



# Transforming Digital Health: Implementing Strategy & Best Practices for a Successful RPM Program

# Introduction

Remote patient monitoring has been around for a while, ever since doctors first thought about what their patients were doing in between office visits. They may have asked a patient to call into the office every now and then or keep a daily log of diet and activities. The idea even then was to gather more data that would be helpful in care management.

With the advent of mHealth devices and telehealth platforms, RPM has gained traction as a legitimate care pathway. Using connected health tools that can track patients at home as they go about their daily routines, care providers can now monitor patients' vital signs, adjust care plans on the fly, intervene when necessary, and even gather non-clinical data to influence health and wellness.

With the coronavirus pandemic pushing telehealth into the spotlight and putting the emphasis on home-based healthcare, RPM is on even more solid footing. It's recognized by the Centers for Medicare & Medicaid Services, has its own reimbursement codes for Medicare coverage, and is showing up in health systems, hospitals, clinics and medical practices across the country. We're at the point where an RPM platform should be a critical component of every healthcare provider's business plan and a key cog in the move to value-based care.

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# The Roots of Remote Patient Monitoring

Healthcare providers have long wondered how they could improve care for patients outside the hospital, clinic or doctor's office. But for a long time, they didn't have the technology to monitor patients, gather data or relay information back to the provider.

That changed with the advent of consumer-facing health devices like smart scales, blood pressure cuffs and blood-glucose monitors, and wearables like fitness bands, smartwatches, sensor-embedded jewelry and clothing, along with smartphone apps that could collect and store that data. These devices and wearables allowed consumers to track exercise and diet and manage their own health.

For the most part, the healthcare industry steered clear of consumer-facing technology, with justifiable concerns that the data coming from these platforms wasn't reliable enough for clinical care. But they were popular. Some

providers saw an opportunity to connect with patients in a way they hadn't done before—and in a way that patients could accept and appreciate.

Small projects were the first to show potential: Programs launched by providers looking to connect with patients at home and using devices to track activity. Instead of looking for accurate data, providers focused on trends. They wanted information for collaborating with patients on healthcare at home or health and wellness. Early examples included a program that used wearables to track activity in women undergoing breast cancer treatment, a project that tracked diet and exercise among young patients living with diabetes, and a program that measured steps taken each day by patients recovering from surgery.



# RPM Pushes Its Way into the Sandbox

Gradually, the programs became more sophisticated, with devices developed specifically for clinical treatment and platforms designed to transmit data into a clinical dashboard, sometimes even the medical record. Providers focused early on very specific conditions, like cardiac care, where they could track one or two data points.

RPM programs had a hard time gaining traction because most payers didn't recognize them, and therefore providers weren't being reimbursed for those services. That changed in 2019, when the Centers for Medicare & Medicaid Services included Medicare coverage in its Physician Fee Schedule for "the collection and analysis of patient physiologic data that are used to develop and manage a treatment plan related to chronic and/or an acute health illness or condition."

Coverage now is focused on five CPT codes, as of the 2021 Physician Fee Schedule:

- 99453 covers the initial setup of the device and is billed once per patient for \$19.46;
- 99454 covers device supply with daily recordings and programmed alerts, billed every 30 days on a minimum of 16 days of recording, for \$64.15;
- 99457 covers 20 minutes of monitoring and care management per month, including Interactive communication with the patient or caregiver during the calendar month, gathered by clinical staff supervised indirectly by a physician, for \$51.54;
- 99458 covers each additional 20 minutes of monitoring and care management per month, also gathered by clinical staff under indirect supervision by a physician, for \$42.22; and
- 99091 covers 30 minutes of monitoring every 30 days that doesn't include interactive communication, to be gathered by a physician or qualified professional, for \$58.38.



These codes were and continue to be a clear effort by CMS to support providers in the growing demand and need for these services.

CMS also separated RPM coverage from telehealth coverage, giving the service its own niche and separating it from complex and often restrictive guidelines for reimbursement. Since then, the agency has amended and added coverage each year at a slow pace, which annoys supporters but falls in line with the long-standing policy of waiting for proof that a new service improves outcomes and reduces costs before they'll cover it.

Still, that news helped give RPM a foothold. [According to the American Medical Association](#), physician adoption of RPM tools jumped from 13 percent in 2016 to 22 percent in 2019, an increase topped only by telehealth visits, which doubled from 14 percent to 28 percent. Likewise, [a Consumer Technology Association CTA survey that year](#) found that 68 percent of physicians "strongly intend to use remote patient monitoring technology" at some future time, while more than half of consumers surveyed indicated they would monitor their health at home with a connected device if recommended by a physician.

In 2020, the playing field changed yet again. Covid-19 swept across the globe at a dizzying rate, forcing healthcare providers to close or limit in-person care and shift as many services as possible onto virtual platforms. Suddenly

telehealth was popular, and health systems, hospitals, practices and clinics were launching new services and programs, taking advantage of emergency federal and state measures designed to improve access to and coverage of telehealth services.

RPM saw that surge as well, as providers used the platform to isolate and treat infected patients in their own homes. Some adjusted protocols from other RPM programs to target COVID-19 treatment, while many others launched new programs, sending patients home with devices to monitor their health and creating telehealth dashboards that allowed clinicians to view data and create and adjust care management plans from the hospital (or even their homes).

As the pandemic ran its course, health systems and hospitals began to plan for the future. The

success of their RPM programs in keeping and treating COVID-19 patients at home prompted new ideas on how to keep the RPM platform alive by shifting to cover other patient populations.

Because many patients with chronic conditions had opted to steer clear of their care providers during the height of the pandemic, an RPM service enabled providers to re-engage with those patients and get them back on their care plans. Likewise, RPM could be used for post-discharge and rehab for the hospitals and patients who'd put off non-urgent surgical procedures during the pandemic, and there was a real need for programs to help people dealing with mental health and substance abuse issues at home.



# Plotting a Future and Mapping Out an RPM Strategy

As the nation moves beyond the pandemic, remote patient monitoring is poised to become a popular and accepted standard of care. It had its trial by fire over the past two years, successful use cases are starting to roll in, and both providers and payers are embracing the platform. [According to a panel discussion at HIMSS20](#), a virtual conference hosted by the Healthcare Information and Management Systems Society, the RPM market is expected to double over the next few years.

In addition, telehealth advocates expect Congress to include RPM in long-term, post-COVID-19 telehealth policy, and we'll likely see some positive signs from CMS as well on improved coverage, thanks in large part to the number of successful use cases and supportive data coming out of the pandemic.

For those now looking to get into the game, the technology is far better than it was just a few years ago, with a number of devices and platforms approved for clinical data capture and transmission. There are also many more RPM vendors on the market, offering providers various partnerships designed to outsource tasks like data capture and transfer, coding and billing, and even patient engagement.

One of the first questions an organization should ask is whether to partner with an RPM vendor or develop a program in-house. The decision can be simplified into the categories of needs, timeline and the organization's historical success implementing new clinical technologies. Regardless of the path chosen, there are many questions a provider must ask in mapping out

an RPM service, and a lot of work goes into the process long before the go-live date.

As a first step, it is important to understand how and why an RPM program would be useful—what gaps in care or costs would it address, what measurable benefits (clinical outcomes, reduced expenses, better physician and staff workflows, improved patient engagement) it would produce, and how it would be sustained and/or scaled.

Once the needs and requirements for an RPM program have been identified, the organization needs to establish deployment timelines and goals. These should include a development timeline and training protocols for clinical staff responsible for using the RPM platform and patients who will be part of the program.

Next, organizations need to look inward and assess their track record developing and diffusing innovation. They might ask: Have we internally developed a new technology like this in the past? Did it go well? How were the staff and patient adoption rates? Do we have the available resources to take on this technical lift right now? Healthy introspection is a vital part of the build-vs.-buy decision-making process.

RPM programs can certainly benefit a hospital, clinic or practice if well planned and run, but they can also fail spectacularly. Keeping that in mind, the breadth of the program, speed to value and experience implementing successful new technologies are great benchmarks to fuel the decision to build the technology or select a vendor that has made RPM their business.

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# Best Practices for RPM Success

In looking at how health systems have launched and supported RPM programs, certain best practices are emerging:

- Choose a specific population to monitor, with clearly defined parameters (such as type 1 diabetes, heart disease, or joint replacement rehabilitation).
- Select devices that are easy to use and that, if possible, capture and transmit data without patient input.
- Identify clear and attainable goals for success, such as specific clinical outcomes or reduced hospitalizations, and make sure the devices and back-end platforms capture that data - and only that data - for physician review.
- Train staff for 24/7 support, with an understanding that patients sometimes just want someone to talk to.
- Create a pathway for patients to log their experiences with the platform, along with anything else they want to mention. This will help organizations learn how to improve the patient experience and address patient engagement needs they may not have considered before.
- When collecting data from patients, establish barriers that trigger alerts to care providers. Those barriers should be easy to adjust and specific to the patient.
- Have clear protocols for emergencies, ranging from alerts to EMS calls to natural disasters like strong storms or floods.
- Integrate with the electronic health records platform if possible.
- Plan for expansion, with a platform that can be modified to handle more devices, patients, and care parameters.

It should be emphasized that these guidelines can and will be adjusted. No two RPM programs are alike, and an organization will find its own path to success and sustainability not by mimicking others but by developing its own game plan.



# Planning for Sustainability and Scalability

Beyond selecting the technology to use both in the home and on the back end, a provider needs to make sure there's enough broadband or cellular capacity to ensure the system runs smoothly. Will the devices chosen for the home consistently and reliably capture data and send it back to the provider? Are there strategies in place for homes that don't have broadband access or have questionable cellular connectivity?

This is an important and often overlooked part of RPM planning. Providers need to make sure they're using a platform that ensures reliable connectivity and that patients introduced to the program can connect from their homes. Many providers will develop protocols for ensuring connectivity, as well as strategies for patients in hard-to-reach areas.

Alongside the challenges of mapping out connectivity, a provider needs to identify the population of patients that an RPM platform will address. The most successful programs start simply, focusing on a specific group of patients with a specific clinical condition, such as cardiac care, hypertension, diabetes, COPD or rehab from an operation, such as joint replacement. The idea is to define a narrow set of data collected in the home and the tools to collect that data. This allows the provider to develop a comfort level with the technology and processes and to focus on a few well-defined benchmarks or goals that will prove the program's success, and then they can scale to other patient populations from there.

While it is great to start small, scalability should be a factor when designing the program from the beginning. Providers who want to monitor different populations need to ensure that an RPM platform can accommodate newer, more diverse data points and devices, including patients with multiple chronic conditions. And this extends beyond the devices in the home to the back end. Can the RPM platform handle multiple programs for multiple patient

populations, separating the data coming in so that the right providers are monitoring the right patients?



Another key factor in a successful RPM program is the patient. RPM platforms should have tools in place to make sure the patient is activated and continuously engaged. This includes assessing the patient's digital literacy and home environment, training on how to connect the devices, and setting reminders to make sure data is collected on the correct cadence. Without patient engagement and adherence, an RPM program can easily fall flat.

In fact, patient engagement is a crucial part of the program and can be overlooked by organizations focused too much on clinical measures. RPM programs that create partnerships with their patients stand the best chance at success because they allow patients to take partial ownership over their own healthcare. The patient and provider are then working together on care management.

In short, providers need to look at the future as much as the present and anticipate that remote patient monitoring will be an integral part of their care strategy going forward. This means laying the groundwork for new services and even new technologies – especially in the wearables and smart home categories – that will one day improve care.

# The Future of Remote Patient Monitoring

Analysts estimate that RPM will grow significantly over the next decade as the nation's healthcare system comes out of the pandemic and adapts to a new paradigm of hybrid healthcare. This means providing more opportunities for care at home, where patients would prefer to be while enabling their care providers to access and use important health data.

These programs will evolve, possibly quite rapidly, as new technology is introduced, as broadband and cellular coverage is improved, and as more providers—from large health systems down to individual practices and clinics—show success. This, in turn, should prompt more payers,

including CMS, to further cover RPM services, giving providers the support they need to embrace and expand.

The idea behind RPM is simple: monitor people at home for health concerns and conditions that don't need to be treated in a hospital bed or clinic visit, give care providers the technology to track patients and adjust care management when and where necessary, and give patients the tools to handle more of their own healthcare, the premise of true value-based care.

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