Remote Physiologic and Therapeutic Monitoring

Remote physiologic (or patient monitoring) (RPM) allows clinicians and health care teams the ability to monitor weight, blood pressure, blood glucose, pulse, temperature, oximetry, respiratory flow rates, and more in a variety of settings, including patients' homes. Remote therapeutic monitoring (RTM) allows additional health care service providers to monitor health conditions and treatment plans through the collection of nonphysiologic data. Based on the transmitted or shared data, treatment plans are developed to help patients and caregivers optimally manage health issues, keeping patients out of hospitals and emergency departments. These two services are also key for patients to self-manage between health care visits.

While the Centers for Medicare and Medicaid Services (CMS) has reimbursed for RPM since 2019 and RTM since 2022, to date they have not created RPM- or RTM-related educational materials as they have for other Medicare services. Using proposed and final rules published in the Federal Register by CMS, we seek to provide the relevant regulatory details for health care organizations to implement RPM and/or RTM, which enhances service delivery options and improves outcomes, enhances the patient experience, and reduces health care costs.

Consult the most recent CPT® Professional Edition codebook for current and accurate service delivery and billing rules and guidelines.

In the tables below, the national payment amount for the non-facility price from the Physician Fee Schedule Search as of January 2024 is rounded to the nearest dollar. Do not rely on the pricing information; have your biller/coder double-check.

Remote Physiologic (or Patient) Monitoring (RPM)

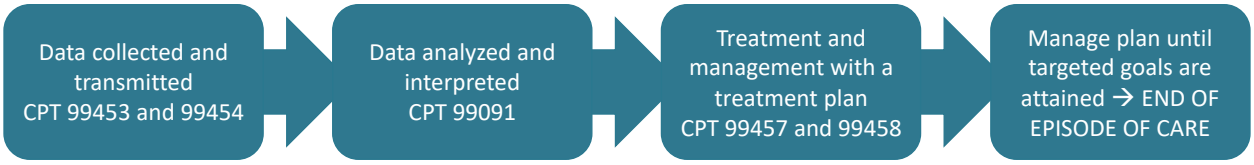
RPM as defined by Medicare, includes five billing codes (see Table 1 below) and has several conditions and requirements. These RPM services require that "the medical device should digitally (that is, automatically) upload patient physiologic data (that is, data are not patient self-recorded and/or self-reported)"[1]. Note that Medicare reimburses for other RPM services (e.g., self-measured blood pressure monitoring and continuous glucose monitoring (CGM), and ambulatory blood pressure monitoring) that don't technically fall under their RPM definition – see Table 3.

Summary of Key Details and Requirements for the Five RPM Codes Listed in Table 1 Below

- Beneficiaries' consent (verbal or written) to receive RPM and notification of any applicable cost sharing must be documented in the patient's medical record.
- Because CMS has designated RPM as care management services, CPT codes 99457 and 99458 can be furnished by clinical staff under the general supervision of the physician or nonphysician practitioner.
- CMS clarifies that "the medical device should digitally (that is, automatically) upload patient physiologic data (that is, *data are not patient self-recorded and/or self-reported*)"[2].
- Practitioners may provide RPM services for patients with acute and/or chronic conditions[3] if they are established patients.
- Nurses, working with clinicians, can check in with the patient and then using patient data, determine whether home treatment is safe.
- RPM and other care management codes and services, including but not limited to Chronic and Principal Care Management, Community Health Integration, Principal Illness Navigation, can be billed concurrently by the same practitioner for the same beneficiary provided that the time is not counted twice. The same is true for the Behavioral Health Integration (BHI) services and codes included in the Psychiatric Collaborative Care Model (CoCM) and General BHI.
- As of January 1, 2024, Federally Qualified Health Centers (FQHCs) and Rural Health Clinics (RHCs) can provide and bill for RPM and RTM for Medicare beneficiaries under G0511[4].

[1] Calendar Year 2021 Physician Fee Schedule Final Rule (CY 2021 PFS FR) p. 84543
[2] Ibid.
[3] Ibid., p. 84546
[4] CY 2024 PFS FR

Figure 1. Overview and progression of services and codes through the end of an RPM episode of care



CMS specifies the details of an **episode of care**[5] as follows. The RPM process begins with CPT codes 99453 and 99454; these codes include "clinical staff time, supplies, and equipment, including the medical device for the typical case of remote monitoring". *After* the data collection period for codes 99453 and 99454, the data may be "analyzed and interpreted by CPT code 99091". *After* analyzing and interpreting the data, a treatment plan is developed; the physician or NPP "then manages the plan until the targeted goals of the treatment plan are attained, which signals the **end of the episode of care**", using CPT codes 99457 and 99458.

Table 1. Service Descriptions, Codes and Prices for RPM

The five codes may only be ordered and billed by physicians or nonphysician practitioners (NPPs) who are eligible to bill Medicare for E/M services

Service Description	Code – Price
Remote monitoring of physiologic parameter(s) (e.g., weight, blood pressure, pulse oximetry, respiratory flow rate), initial; **set-up and patient education on use of equipment** (clinical staff time) – may only be billed once per episode of care	99453 - $20
Remote monitoring of physiologic parameter(s) (e.g., weight, blood pressure, pulse oximetry, respiratory flow rate), initial; **device(s) supply with daily recording(s) or programmed alert(s) transmission, each 30 days** (may include the medical device or devices supplied to the patient and the programming of the medical device for repeated monitoring[6])	99454 - $46

[5] CY 2021 PFS FR pp. 84543-4
[6] Ibid.

Service Description	Code – Price
CPT 99453 and 99454 (considered care management codes) • Include clinical staff time, supplies and equipment (including the medical device(s)) • Consent may be obtained at the time the services for these two codes are furnished[7] • Auxiliary personnel (which includes other individuals who are not clinical staff but are employees or leased or contracted employees) may furnish services for 99453 and 99454 under the general supervision of the billing physician or practitioner[4] • Monitoring must occur over at least 16 days of a 30-day period to bill these codes and cannot be billed by more than one practitioner per beneficiary even when multiple devices are provided to the patient • Not to be reported for a patient more than once during a 30-day period, even when multiple medical devices are provided to a patient • Cannot be billed when these services are included in other codes for the duration of the time of the physiologic monitoring service • Can be billed only once per episode of care, where an episode of care is defined as ''beginning when the remote physiologic monitoring service is initiated and ends with attainment of targeted treatment goals[2]''	
Collection and interpretation of physiologic data (e.g., ECG, blood pressure, glucose monitoring) digitally stored and/or transmitted by the patient and/or caregiver to the physician or other qualified healthcare professional, qualified by education, training, licensure/regulation (when applicable) **requiring a minimum of 30 minutes of time, each 30 days**	99091 - $53
CPT 99091 • After the 30-day data collection period for CPT codes 99453 and 99454, the physiologic data that are collected and transmitted are analyzed and interpreted by the physician or practitioner as described by CPT code 99091 • Includes a total time of 40 minutes of physician or nonphysician practitioner work broken down as follows: 5 minutes of preservice work (e.g., chart review); 30 minutes of intra-service work (e.g., data analysis and interpretation, report based upon the physiologic data, modification of care plan, if necessary, as well as a possible phone call to the patient); and 5 minutes of post-service work (that is, chart documentation). • Can be billed once per patient during the same service period as Chronic Care Management CPT codes (99487, 99489, and 99490), Transitional Care Management CPT codes (99495 and 99496), and behavioral health integration (BHI) CPT codes (99492, 99493, 99494, and 99484). • Cannot be billed in conjunction with 99453, 99454, 99457, 99458, 99473 or 99474	
BASE CODE: Remote physiologic monitoring treatment management services, clinical staff/physician/other qualified health care professional time in a calendar month requiring interactive communication with the patient/caregiver during the month; **initial 20 minutes**	99457 - $48
ADD-ON CODE: Remote physiologic monitoring treatment management services, clinical staff/physician/other qualified health care professional time in a calendar month requiring interactive communication with the patient/caregiver during the month; **additional 20 minutes**	99458 - $39

[7] Ibid. p. 84536

Service Description	Code – Price
CPT 99457 and 99458 – 20 minutes of interactive communication • Can be furnished by clinical staff under the general supervision of the physician or nonphysician practitioner[8]. • Interactive communication must total at least 20 minutes of interactive time with the patient over the course of a calendar month for CPT code 99457 to be reported. CMS clarifies that the work associated includes non-face-to-face care management services during the month.[9] • Time spent in direct, real-time interactive communication with the patient. • CMS defines interactive communication as "real-time interaction, between a patient and the physician, nonphysician practitioner, or clinical staff who provide the services" and "involves, at a minimum, a real-time synchronous, two-way audio interaction that is capable of being enhanced with video or other kinds of data transmission."	

[8] CY 2021 PFS FR p. 84544

[9] CY 2021 PFS FR; Correction. p. 5021. Published Jan 21, 2021. https://www.govinfo.gov/content/pkg/FR-2021-01-19/pdf/2021-00805.pdf

Remote Therapeutic Monitoring

As of Jan 1, 2022[10], Medicare initiated a set of services and codes for remote therapeutic monitoring (RTM), which are closely related to RPM services but have notable differences. The RTM codes provide an opportunity for practitioners who are not permitted to furnish E/M services (e.g., physical and occupational therapists) to provide RTM.

Summary of Key Details and Requirements for the Five RTM Codes Listed in Table 2 Below

- The five RTM codes are designated as ''sometimes therapy'' codes, which means that the services can be billed outside a therapy plan of care by a physician and certain non-physician practitioners, but only when appropriate.
- These services represent the review and monitoring of data related to signs, symptoms, and functions of a therapeutic response. RTM codes "monitor health conditions, including musculoskeletal system status, respiratory system status, therapy (for example, medication) adherence, and therapy (for example, medication) response, and as such, allow nonphysiologic data to be collected."
- Services must be reasonable and necessary.
- RTM services must be ordered by a physician or other qualified health care professional.
- As of January 2024, CMS has not specified whether RTM services require an established patient relationship but does expect that such services would be furnished after a treatment plan was established after some initial interaction with a patient. They will clarify this policy further in future rulemaking.[11]
- Unlike RPM, non- Evaluation and Management (E/M) billing practitioners may furnish and bill RTM services.
- RTM services must be provided under direct supervision when not directly performed by physicians, NPPs, or therapists.
- Services described by RTM codes must be furnished directly by the billing practitioner or, in the case of a physical therapist (PT) or occupational therapist (OT), by a therapy assistant under the PT's or OT's supervision. Any RTM service may be furnished under Medicare's general supervision requirement[12].
- RTM services delegated by PTs and OTs to physical therapist assistants (PTAs) and occupational therapy assistants (OTAs), respectively, are subject to the *de minimis*[13] standard (i.e., CPT 98980, 98981 and 98975).
- Payment for PT and OT physical services furnished in whole or in part by PTAs and OTAs is 85 percent of the otherwise applicable physician fee schedule

[10] CY 2022 PFS FR. pp. 65114-7
[11] CY 2024 PFS FR. p. 78884
[12] CY 2023 PFS FR p. 69649
[13] CMS provides additional information and a billing example to illustrate how the *de minimis* standard would be applied for the RTM treatment management services that describe the interactive communications between the therapist and/or therapy assistant and the patient/ caregiver during the calendar month. CY 2022 PFS FR pp. 65176-7

- If multiple medical devices are used, devices can be billed by only one practitioner, only once per patient, per 30-day period, and only when at least 16 days of data have been collected
- Beneficiaries' consent (verbal or written) to receive RPM and notification of any applicable cost sharing must be documented in the patient's medical record.
- Any device used must be a medical device as defined by the FDA.
- RTM data can be subjective inputs that are patient- reported, as well as objective device generated integrated data.
- Codes 98975, 98976, 98977 are not reported if monitoring is less than 16 days.
- As of January 1, 2024, FQHCs) and RHCs can provide and bill for RPM and RTM for Medicare beneficiaries under G0511.

Table 2. Service Descriptions, Codes and Prices for RTM

Service Description	Code – Price
BASE CODE: RTM treatment management services, physician/other qualified health care professional time in a calendar month requiring at least one interactive communication with the patient/caregiver during the calendar month; first 20 minutes) (includes 40 minutes of activities performed by clinical staff: communicating with the patient throughout the month, resolving technology or data transmission concerns, reviewing data with the billing practitioner, updating and modifying care plans, and addressing lack of patient improvement – considered incident to the services of the billing practitioner)[14]	98980 - $50 Time code
ADD-ON CODE: RTM treatment management services, physician/other qualified health care professional time in a calendar month requiring at least one interactive communication with the patient/caregiver during the calendar month; each additional 20 minutes (List separately in addition to code for primary procedure) (includes 40 minutes of activities performed by clinical staff: communicating with the patient throughout the month, resolving technology or data transmission concerns, reviewing data with the billing practitioner, updating and modifying care plans, and addressing lack of patient improvement – considered incident to the services of the billing practitioner)[15]	98981 - $39 Time code
RTM (e.g., respiratory system status, musculoskeletal system status, therapy adherence, therapy response; initial set-up and patient education on use of equipment). Reported for each episode of care defined as beginning when the remote therapeutic monitoring service is initiated and ends with attainment of targeted treatment goals.[16]	98975 - $20

[14] Ibid. p. 69642
[15] Ibid.
[16] CPT® 2022 Professional Edition

Service Description	Code – Price
RTM (e.g., respiratory system status, musculoskeletal system status, therapy adherence, therapy response); device(s) supply with scheduled e.g., daily) recording(s) and/or programmed alert(s) transmission **to monitor respiratory system**, each 30 days	98976 - $47 Device code
RTM (e.g., respiratory system status, musculoskeletal system status, therapy adherence, therapy response); device(s) supply with scheduled (e.g., daily) recording(s) and/or programmed alert(s) transmission **to monitor musculoskeletal system**, each 30 days	98977 - $47 Device code

Table 3. Service Descriptions, Codes and Prices for Self-Measured Blood Pressure Monitoring and Continuous Glucose Monitoring (CGM) Note that the codes and services listed in Table 3 are not technically remote physiologic monitoring, but they do offer the opportunity to support patients with monitoring and self-management support.

Service Description	Code – Price
Self-measured blood pressure using a device validated for clinical accuracy; patient education/training and device calibration	99473 - $14
Separate self-measurements of two blood pressure readings one minute apart, twice daily over a 30-day period (minimum of 12 readings), collection of data reported by the patient and/or caregiver to the physician or other qualified health care professional (QHCP), with report of average systolic and diastolic pressures and subsequent communication of a treatment plan to the patient	99474 - $16
Ambulatory CGM of interstitial tissue fluid via a subcutaneous sensor for a minimum of 72 hours; patient-provided equipment, sensor placement, hook-up, calibration of monitor, patient training, removal of sensor, and printout of recording (check additional reporting requirements in an official CPT codebook).	95249 - $64
Ambulatory CGM of interstitial tissue fluid via a subcutaneous sensor for a minimum of 72 hours; physician or other qualified health care professional (office) provided equipment, sensor placement, hook-up, calibration of monitor, patient training, removal of sensor, and printout of recording	95250 - $145
Ambulatory CGM of interstitial tissue fluid via a subcutaneous sensor for a minimum of 72 hours; interpretation and report.	95251 - $34
Note that for CGM there are Category III CPT codes 0446T, 0447T and 0448T that describe services related to the insertion and removal of an implantable interstitial glucose sensor system.	

Medical Devices per the FDA

Since the initiation of RPM and RTM codes for reimbursement, there has been some debate over which kinds of medical devices can be used to collect the patient's physiologic data. CMS reiterates that devices used to capture a patient's physiologic data must meet the FDA definition of being a medical device as described as described in section 201(h) of the Federal, Food, Drug and Cosmetic Act (FFDCA) but do not need to be an FDA-approved or cleared device[17]. Additionally, CMS clarifies that the medical device does not need to be prescribed by a physician, although this could be possible depending upon the medical device.

CMS also notes that the medical device or devices must be "reasonable and necessary for the diagnosis or treatment of the patient's illness or injury or to improve the functioning of a malformed body member" and that "the device must be used to collect and transmit reliable and valid physiologic data that allow understanding of a patient's health status to develop and manage a plan of treatment."

References

- Calendar Year 2021 Physician Fee Schedule Final Rule
- Calendar Year 2022 Physician Fee Schedule Final Rule
- Calendar Year 2023 Physician Fee Schedule Final Rule
- Calendar Year 2024 Physician Fee Schedule Final Rule
- CMS' Therapy Services. Includes additional information on the de minimus standard.
- CMS' Billing Examples Using CQ/CO Modifiers for Services Furnished In Whole or In Part by PTAs and OTAs
- Behavioral Health Integration Services. CMS Medicare Learning Network Booklet
- Bust These 4 Myths for Precision RPM Coding. American Academy of Professional Coders. 2021.
- 2022 Medicare Remote Therapeutic Monitoring FAQs: CMS Final Rule. Foley & Lardner. Nov 2021.

[17] CY 2021 PFS FR p. 84543