential partners of the technology. The analysis is performed with the application of technology and business intelligence tools. The research in the information providers is usually based on the use of keywords or by thematic area, according to the specific topic of interest.

The results of the assessment are data about the target or global market potential, market value and applicability of the technologies or products developed by the customer, the trends of the market of interest, the segmentation of the market (e.g., by application, geography or indication), the supply chain and the competitive advantages of products or technologies, the key players active in the market of interest and the possible direct or indirect competitors of the customer.

Context

This report provides an overview of the **mhealth solutions market**, with reference to the trend and dynamics in the period 2023 – 2028, to the market segmentations by product & service, by end user and by region and to the competitive landscape in the field, especially at the European level.

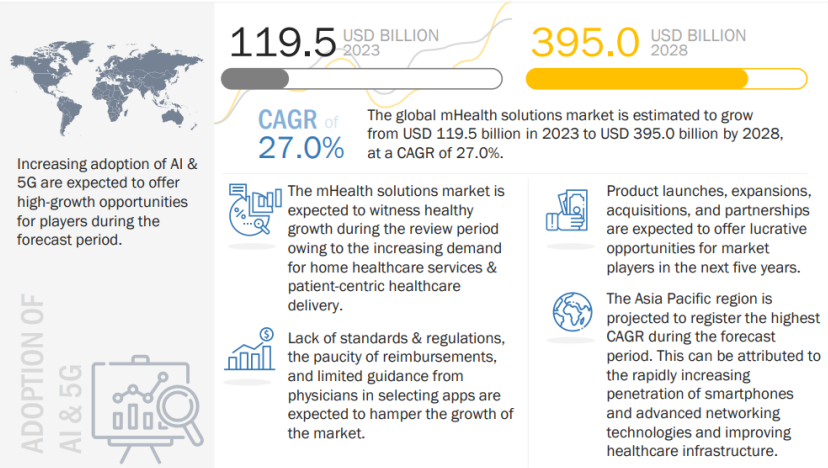
1 mHealth Solutions

Mobile health (mHealth) refers to the use of mobile devices for collecting and distributing health-related data, remote delivery of care, and near real-time monitoring of patients. Connected medical devices and mHealth apps and solutions help clinicians document more accurate and complete records, improve productivity, access information, and communicate findings & treatments.

1.1 Global Market and Market Dynamics

The **global mhealth solutions market** is projected to reach USD 394.95 billion by 2028 from USD 119.47 billion in 2023, at a high Compound Annual Growth Rate (CAGR) of 27.0% during the forecast period (Figure 1).

Figure 1. Global Mhealth Solutions Market, in the Period 2023 - 2028



The global mHealth solutions market is expected to **grow** significantly in the coming years (Table 1). Factors such as the increasing penetration of smartphones, tablets, and other mobile platforms, the increasing utilization of connected devices and mHealth apps for the management of chronic diseases, the cost containment in healthcare delivery, the robust penetration of 3G and 4G networks and the rising focus on patient-centric healthcare delivery and increase in demand for home healthcare services are expected to drive market growth in the coming years. On the other hand, lack of standards and regulations, the paucity of reimbursements, low guidance from physicians in selecting apps due to unawareness of technology, and resistance from traditional healthcare providers are expected to **limit** market growth to a certain extent.

Table 1. Market Dynamics: Mhealth Solutions Market

	DESCRIPTION	IMPACT		
		1-2 YEARS	2-3 YEARS	3-5 YEARS
Drivers	Increasing penetration of smartphones, tablets, and other mobile platforms	Medium	High	High
	Increasing utilization of connected devices and mHealth apps to manage chronic diseases	Medium	High	High
	Cost containment in healthcare delivery	Medium	High	High
	Growing penetration of 4G & 5G networks to ensure uninterrupted healthcare	Medium	High	High
	Rising focus on patient-centric healthcare delivery	Medium	High	High
Restraints	Lack of standards & regulations and insufficient reimbursements	High	Medium	Low
	Resistance from traditional healthcare providers and limited guidance from physicians	High	Medium	Low
Opportunities	Growing adoption of mHealth solutions in other mobile platforms	Medium	Medium	High
Challenges	Authenticity and reliability	Medium	Medium	Low
	Patent protection for mHealth devices and apps	High	Medium	Low
	Lack of data security and concerns regarding data theft and healthcare fraud	High	High	Medium

1.2 Market Segmentation by Product & Service

Based on product and service, the mHealth solutions market is segmented into: **connected medical devices, mHealth applications (apps), and mHealth services** (Table 2). In 2023, the **mHealth apps** segment accounted for the largest share of the mHealth solutions market. This is mainly due to the increasing adoption of connected medical devices by individuals & patients at home, the growing use of telehealth, and the rapidly increasing geriatric population & the subsequent increase in the prevalence of chronic diseases.

The **mHealth services** segment is expected to grow at the highest CAGR of 33.7% during the forecast period. The rising global adoption of smartphones, availability of high-speed networks, and rising demand for remote patient monitoring and consultation are the key factors driving the growth of the mHealth services segment.

Table 2. Mhealth Solutions Market, by Product & Service, 2021–2028 (USD Million)

Product/ Service	2021	2022	2023	2024	2025	2026	2027	2028	CAGR (2023-2028)
mHealth Apps	32,846.3	43,683.1	57,419.9	74,136.5	94,878.5	119,789.0	148,357.0	180,037.5	25.7%
Connected Medical Devices	16,736.4	20,982.4	25,999.8	31,645.1	38,177.6	45,438.5	53,049.5	60,688.0	18.5%
mHealth Services	18,213.8	25,775.8	36,053.2	49,533.3	67,455.3	90,625.1	119,432.7	154,227.5	33.7%
Total	**67,796.5**	**90,441.3**	**119,472.9**	**155,314.8**	**200,511.4**	**255,852.6**	**320,839.2**	**394,953.0**	**27.0%**

1.2.1 Mhealth Apps

The **mHealth apps** segment accounted for the highest share during the forecast period. This share can be attributed to factors such as increasing penetration & use of smartphones, rising awareness among patients & doctors regarding mHealth apps, and growing demand for home healthcare & the convenience of using healthcare apps. Technological advancements, such as faster processors, improved memory, smaller batteries, and highly efficient open-source operating systems that perform complex functions, have paved the way for medical mHealth apps for professional and personal use.

mHealth apps include **healthcare apps** for patients and **medical apps** for healthcare professionals (Table 3). **Healthcare apps** are mostly used by consumers, that is, patients, for the continuous self-monitoring of vital signs and communicating with physicians for related services. **Medical apps**, on the other hand, are designed for healthcare practitioners. These apps, designed for physicians and nurses, provide a better understanding of medical procedures, and provide medical literature, drug references, highly detailed anatomical models, and related information. They are increasingly preferred by healthcare professionals, as they are handy and provide timely updates on new events in the medical field at a global level. iOS-based applications dominate this market since medical professionals prefer iOS-based smartphones over Android-based ones.

The mobile health apps market is highly fragmented and comprises many healthcare and non-healthcare players. Koninklijke Philips N.V. (Netherlands), Medtronic plc (Ireland), OMRON Healthcare Co., Ltd (Japan), and AirStrip Technologies, Inc. (US) contribute significantly to the global healthcare mobile apps market.

Table 3. Mhealth Apps Market, by Type, 2021–2028 (USD Million)

Type	2021	2022	2023	2024	2025	2026	2027	2028	CAGR (2023-2028)
Healthcare Apps	20,524.3	27,782.5	37,150.6	48,770.2	63,428.8	81,341.2	102,273.0	125,939.6	27.7%
Medical Apps	12,322.1	15,900.7	20,269.3	25,366.3	31,449.8	38,447.8	46,084.0	54,097.9	21.7%
Total	**32,846.3**	**43,683.1**	**57,419.9**	**74,136.5**	**94,878.5**	**119,789.0**	**148,357.0**	**180,037.5**	**25.7%**

Healthcare Apps

Although a majority of the revenue in the mHealth market comes from hardware sales, **healthcare apps** have gained tremendous popularity over the last few years. The smartphone boom, growing focus on self-care management, and heavy investment into the digital health market have propelled the penetration of healthcare apps. Healthcare apps are mostly used for continuously self-monitoring vital signs and communicating with physicians for related services. Other major application areas include fitness/wellness and disease prevention, diagnosis, and treatment.

Mobile apps enable healthcare organizations to connect directly with patients for efficient and quality care. With mobile scheduling, the ability to check wait times in offices and emergency rooms, and mobile prescription refills, mHealth apps ease patient-healthcare organization interaction.

The mobile healthcare apps market is in the introductory phase; however, it is highly fragmented, with an ample number of software-developing companies. Free healthcare apps dominate device-linked and paid healthcare applications in the market. Free access to most smartphone apps is a major factor restraining the market growth for paid apps. Some major players in this market segment are: AirStrip Technologies, Inc. (US), AliveCor Inc. (US), Jawbone (US), Johnson & Johnson (US), Medtronic plc (Ireland), Koninklijke Philips N.V. (Netherlands), OMRON Healthcare Co., Ltd (Japan), Nokia Corporation (Finland), WellDoc Inc. (US), and iHealth Labs, Inc. (US).

Table 4. Healthcare Apps Market, by Type, 2021–2028 (USD Million)

Type	2021	2022	2023	2024	2025	2026	2027	2028	CAGR (2023-2028)
Chronic Care Management Apps	7,757.5	11,140.8	15,760.6	21,827.5	29,865.8	40,183.8	52,867.9	67,944.2	33.9%
General Health & Fitness Apps	5,436.2	6,945.6	8,741.5	10,770.6	13,110.8	15,693.7	18,369.1	21,002.3	19.2%
Medication Management Apps	2,667.6	3,667.3	4,966.3	6,584.0	8,623.5	11,106.8	13,988.0	17,208.5	28.2%
Women's Health Apps	1,734.5	2,305.9	3,019.9	3,871.7	4,903.9	6,108.0	7,439.1	8,850.3	24.0%
Personal Health Record Apps	553.4	694.6	858.6	1,039.2	1,242.5	1,460.9	1,679.6	1,886.3	17.0%
Other Healthcare Apps	2,374.9	3,028.3	3,803.7	4,677.3	5,682.2	6,788.0	7,929.3	9,048.0	18.9%
Total	**20,524.3**	**27,782.5**	**37,150.6**	**48,770.2**	**63,428.8**	**81,341.2**	**102,273.0**	**125,939.6**	**27.7%**

Chronic diseases account for a significant share of the current healthcare expenditure. Nearly three-quarters of the total medical expenditure across the globe are spent on the management and treatment of chronic illnesses, such as cardiac arrhythmia, hypertension, ischemic diseases, sleep apnea, **diabetes**, hyperlipidemia, asthma, and COPD. Chronic disease

management apps offer a novel way to utilize mHealth to help patients better manage their health. For example, remote monitoring devices use apps that help patients record their health status and instantaneously send images or information to physicians. This negates the need for a visit to the physician's office, allows time for physicians to interact with other patients or perform care-related activities, and ultimately reduces the costs involved.

Chronic care management apps include apps for mental health and behavioral disorders, **diabetes management**, blood pressure and ECG monitoring, cancer management and other chronic disorders (Table 5).

Table 5. Chronic Care Management Apps Market, by Type, 2021–2028 (USD Million)

Type	2021	2022	2023	2024	2025	2026	2027	2028	CAGR (2023-2028)
Mental Health & Behavioral Disorder Management Apps	3,333.5	4,801.7	6,811.8	9,458.4	12,972.6	17,492.7	23,060.6	29,691.1	34.2%
Diabetes Management Apps	1,839.9	2,673.8	3,826.7	5,360.6	7,417.4	10,090.6	13,420.3	17,432.0	35.4%
Blood Pressure & ECG Monitoring Apps	957.1	1,381.5	1,963.8	2,732.4	3,755.2	5,074.1	6,702.9	8,647.8	34.5%
Cancer Management Apps	826.8	1,180.9	1,661.2	2,287.2	3,110.5	4,159.0	5,436.7	6,940.9	33.1%
Other Chronic Care Management Apps	800.3	1,102.9	1,497.1	1,988.9	2,610.0	3,367.4	4,247.4	5,232.4	28.4%
Total	**7,757.5**	**11,140.8**	**15,760.6**	**21,827.5**	**29,865.8**	**40,183.8**	**52,867.9**	**67,944.2**	**33.9%**

Endocrine disorders such as **diabetes mellitus**, impaired fasting glucose, and impaired glucose tolerance require continuous glucose monitoring. Amidst the growing prevalence of diabetes, there is an increasing need to reduce diabetes management-related expenditure as well. mHealth apps are seen to greatly help reduce the overall expenditure of diabetes management by enabling the continuous tracking of blood glucose levels.

The main apps offered by key players are reported in the following Table.

Table 6. Diabetes Management Apps Offered by Key Market Players

COMPANY NAME	PRODUCT
BHI Technologies, Inc. (Japan)	▪ Diabetes App Lite
Abbott Laboratories (US)	▪ FreeStyle Libre Link
WellDoc, Inc. (US)	▪ BlueStar
Glooko Inc. (US)	▪ Glooko Logbook
AgaMatrix, Inc. (US)	▪ WaveSense Diabetes Manager ▪ WaveSense JAZZ WIRELESS blood glucose monitor ▪ AgaMatrix Diabetes Manager App
Azumio Inc. (US)	▪ Glucose Buddy
Coheso (US)	▪ TRACK3
iHealth Labs, Inc. (US)	▪ iHealth Align ▪ iHealth Gluco-Smart ▪ iGluco Pro
Diabeto Inc. (US)	▪ MyDiabeto

General health & fitness apps include fitness & nutrition, health tracking, and obesity & weight management apps. Currently, numerous fitness apps, such as MyFitnessPal, 7 minute workout app, MyPlate, 8 Fit, Fitbit Coach, LifeSum, and Keelo, are available in the market and enable patients to maintain virtual logs of nutrition, exercise habits, and day-to-day movements. The growth in this market is mainly driven by the increasing awareness of the benefits of maintaining healthy lifestyles. In addition, the lower price range of the app, as compared to the actual fees of workout training centers, encourages many users to adopt this technology. Furthermore, the increasing penetration of smartphones and the availability of better network connectivity have boosted the growth of this market in developing countries.

Women's health apps comprise a variety of apps for monitoring pregnancy status, tracking menstrual cycles & ovulation to predict fertile times, and receiving women-oriented exercise tips. Some popular women's health apps include period trackers, pregnancy monitoring apps, and fetal heart rate monitoring apps. The rapid adoption of smartphones and the increasing prevalence of chronic diseases in women are key factors driving the greater adoption of women's health apps globally. Changing lifestyles among working women, resulting in complications during pregnancy, have boosted the need for these apps. According to WHO, almost 800 women died from preventable causes related to pregnancy and childbirth every day in 2020. Apps in the market include Glow Ovulation-Period Tracker, nurx - Birth Control Pills, and Clue Period & Health Tracker. Significant growth in the usage of mobile-linked healthcare services among women worldwide, especially in developing regions such as Latin America and Southeast Asia, will contribute to the growth of the women's health apps market during the forecast period.

Personal Health Record Apps help patients communicate with doctors, view scheduled appointments, view lab and test results, and renew prescriptions without any hassles of hospital or clinic visits. PHR includes basic information such as the patient's primary care; doctor's name and phone number; drug allergies; medications with dosages; chronic health problems; and major surgeries with dates, family history, and immunization history. These apps can easily share patient information with pharmacists and doctors when required. Payer or insurance-based PHRs allow patients to view claims data already in their database. MyHealthRecord, Capzule PHR, and Medelinked Personal Health Record are major personal health record apps in the market.

Other healthcare apps include apps designed for tracking different parameters, such as sleep, dermatological, and emergency response (vital tracking). Sleep monitoring apps help patients track their sleep patterns through continuous monitoring of sleep habits. The app can have different functionalities, such as tracking breathing, heart rate monitoring, bed movement, and musical therapy. Sleep cycle monitoring apps are also gaining popularity.

With the help of dermatological treatment apps, users can take pictures of any skin problem, describe their symptoms, and send them to a certified dermatologist. The dermatologist can then send a personalized treatment plan to a patient, with the appropriate prescriptions filed digitally with the nearest pharmacy. Some apps analyze pictures of skin lesions to determine if the lesion is suspicious and, if so, suggest a follow-up with a dermatologist. Such apps help reduce waiting times in clinics and hospitals and enable patients to receive immediate treatment for the disease. The growing focus on skin aesthetics and health, in addition to the low cost of these apps, is driving the growth of this market. Some major skin treatment apps available in the market include Ultraviolet ~ UV Index, VisualDx, SPF, iSore, SpotMole, App Derm Connect, First Derm, Skin Scan, i-Derm, and iRASH.

Medical Apps

Medical apps are specifically designed for healthcare practitioners, including doctors, physicians, nurses, and other healthcare providers. Various government initiatives towards improving the accessibility and availability of patient information and the growing need to improve the quality of care delivered to patients are key factors driving the adoption of medical apps among healthcare professionals. The growing adoption of smartphones among healthcare professionals

is expected to further contribute to the growth of the medical apps market during the forecast period. This market comprises apps for medical reference, continuing medical education, communication and consulting, and patient management and monitoring (Table 7). Major players in this market include athenahealth (US), Apple Inc. (US), Google (US), iHealth Labs (US), Microsoft (US), Qualcomm (US), and Quest Diagnostics (US). Some of the major mobile medical apps by leading players include athenaClinicals mobile, Epocrates, Mayo Clinic, Happtique, mRemedy, Medscape Mobile, iRadiology, Nursing Central, Care360 Mobile, STAT ICD-9 LITE, Netter's Atlas of Human Anatomy and EMR apps.

Table 7. Medical Apps Market, by Type, 2021–2028 (USD Million)

Type	2021	2022	2023	2024	2025	2026	2027	2028	CAGR (2023-2028)
Patient Management & Monitoring Apps	6,048.1	7,839.0	10,035.0	12,609.2	15,693.6	19,256.2	23,161.4	27,279.3	22.1%
Medical Reference Apps	3,490.3	4,436.3	5,569.1	6,862.3	8,375.7	10,078.2	11,887.6	13,730.2	19.8%
Communication & Consulting Apps	2,014.5	2,655.4	3,457.2	4,418.0	5,592.3	6,978.6	8,536.9	10,225.9	24.2%
Continuing Medical Education Apps	769.2	969.9	1,208.0	1,476.8	1,788.2	2,134.7	2,498.1	2,862.6	18.8%
Total	**12,322.1**	**15,900.7**	**20,269.3**	**25,366.3**	**31,449.8**	**38,447.8**	**46,084.0**	**54,097.9**	**21.7%**

1.2.2 Connected Medical Devices

A **connected medical device** is a technical combination of a medical device and a mobile platform. These devices capture health-related data that can easily be transferred to handheld mobile devices. Connected medical devices combine existing consumer electronics devices with application-specific sensors and specialized algorithms to create personal devices used by patients, medical professionals, and consumers to improve personal health. The smartphone boom and increasing inclination towards self-health management have propelled the use of connected medical devices for patient monitoring.

The increasing prevalence of chronic diseases, which has resulted in increased FDA clearances for mobile medical devices over the years, is driving market growth for connected medical devices. Some of the major developments in this segment are listed below:

- In February 2023, Dexcom, Inc. (US) launched Dexcom G6 CGM System in Singapore for people with diabetes ages two years and older, including pregnant women.
- In November 2022, Medtronic (Ireland) launched its InPen with Real-Time Guardian, the first integrated smart insulin pen for people with diabetes on MDI.
- In October 2022, Dexcom, Inc. (US) launched Dexcom G7 Continuous Glucose Monitoring (CGM) System in the UK, Ireland, Germany, Austria, and Hong Kong.
- In March 2021, Roche (Ireland) launched the Accu-Chek Instant system, a connected blood glucose monitoring (BGM) system that supports integrated personalized diabetes management.

The connected medical devices segment is categorized into: **vital signs monitoring devices, peak flow meters, neurological monitoring devices, sleep apnea monitors, multiparameter trackers, fetal monitoring devices and others** (Table 8). The vital signs monitoring devices segment accounted for the largest share of the connected medical devices market in 2023. This is mainly due to the growing adoption of digital healthcare solutions for monitoring vital signs and the increasing incidence of cardiovascular diseases, the high prevalence of diabetes and the rising number of patients suffering from asthma, hypertension, and hypotension.

Table 8. Connected Medical Devices Market, by Type, 2021–2028 (USD Million)

Type	2021	2022	2023	2024	2025	2026	2027	2028	CAGR (2023-2028)
Vital Signs Monitoring Devices	12,804.5	16,198.4	20,246.6	24,848.9	30,219.5	36,244.7	42,629.7	49,115.5	19.4%
Peak Flow Meters	975.2	1,175.0	1,398.8	1,635.1	1,893.8	2,163.3	2,423.4	2,659.2	13.7%
Sleep Apnea Monitors	893.7	1,070.1	1,266.0	1,470.8	1,693.1	1,922.1	2,139.9	2,333.7	13.0%
Multiparameter Trackers	873.3	1,091.1	1,346.8	1,632.5	1,960.7	2,322.5	2,697.7	3,069.6	17.9%
Fetal Monitoring Devices	488.5	608.5	748.8	904.9	1,083.5	1,279.4	1,481.6	1,680.7	17.5%
Neurological Monitoring Devices	441.2	524.6	616.1	710.6	812.1	915.3	1,011.7	1,095.4	12.2%
Other Connected Medical Devices	259.9	314.7	376.5	442.3	514.9	591.1	665.5	733.9	14.3%
Total	**16,736.4**	**20,982.4**	**25,999.8**	**31,645.1**	**38,177.6**	**45,438.5**	**53,049.5**	**60,688.0**	**18.5%**

1.2.3 Mhealth Services

Services are an indispensable component of the mHealth solutions market. Mobile health services play a key role in helping patients with chronic conditions. The rising global adoption of smartphones, high-speed network availability, and the demand for remote patient monitoring and consultation are key to the market growth. Other factors driving the market growth are the rising global prevalence of chronic diseases, emerging applications of mHealth services, and increasing demand for patient-centric healthcare delivery.

Prominent players offering mHealth services include: Apple, Inc. (US), Symantec Corporation (US), AT&T, Inc. (US), AirStrip Technologies, Inc. (US), Koninklijke Philips N.V. (Netherlands), Quest Diagnostics (US), Honeywell Life Care Solutions (US), Apollo TeleHealth Services (India), Advanced TeleHealth Solutions (US), Allscripts (US), Medtronic, plc (Ireland), Vodafone Group Plc. (UK) and Cerner Corporation (US).

Table 9. Mhealth Services Market, by Type, 2021–2028 (USD Million)

Type	2021	2022	2023	2024	2025	2026	2027	2028	CAGR (2023-2028)
Remote Monitoring Services	12,180.8	17,295.5	24,260.2	33,409.1	45,582.6	61,327.2	80,902.9	104,534.8	33.9%
Diagnosis & Consultation Services	2,548.8	3,711.7	5,339.7	7,541.6	10,553.1	14,561.8	19,701.8	26,108.5	37.4%
Treatment Services	1,689.0	2,319.8	3,147.5	4,192.7	5,533.3	7,201.0	9,188.8	11,484.4	29.5%
Healthcare System Strengthening Services	880.7	1,159.9	1,509.1	1,927.5	2,439.3	3,043.9	3,724.5	4,463.6	24.2%
Fitness & Wellness Services	774.4	1,108.4	1,567.1	2,175.4	2,991.9	4,057.6	5,395.8	7,027.8	35.0%
Prevention Services	140.1	180.4	229.6	286.9	355.2	433.6	519.0	608.4	21.5%
Total	**18,213.8**	**25,775.8**	**36,053.2**	**49,533.3**	**67,455.3**	**90,625.1**	**119,432.7**	**154,227.5**	**33.7%**

1.3 Market Segmentation by End User

Based on end users, the mHealth solutions market is segmented into: **providers, payers, patients/consumers and other end users** (Table 10). **Providers** are expected to hold the largest share of the mHealth solutions market. This end-user segment is expected to grow at a significant CAGR of 29.0% during the forecast period. The high growth can be attributed to the availability of portable special-purpose technologies and the potential to reach patients in remote areas, thereby reducing hospital readmission rates. **Patients/consumers** held the second-largest share of the mHealth solutions market in 2023.

Table 10. Mhealth Solutions Market, by End User, 2021–2028 (USD Million)

End User	2021	2022	2023	2024	2025	2026	2027	2028	CAGR (2023-2028)
Providers	23,585.6	31,991.9	42,956.5	56,743.5	74,412.5	96,419.2	1,22,742.6	1,53,340.8	29.0%
Patient/ Consumers	20,352.4	27,025.2	35,523.6	45,937.1	58,972.9	74,804.8	93,222.5	1,14,009.8	26.3%
Payers	14,499.0	19,444.9	25,814.8	33,715.5	43,715.3	56,004.8	70,490.6	87,069.8	27.5%
Other End Users	9,359.4	11,979.4	15,178.0	18,918.8	23,410.8	28,623.7	34,383.5	40,532.6	21.7%
Total	**67,796.5**	**90,441.3**	**1,19,472.9**	**1,55,314.8**	**2,00,511.4**	**2,55,852.6**	**3,20,839.2**	**3,94,953.0**	**27.0%**

The **provider segment** includes healthcare providers such as individual physicians, physician groups, hospitals, clinics, and other healthcare facilities that offer mHealth solutions. The adoption of mHealth solutions by providers has increased significantly. mHealth solutions providers utilize portable special-purpose technologies, from connected portable machines to a complete suitcase option (a doctor's suitcase with mobile health sensors, examination tools, two-way video communications, and a HIPAA-compliant platform) to an independent cart or a kiosk setting. These solutions enable providers to communicate seamlessly throughout healthcare delivery beyond traditional healthcare settings. Moreover, these solutions help exchange data, reach patients in remote areas, and reduce hospital readmissions by enabling close monitoring of patients.

The provider can upgrade and optimize existing hardware for the desired tele-specialty provision. In addition to saving the physician's time, mHealth helps prevent waste (or unnecessary usage) of resources such as medication, devices, and other accessories. It also enables healthcare facilities to expand their reach to newer patients in rural locations. The easy availability of mobile phones has extended even to low and middle-income countries. Thus, most diseases and chronic conditions can be virtually screened globally. Chronic diseases demand frequent hospital visits, regular check-ups, and multiple lifestyle changes deemed necessary by a physician. mHealth can help efficiently influence the patient's awareness of their condition, lifestyle interventions, clinical decisions, medication adherence, screening regimens, and rehabilitation support. Individuals suffering from chronic diseases have sought mHealth as a convenient and affordable approach to managing their disease. Owing to these factors, the market for providers in the mHealth solutions space is growing steadily.

Patients increasingly rely on mHealth solutions and apps to make appointments, communicate with doctors, schedule follow-up visits, and request prescription refills. These functions are achievable through smartphones and the internet and greatly extend the reach of both patients and physicians for better health management. Additionally, they help reduce hospital readmissions and overall healthcare costs. The overall outlook for telehealth and mHealth has received a boost from advancements in wearable devices and the implementation of AI, particularly in remote monitoring services in personalized patient care. AI-based patient management platforms by companies like Current Health (UK), Feebris (UK), and Myia Health (US) continuously monitor multiple parameters by generating a digital health ecosystem of connected

devices. Wearable patient monitoring systems such as Wearable Biosensors (Koninklijke Philips, Netherlands) continuously track vital signs, body posture, step count, and even detect falls. Patients are more likely to wear these devices and stay under medical surveillance than visit a health facility frequently.

Moreover, the rising geriatric population worldwide is expected to increase the number of patients relying on mHealth solutions. For elderly patients, mHealth provides simpler and more convenient options for visiting doctors/professionals in person, thus reducing the need to travel and ensuring the availability of care and consultation at home. This also works in favor of the chronic disease population. However, the elderly may refuse to avail themselves of mHealth services due to unfamiliarity with technology and infrastructure. The lack of awareness is another challenging factor for this market segment.

Payers include private and public insurance bodies like the Centers for Medicare & Medicaid Services (US), Aetna (US), Blue Cross Blue Shield (US), Humana (US), Cigna (US), Anthem (US) and United Healthcare (US). This industry is witnessing changes in legislation, competition, and market segments. Healthcare payers require solutions to reduce patient readmissions and overhead costs, minimize paper trails, and improve member services. This has proven favorable to clinical-grade mHealth solutions. Different payers (both private and public) may have different reimbursement eligibility criteria, such as the location of the care sites, clinical area, geography, practitioner type, and parity. Parameters concerning physicians are evaluating service standards, considerations about crossborder practices, the scope for remote prescriptions, clinical protocols for virtual care, and policies for obtaining informed consent from the patients.

Other end user segment includes **employer groups** and **government bodies**. Many companies have initiated wellness programs to assess the health of their employees and prevent complications. Companies use health risk assessments (HRAs) to track their employee health and ask employees to fill out HRA questionnaires as part of their wellness programs. Employer groups can log in, choose a doctor, and connect anywhere & anytime. Additionally, they can request prescriptions within minutes, saving time and money. Rising digital health interventions to monitor and improve patient treatment, increasing government initiatives worldwide to improve the quality of care and patient safety, and the surging usage of big data and analytics in research and medical studies are driving the adoption of mHealth solutions by other end users. Government organizations are actively adopting mHealth solutions and services to manage the growing patient volume, support practitioners, build a national health services directory, document health best practices, and explore the potential of mHealth solutions for a coordinated response from care settings during outbreaks. Owing to this, government organizations are mainly adopting infrastructure and network strengthening services and other mHealth solutions and services for procuring and delivering integrated patient-centered services.

1.4 Market Segmentation by Region

The mhealth solution market by region has been segmented into: **North America, Europe, Asia Pacific, Latin America and Middle East and Africa** (Table 11). In 2023, **North America** accounted for the largest share of the mHealth solutions market, followed by Europe, the Asia Pacific, Latin America and the Middle East & Africa. The large shares of **North America** and **Europe** in the global mHealth solutions market can be attributed to the high penetration of smartphones, tablets, and other mobile platforms; the increasing utilization of connected devices & mHealth apps for the management of chronic diseases; the development & adoption of innovative technologies; rising government initiatives; and the presence of major companies in these regions.

The **Asia Pacific** and **Latin America** offer lucrative growth opportunities for market players, mainly due to the growing government initiatives and the increasing incidence of lifestyle disorders. The growth in these markets will likely be centered in India, China, South Korea, Australia, Singapore, Brazil, Argentina, Saudi Arabia, the UAE, and Mexico. This is mainly due to the rising prevalence of chronic disorders, increasing per capita income, higher adoption of smartphones, and the presence of advanced connectivity and networks in these countries.

Table 11. Mhealth Solutions Market, by Region, 2021–2028 (USD Million)

Region	2021	2022	2023	2024	2025	2026	2027	2028	CAGR (2023-2028)
North America	26,283.3	34,710.1	45,354.2	58,270.1	74,278.3	93,495.4	1,15,540.1	1,40,018.4	25.3%
Europe	18,953.0	25,150.1	33,028.7	42,659.3	54,679.7	69,223.0	86,057.6	1,04,938.8	26.0%
Asia Pacific	17,415.7	23,851.3	32,380.4	43,304.2	57,566.6	75,703.8	97,917.5	1,24,416.4	30.9%
Latin America	3,669.1	4,811.3	6,241.4	7,960.1	10,071.4	12,581.1	15,428.2	18,551.3	24.3%
Middle East & Africa	1,475.4	1,918.6	2,468.1	3,121.2	3,915.5	4,849.4	5,895.7	7,028.1	23.3%
Total	**67,796.5**	**90,441.3**	**1,19,472.9**	**1,55,314.8**	**2,00,511.4**	**2,55,852.6**	**3,20,839.2**	**3,94,953.0**	**27.0%**

1.4.1 Focus on: Europe

In 2022, **Europe** accounted for 27.8% of the global mHealth solutions market. Government efforts to improve healthcare coverage & streamline healthcare delivery using eHealth technologies across European countries, increasing adoption of health and wellness apps and wearable devices, and rapidly increasing aging population and the subsequent rise in the incidence of chronic diseases are the major factors driving the growth of the mHealth market in Europe. The fastest-growing markets in the European region include the UK, Germany, France, Spain, and Italy. The rising adoption of mHealth apps by doctors, the high level of digitization in hospitals, the large number of potential users for smartphones and apps, government funds, and the willingness of patients to pay for apps and services are likely to change the industry's dynamics.

Due to the rising incidence of chronic diseases, growth in the aging population, and rising affluence, Europe is expected to be the leading market for mHealth solutions in the coming years. According to the World Economic Forum, the European Union and other regions across the globe are expected to face challenges due to a growing geriatric population this century. As the elderly are more susceptible to various diseases, the growth in the aging population in Europe is expected to increase the disease burden on the healthcare system in the region. This, in turn, will lead to an increase in the overall healthcare expenditure in Europe. Mobile healthcare apps and solutions will help to curtail overall healthcare costs and improve personalized healthcare.

The **European market segmentations by country, by product & service and by type** are reported in the following Tables.

Table 12. Europe: Mhealth Solutions Market, by Country, 2021–2028 (USD Million)

Country/ Region	2021	2022	2023	2024	2025	2026	2027	2028	CAGR (2023-2028)
Germany	3,858.9	5,183.5	6,888.5	9,000.2	11,666.3	14,931.3	18,760.5	23,113.9	27.4%
UK	3,205.4	4,276.5	5,644.7	7,325.2	9,430.8	11,988.2	14,960.5	18,307.0	26.5%
France	2,798.9	3,726.3	4,908.3	6,356.2	8,166.3	10,359.2	12,900.7	15,753.7	26.3%
Italy	1,733.4	2,217.0	2,805.4	3,490.1	4,307.5	5,249.1	6,279.7	7,366.6	21.3%
Spain	1,331.4	1,680.2	2,097.7	2,574.8	3,135.4	3,769.8	4,449.7	5,150.1	19.7%
Rest of Europe	6,025.0	8,066.5	10,684.2	13,912.8	17,973.4	22,925.4	28,706.6	35,247.5	27.0%
Total	**18,953.0**	**25,150.1**	**33,028.7**	**42,659.3**	**54,679.7**	**69,223.0**	**86,057.6**	**1,04,938.8**	**26.0%**

**The Rest of Europe includes Finland, Sweden, Switzerland, Turkey, the Netherlands, Norway, Poland, Portugal, Romania, Denmark, Estonia, Austria and Belgium*

Table 13. Europe: Mhealth Solutions Market, by Product & Service, 2021–2028 (USD Million)

Product/Service	2021	2022	2023	2024	2025	2026	2027	2028	CAGR (2023-2028)
mHealth Apps	9,243.4	12,251.5	16,042.4	20,622.8	26,263.3	32,976.0	40,588.1	48,916.1	25.0%
Connected Medical Devices	4,772.2	5,960.9	7,355.4	8,909.9	10,691.6	12,648.4	14,667.6	16,653.7	17.8%
mHealth Services	4,937.3	6,937.6	9,631.0	13,126.5	17,724.7	23,598.6	30,801.8	39,369.0	32.5%
Total	**18,953.0**	**25,150.1**	**33,028.7**	**42,659.3**	**54,679.7**	**69,223.0**	**86,057.6**	**1,04,938.8**	**26.0%**

Table 14. Europe: Chronic Care Management Apps Market, by Type, 2021–2028 (USD Million)

Type	2021	2022	2023	2024	2025	2026	2027	2028	CAGR (2023-2028)
Mental Health & Behavioral Disorder Management Apps	917.0	1,317.1	1,862.4	2,576.3	3,518.5	4,721.5	6,190.4	7,921.4	33.6%
Diabetes Management Apps	523.3	757.4	1,079.0	1,503.7	2,068.7	2,796.2	3,692.5	4,758.6	34.6%
Blood Pressure & ECG Monitoring Apps	270.3	388.5	549.7	760.9	1,039.7	1,395.9	1,830.8	2,343.3	33.6%
Cancer Management Apps	235.6	335.5	470.3	644.9	873.0	1,161.3	1,509.3	1,914.5	32.4%
Other Chronic Care Management Apps	244.2	335.3	453.4	599.7	783.0	1,004.5	1,259.1	1,540.3	27.7%
Total	**2,190.4**	**3,133.8**	**4,414.8**	**6,085.5**	**8,282.9**	**11,079.5**	**14,482.1**	**18,478.2**	**33.2%**

1.5 Competitive Landscape

The **leading players** in the market include: Koninklijke Philips N.V. (Netherlands), Medtronic plc (Ireland) and OMRON Healthcare Co., Ltd. (Japan).

Other players include: Johnson & Johnson (US), Cerner Corporation (US), Apple, Inc. (US), AliveCor, Inc. (US), AirStrip Technologies (US), athenahealth, Inc. (US), iHealth Labs Inc. (US), AT&T Inc. (US), AgaMatrix, Inc. (US), Cisco Systems, Inc. (US), Fitbit Inc. (US), OSP Labs (US), SoftServe (US), Garmin, Ltd. (US), Dexcom, Inc. (US), Tunstall Healthcare (UK), Teladoc Health, Inc. (US), ZTE Corporation (China), and My mHealth Limited (UK). In the past few years, several smaller players have emerged from niche markets and are competing with global players based on price and technological innovation. Due to the intense competition in the market, major market players are increasingly focusing on strengthening their technological competitiveness by acquiring smaller players with the desired technological capabilities or target customer groups. Market players also focus on acquiring local players to expand their portfolios and enhance their distribution channels in regional markets.

The main **European players** active in the market are further described in the Table below.

Table 15. European Players in the Mhealth Solutions Market

Company	Location	Description	Website
AgaMatrix	Germany	Develops and sells biosensors and blood **glucose monitoring** systems. The company's product offerings include glucose meters for diabetes management and the AgaMatrix Diabetes Manager, a data management software that tracks glucose, insulin, carbs, and weight. The company also offers its WaveSense diabetes management app, which personalizes each test with high accuracy, and Zero-Click, a data management software for diabetes data management	AgaMatrix | Innovative Products for Diabetes Care
Koninklijke Philips	The Netherlands	One of the leading companies in the healthcare sector with a strong presence in cardiac care, acute care and home healthcare. The company offers mHealth solutions through its Connected Care segment. It also provides mHealth apps for medical professionals and patients	Global home | Philips
Medtronic	Ireland	The company offers various innovative products and therapies to treat chronic diseases related to cardiac, **diabetic**, neurological, and spinal conditions. The company's main offering for mHealth solutions and services includes remote monitoring, patient-centered software solutions, and connected devices for tracking the health status of patients with chronic diseases, such as diabetes	Global Healthcare Technology Leader | Medtronic (Ireland)
My mHealth	UK	UK-based team of doctors, engineers, product designers, and digital health advocates creating digital therapeutics and services that help people with COPD, heart disease, asthma, **diabetes** and cancer	Digital therapeutics for long-term conditions
Tunstall Healthcare	UK	Technology company specializing in digital health and care services. The company specializes in telecare, telehealth, assisted living, response & monitoring and managed services	Home

2 Sources

MarketsandMarkets Knowledge Store - Multisectoral database that collects market research reports in various technological fields and designed to process some information interactively. More than 1,200 market reports are published each year (https://www.mnmks.com/). The information presented are contained in the report "*mHealth Solutions Market – Forecast to 2028*", published in March 2023.