WITHINGS

The Benefits of Remote Patient Monitoring
for Physicians and Patients

WHAT IS **REMOTE PATIENT MONITORING?**

Remote Patient Monitoring (RPM) is a coordinated system of technologies that collect physiological data from a patient outside of a clinical setting, and then securely transmit that data for review and assessment by a healthcare provider in another location. Examples include tracking weight, blood pressure, heart rate, heart rhythms, and even data on sleeping patterns using a medical-grade smartwatch or a WiFi-connected scale, blood pressure cuff or other device in the patient's home. When patient data is outside of normal ranges, RPM can provide automated alerts for the healthcare provider.

BENEFITS

For physicians and healthcare providers, RPM offers a **more complete view of a patient's health over time** and a better understanding of adherence to a **personalized treatment plan**, and can give an early warning to help prevent a costly care episode. The results are better health outcomes and reduced readmission rates, along with clear financial benefits for practitioners.

For patients, RPM offers **a way to better understand their health** and to **participate in managing and even improving it**. For older patients, RPM can let them live independently longer by providing some of the monitoring benefits of a clinical setting while remaining comfortably at home. RPM also provides reassurance to patients living with chronic health conditions.

CLINICAL RESULTS

A 2016 technical brief by the U.S. Department of Health and Human Services Agency for Healthcare Research and Quality reported that a meta-analysis of more than 200 remote patient monitoring studies covering more than 48,000 patients shows "**there is sufficient evidence to support the effectiveness of telehealth for specific uses with some types of patients, including remote patient monitoring for patients with chronic conditions.**" [1]

HEART FAILURE
A 2014 study of RPM use for chronic heart failure patients reported that "RPM resulted in a **significantly lower mortality risk** compared to usual care." [2] A 2013 study of RPM used with 1650 cardiac patients indicated that RPM was "highly effective in detecting and managing clinical events." [3]

Hypertension and Diabetes

A 2013 study on hypertension management reported "improved health outcomes using mHealth applications that have undergone rigorous usability testing." [4] A 2018 study of patients with Type 2 diabetes reported that patients who consistently used RPM were **more likely to lower HbA1C levels.** [5] A separate 2016 study of diabetes patients also showed significantly **lower levels of A1C over 9 months**, along with significant lowering of systolic and diastolic blood pressures." [6]

FINANCIAL BENEFITS OF RPM

By 2030, an estimated **20% of the U.S. population will be 65 or older**, and by 2035, there will be more people over 65 than people under 18 for the first time in U.S. history. [7] Health spending in the U.S. is projected to grow 5.5% per year through 2027, reaching nearly $6 trillion annually.[8] The treatment and management of chronic disease currently accounts for 90% of healthcare spending. [9] Early detection and regular monitor of chronic health issues outside of a clinical setting will be an **important tool to manage costs and provide better outcomes for an aging population.**

RPM has the potential to reduce overall healthcare spending for society, but physicians and other healthcare providers also stand to benefit. Using RPM to manage patient population health and care coordination services can drive recurring revenue while improving the patient care experience.

For nearly two decades, the Centers for Medicare and Medicaid Services (CMS) has recognized the importance of RPM. In 2002, CMS first began reimbursing the "collection and interpretation of physiologic data…digitally stored and/or transmitted by the patient…" under Current Procedural Terminology (CPT) billing code 99091. In 2019, several new CPT codes for RPM were added, and the rules for reimbursement of RPM were separated from the rules covering Chronic Care Management (CCM) since 2015, offering significant revenue potential.

Healthcare providers can be reimbursed over $110 per month and per patient for RPM services and for reviewing RPM data with patients or a caregiver. In addition, CCM codes are still in force and may be billed concurrently with RPM codes if applicable. Combining RPM with CCM services represents potential monthly recurring revenue of $213 – $303 per month per patient while also improving health outcomes.

CPT CODES FOR RPM[10]

CPT 90091	≥ 30 min of collection and interpretation of physiologic data (for example, ECG, BP, glucose monitoring) digitally stored and/or transmitted by the patient and/or caregiver to the physician or qualified staff	$57	Every 30 days
CPT 99453	Remote monitoring of physiologic parameter(s) (for example, weight, blood pressure, pulse oximetry, respiratory flow rate) initial setup and patient education on equipment use	$20	One-time
CPT 99454	Remote monitoring of physiologic parameter(s) (for example, weight, blood pressure, pulse oximetry, respiratory flow rate), initial device(s) supply with daily recording(s) or programmed alert(s) transmission, every 30 days	$66	Every 30 days
CPT 99457	Remote physiologic monitoring treatment management services, 20 minutes or more of clinical staff/physician/other qualified healthcare professional time in a calendar month requiring interactive communication with the patient/caregiver during the month	$52	Each calendar month

CPT CODES FOR CCM

CPT 99487	Complex chronic care management services of two or more chronic conditions expected to last at least 12 months (or until death); 60 minutes of clinical staff time directed by a physician or other qualified healthcare professional	$95	Per calendar month
CPT 99489	Each additional 30 minutes of clinical staff time directed by a physician or other qualified healthcare professional, per calendar month. (List separately in addition to code for primary procedure, generally CPT code 99487.)	$47	Per calendar month
CPT 99490	Chronic care management services, at least 20 minutes of clinical staff time directed by a physician or other qualified healthcare professional	$43	Per calendar month

While it's clear that **RPM provides an opportunity for physicians to increase their incomes while simultaneously providing better health outcomes for patients at a lower cost to insurers**, the use of RPM is still in its infancy. A recent survey showed that 84% of healthcare professionals had heard of RPM and 70% thought it could be useful for their practices, but only 22% were currently implementing RPM with their patients. [1]

CONTACT US

If you want to learn more about how Withings can help you implement RPM in your practice, send us your question at this address: **medpro-care@withings.com**

[1] : Agency for Healthcare Research and Quality, "Telehealth: Mapping the Evidence for Patient Outcomes from Systematic Reviews." 2016; https://effectivehealthcare.ahrq.gov/topics/telehealth/technical-brief

[2] : Nakamura N, Koga T, Iseki H. "A meta-analysis of remote patient monitoring for chronic heart failure patients." Journal of Telemedicine and Telecare. 2014 Jan; 20(1):11-17.

[3] : Renato Pietro Ricci, Loredana Morichelli, Antonio D'Onofrio, Leonardo Calò, Diego Vaccari, Gabriele Zanotto, Antonio Curnis, Gianfranco Buja, Nicola Rovai, Alessio Gargaro, "Effectiveness of remote monitoring of CIEDs in detection and treatment of clinical and device-related cardiovascular events in daily practice: the HomeGuide Registry." EP Europace, Volume 15, Issue 7, July 2013, pages 970–977, https://doi.org/10.1093/europace/eus440

[4] : Logan Ag. "Transforming hypertension management using mobile health technology for telemonitoring and self-care support." Canadian Journal of Cardiology. 2013 May;29(5):579-85.

[5] : Tzeyu L. Michaud et al. "Remote Patient Monitoring and Clinical Outcomes for Post Discharge Patients with Type 2 Diabetes." 26 Sep 2018; https://doi.org/10.1089/pop.2017.0175

[6] : Wild SH, Hanley J, Lewis SC, McKnight JA, McCloughan LB, Padfield PL, et al. "Supported Telemonitoring and Glycemic Control in People with Type 2 Diabetes: The Telescot Diabetes Pragmatic Multicenter Randomized Controlled Trial." PLos Med. 2016;13(7):e1002098.

[7] U.S. Census Bureau, "Older People Projected to Outnumber Children for First Time in U.S. History." https://www.census.gov/newsroom/press-releases/2018/cb18-41-population-projections.html, March 13, 2018.

[8] Centers for Medicare & Medicaid Services, "2018–2017 Projections of National Health Expenditures." https://www.cms.gov/newsroom/press-releases/cms-office-actuary-releases-2018-2027-projections-national-health-expenditures, February 20, 2019.

[9] Buttorff C, Ruder T, Bauman M. "Multiple Chronic Conditions in the United States." Santa Monica, CA: Rand Corp.; 2017. Center for Medicare & Medicaid Services. National Health Expenditure Data for 2016.

[10] Based on average amount for reimbursement as defined by Medicare, can vary state by state. More in-depth information can be found by referencing the 2019 CPT code update book published by AMA, or the November Federal Register

[11] Survey of Withings users in the U.S., September 2019.