

Remote Patient Monitoring for Preventive Cardiac Care

Improving Outcomes for Patients with
Chronic Cardiac Conditions

About This Guide

Nearly half of all Americans are living with some type of cardiovascular disease. One person in the US dies of heart disease every 36 seconds. And it costs our country over \$360 billion per year.

With these staggering numbers, it is no surprise that the Center for Medicare and Medicaid Services (CMS) has been promoting innovative solutions to treat and prevent cardiac disease.

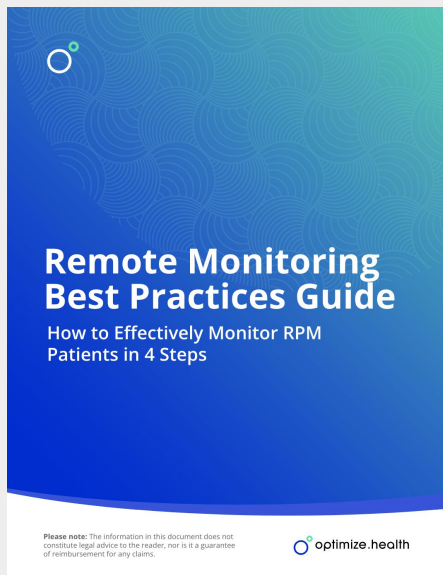
Remote patient monitoring (RPM) can be the solution that helps millions of Americans take a more proactive approach to living with chronic, cardiology conditions.

Optimize Health has helped hundreds of practices successfully implement cardiac RPM programs. This guide will explain how RPM can benefit your cardiac patients and help you take the first steps to learn how to launch a program.

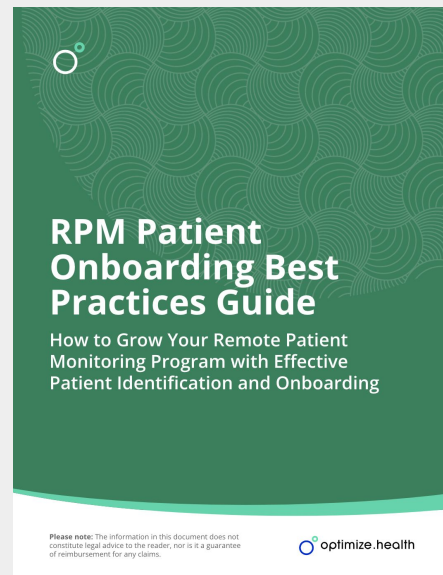
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Part of Our RPM Best Practices Series



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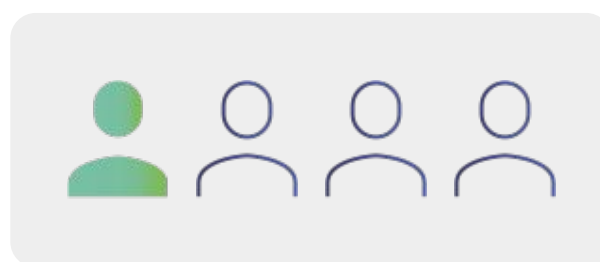
Introduction

Facts about Cardiac Conditions in the US

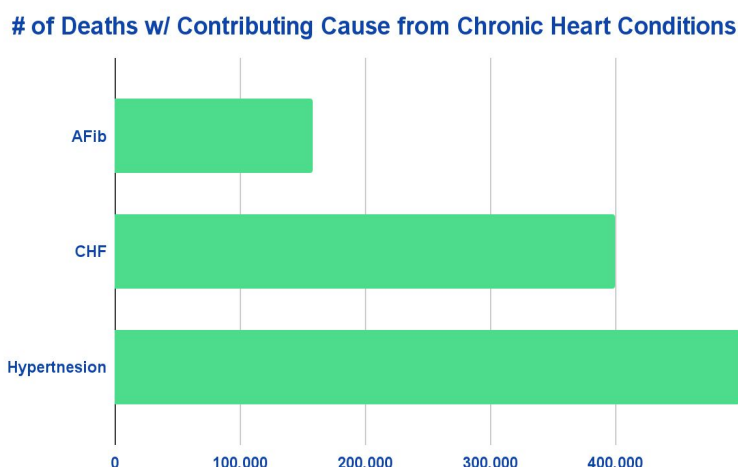
- Over 116 million Americans (or 47%) have high blood pressure

- High blood pressure was a primary or contributing cause of death for over 500,000 Americans in 2019

- High blood pressure costs the US healthcare system \$131 - \$198 billion dollars each year
- Over 12 million Americans will have Atrial fibrillation (AFib) by 2030



Only 1 in 4 adults with hypertension have their condition under control



- AFib causes [1 in 7 strokes](#), over 450,000 hospitalizations, and contributes to 158,000 deaths per year
- [Over 6 million Americans](#) have Congestive Heart Failure (CHF); over 500,000 new CHF cases are diagnosed each year
- CHF is one of the most common causes of hospitalization for those 65 and older and contributed to nearly 400,000 deaths in 2018



PART 1: HYPERTENSION



How to Use RPM to Monitor Hypertensive Patients

Remote patient monitoring (RPM) can help your patients take control of their high blood pressure. We recommend taking the following steps to monitor your hypertensive patients.

- 1) [Talk to your patients](#) about how RPM will be beneficial to their health and collect consent
- 2) Establish RPM treatment plans, goals, and escalation policies with your team
- 3) Choose the [right devices](#) for your patient population
- 4) [Onboard](#) hypertensive patients to your RPM program
- 5) Monitor and triage patients daily
- 6) Provide ongoing coaching and patient education



2. Establish treatment plans, goals, and escalation policies

Your practice can choose to create a general treatment plan that covers all hypertensive patients or when necessary, treatment plans per patient.

Treatment plans and goals

A treatment plan helps ensure your care team members, patients, and caregivers are all working towards the same goals for the duration of the RPM program. A good treatment plan should include:

- RPM order instructions
- Goals and expected outcomes
- Projected duration



Treatment goals for hypertension could include:

- A specific target for blood pressure readings
- Medication reduction
- Medication adherence
- Improved diet, exercise, or weight loss
- Decreased ER and hospital visits



- Specific target ranges that trigger an escalation
- A clear workflow of what your care team member should do
- Who to contact



5. Monitor and triage patients daily

To keep the momentum for RPM going, it is critical to start engaging with each patient immediately after onboarding. Dedicating sufficient staff to conduct the daily monitoring and patient communication is essential. If RPM becomes everyone's job, it can quickly become no one's job.

[How much staff do you actually need?](#) In our experience, one full-time dedicated clinician can monitor 150 – 250 patients, depending on the nature and complexity of your patients' needs. If your staff doesn't have the time, you may want to consider a [managed RPM service](#), where your RPM partner's clinical team serves as an extension of your own team.

Your RPM software should make monitoring intuitive for your staff with real-time alerts and functionality that makes it easy to filter and triage patients.

We recommend the triaging patients as follows:

1. **Crisis readings (severe and/or sudden in onset):** Contact the patient, assess if symptomatic, and follow the escalation protocol if needed.
2. **Outside normal limits readings (per the treatment plan):** Contact the patient, assess if symptomatic, and follow the escalation protocol if needed.
3. **Normal readings:** Review current and previous readings and provide positive reinforcement for taking readings.
4. **Patients not taking readings:** Provide ongoing encouragement and continue to reach out to patients about taking readings.

Your RPM software should automatically clock care team time. Your care team members should also be documenting notes in the software to ensure continuity of care.



PART 2: HEART FAILURE





Clinical Benefits of RPM for Heart Failure

While many of the benefits of RPM for hypertension apply, explaining the value of RPM for your heart failure patients could also include:

- When your heart failure flares up, you may experience symptoms like difficulty breathing and swelling. Managing these symptoms with RPM can improve your daily quality of life.
- Sudden worsening of heart failure symptoms, if not detected early, can land you in the emergency room or hospital. Fortunately, we can often catch the signs early simply by monitoring your weight every day to check for fluid retention.
- If we catch a heart failure exacerbation early, we may be able to treat it at home with medication and avoid the expense, pain, and inconvenience of an ER visit or hospitalization.

Treatment Goals

Treatment goals for your heart failure patients can include:

- Decreasing blood pressure
- Managing heart failure symptoms
- Reducing ER visits and hospitalizations
- Improved quality of life and patient satisfaction



Clinical Research Supports RPM for Heart Failure

In the research studies, clinicians reported they could manage heart failure patients more effectively with access to more regular physiological data. This enables better decision-making for treatment and medication titration at an earlier stage of decompensation.

Highlights of the Research Include:

- The 30-day hospital readmission rate at [Mt. Sinai Hospital was 10%](#) for heart failure patients enrolled in RPM, compared to 23% for non-RPM patients.
- Home telemonitoring [reduced mortality](#) (risk ratio = 0.64; 95% CI: 0.48-0.85) compared with usual care.
- In one study, [70% of telemonitoring patients](#) completed at least 80% of their possible daily readings. Findings showed telemonitoring improved self-care, quality of life, and clinical management.
- Home telemonitoring interventions reduced the [relative risk of all-cause mortality](#) (0.60 to 0.85) and heart failure-related hospitalizations (0.64 to 0.86) compared with usual care.
- Structured telephone support and telemonitoring interventions [reduced heart failure-related hospitalizations](#) in older patients (RR 0.81; 95% CI=0.67-0.99).



- Have you eaten more [salty foods](#) than usual (including adding salt to your food, restaurant food, frozen food, and canned food)?
- Have you drunk more water or other fluids than usual?
- How much [alcohol have you consumed](#)?
- How much caffeine have you consumed?
- Do you have any swelling in the feet, ankles or lower legs?
- Do you have any swelling or pain in your abdomen?
- Have you been taking medications as prescribed?



PART 3: OTHER CARDIAC CONDITIONS

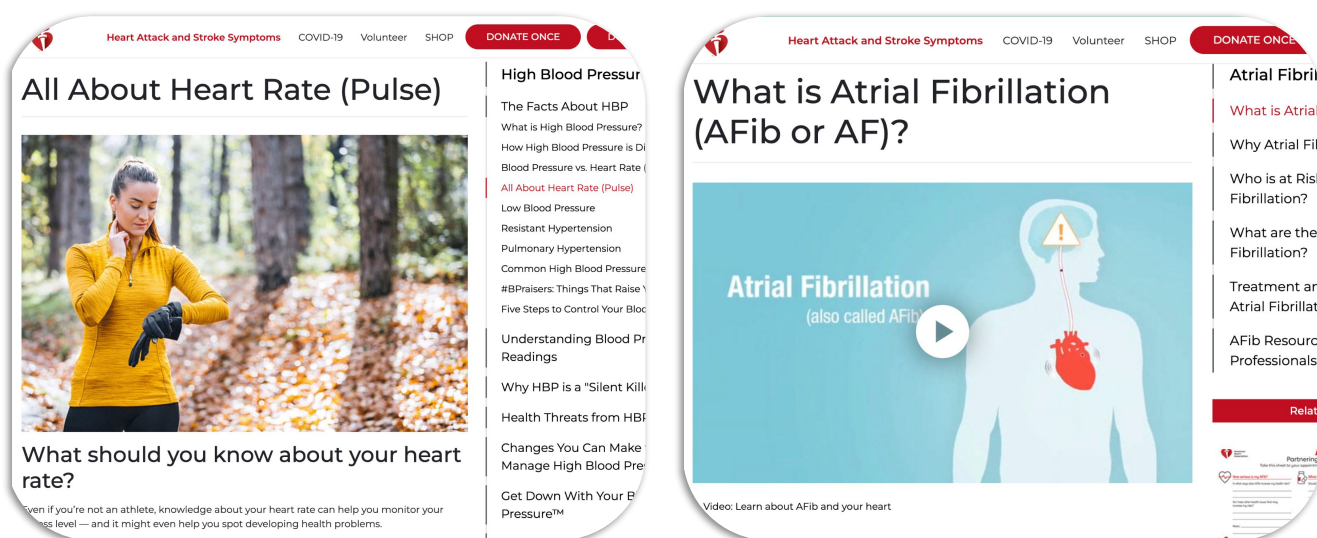


How to use RPM to Monitor Heart Rate Irregularities

RPM enables your clinicians to analyze blood pressure and pulse rate trends over time, not just a single data point. RPM also provides timely patient education and coaching that is essential for making heart healthy lifestyle choices. Regular communication with care team members can also help with medication adherence which is critical for managing blood pressure.

Many cardiac conditions are risk factors for other cardiac conditions. AFib [can lead to heart failure](#) and heart failure increases risk for AFib. Many patients have both AFib and heart failure, as well as high blood pressure. Managing and/or lowering blood pressure through RPM has the potential to improve outcomes of all cardiac conditions.

We've included free patient education resources from the AHA on arrhythmia and heart rate in the [Appendix on page 33](#) of this guide.





The Path to RPM Success

Improving cardiac patient outcomes with RPM does not happen on its own. A successful RPM program requires your practice to commit significant resources to drive effective onboarding and monitoring.

Fortunately, the right RPM vendor can provide services that make it much easier to launch, manage, and grow your cardiac RPM program. That may mean comprehensive training and support for patient onboarding and monitoring or using managed RPM services if your practice doesn't have enough staff time.

To help you launch or evaluate your current program, we have developed resource guides to share our extensive knowledge on these key topics, including:

- [**RPM Onboarding Best Practices Guide: How to Grow Your RPM Program with Effective Patient Onboarding**](#)
- [**Remote Monitoring Best Practices Guide: How to Effectively Monitor RPM Patients in 4 Steps**](#)

If you want to improve outcomes for your chronic cardiac patients, please visit optimize.health or schedule a [free consultation](#) with one of our RPM experts.



Appendix: Patient Education Materials





Heart Failure Education Resources from the AHA and Keeping it Pumping

- [Warning Signs of Heart Failure](#)
- [Managing Heart Failure Symptoms](#)
- [Heart Failure Symptom Checker](#)
- [Heart Failure Diet Tips](#)
- [Signs of Heart Failure](#)
- [What is Heart Failure?](#)
- [Staying Active with Heart Failure](#)

Arrhythmia and Heart Rate Education Resources from the AHA

- [All About Heart Rate \(Pulse\)](#)
- [What is an Arrhythmia?](#)
- [Atrial Fibrillation](#)
- [Ventricular Fibrillation](#)
- [Prevention and Treatment of Arrhythmias](#)
- [Heart Conduction Disorders](#)
- [Risk Factors for Heart Disease and Stroke](#)

