

BECAUSE YOU ARE THE HEART OF THE MATTER

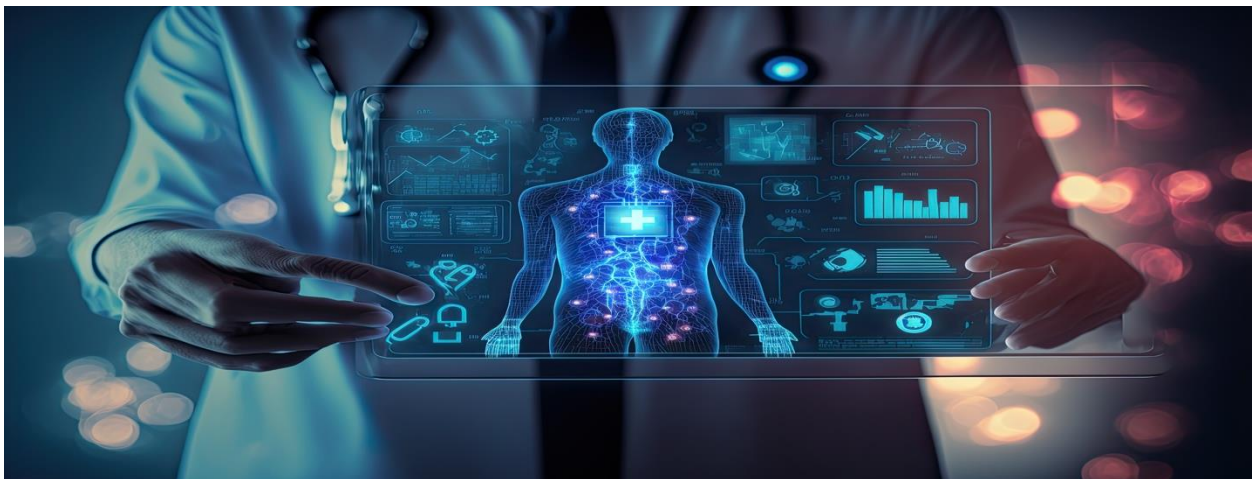


Coordinating, Counseling, Coaching and Caring



THE OPPORTUNITY:

- Increasing quality patient outcomes,
- Generating a new revenue stream and,
 - Reducing costs



Cardio patient monitoring using Artificial Intelligence

The Problem

According to the Centers for Disease Control, heart disease and stroke kills more than 944,800 Americans every year that is more than 1 in 3 deaths.¹ These diseases take an economic toll, as well, costing our health care system \$254 billion per year and causing \$168 billion in lost productivity on the job.² Costs from cardiovascular diseases are projected to hit roughly \$2 trillion by 2050.³

Further, the CDC reports:

- Half of U.S. adults have high blood pressure, or hypertension, a preventable and treatable risk factor for heart disease and stroke.
- High blood pressure is one of our nation's costliest health conditions.
- CDC supports the use of evidence-based interventions, including self-measured blood pressure monitoring, team-based care, community health workers, and pharmacy-based interventions to help people manage their blood pressure.

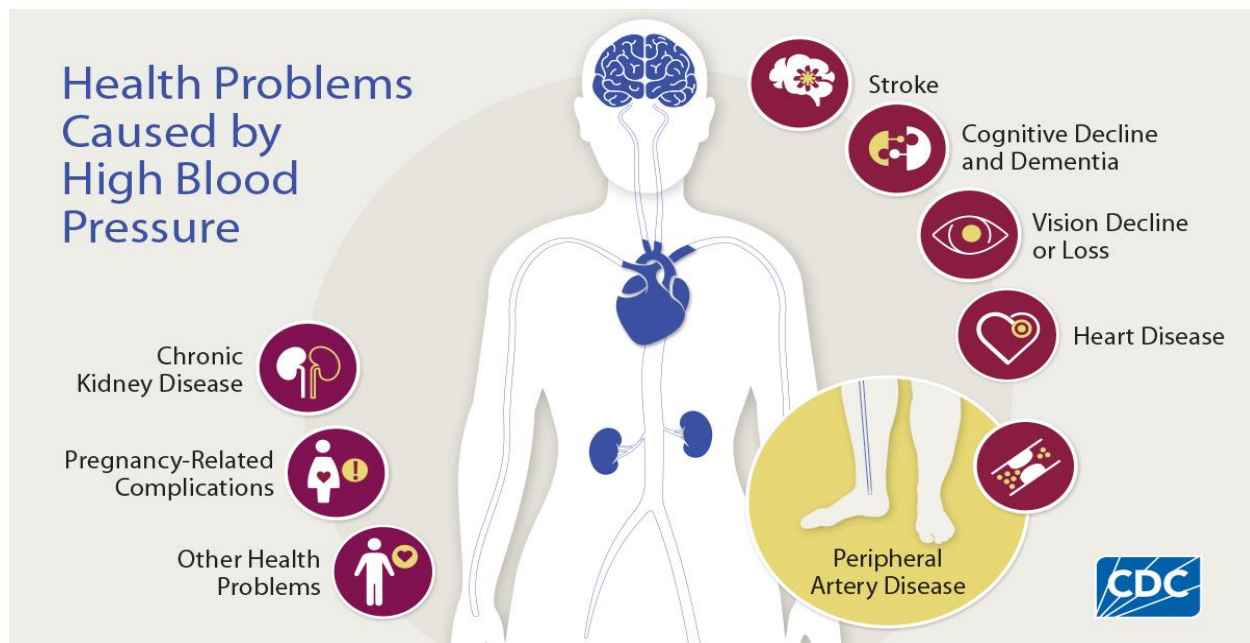
High blood pressure in the United States

High blood pressure, defined as having a blood pressure reading of 130/80 mm Hg or higher, is a dangerous condition and key risk factor for heart disease and stroke. Healthy lifestyle behaviors—like eating a diet high in fruits and vegetables and low in sodium and being physically active—can help prevent high blood pressure.

About High Blood Pressure

KEY POINTS

- High blood pressure (hypertension) is consistently at or above 130/80 mm Hg.
- High blood pressure typically has no signs or symptoms but can cause problems for your heart, brain, kidneys, and eyes.
- No matter your age, you can take steps each day to keep your blood pressure in a healthy range.



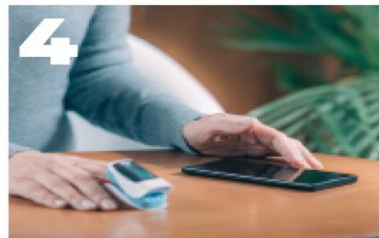
- Nearly half of U.S. adults (119.9 million) have high blood pressure, and most of them (94.9 million) are recommended lifestyle modifications and prescription medication. ⁴
- 3 in 4 adults with high blood pressure (92 million) do not have it under control, defined as less than 130/80 mm Hg.⁵
- High blood pressure rates vary by race and ethnicity. Over half (58%) of non-Hispanic Black adults, 49% of non-Hispanic White adults, 45% of non-Hispanic Asian adults, and 39% of Hispanic adults in the United States have high blood pressure.¹
- Increasing the use of self-measured blood pressure monitoring, where people with high blood pressure check their own blood pressure regularly and share this information with their health care provider has been viewed a successful strategy. ^{6, 7}
- The high cost of high blood pressure – Annual costs associated with high blood pressure were an estimated \$219 billion in the effective chronic care management tool. United States in 2019 reports the CDC. Because it affects so many Americans, it is one of our nation’s costliest health conditions

What is remote patient monitoring (RPM)

- This service is a form of telehealth that provides the platform for medical professionals to monitor and manage their patients' chronic and acute conditions. RPM is an element of digital therapeutics including the coined remote therapeutics monitoring (RTM). This is typically done through RPM devices like wearables, continuous glucose monitors and heart monitors, among others. It's been a largely untapped market in the virtual care space mainly due to the lack of sufficient data and research around the technology. However, the recent pandemic saw payers like Medicare, Medicaid and some commercial insurers add it to their reimbursement list. The popularization of telehealth and the emerging data backing up its use as a viable mode of care.

**TYPES OF RPM
DEVICES INCLUDE:**

1. Continuous glucose monitors
2. Blood pressure monitors
3. Spirometers
4. Pulse oximeters
5. Wearables (activity trackers, fitness trackers)



How does remote patient monitoring work?

The devices are used remotely, outside of the medical facility to track the patients' health data (heart rate, heart rhythm, glucose levels, etc). The device then sends that data to their care provider in real-time or the patient can upload their data to their patient portal.



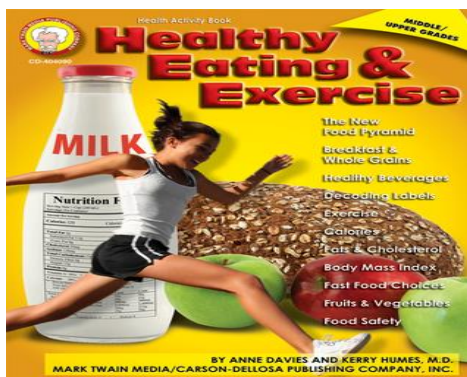
PATIENT



RPM device tracks data



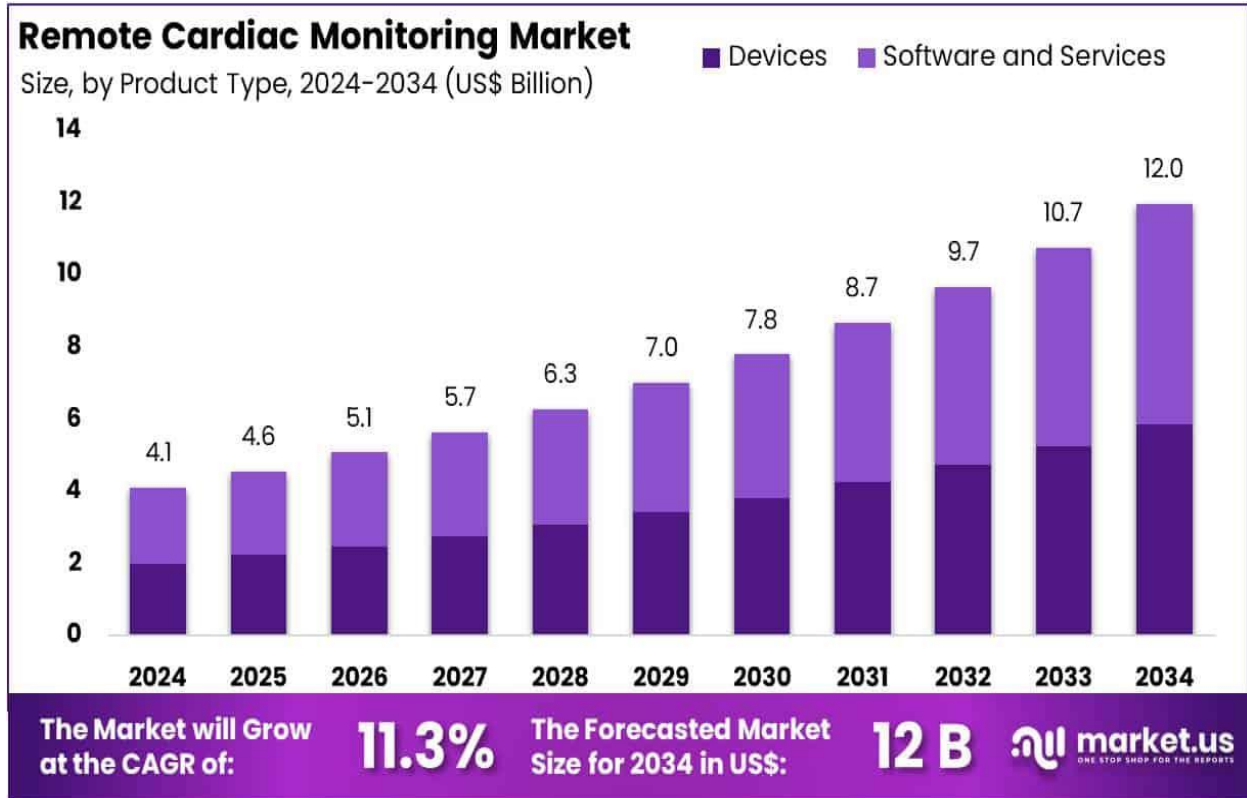
Data reviewed by Medical



Assessment & Recommendation

Market projections

The market size is expected to be worth \$12 billion by 2034 having grown from \$4 billion in 2024.



- In 2024, the devices segment took the lead in the global market, securing 49% of the total revenue share.
- The hospitals and clinics segment took the lead in the global market, securing 45% of the total revenue share.

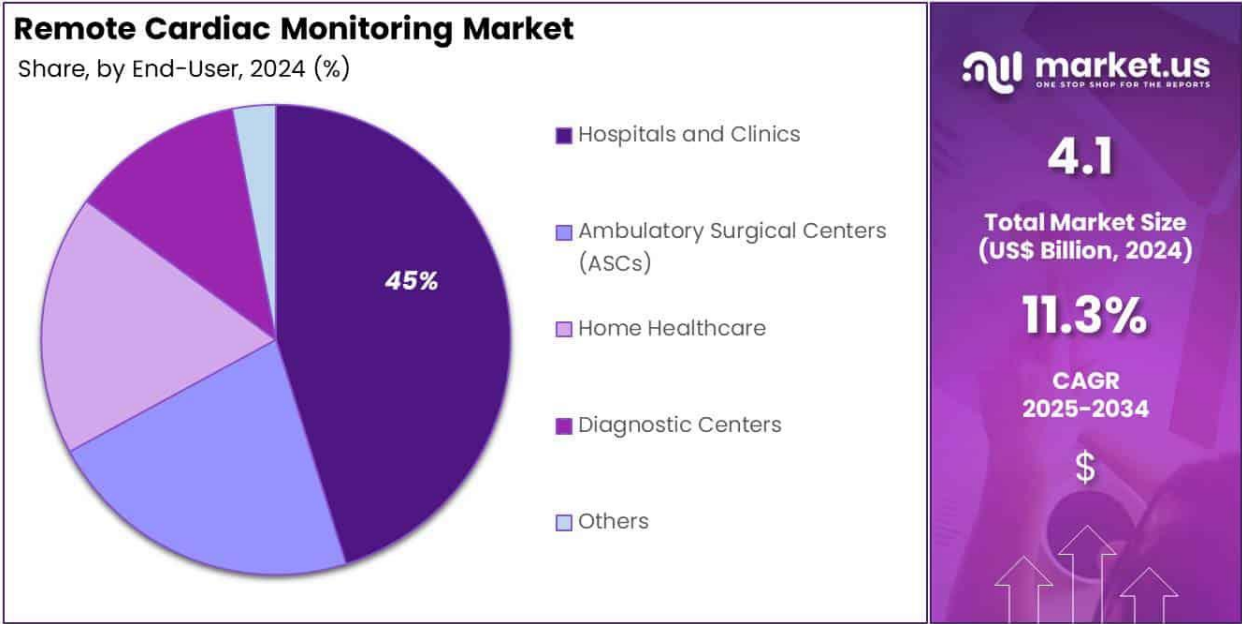
North America maintained its leading position in the global market with a share of over 47% of the total revenue.

Drivers - Rising Prevalence of Cardiovascular Diseases

The rising prevalence of cardiovascular diseases (CVDs) is significantly driving the growth of the Remote Cardiac Monitoring Market. The increasing incidence of conditions such

as arrhythmias, heart failure, and coronary artery diseases has heightened the need for continuous cardiac monitoring.

Remote cardiac monitoring offers real-time, non-invasive tracking of heart activity, enabling early detection of irregularities and timely medical intervention. Factors such as sedentary lifestyles, unhealthy dietary habits, and the growing aging population further exacerbate the prevalence of CVDs, creating a robust demand for remote solutions.



Trends

The global remote cardiac monitoring market is witnessing several key trends driven by technological advancements and shifting healthcare priorities. Wearable technology has emerged as a prominent trend, with smartwatches and fitness trackers integrating advanced cardiac monitoring features like ECG and heart rate variability analysis, increasing user engagement and accessibility.

AI and machine learning are transforming remote cardiac monitoring by enabling predictive analytics, real-time alerts, and personalized care, improving early detection and management of cardiovascular diseases. The adoption of cloud-based platforms for data storage and seamless integration with [electronic health records](#) (EHRs) is enhancing remote monitoring efficiency.

Recorded success records

Remote Patient Monitoring systems are revolutionizing healthcare with VIRTUAL CARE MANAGEMENT programs, that manage patients through ongoing monitoring of physiological variables like blood pressure and managers their care in accordance with a care plan. The results documents that not only improves patients’ health outcomes and provides reimbursable revenue for physicians but also achieves cost savings of over \$5,400 per patient with cardiometabolic disease annually.

Unlike traditional episodic care models, where patients may go without follow-up, our system provides consistent communication with patients to provide:

- Medication reminders and adherence support
- Lifestyle coaching and education
- Early interventions for worsening conditions
- Additionally, the platform gives physicians direct access to patient health data and notes, allowing them to monitor trends and intervene when necessary—without requiring an in-office visit. This innovative approach helps ensure that

patients stay on top of their health, preventing costly complications before they arise. For people living with chronic conditions like hypertension (high blood pressure) this kind of continuous monitoring is a game-changer.

What did studies of leading RMP systems find?

Studies found that RPM systems are overwhelmingly positive. Not only did the program improve health outcomes, but it also provided significant cost savings. Here below is a close look at what was discovered:

1. Improved Health Outcomes:

Blood Pressure:

- **Patients with blood pressure between 130–140 mmHg** saw an average reduction of **4.3 mmHg**.
- **Those with blood pressure between 140–150 mmHg** saw an average reduction of **9.8 mmHg**.
- **Patients with blood pressure between 150–160 mmHg** saw an average reduction of **17.2 mmHg**.
- **For those with blood pressure above 160 mmHg**, saw a significant reduction of **28.9 mmHg**.

These changes are significant because even small reductions in blood pressure can greatly reduce the risk of heart attacks and strokes.

57.3% of patients with Stage 2 hypertension (higher blood pressure) reduced their pressure to safer levels (below 140/90 mmHg).

2. Patient Engagement = Better Results:

Patients who submitted **more frequent data** (daily blood pressure) saw much greater improvements in their health.

Staff is instrumental in keeping patients engaged through regular check-ins, education, and ongoing motivation, ensuring they remain committed to their care plans.

3. Cost Savings

Perhaps the most interesting part of our study is the financial impact of the RPM program. Using propensity score matching for a cross-sectional analysis, they found:

- Patients with heart failure, the RPM program spent on average, \$452.66 less per month on healthcare compared to those who did not use the program.
- This amounts to an annual savings of \$5,431.92 per patient.

These savings were driven by fewer hospitalizations, emergency room visits, and the prevention of expensive complications that would otherwise require urgent medical care. Even though RPM patients had more regular check-ins with their doctors, their overall healthcare costs were significantly lower.

How do you implement a remote patient monitoring program?

If you service a lot of patients with heart disease (high blood pressure, high cholesterol.) covered by Medicare or Medicaid, then you probably have enough patients for a RPM program.

Tip: *Send out a survey asking privately insurance patients if as a part of their treatment plans, they would want to participate in a RPM program to increase their quality outcomes.*

- Ask your payers
- Market it to patients
- Pick the devices you want to train providers on
- Launch and scale

How do you bill for remote patient monitoring?

There are five primary CPT codes for Medicare:

99453 & 99454: These are practice expense only codes.

They are specifically related to device set -up and education and are valued to cover clinical staff time, supplies and equipment, including RPM device.

99091: After the data collection period for CPT codes 99453 and 99454, the collection and interpretation of physiologic data digitally stored and/or transmitted by the patient and/or caregiver to the physician or other qualified healthcare professional. It can also be billed monthly but has more requirements than CPT codes 99457 and 99458.

99457: Reimburses medical professionals and healthcare organizations for their time spent performing duties related to interpreting remote monitoring physiologic data.

This includes:

- Assessing patient stability
- Communication with patients in person/remotely

- Oversight of the management and coordination of service

99458: An add-on code to 99457 for each additional 20 minutes of remote physiologic monitoring treatment management service provided in a 30-day calendar month.

The number of RPM claims grew by a CAGR of 900% from 2019-2022 (based on code 9954)

Source: Business insider

Who qualifies for remote patient monitoring?

A previous patient-physician relationship must be present in order to be reimbursed for the virtual care option. After that, it's up to the provider to determine if the addition of RPM devices and monitoring to a patient's care plan is appropriate or in the best interest of the patient.

Here are the Identifiers that make a patient a good candidate:

- Insured by Medicare or Medicaid
- Has high blood pressure
- Diabetes
- Weight loss or gain exceeds standards
- Has heart conditions
- Has chronic obstructive pulmonary disease
- Has sleep apnea

- Has asthma

The Challenge of Chronic Care Management

Chronic care management allows healthcare providers to supervise the treatment of these conditions in patients who require ongoing care. The program provides services such as care coordination, medication management, and patient education with a view to improving healthcare outcomes.

[Centers for Disease Control](#) (CDC) reports show that 90% of America’s \$4.5 trillion annual healthcare spending goes on managing chronic diseases and mental health. 12

Proven chronic disease interventions can be cost-effective. “Cost-effectiveness” recognizes that the cost of the intervention is worthwhile in terms of longer life and better quality of life.

You are invited to contact us so you and your patients can benefit from cost-effective care that will provide for your patients a longer and better quality of life and a new revenue stream for your practice.

Diroy LLC dian@diroyllc.com 908-4216270

End Notes

1 Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 2018-2022 on CDC WONDER Online Database website. Reviewed April 26, 2024. Access May 3, 2024. <http://wonder.cdc.gov/mcd.html>

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3 Kazi D, Elkind M, Deutsch A, Dowd W, et al. Forecasting the economic burden of cardiovascular disease and stroke in the United States through 2050: a presidential advisory from the American Heart Association. *Circulation*. 2024;149:e00–e00. doi: 10.1161/CIR.0000000000001258

4 Centers for Disease Control and Prevention. Estimated hypertension prevalence, treatment and control among US adults. Reviewed May 2023. Accessed May 3, 2024. <https://millionhearts.hhs.gov/data-reports/hypertension-prevalence.html>

6 Community Preventive Services Task Force. Cardiovascular disease prevention and control: self-measured blood pressure monitoring interventions for improved blood pressure control—when combined with additional support. Accessed December 16, 2019. <https://www.thecommunityguide.org/findings/heart-disease-stroke-prevention-self-measured-blood-pressure-with-additional-support.html>

7 Arrieta A, Woods J, Qiao N, Jay S. Cost-benefit analysis of home blood pressure monitoring in hypertension diagnosis and treatment: an insurer perspective. *Hypertension*. 2014;64:891–896.