



**REMOTE
MONITORING
SERVICES
IMPLEMENTATION GUIDE**

Overview

This implementation guide provides information and guidance to sleep medicine clinicians and sleep centers understand and implement remote physiological monitoring (RPM) and remote therapeutic monitoring (RTM) services. The following content areas are included:

- Introduction and background of remote services
- Remote services general requirements
- Digitally stored data services/RPM codes and descriptors
- RPM treatment management services codes and descriptors
- RPM and RTM background, applications, and reporting requirements
- RPM and RTM medical devices
- Ordering and rendering of RPM and RTM services
- Interactive communication requirements
- Recommendations for implementation in sleep medicine

Introduction and Background

Remote monitoring services allow health care clinicians to collect and analyze patients' health care data and use that data to monitor and manage their patients' acute and chronic conditions outside of a traditional clinical setting. The use of remote monitoring services has grown as new technologies are profoundly changing the way patients interact with health care clinicians. A rise in virtual care services, the establishment of new procedure/billing codes, and coverage/payment determinations from public and private payers are also contributing to the growth of remote monitoring services.

General Requirements for Remote Services

Furnishing remote monitoring services

To report remote monitoring services, the services must be ordered and billed by a physician or other qualified health care professional (QHP) whose scope of practice and

Medicare benefit category permit independent billing for the service. The term "physician or other qualified health care professional" is defined by CPT as an individual who is qualified by education, training, licensure or regulation (when applicable), and facility privileging (when applicable), who performs a professional service within their scope of practice and independently reports that service. Examples of QHPs may include nurse practitioners, physician assistants, clinical nurse specialists, and other practitioners recognized by CPT. For Medicare coverage and payment purposes, however, a physician or other QHP is an individual whose scope of practice and Medicare benefit category include the specific service being furnished and who is authorized to independently bill Medicare for that service.

Clinical staff are defined as individuals who work under the supervision of a physician or other qualified health care professional and who are permitted by law, regulation, and facility policy to perform or assist in the performance of a professional service, but who do not independently report that service. Examples of clinical staff include medical assistants and licensed practical nurses. In the Calendar Year 2021 Medicare Physician Fee Schedule Final Rule, the Centers for Medicare & Medicaid Services (CMS) finalized that auxiliary personnel may furnish services described by CPT codes 99453 (remote monitoring device setup and patient education) and 99454 (remote monitoring device supply and data transmission) incident to the billing practitioner's services and under the required level of supervision. CMS further clarified that auxiliary personnel may include contracted employees, consistent with Medicare incident-to policy.

Coding guidelines

Remote CPT coding guidelines may differ from private and public payer payment eligibility and coverage policy guidelines. The AASM recommends that clinicians contact payers to verify requirements as they vary by payer.

Patient consent

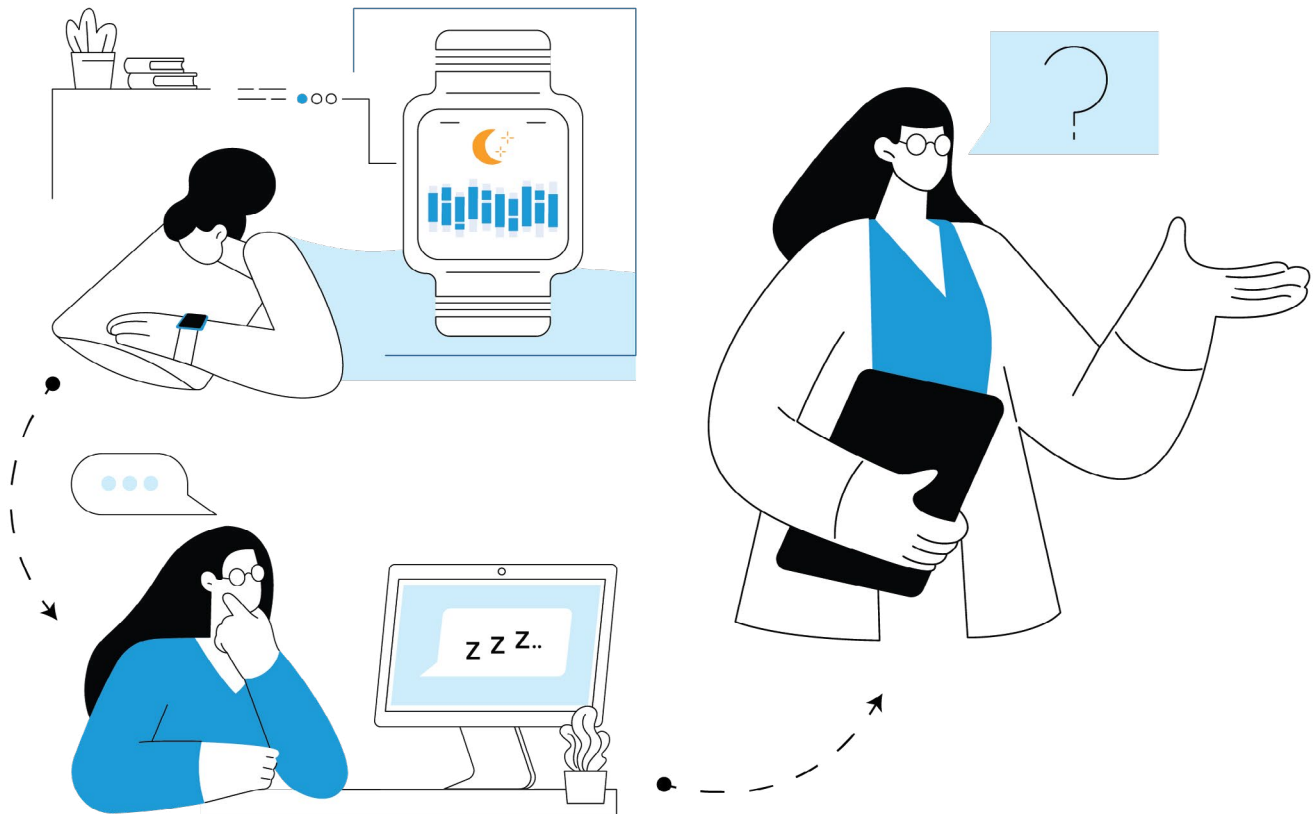
Patient consent requirements for remote monitoring services vary by state, and providers must comply with applicable state laws in addition to federal Medicare requirements. Under Medicare policy, CMS finalized in the Calendar Year 2021 Medicare Physician Fee Schedule Final Rule that patient consent for Remote Physiologic Monitoring (RPM) services must be obtained and documented in the medical record but may be obtained at the time the RPM services

are furnished, rather than requiring advance consent. While CMS has clearly articulated consent requirements and timing for RPM services, it has not issued explicit, service specific guidance addressing patient consent requirements for Remote Therapeutic Monitoring (RTM) services. Given variability in state law and the absence of explicit Medicare consent requirements for RTM, the AASM recommends that patient consent be obtained and documented in the patient's medical record prior to furnishing any remote monitoring services as a best practice to support compliance and mitigate audit risk.

Remote monitoring process

Physiologic or therapeutic data are collected through the use of a medical device that meets the U.S. Food and Drug Administration (FDA) definition of a medical device and are

electronically transmitted to the sleep medicine practice for clinical review. For Remote Physiologic Monitoring (RPM), the data must be automatically collected and transmitted by the device, while Remote Therapeutic Monitoring (RTM) may include patient reported data, depending on the specific CPT code. The transmitted data are stored in a secure system and made available to the billing clinician for analysis and interpretation. Clinical staff or auxiliary personnel, working under the supervision of the billing clinician, may assist with aspects of data management or care coordination consistent with Medicare requirements; however, clinical interpretation of the data and all diagnostic, treatment planning, and therapy response decisions remain the responsibility of the physician or other qualified health care professional (QHP), acting within their scope of practice.



Remote Physiological Monitoring (RPM)

Digitally stored data services and Remote Physiologic Monitoring (RPM) services are described in the Medicine section of the CPT code set as services that involve the collection, transmission, and analysis of patient physiologic data used to develop and manage a treatment plan for patients with acute and/or chronic conditions. These services are reported using specific CPT codes that are distinct from traditional Evaluation and Management (E/M) services, although they support ongoing clinical management. Under Medicare policy, RPM services are limited to patients with an established patient clinician relationship. Following the end of the COVID 19 Public Health Emergency, CMS requires that RPM services be furnished only to established patients, with limited exceptions for beneficiaries who initiated RPM services during the Public Health Emergency and are considered established for purposes of continued care.

Digitally Stored Data Services/RPM

| Codes | Long Descriptor |
|-------|---|
| 99091 | 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 health care professional, qualified by education, training, licensure/regulation (when applicable) requiring a minimum of 30 minutes of time, each 30 days. |
| 99453 | Remote monitoring of physiologic parameter(s) (e.g., weight, blood pressure, pulse oximetry, respiratory flow rate), initial; setup and patient education on use of equipment (PE only). |
| 99454 | Remote monitoring of physiologic parameter(s) (e.g., weight, blood pressure, pulse oximetry, respiratory flow rate), device(s) supply with daily recording(s) or programmed alert(s) transmission, 16-30 days in a 30-day period. (PE only). |
| 99473 | Self-measured blood pressure using a device validated for clinical accuracy; patient education/training and device calibration. (Do not report 99473 more than once per device). |

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| 99474 | Self-measured blood pressure using a device validated for clinical accuracy; separate self-measurements of two 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, with report of average systolic and diastolic pressures and subsequent communication of a treatment plan to the patient. (Do not report 99474 more than once per calendar month). |
|-------|--|

RPM Treatment Management Services

Medical devices

| Codes | Long Descriptor |
|-------|---|
| 99457 | Remote physiologic monitoring treatment management services, clinical staff/physician/ other qualified health care professional time in a calendar month requiring 1 real-time interactive communication with the patient/caregiver during the calendar month; first 20 minutes (Report 99457 once per calendar month for the first completed 20 minutes of remote monitoring services provided, regardless of the number of modalities performed). |
| 99458 | Remote physiologic monitoring treatment management services, clinical staff/physician/ other qualified health care professional time in a calendar month requiring 1 real-time interactive communication with the patient/caregiver during the calendar month; each additional 20 minutes. (List separately in addition to code for primary procedure). |

Medical Devices

The CPT code set specifies that devices used for Remote Physiologic Monitoring (RPM) must meet the U.S. Food and Drug Administration's (FDA's) definition of a medical device, as set forth in Section 201(h) of the Federal Food, Drug, and Cosmetic Act, without imposing additional device specific requirements. CMS provides more detailed guidance through Medicare coverage and payment policy regarding the use of medical devices for RPM services. Under CMS policy, there is no requirement that an RPM device be formally prescribed, although an order for RPM services is required and, depending on the clinical circumstances, use of a prescribed device may be appropriate. CMS further requires that RPM devices

automatically collect and electronically transmit patient physiologic data; data that are manually self recorded or reported by the patient do not meet RPM requirements. The device and associated monitoring services must be reasonable and medically necessary for the diagnosis or treatment of the patient's illness or injury, or to improve the functioning of an abnormal body part, and must generate reliable, clinically meaningful physiologic data that allow the billing practitioner to assess the patient's health status and develop or manage an appropriate treatment plan.

Data Collection and Analysis

Codes 99453 and 99454

The two practice expense (PE) only RPM codes include:

- Code 99453 is used for clinical staff time spent instructing/educating a patient and/or caregiver about using one or more medical devices.
- Code 99454 is used to report the supply of one or more RPM medical devices and the ongoing collection and electronic transmission of patient physiologic data during a 30-day period.

When billing codes 99453 and 99454, monitoring must occur over at least 16 days of a 30-day period. These two codes cannot be reported more than once during a 30-day period per patient.

- When multiple medical devices are provided to a patient, the services associated with all the medical devices can only be billed once per patient per 30-day period and only when at least 16 days of data have been collected.
- CPT code 99453 can only be billed only once per episode of care. An episode of care is defined as "beginning when the remote physiologic monitoring service is initiated and ends with attainment of targeted treatment goals."

Code 99091

CPT code 99091 describes the professional work associated with the collection, review, and interpretation of physiologic data that are digitally stored and/or transmitted by the patient and/or caregiver to the physician or other qualified health care professional (QHP). This service involves at least 30 minutes of physician or QHP time within a 30 day period

spent reviewing and interpreting the transmitted physiologic data and using that information to inform clinical decision making for the management of an acute and/or chronic condition. CMS finalized separate payment for CPT code 99091 in Calendar Year 2018, and the code is valued as professional work only, without associated practice expense.

CPT code 99091 may be reported no more than once per 30 day period and may be reported again in a subsequent 30 day period when the required time threshold is met. The service may be reported once a cumulative total of at least 30 minutes of physician or QHP time has been spent reviewing, analyzing, and interpreting physiologic data and modifying the patient's care plan, as clinically appropriate, during the 30 day period. Documentation must support the total time spent on these professional activities. Interactive communication with the patient or caregiver is not required for reporting CPT code 99091.

CPT code 99091 may not be reported in the same 30 day period as RPM treatment management codes 99457 or 99458, as these codes describe overlapping clinical work and time. In sleep medicine, the American Academy of Sleep Medicine (AASM) has provided coding guidance indicating that, when all RPM requirements are met, the download, review, and interpretation of positive airway pressure (PAP) efficacy and adherence data may be reported under applicable RPM codes, including CPT code 99091 or 99457, as appropriate. Additional information on this topic is available in the AASM Coding FAQs (<https://aasm.org/coding-faq-downloading-and-interpreting-pap-data>).

Codes 99473 and 99474

As of January 1, 2020, clinicians may submit claims for self measured blood pressure (SMBP) services using CPT codes 99473 and 99474. SMBP refers to blood pressure measurements obtained outside of the clinician's office, most commonly in the home setting. CPT code 99473 describes initial SMBP services, including patient education and training and calibration of a blood pressure device validated for clinical accuracy. CPT code 99474 describes ongoing SMBP services, including collection and interpretation of patient reported blood pressure readings and development or modification of a treatment plan. SMBP services can enhance the quality and accessibility of care for individuals with elevated blood pressure and are clinically useful in confirming or diagnosing hypertension, supporting patient engagement in blood pressure management, and informing ongoing treatment decisions.

Code 99473

- CPT code 99473 can be used when a patient receives education and training (facilitated by clinical staff) on the setup and use of a SMBP measurement device validated for clinical accuracy, including device calibration.
- Code 99473 can only be reported once per device. It would most commonly be used prior to initiating SMBP in patients suspected of having hypertension or for those patients with an existing diagnosis of hypertension who have a new BP measurement device or are receiving training for the first time.

CPT code 99473 may be reported once per device. CPT code 99473 should not be reported if the services are performed as part of an evaluation and management (E/M) service. When a significant, separately identifiable E/M service is provided on the same date, modifier 25 should be appended to the E/M service, not to CPT code 99473.

Code 99474

- CPT code 99474 can be used for SMBP data collection and interpretation when patients use a BP measurement device validated for clinical accuracy to measure their BP twice daily (two measurements, one minute apart in the morning and evening), with a minimum of 12 readings required each billing period.
- SMBP measurements must be communicated back to the clinician's office and can be manually recorded (e.g., phone, fax, or in-person) or electronically captured and transmitted (e.g., secure email, patient portal, or directly from device).
- The physician or other QHP must establish or change the treatment plan based on the documented average of these readings. The treatment plan must be documented in the medical record and communicated back to the patient, either directly or through clinical staff.

CPT code 99474 may be reported once per calendar month and may not be reported in the same calendar month as ambulatory blood pressure monitoring codes (93784, 93786, 93788, 93790), remote physiologic monitoring

codes (99453–99458, 99091), or chronic care management codes (99487, 99489–99491). CPT code 99474 should not be reported if the services are performed as part of an evaluation and management (E/M) service. When a significant, separately identifiable E/M service is provided on the same date, modifier 25 should be appended to the E/M service, not to CPT code 99474.

Codes 99457 and 99458

CPT codes 99457 and 99458 describe remote physiologic monitoring (RPM) treatment management services provided by a physician or other qualified health care professional, or by clinical staff under the general supervision of the physician or non physician practitioner. These services involve the ongoing review and interpretation of remotely collected physiologic data, interactive communication with the patient or caregiver, and clinical decision making to establish or modify a treatment plan. CPT code 99457 represents the first 20 minutes of RPM treatment management services furnished in a calendar month, and CPT code 99458 is an add on code that may be reported for each additional 20 minutes of qualifying time in the same month. RPM services are considered care management services rather than diagnostic tests and therefore may not be furnished or billed by an independent diagnostic testing facility, even when ordered by a physician or other qualified health care professional.

CPT codes 99457 and 99458 describe remote physiologic monitoring (RPM) treatment management services that are typically furnished using communications technology and require interactive communication with the patient or caregiver. For purposes of CPT codes 99457 and 99458, interactive communication is defined as real time, synchronous, two way audio interaction, which may be enhanced with video or other forms of data transmission. CPT code 99457 represents the first 20 minutes of RPM treatment management services furnished in a calendar month and requires at least one episode of interactive communication during that month. The total time reported under CPT code 99457 includes time spent by the physician, other qualified health care professional, or clinical staff under general supervision reviewing and analyzing physiologic data, engaging in clinical decision making, and managing the patient's treatment plan. CPT code 99458 is an add on code reported in conjunction with CPT code 99457 for each additional full 20 minute increment of qualifying RPM treatment management time furnished

in the same calendar month. CPT code 99457 may not be reported for services of less than 20 minutes and may not be reported in conjunction with CPT code 99091. CPT code 99458 may not be reported for partial increments of time and may only be reported when CPT code 99457 is also reported.

Remote Therapeutic Monitoring (RTM)

Remote Therapeutic Monitoring (RTM) services represent the review and monitoring of data related to signs, symptoms, and functions of a therapeutic response. Data collected through RTM may include objective device generated data as well as subjective inputs reported by the patient. These data reflect therapeutic responses and provide a functionally integrative representation of a patient’s health status, rather than physiologic vital signs. RTM services are reported using a defined set of CPT codes, including initial set up and device supply codes and RTM treatment management service codes. The six RTM codes include:

Remote Therapeutic Monitoring Services

| Codes | Long Descriptor |
|--------|---|
| 98975 | Remote therapeutic monitoring (e.g., therapy adherence, therapy response, digital therapeutic intervention); initial setup and patient education on use of equipment. |
| 98976* | Remote therapeutic monitoring (e.g., therapy adherence, therapy response, digital therapeutic intervention); device(s) supply for data access or data transmissions to support monitoring of respiratory system, 16-30 days in a 30-day period. |
| 98977* | Remote therapeutic monitoring (e.g., therapy adherence, therapy response, digital therapeutic intervention); device(s) supply for data access or data transmissions to support monitoring musculoskeletal system, 16-30 days in a 30-day period). |
| 98978* | Remote therapeutic monitoring (e.g., therapy adherence, therapy response, digital therapeutic intervention); device(s) supply for data access or data transmissions to support monitoring of cognitive behavioral therapy, 16-30 days in a 30-day period. |

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| 98980* | Remote therapeutic monitoring treatment management services, physician or other qualified health care professional time in a calendar month requiring at least one real-time interactive communication with the patient or caregiver during the calendar month; first 20 minutes. |
| 98981* | Remote therapeutic monitoring treatment management services, physician or other qualified health care professional time in a calendar month requiring at least one real-time interactive communication with the patient or caregiver during the calendar month; each additional 20 minutes. (List separately in addition to code for primary procedure). |

**These codes depend on collection of no fewer than 16 days of data in a 30-day period.*

Medical devices

To report 98975, 98976, 98977, 98980, and 98981, the device used must be a medical device as defined by the FDA. That is, a device meeting the FDA’s definition of a medical device as described in section 201(h) of the Federal, Food, Drug and Cosmetic Act (FFDCA).

Recognizing that RTM technologies continue to evolve, CMS solicited stakeholder input through recent rulemaking regarding the types of data collected using RTM devices, costs associated with available RTM technologies, and the potential beneficiary populations and clinical use cases by condition type. This ongoing feedback process provides insight into how CMS is evaluating RTM technologies and may inform future refinements to RTM coding and payment policies.

Codes 98975-98977

CPT codes 98975, 98976, and 98977 are used to report remote therapeutic monitoring (RTM) services. CPT code 98975 describes the initial setup and patient education on the use of RTM equipment and is reported once per episode of care. CPT codes 98976 (respiratory system monitoring) and 98977 (musculoskeletal system monitoring) describe the supply of RTM devices with scheduled recording(s) and/or programmed alert(s) transmissions and are reported once per 30 day period when applicable data collection thresholds are met. RTM codes should not be reported in conjunction with other physiologic monitoring services, such as continuous glucose monitoring (e.g., CPT 95250) or remote physiologic monitoring codes (e.g., CPT 99453,

99454), when services would be duplicative. An RTM episode of care generally begins when remote therapeutic monitoring is initiated for a specific condition or therapeutic goal and concludes based on clinical judgment, such as completion of the treatment plan or achievement of therapeutic objectives.

Codes 98980 and 98981

CPT codes 98980 and 98981 describe remote therapeutic monitoring (RTM) treatment management services and should not be reported for time that is reported using other, more specific monitoring or treatment management codes. RTM treatment management services may be reported during the same service period as chronic care management, transitional care management, principal care management, and behavioral health integration services, provided that time spent performing each service is separately documented and not counted toward more than one service in the same calendar month. CPT code 98980 is reported for the first completed 20 minutes of RTM treatment management time furnished in a calendar month by the physician, other qualified health care professional, or clinical staff under general supervision. CPT code 98981 is an add on code reported for each additional completed 20 minute increment of qualifying time in the same month. Neither code may be reported for services of less than 20 minutes. CPT code 98980 is reported once per calendar month, regardless of the number of therapeutic monitoring modalities performed. RTM treatment management time may be counted on the same date as other services, including evaluation and management services, as long as the work is distinct and time is not duplicated. CPT codes 98980 and 98981 require at least one episode of interactive communication with the patient or caregiver during the calendar month. Interactive communication is defined, at a minimum, as a real time, synchronous, two way audio interaction and may be enhanced with video or other forms of data transmission.

Use of HCPCS Code G2211 with Remote Monitoring Services

HCPCS code G2211 is an add on code intended to capture the inherent complexity of office or outpatient based evaluation and management (E/M) visits associated with longitudinal, ongoing patient care. G2211 must be reported in conjunction with a new or established patient office/outpatient E/M visit (CPT codes 99202–99215) and is not separately billable on its own. While remote physiologic monitoring (RPM) and

remote therapeutic monitoring (RTM) services may support the overall management of a patient’s condition and inform medical decision making, G2211 cannot be billed with remote monitoring codes alone. Instead, G2211 may be reported only when an eligible E/M visit occurs, during which the clinician serves as a continuing focal point for the patient’s care and reviews or incorporates information from remote monitoring as part of that visit. Claims for G2211 submitted without an associated qualifying E/M service do not meet CMS billing requirements.

Code G2211

| Codes | Long Descriptor |
|-------|--|
| G2211 | Visit complexity inherent to evaluation and management associated with medical care services that serve as the continuing focal point for all needed health care services and/or with medical care services that are part of ongoing care related to a patient’s single, serious condition or a complex condition. |

Sleep Medicine Recommendations

Because of ongoing technological advances in health care delivery, the maturation of virtual care infrastructure, and the establishment of durable reimbursement pathways under the Medicare Physician Fee Schedule and commercial payer policies, the AASM supports the appropriate implementation of remote physiologic monitoring (RPM) and remote therapeutic monitoring (RTM) services. When used in accordance with clinical need and payer requirements, RPM and RTM can improve access to sleep care, enhance patient engagement with diagnostic and therapeutic devices, increase care team efficiency, and support high quality, patient centered care delivery within sleep medicine practices.

- Sleep clinicians and sleep centers commonly assess positive airway pressure (PAP) therapy efficacy and adherence through remote physiologic monitoring data generated by PAP devices. Depending on the structure of the service and the personnel involved, CPT code 99091 or CPT code 99457 may be used to report qualifying work associated with the review and interpretation of this data and the provision of ongoing patient management between in person visits. CPT code 99091 applies when the physician or other qualified health care

professional personally performs at least 30 minutes of data review and interpretation in a 30 day period, whereas CPT code 99457 may be used when remote physiologic monitoring treatment management services are furnished, including qualifying clinical staff time under general supervision and required interactive communication with the patient.

- CPT code 98978 is used to report remote therapeutic monitoring of cognitive behavioral therapy (CBT) and describes the supply of one or more devices with scheduled recording(s) and/or programmed alert(s) transmissions during a 30 day period. This code applies when CBT related therapeutic data are collected through a qualifying RTM platform and appropriate documentation requirements are met. CPT code 98978 reflects device supply and data transmission only and does not include clinical interpretation or treatment management services, which may be reported separately using CPT codes 98980 and 98981 when applicable.
- Patient consent must be obtained and documented in the patient's medical record at the time remote physiologic monitoring (RPM) or remote therapeutic monitoring (RTM) services are initiated. Consent may be verbal or written and is required before billing for RPM or RTM services, including those furnished to sleep medicine patients.
- Sleep clinicians should document the time spent assessing, reviewing and/or interpreting the data in the medical record.
- Sleep clinicians should document time spent communicating with the patient (and family caregiver, if applicable), along with the details of the conversation, in the medical record.
- Sleep practices should understand and assess liability and risk before implementing and providing RPM and RTM services (e.g., medical liability, licensing, consent requirements, HIPAA compliance).
- Sleep practices should make use of digital tools to allow clinicians to provide ongoing guidance

and assessments for patients outside of the in-office visit, including the collection and use of patient-generated health data (PGHD).

- Sleep practices should use digital platforms and devices that support an active feedback loop, enabling the transmission of patient data in real time or near real-time to the sleep care team and providing patients with automated, ongoing one way guidance or reminders. Such tools may support clinical monitoring and patient engagement between visits but do not replace required real time, two way interactive communication when reporting time based RPM or RTM treatment management services.
- Balance the costs of remote monitoring platforms with the potential benefits of remote monitoring services for sleep patients.
- Identify which patients are using remote monitoring services and which, if any, sleep disorder patient groups are facing access issues.
- Evaluate the use of remote monitoring services for monitoring symptoms of respiratory sleep disorders.

To access national payments for remote physiologic and therapeutic monitoring services, visit the [CMS Physician Fee Schedule page](#) on the AASM website, which includes updated national payment and RVU documents.

References

Guidance from CMS Released 2020 -2024 regarding Digitally Stored Data Services/Remote Monitoring Services. Published in the Federal Register.

Tang M, Nakamoto CH, Stern AD, Mehrotra A. Trends in remote patient monitoring use in traditional Medicare. *JAMA Intern Med.* 2022;182(9):1005-1006. doi:[10.1001/jamainternmed.2022.3043](https://doi.org/10.1001/jamainternmed.2022.3043)

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