



The Foundations of Remote Therapeutic Monitoring

Presented by Paul Yerhot, PT, DPT, SCS



About Paul

Paul Yerhot is a residency-trained, board-certified physical therapist with more than 10 years of clinical experience. Paul spent nearly a decade caring for patients at Mayo Clinic in Rochester, Minnesota, and also taught and mentored physical therapy students, residents, and other medical colleagues. Paul is the co-founder and Chief Clinical Officer of SaRA Health, where a passion for patient care and education comes together to expand access and improve outcomes. Paul is especially energized by how technology, including Remote Therapeutic Monitoring (RTM), can help meet patients where they are and support more personalized, consistent care.



Objectives of this course:

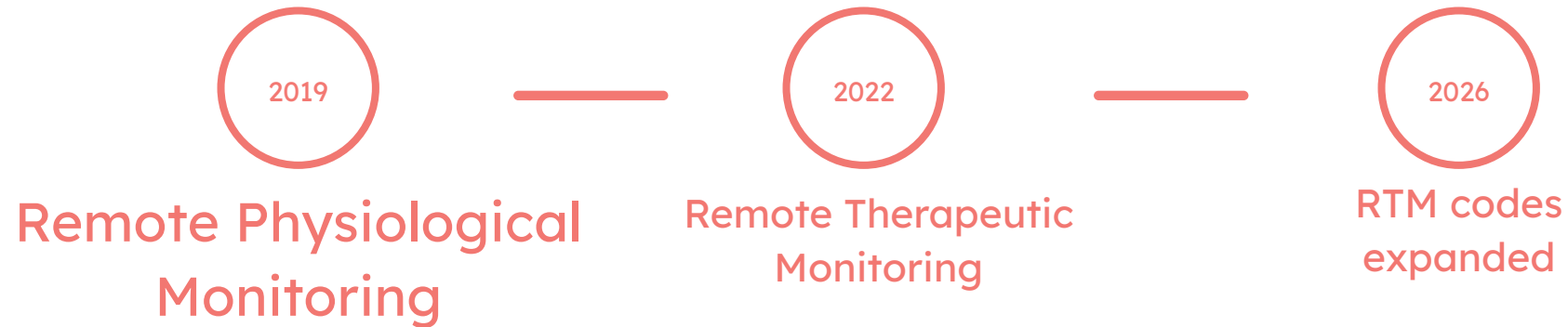
- **Articulate Payer Motivation:**
 - a. Clearly articulate the financial and clinical motivations for payers to include Remote Therapeutic Monitoring (RTM) codes in their fee schedules, focusing on the three-prong benefit model (Patient, Provider, and Payer).
- **Differentiate Billing Requirements:**
 - a. Differentiate between the key technical requirements for RTM codes, including specific data transmission thresholds (e.g., 16-day vs. 2-15 day) and time-based treatment management increments.
- **Identify Device and Candidate Selection:**
 - a. Identify the specific regulatory criteria for RTM-eligible medical devices and evaluate patient profiles to determine appropriate enrollment and "medical necessity" for a remote monitoring program.
- **Apply Clinical Integration:**
 - a. Apply RTM-derived data to clinical decision-making to enhance patient care across the continuum, from managing acute symptoms to maintaining long-term functional progress

RTM Codes in Healthcare





Leading into RTM...RPM



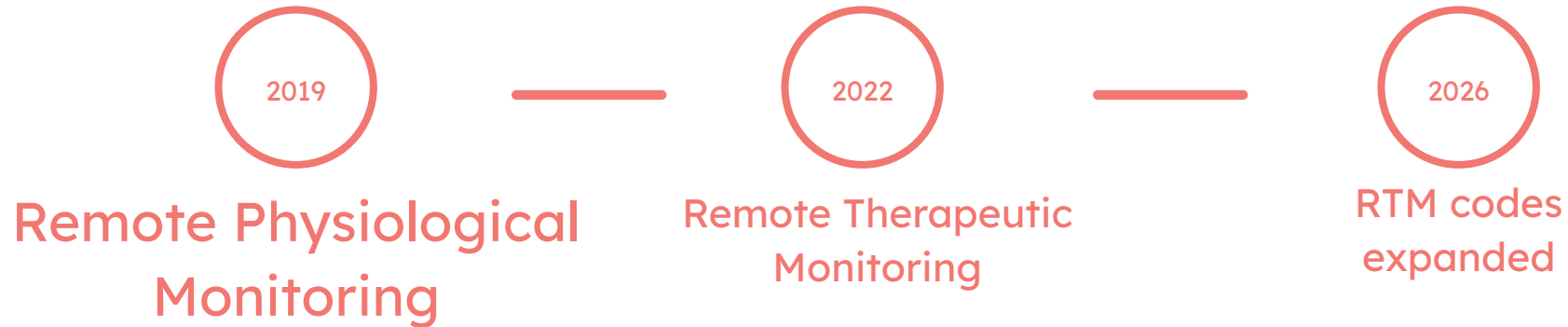
Remote Physiologic Monitoring (RPM)

- Launched in 2019
- Primary driver: the need to improve chronic disease management by collecting continuously data
 - *Ex: continuous glucose monitors for those with diabetes*
- Result:
 - ↓ readmission rates
 - ↓ need for in-person visits
 - ↓ cost per patient
- In a phrase: cost savings for the payer

Curtis & Willig, 2020
Lee et al, 2025



Leading into RTM...RPM



Remote Physiologic Monitoring (RPM)

- Limitations:
 - Required physiological data only that must be collected/transmitted via a biosensor
 - Billed only by physicians (or incident to)
 - Does not include patient reported data
- Unable to impact patients when:
 - Primary outcome data is self-reported or non-physiological
 - Having their care managed by non-physician teams/individuals

Curtis & Willig, 2020
Ekekezie et al, 2023
Lofton, 2023



Remote Therapeutic Monitoring!



Remote Therapeutic Monitoring (RTM)

- Launched in 2022
- Motivated by:
 - Observed success of RPM
 - Desire to expand impact into non-physiological data and self-reported data
 - *Recognition that reports of pain (for example) are just as valuable as continuous glucose monitoring*
 - Desire to expand to other providers

Evolutionary dynamics, 2025
Ekekezie et al, 2023
Tang et al, 2022



Remote Therapeutic Monitoring!



Remote Therapeutic Monitoring (RTM)

- Focus on supporting patients who are receiving:
 - Musculoskeletal rehabilitation
 - Respiratory medicine
 - Cognitive behavioral therapy
- Expanded to providers, including physical therapists, occupational therapists, speech and language pathologists, nurse practitioners, and others

Evolutionary dynamics, 2025
Ekekezie et al, 2023
Tang et al, 2022



Remote Therapeutic Monitoring!



Core tenets of both RPM and RTM

- Exchanging of data between visits
- Incentivizing providers to review and react to that data
- Incentivizing providers to execute care delivery tasks between visits
- Seeking to increase the patient's engagement and completion of their current plan of care, with the hopes of reducing that patient's overall cost

Curtis & Willig, 2020
Ekekezie et al, 2023
Lofton, 2023



Actual patient story

Interaction Log

Messages

March 30, 2026

M

Enter message

📷 😊 🔊 🔔



The Three Winner's with RTM

1. Payers
 - a. Cost savings via efficient and completed plans of care
2. Patients
 - a. Improved outcomes
 - b. Access to providers between visits
3. Providers
 - a. More and real time data about their patients
 - b. Getting paid for work we are already doing
 - c. Low-friction (and unified) touchpoints with patients

Software Requirements



What are the software requirements?

Software as a Medical Device (SaMD)

- *“The software must be intended to diagnoses, cure, mitigate, treat or prevent disease”*
- Key functionality:
 - An app or software platform must meet formal definition of SaMD by FDA
 - Must run on general-purpose hardware (like a smartphone or computer)
 - NOT a dedicated medical device
- Excluded:
 - General purpose “wellness” applications
 - Step counters, sleep logs
 - Manually sending and tracking of emails/texts

The CPT Codes

Remote Therapeutic Monitoring



Remote Therapeutic Monitoring CPT Codes

CONNECT
98975

Initial set-up with monitoring device and patient education

ENGAGE
98985

A patient who has engaged in remote monitoring for 2-15 days (in a 30 day period)

ENGAGE
98977

A patient who has engaged in remote monitoring for 16 days (in a 30 day period)

SUPPORT
98979

10-19 minutes of interaction with patient data and communication with patient

SUPPORT
98980

20-39 minutes of interaction with patient data and communication with patient

SUPPORT
98981

Each additional 20 minutes of interaction with patient data and communication with patient



Remote Therapeutic Monitoring CPT Codes

CONNECT
98975

Initial set-up with monitoring device and patient education

- ❑ Requirements:
 - ❑ Enroll patient in appropriate RTM device
 - ❑ Does not opt out prior to day 16
 - ❑ Patient must engage 2 times to reach billable threshold
- ❑ How often?
 - ❑ Eligible to bill connect code only ONCE per POC



Remote Therapeutic Monitoring CPT Codes

ENGAGE

98985/98977

The number of responses (day of data exchange) in a 30 day cycle.

- ❑ Requirements:
 - ❑ 98985: Patient responds 2-15 unique days in a 30 day window
 - ❑ 98977: Patient responds >16 unique days in a 30 day window
- ❑ Of note:
 - ❑ Either/or - can only bill one per 30 day window
 - ❑ Eligible every 30 days in a POC
 - ❑ Multiple responses in one day only counts as 1 engagement



Remote Therapeutic Monitoring CPT Codes

SUPPORT 98979/80/81

Time spent by a qualified provider review, reacting and responding to messages

- ❑ Required behaviors:
 - ❑ Data review (reviewing, reacting, responding) to messages
 - ❑ Synchronous interaction discussing responses (phone call, virtual visit, in-person visit)
 - ❑ NEED BOTH in a calendar month
- ❑ 98979: 10-19 minutes
- ❑ 98980: 20-39 minutes (replaces 98979)
- ❑ 98981: +1 unit for each additional 20 minutes (40-59 min, etc)
- ❑ Of note:
 - ❑ Collects PER calendar MONTH
 - ❑ Does NOT follow 8-minute rule
 - ❑ Collects per patient (not per provider)

Galín, 2023
Lofton, 2023
Redd et al, 2025
Thankathuraipandian et al, 2024



Remote Therapeutic Monitoring CPT Codes

Some key ideas to highlight:

- *Collecting* across days
 - 30 day cycles for Engage codes
 - Calendar month for Support Codes
- Able to capture time asynchronously
- Do NOT follow 8-minute rules
- Collecting across multiple providers per patient
- Not ONLY HEP adherence data
 - Any topic/info clinically relevant is appropriate!



Remote Therapeutic Monitoring CPT Codes

“Sometimes therapy”

- Requires the codes to be billed as part of a plan of care when administered by a physical, occupational, or speech therapist
- RTM codes ARE not included in daily limits
- RTM codes WILL NOT trigger co-pays

Modifiers

- When BILLED by a PTA - the CQ modifier DOES need to be applied
- When BILLED by a PT - the CQ modifier does NOT need to be applied
 - Even if actions were performed by a PTA during relevant time window



Remote Therapeutic Monitoring CPT Codes

Place of Service

- RTM codes should be billed to Pos11 (“office”)
 - Reason: the software is being housed at your clinic/office location

Patient Responsibility

- Can range from 0-100% of allowed amount (not charged)
- Payer/plan dependent
- Example - Medicare patient without a secondary

	CPT Code	Total Allowed (Avg)	Patient Responsibility (20%)
Connect Code	98975	~\$21.71	\$4.34 (One-time)
Engage Code (2-15 days)	98985	~\$40.08	\$8.02 (Monthly)



Remote Therapeutic Monitoring CPT Codes

Medical Necessity

- **Clinical Appropriateness:** Monitoring must align with generally accepted standards of medical practice and be appropriate for the specific illness, injury, or chronic condition in terms of type, frequency, and duration.
- **Risk of Instability:** patient must be at risk for clinically significant changes in medical status due to the instability of their underlying condition.
- **Preventative Intent:** There must be a reasonable likelihood that monitoring will prevent avoidable clinical deterioration, emergency department visits, or hospital readmissions
- **Active Assessment:** Clinical records must document that the transmitted data is being ****regularly assessed**** by a healthcare provider to detect acute changes and prompt timely intervention.
- **Access Barriers:** patient is either unable to access regularly scheduled outpatient care (due to geography or mobility) or requires monitoring between visits because of potential changes in status.



RTM CPT Codes - Summary

CONNECT

98975

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Patient and Provider Outcomes with RTM and SaRA Health



The Three Winner's with RTM

1. Payers
 - a. Cost savings per patient via higher compliance and efficiency to plans of care
- 2. Patients' motivation**
 - a. Improved outcomes
 - b. Improved compliance to HEP
 - c. Improved perceived value of care
 - d. Increased access to providers between visits
- 3. Providers' motivation**
 - a. Incentivized and reimbursed for doing things we've always done
 - b. Increase visibility to patient's progress and status
 - c. Capture trends to intervene early
 - d. Increase connection/therapeutic alliance with patient
 - e. Able to deliver care in novel ways (support post scheduled visits)



Patient **outcomes** with SaRA Health

Initial Study

- Population:
 - 20 patients enrolled in SaRA Health (compared to 20 receiving usual care)
- FOTO was primary outcome measure
- Results:
 - 2.3 fewer visits
 - Exceeded expected FOTO score by 11.5 points
 - \$127 cost savings to patient



Patient outcomes with SaRA Health

Follow Up Study

- Population:
 - All patients during two, separate 6-month time windows
 - *(Sept 2023 - Feb of 2024 & Feb 2024 - Sept 2024)*
- ALL patients included in our analysis even if not enrolled
 - ~80% patients enrolled in SaRA Health
- Outcome measures
 - KOOS, LEFS, NDI, Dash
- Evaluated for percent change and failure to progress (no clinically meaningful threshold achieved)



Patient outcomes with SaRA Health

Raw score change	No SaRA n = 220	With SaRA n = 260	Difference	% Difference	National Average	
KOS	20.2	24.93	4.73	23.42%	24.64	
LEFS	13.72	17.94	4.22	30.76%	15.93	
DASH	20.14	21.15	1.01	5.01%	22.48	
NDI	17.78	19.88	2.1	11.81%	12.92	
Failure to Progress	No SaRA	With SaRA	Difference	% Difference	National Average	MCID
KOS	29.26%	18.60%	-10.66%	-36%	24.14%	10
LEFS	41.66%	15.68%	-25.98%	-62%	36.27%	9
DASH	23.80%	19.23%	-4.57%	-19%	25.66%	8
NDI	16.66%	7.14%	-9.52%	-57%	36.79%	7.5



Patient **outcomes** with other RTM solutions

Study Overview

- Retrospective case-control study conducted across 95 private practice physical therapy clinics
- Population: 1,224 total patients with musculoskeletal (MSK) conditions
- Comparison Groups: 306 patients receiving in-person PT plus RTM matched against 918 control patients receiving only in-person PT

Key Results

- 72% of patients in the PT + RTM group successfully achieved their projected discharge functional status benchmark, compared to only 63% of the PT-only control group.
- RTM group demonstrated significantly higher engagement, with 36% attending more than two in-person visits per week, compared to just 24% of the control group.
- When controlling for other variables, participation in RTM was a significant independent predictor of success;
 - RTM patients were 1.53x more likely to achieve their functional recovery goals.



Patient **outcomes** with other RTM solutions

Study Overview

- To evaluate the effectiveness of RTM to increase physical activity and participation
- Population: 42 participants (Parkinson's disease, multiple sclerosis, stroke, mild TBI/concussion, post-COVID, and lower extremity or back pain)
- Comparison Groups: Historical controls

Key Results

- Inclusion of RTM increased
 - Average daily steps by 19%
 - Average weekly minutes of mod/vigorous activity
 - Post-stroke patients exceeded MCID/MDC in 6MWT, 10mWT, FGA



Patient perspective with SaRA Health

Nearly 10,000 patients have completed an anonymous survey administered by SaRA Health during their RTM enrollment:

- 83% believe the quality of their care was positively impacted by the responses they provided
- 60% report improved compliance (as a result of messages)
- 73% report messaging has successfully captured their progress between sessions
- 80% report an increased perceived value of their care
- 76% report that check-ins improve their overall therapy experience



Provider perspectives with SaRA Health

The study:

- IRB approved study conducted in collaboration with SaRA Health client (seeking publication in 2026)
- 42 PT/OT responded to subjective questions about their experience using SaRA Health
 - Questioned about impact on:
 - Therapeutic alliance
 - Alerting to early warning signs
 - Patient connection
 - Workflow (time, efficiency)



Provider perspectives with SaRA Health

The results:

- 78% agree that SaRA Health makes them feel more connected to their patient's journey in between visits
- 73% agree that SaRA Health is effective at alerting them to warning signs of patient decline or potential adverse events.
- 56% report improvement in their patient therapeutic alliance
- 70% report that SaRA Health is NOT mentally taxing on the average day
- 72% report SaRA has not reduced need outside of work hours work



Leveraging RTM to Deliver Exceptional Care



RTM Enables Unique Patient Touchpoints

RTM for: Acute Monitoring - The Safety Net

- Real SaRA Health patients:
 - Fluid on the lungs example from earlier
 - DVT early detection
- Research
 - Monitoring following cardiac interventions reduced number of hospitalizations and ED visits up to 6 months post interventions (Po et al., 2024)
 - Use of digital monitoring following major orthopedic surgeries reduced 90-day hospital readmissions by 20-30% (Lee et al., 2025)



RTM Enables Unique Patient Touchpoints

RTM for: In-Context” Assistance

- Real SaRA Health patients:
 - Fallen and looking for guidance

Interaction Log

Messages

PM

Hi [redacted] I'm stuck on the floor and can't figure out the best way to get up.... I made it onto my side but I'm not sure what to do from here
2:07 PM

From there, I would suggest going up onto all fours, like hands and knees. Hopefully from that position, you can then use your hands to walk up your legs for a little support from your back. Sorry, hard to explain without demonstration
✓ 2:08 PM

Okay, thank you
2:08 PM

If a chair is nearby, then after you are on hands and knees, then you could put your hands on a chair to provide support, as well
✓ 2:08 PM

My left toe feels numb
2:08 PM

I assume that's because the nerve is getting pinched somewhere along the path
✓ 2:08 PM

Suggestions on how to get to my hands and knees? Just keep rolling on my belly?
2:09 PM

Enter message

📎 🗨️



RTM Enables Unique Patient Touchpoints

RTM for: In-Context” Assistance

- Real SaRA Health patients:
 - Fallen and looking for guidance

Interaction Log

Messages

M

Suggestions on how to get to my hands and knees? Just keep rolling on my belly?
2:09 PM

Yes, roll onto belly and then get your hands and knees underneath you.
✓ 2:09 PM

If you can't get up, then you will need to enlist the help of someone else, and of course, if no one is around and you are unable to do it, then you will need to call 911

There's not a chance that I could damage anything by moving, right?
2:09 PM

✓ 2:10 PM

It sounds like it's going to hurt, but whatever is happening is already present, so it would be hard for me to say that you would do more damage

Okay, that's good to know
2:10 PM

✓ 2:10 PM

You might just have to psych yourself up and do it, hopefully once you are up, then you might have to go to bed and lay down to get things to calm back down. I would also highly suggest calling the doctor on tomorrow to let them know the situation and potentially they would choose to do an MRI

Enter message

📎 😊



RTM Enables Unique Patient Touchpoints

RTM for: In-Context” Assistance

- Real SaRA Health patients:
 - Fallen and looking for guidance

Interaction Log

Messages

Okay, that's good to know
2:10 PM

✓ 2:10 PM

You might just have to psych yourself up and do it, hopefully once you are up, then you might have to go to bed and lay down to get things to calm back down. I would also highly suggest calling the doctor on tomorrow to let them know the situation and potentially they would choose to do an MRI sooner.

Okay, thank you
2:10 PM

I made it to my bed... What would be the best position to lay in? My bed moves so I can do incline or zero gravity? Or should I just lay on my side with pillow between my knees?
2:11 PM

✓ 2:11 PM

Either slight incline or on side with a pillow, either of those is good. Ultimately, you just need to let things calm down if it felt like pain was a lot worse. No specific amount of time, however, long in order to let it calm down.

Okay thank you so much, I really appreciate you
2:11 PM

✓ 2:11 PM

You are very welcome

Enter message



RTM Enables Unique Patient Touchpoints

RTM for: the soft landing

- Enables redefining discharge to end of RTM enrollment (not last visit)
- Maintain contact with patients that no longer need in-person touchpoints
 - Allows for quicker capture should they decline
 - “Transition” period as the patient seeks to integrate HEP, habits, etc into daily life without in person touchpoints
- Research
 - SaRA internal - nearly 60% of patients report increased compliance
 - SMS touchpoints have been shown to be effective at improving medication compliance (Moon & Walsh, 2025)



RTM Enables Unique Patient Touchpoints

RTM for: timely patient touchpoints

- Assure your patient gets the message at the *perfect time*
- In an ideal world - when would you like to...
 - ... learn about their response to today's treatment
 - ... get an update about their MD visit
 - ... provide encouragement about an upcoming event
 - ... remind them their restrictions have been lifted
 - OTHERS!
- In collaboration with your patient - write and schedule send a message
 - *This would count as synchronous interaction!*

Schedule message? ×

You are about to schedule a message.

Message*

How are you feeling after yesterday's treatment?

Date & Time*

Mar 31, 2026, 3:37:00 PM 📅

Set the date and time when the message should be sent in the future.

Cancel **Schedule**



RTM Enables Unique Patient Touchpoints

RTM for: meeting the patient where they are at

- Rehab is a conflict of ideal and reality
 - Ideal: 3x/week
 - Reality: 2x/month (*parent, two jobs, spouse is sick, etc*)
- 20% of PT patients drop out within first three visits and 70% fail to complete full POC (Lofton, 2023; Galin, 2024)
- Leverage RTM to keep these patients motivated and connected
- Research
 - SaRA internal:
 - Majority of patients describe SaRA as encouraging, helpful and/or motivating
 - 73% report messages capture their progress/goals between sessions
 - 60% report improved compliance to care



RTM Enables Unique Patient Touchpoints

RTM for: elevating the caregiver

- Parents/guardians/loved ones (legal medical proxies) can be enrolled in RTM on behalf of the patient
- Great opportunity to support and be available to them
- Examples:
 - Younger patients - parents want to be more in the loop
 - Elderly patients - improve coordination with adult children



RTM Enables Unique Patient Touchpoints

RTM for: jump starting your visit

- *“SaRA has helped me ask better first questions”*
- This would count as synchronous interaction!

The screenshot displays the RTM interface. On the left, a 'Patients' section shows 6 active patients, 2 unread messages, 1 enrollment ending, and 1 first cycle. Below this is a search bar and a table with columns for 'Patient' and 'Time Tracking'. A modal window titled 'Interaction details' is open in the center, containing the following fields:

- Interaction Date & Time ***: Apr 1, 2026, 11:33:54 AM
- Interaction Type(s) ***: Message Review/Response
- Interaction length ***: 1 Mins
- Interaction Notes / Patient Updates ***: Discussed recent response to manual treatments
- Recommendations / Decisions**: Updated HEP to include self directed stretching/soft tissue techniques

At the bottom of the modal are 'Cancel' and 'Save' buttons. In the background, a table shows 'Cycle Ends in' and 'Care Team' information for various patients.



Summary

The Three Winners with RTM

- Payers' motivation
 - Cost savings per patient via higher compliance and efficiency to plans of care
- Providers' motivation
 - Incentivized and reimbursed for doing things we've always done
 - Increase visibility to patient's progress and status
 - Capture trends to intervene early
 - Increase connection/therapeutic alliance with patient
 - Able to deliver care in novel ways (support post scheduled visits)
- Patients' motivation
 - Improved outcomes
 - Improved compliance to HEP
 - Improved perceived value of care
 - Increased to providers between visits



Thank you!
