APTA Magazine

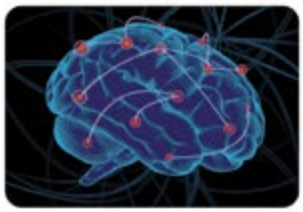
- AI Scribes in Physical Therapy Practices
- Why Neuroplasticity Matters in Every Physical Therapy Session
- How PT-PTA Teams Are Expanding Access to Care

August/September 2026 / Vol. 18 No. 4

The Signature Publication for Members of the American Physical Therapy Association

Evolving Our Practice

Through Technology, Innovation, and Access



Neuro Sensorimotor Integrator

Balance Graph

NSI... The ORIGINAL Multi-Disciplinary System

Using a 50 inch HD TV and interactive touch screen, the NSI-R is a multi-disciplinary system incorporating eye-hand coordination with cognitive processing and balance tracking to offer a host of procedures to a wide range of individuals.

The programmable instrument offers procedures to address: Pursuits, Saccades, Eye-Hand Coordination, Visual Reaction Time, Speed and Span of Recognition, Visual-Vestibular Integration, Ocularmotor Skills, Visual Motor Skills and Neuro-Cognitive Skills.

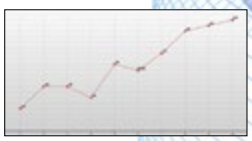
12 CATEGORIES OFFERING 40 PROCEDURES INCLUDING:

- EYE HAND
- SACCADES
- CUSTOM TRACKING
- AUDITORY VISUAL TIMING
- TACHISTOSCOPE
- OPTOKINETICS
- VISUAL MOTOR
- VESTIBULAR BALANCE
- ROTATOR
- MEMORY SACCADES
- GO NO GO
- CHARTS

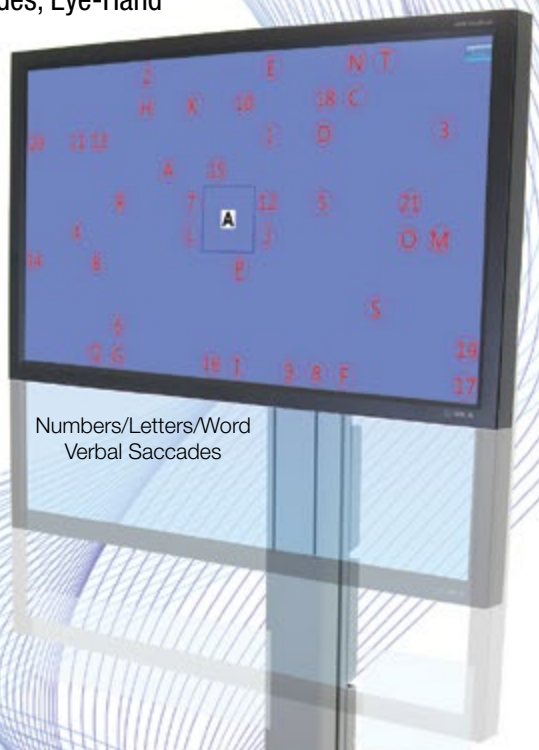
Selectable Parameters

Eye-Hand

Tachistoscope



Storage & Graphing of Results Data & Reports



Numbers/Letters/Word Verbal Saccades

Adjustable Stand
Comfortable for standing or sitting
Wheelchair-friendly

The NSI incorporates a Balance Board allowing a Balance Component to be added to all procedures.

For information on our 2-month trial, lease to own program or to view video demonstrations contact
RKB Instruments: 800-346-4925 / 480-983-0857
nsi@rkbinstruments.com • www.rkbinstruments.com
6756 S. Kings Ranch Rd. Suite 102 • Gold Canyon, AZ 85118

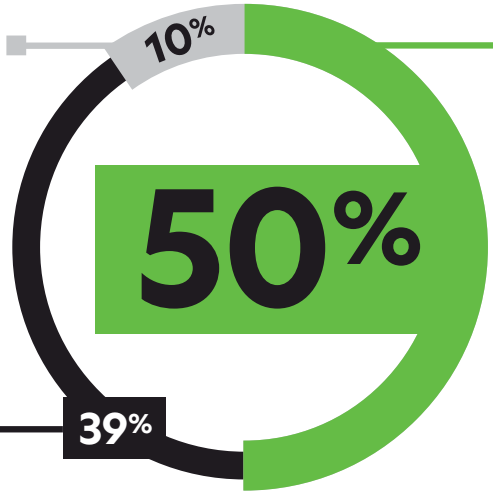
RKB INSTRUMENTS

NOTE: NEURO SENSORIMOTOR INTEGRATOR DOES NOT TREAT OR DIAGNOSE ANY SPECIFIC MEDICAL CONDITION OR DISEASE.

HALEON

Not All Patients Treat Pain the **Same Way**

Patients who **do not treat** their pain at all



Patients who will **wait hours, days, or even weeks** before seeking treatment

Patients who **treat immediately**

Patients respond to pain differently - some act immediately, while others delay or avoid treatment. Understanding these behaviors helps drive better conversations and more personalized outcomes.

As part of the **Listen to Pain** initiative, fostering meaningful dialogue helps uncover what patients are really experiencing and supports more effective pain management.

Better conversations for better clinical outcomes.

Access guides & resources here

#ListenToPain

Advil Voltaren

AUGUST/SEPTEMBER 2026 / Vol. 18 No. 4

/ 12

AI Scribes in Physical Therapy Practices

What PTs and PTAs need to know about using AI-enabled ambient scribe technology.

COLUMN

/ 58

Defining Moment

After his premature twin boys spent time in the NICU, one PT learned valuable lessons about patient advocacy and the power of communication.

DEPARTMENTS

/ 4

Quoted

/ 6

Viewpoints

President's Note:
Shaping What Comes Next in Practice

/ 44

Professional Pulse

Advocacy Update
Researcher Spotlight
Success Story

/ 56

Marketplace

/ 57

Advertiser Index

/ 24

Neuroplasticity: The Science, the Spark, and the Everyday Work of Physical Therapy

Better brain, better outcomes. Why neuroplasticity matters in every physical therapy session.

/ 34

Stronger Together: How PT-PTA Teams Are Expanding Access to Care

As supervision models evolve and workforce pressures grow, physical therapists and physical therapist assistants are redefining collaboration to improve access, efficiency, and patient outcomes.

SPONSORED CONTENT

/ 8

Preventing Burnout Among Physical Therapists

On the cover: At Therapeutic Associates Scholls Physical Therapy in Beaverton, Oregon, Amy Shepro Tanous, PT, DPT, (left) helps a patient while using AI-enabled scribe technology.

FOCAL SPASTICITY?

Support patient care with

1st line treatment options by collaborating with Physiatry.

Working with Physiatry to identify and treat Adult Spasticity with an established first-line treatment may help your patients pursue their treatment goals.

Learn more about Adult Spasticity and an available treatment option.

abbvie

QUOTED

“I don’t think of neuroplasticity as something reserved for stroke, Parkinson’s disease, or traumatic brain injury. Whenever a patient is learning a new movement strategy, the nervous system is adapting.”

— Emily Dunlap, PT, PhD, in “Neuroplasticity: The Science, the Spark, and the Everyday Work of Physical Therapy” on Page 24.

APTA American Physical Therapy Association

3030 Potomac Ave., Suite 100
Alexandria, VA 22305-3085
703-684-2782 • 800-999-2782
aptamag@apta.org

PRINTED WITH SOY INK

BPA WORLDWIDE

Please recycle this magazine

APTA is committed to being a good steward of the environment. APTA Magazine is printed using soy-based inks as defined by the American Soybean Association, is packaged using recyclable film, and uses a Forestry Stewardship Council-certified supplier that recycles unused inks into reusable black ink, recycles all press plates into aluminum blocks, recycles all manufacturing waste, and purchases ink from suppliers whose manufacturing processes reduce harmful VOCs (volatile organic compounds).

Thank You to Our 2026 APTA Payment Advocacy Summit Diamond Sponsors

Athelas
Powered by Commure

Fusion
by Ensora Health

HPSO

medbridge

prompt

VIRTUAL ROCKSTAR

APTA extends its sincere appreciation to our Diamond Sponsors for their generous support of the 2026 Payment Advocacy Summit. Their leadership and collaboration help drive meaningful dialogue on payment, reimbursement, and the evolving landscape of physical therapy.

Together, we are advancing innovative approaches and advocating for solutions that support the profession and the patients we serve.

APTA American Physical Therapy Association

APTA **Payment Advocacy Summit**

Exploring how teamwork, technology, and innovation are expanding what's possible in physical therapist practice.

President's Note

Shaping What Comes Next in Practice

Practice is not static. It evolves in response to new evidence, new tools, and the changing needs of the people and communities we serve. That evolution doesn't happen in one place or through one role. It takes shape across how we collaborate, how we apply what we know, and how we remain open to new possibilities.

In this issue, you'll see that evolution from a few different angles. At first glance, these stories may feel distinct — team-based care, emerging technology,

Kyle Covington

APTA President Kyle Covington, PT, DPT, PhD, has been a member since 2002. His previous association service includes terms on the APTA Board of Directors, being the president of APTA North Carolina, and being a delegate to the APTA House of Delegates. In 2021, he received APTA North Carolina's Founders' Lectureship Award, and he was recognized in 2011 with an APTA Emerging Leader Award.

#

Continue the conversation by following Kyle Covington, PT, DPT, PhD, on social media.

Facebook
@APTAPresident2025

Instagram
@aptapresident

X
@aptapresident

and the science that underpins what we do. But they share a common thread. Each reflects how our profession continues to adapt and expand, while staying grounded in outcomes that matter. Taken together, these stories reflect the third pillar of our Strategic Framework for 2030: Evolving Our Practice.

You'll read about the role of PT-PTA teams in improving access to care and what becomes possible when collaboration is intentional and well defined. Effective team-based care is not new. But the way we think about it — how roles align, how communication happens, and how care is coordinated — continues to evolve. When PTs and PTAs are supported to work in partnership, patients benefit, and practice models become stronger as a result. For more, turn to Page 34.

You'll also see how technology is beginning to reshape parts of practice, particularly when it comes to documentation and administrative work. AI-enabled scribes are one example of how new tools can create space — space to focus more fully on patients, and space to ease some of the burden many of you continue to navigate. You can read more on Page 12. These tools are still emerging, but they reflect a broader shift toward technology-enabled care that can support access, efficiency, and outcomes when used thoughtfully.

> "Practice is not static. It evolves in response to new evidence, new tools, and the changing needs of the people and communities we serve."

And you'll explore the science of neuroplasticity, a reminder that the foundation of our practice continues to grow stronger. As our understanding evolves, so does our ability to translate that knowledge into meaningful, everyday care. Dive in on Page 24. This is part of how practice moves forward, not only through innovation, but through deepening our application of the science that drives what we do.

All of these topics focus on accelerating the transformation of practice models and services to better serve both society and our profession. It means building on what works, exploring new approaches, and supporting the integration of tools and models that improve access, affordability, and outcomes.

And like everything in our strategy, progress depends on how it shows up in practice: in the decisions you make, the teams you build, and the ways you adapt to meet the needs of your patients and communities.

My hope is that, as you read this issue, you see those possibilities taking shape and find your own way to contribute to what comes next.

KYLE COVINGTON, PT, DPT, PHD
APTA PRESIDENT

Encompass Health
Rehabilitation Hospitals

Preventing Burnout Among Physical Therapists

By Abigail Doberstein, PT, DPT

It is safe to say that most physical therapists (PTs) enter the profession to make a difference in people's lives. When you ask PTs what keeps them going when they get frustrated, many will tell you that it's the true joy that comes from seeing patient progress and achieving individualized goals; many sweaty hours of heavy lifting lead to that one moment that their patient can stand to hug a loved one, walk a daughter down the aisle, return to doing something that they love or pick up a child without pain.

The unfortunate truth is that today's healthcare system is overburdening many PTs and eroding the joy from their work.

While burnout in PTs is an under-researched area with limited, outdated data, according to a study conducted by the Journal of Educational Evaluation for Health Professionals found that 49% of the physical therapists surveyed have experienced burnout. Let that number sink in — nearly half or more of physical therapists are feeling burnout, so if you fall into this statistic, you are definitely not alone.

What is burnout?

Although we all have an intuitive sense about what burnout is and what it feels like in ourselves, it is often defined by three components:

- **Emotional exhaustion:** the state of feeling emotionally drained as a result of accumulated stress
- **Depersonalization:** the depletion of empathy, caring and compassion for patients and others
- **Decreased sense of accomplishment:** feeling like nothing you do makes any difference

What drives burnout among physical therapists?

Burnout among physical therapists is complex and can be caused by a wide variety of factors, but the top drivers include unrealistic productivity requirements, changing reimbursement structures, continually increasing costs of rigorous foundational and continuing education without comparable salary increases, limited opportunities for clinical growth or feeling stuck, threatened autonomy, feeling undervalued, and managing unrealistic expectations.

What are potential consequences of burnout?

Burnout can affect both individuals and the workplace. Many studies have identified the health effects experienced by people who are burned out, which include depression, loss of energy, fatigue, increased health care needs and substance abuse issues. In the workplace, burnout can further lead to job turnover, decreased productivity, absences, compromised patient care and poor outcomes due to employee disengagement.

What you can do to prevent burnout

Combating and preventing burnout among physical therapists is more complex than all of those "self-care" methods that you may have already tried. While we may not have all of the answers, here are some suggestions:

1 Complete the stress cycle:

Stressors on the job and in life are inevitable. Emily and Amelia Nagoski, authors of "Burnout: The Secret to Unlocking the Stress Cycle," explain that each stressor you encounter leads to the initiation of an internal stress cycle, and your body chooses fight, flight or freeze in response. Completion of a stressful task such as ending a session with a difficult patient, paying a bill, surviving a difficult meeting or making it through a challenging day are not enough to end the stress cycle itself. Every stress cycle needs to be completed in order to prepare your body to move on, and if the cycle is never completed, the stress response builds. When you experience a stressor, the Nagoskis suggest engaging in activities such as physical motion, breathing, positive social interaction, laughter, affection such as a 20-second hug, crying or creative expression to end the stress cycle.

2 Give yourself purpose:

In the wise words of Howard Thurman, "Ask yourself what makes you come alive and go do that because what the world needs is people who have come alive." Use your signature strengths, such as creativity with interventions, being an active listener, motivational interview strategies or building strong personal rapport with patients and co-workers on a daily basis to contribute to making a difference. Continue to fuel your curiosities and professional development through self-reflection and learning opportunities.

3 Build a circle:

Surround yourself with people you trust and who make you feel safe. This can look different for everyone and involve one person at a time, a pet, a divine power and/or cooperative groups. Humans thrive on balancing connection and autonomy. Loneliness can perpetuate a stress cycle leading to feelings of rage and sadness.

4 Commit to work-life balance:

Master efficiency and time management through methods that work best for you. This may look like pre-made templates, saved shortcuts, prioritizing daily responsibilities, etc. Do not feel guilty about taking paid time off within reasonable company protocols and set boundaries to avoid continuing work as part of your home life.

5 Participate in organizational & professional opportunities:

It is easy to express frustration at the state of the PT industry, but did you let your American Physical Therapy Association membership lapse? The more people who join the APTA, the stronger our impact can be on regulatory policies and practice. You can also join various other professional organizations to influence change, such as the PT political action committee, employer-based staff advisory councils or regional groups.

Physical therapy is an amazing profession focused on helping others through daily human interaction and creative, autonomous care based in movement.

It is critical to address the prevalent issue of burnout within the field to further support its professionals and develop new graduates. If you are in crisis you can reach out for help at The National Suicide Prevention and Crisis Lifeline or 1-800-273-8255 (TALK) or 988.

ABOUT THE AUTHOR

Abigail Doberstein, PT, DPT, is a therapy manager and physical therapist at Encompass Health Rehabilitation Hospital of Nittany Valley in Pennsylvania.

She has been been a PT for 13 years across various settings, but her heart has always been in inpatient rehabilitation. She started her career with Encompass Health more than 10 years ago in San Antonio, Texas and transferred to the Nittany Valley, Pennsylvania location to be closer to family. She has been there for seven years. Doberstein started there as a staff PT and worked to become a senior PT and team lead. Now, she is the inpatient therapy manager overseeing the hospital's PT, OT and SLP departments.

Doberstein is passionate about understanding the intricacies of the human body and embraces her role as a human movement systems expert. She continually aspires to be a skilled clinician and leader in neurorehabilitation.

Doberstein has her clinical specialist certification in neurologic physical therapy and recently became LSVT BIG certified. She also chairs her hospital's Parkinson's disease program. She received her undergraduate degree and doctorate in physical therapy from Arcadia University.

REFERENCES

1. Pugliese M. (2023). Mentorship and self-efficacy are associated with lower burnout in physical therapist in the United States: A cross-section survey study. Journal of Education Evaluation for Health Professions.
2. Freudenberger, H. J. (1975). The staff burn-out syndrome in alternative institutions. Psychotherapy: Theory, Research & Practice, 12 (1), 73–82.
3. Maslach, C., Jackson, S. E., & Leiter, M. P. (1996). Maslach burnout inventory. (3rd ed.). Palo Alto, CA: Consulting Psychologists Press.
4. Schuster ND, Nelson DL, Quisling C. Burnout among physical therapists. Phys Ther. 1984 Mar;64(3):29 Donohoe E, Nawawi A, Wilker L, et al. Factors associated with burnout of physical therapists in Massachusetts rehabilitation hospitals. Phys Ther. 1993;73(11):750–756. 9-303. doi: 10.1093/ptj/64.3.299. PMID: 6701199.
5. Schlenz KC, Guthrie MR, Dudgeon B: Burnout in occupational therapists and physical therapists working in head injury rehabilitation. Am J Occup Ther 49:986-993, 1995.
6. Berry J. Occupational burnout in physical therapy: clinical implications and strategies for reduction. http://www.fsbpt.org/Portals/0/documents/free-resources/Spring2018ForumOccupationalBurnoutinPhysicalTherapy.pdf. Accessed November 1, 2018
7. Castin A. Physical therapy burnout is destroying our profession (blogpost). http://covalentcareers.com/blog/physical-therapy-burnout/. November 1, 2018.
8. Ries, Eric. "Beating Burnout." PT in Motion, February 1, 2019.
9. Nagoski, E., & Nagoski, A. (2020). Burnout: the secret to unlocking the stress cycle. Ballantine Books trade paperback edition. New York, Ballantine Books.

AI Scribes in Physical Therapy Practices

What PTs and PTAs need to know about using AI-enabled ambient scribe technology.

By Chris Hayhurst

For Anang Chokshi, PT, DPT, OCS, SCS, the reasons he became a physical therapist are clear. He spent years in school, completed his clinicals, earned his degrees, and obtained his certifications all because he hoped to help people improve their function and quality of life.

Similarly, Chokshi says, as a practicing clinician, he's come to love his job for how it allows him to connect with and build relationships with his patients. "I think these are the things we all value in this profession. It's the time we spend listening and talking and working with people when we see them during their appointment."

What Chokshi has never enjoyed, on the other hand, is the constant need to take notes. He fully understands that it's his professional responsibility, with important legal, payment, and patient-outcomes implications. But the way he sees it, it pulls him away from the face-to-face work that drew him into his career.

"I didn't go into healthcare because I love documentation," he explains.

At Therapeutic Associates Scholls Physical Therapy in Beaverton, Oregon, Amy Shepro Tanous, PT, DPT, (left) helps a patient while using AI-enabled scribe technology.

Today, as the founder and managing partner of Digital Healthcare Consulting, Chokshi advises healthcare service and technology companies on product development, clinical approval, and reimbursement strategies. And with 20 years of physical therapy experience spanning orthopedic practice, a decade as an instructor, and various positions in technology development and sales, he also works part time providing concierge services to patients in their homes. In that role, as in any other practice setting, he's required to carefully document every aspect of his work. His solution, he says, is to use software on his phone to automate the clinical note-generating process.

The technology, an AI scribe, leverages artificial intelligence to listen to him and his patients and transcribe their conversations in real time. When an appointment is over, the software converts this transcript into a structured medical note, and he only needs to review and approve it before it's incorporated into the patient's electronic medical record.

"The best part about it is that it also creates referral notes," Chokshi says. "I can copy and paste it, and email or text it to the referring clinician, and say, 'Just to let you know, this is what I found.'"

The tool allows him to focus better on his patients and worry less about writing everything down, he says.

"It doesn't take away from my responsibilities as a clinician or replace clinical judgment or anything like

Marla Ranieri advises that all PTs, PTAs, and students should familiarize themselves with scribe technology before trying it in the clinic.

that — it's more about freeing me from having to look at my laptop so I can engage more naturally with the person in front of me."

A Tool Targeting Administrative Burden

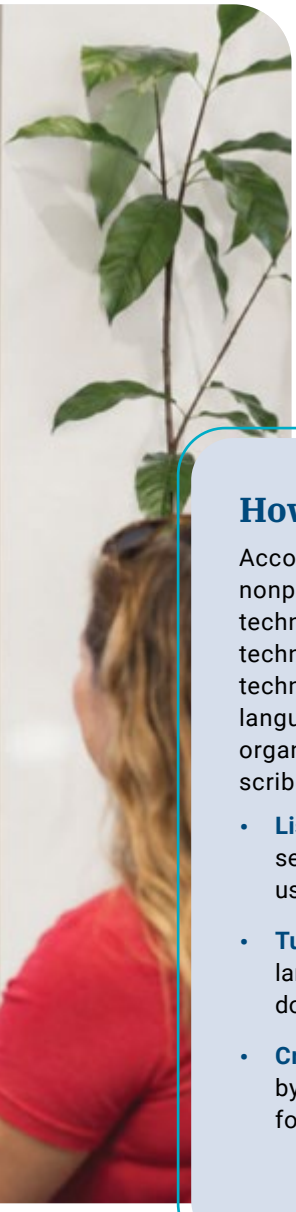
It's not clear how many physical therapists are currently using AI scribes, but if the profession is keeping pace with others in healthcare, adoption is almost certainly on the rise. As of 2025, an estimated 30% of physician practices had deployed AI scribe technology, with many reporting they'd done so to reduce the administrative burden driving clinician burnout.

More recently, an American Hospital Association report noted that "ambient clinical documentation has emerged as one of the most significant use cases for artificial intelligence in health care settings." The AHA pointed to several health systems that had seen measurable improvements after implementing AI scribes, including Cleveland Clinic, where clinicians had cut an average of 14 minutes per day in time spent writing and reviewing notes in the electronic health record. Three months after deployment at Mass General Brigham, clinician burnout had declined by 21%, according to the report.

According to Alice Bell, PT, DPT, GCS, senior specialist in health policy and payment at APTA, the general consensus is that AI scribes can be a "potentially useful resource for documentation." Still, she says, it's important for physical therapists to consider the compliance requirements associated with the technology prior to any implementation.

"You have to make sure that you have consent from your patient before you use it, and you have to recognize that the accuracy of the information captured will always be questionable," she explains.

Fundamentally, Bell adds, an ambient AI scribe, often called "ambient scribes" because they work quietly in the background, can replace the burden of writing with that of editing. However, she notes, "Depending on the user, one of those tasks may be more cumbersome than the other." The technology, in other words, isn't necessarily suited to every PT or every practice setting.



How AI Scribes Work

According to the Peterson Health Technology Institute, an independent nonprofit that conducts evidence-based evaluations of digital health technologies, AI scribes "are poised to become one of the fastest technology adoptions in healthcare history." A 2025 PHTI report on the technology explains how it combines speech recognition and natural language processing "to record, transcribe, summarize, and ultimately organize patient-provider conversations into a structured note." An AI scribe:

- **Listens and records in real time.** With patient permission, an AI scribe securely captures patient-provider interactions and provider dictations using a secure mobile device or app.
- **Turns speech into notes.** The technology uses speech recognition and language-processing tools to identify important clinical details and draft documentation automatically.
- **Creates structured records.** AI-generated summaries can be reviewed by the clinician and automatically added to the electronic health record for documentation, billing claims, and prior authorization needs.

Alice Bell, PT, DPT, GCS

Anang Chokshi, PT, DPT, OCS, SCS

Chris Hoekstra, PT, DPT, PhD

Robert Latz, PT, DPT

CJ Morrow, PT, DPT, OCS

Marla Ranieri, PT, DPT, OCS

Anang Chokshi (far left) and CJ Morrow (second from left) participate in a panel on AI during the APTA Future of Rehab Therapy Summit in July 2025.

"It doesn't matter how well you think it works — there has to be a human check every time you use it to generate a note. Ultimately, what's reported and billed is the provider's responsibility."

— Alice Bell

As a 2025 APTA Practice Advisory on AI-enabled ambient scribe tools notes, this technology could be prone to occasional AI "hallucinations," which are incorrect or fabricated outputs. Language differences or the presence of multiple speakers can also affect transcript and documentation quality.

Some clinicians, or their employers, may have legitimate concerns about issues such as system security, data privacy, and the storage and processing of patient information. Others will question whether paid versions of the technology are worth the cost.

"I think a lot of it is going to depend on how knowledgeable and efficient the user is," Bell says. With any AI scribe, the vendor should provide training on the technology, and clinicians should take the time to trial the tool without patients before using it in the clinic. If the PT or physical therapist assistant will be working in a busy room, for instance, they should ensure the technology can distinguish the right voices and is not affected by nearby conversations.

"It doesn't matter how well you think it works — there has to be a human check every time you use it to generate a note," she explains. "Ultimately, what's reported and billed is the provider's responsibility."

Bell also recommends that practices that choose to integrate AI scribes into their EMRs check with their vendors to ensure updates occur automatically. "You want to make sure that whatever you're acquiring will always provide you with the most current version of that tool," she says. "This technology is evolving so rapidly—what might have been good a week ago may not be good a week from now."

Robert Latz, PT, DPT, chief information officer at Trinity Rehab Services, agrees that practices should do their homework before any AI scribe implementation (see Page 18). Thus far, he notes, his own organization has opted not to use AI scribes, but he thinks that could change if their electronic health record vendor rolls out a product they like and trust.

He's personally tested scribe solutions outside the clinical environment, and while he generally found them impressive, he'd also like to see them improve. "The biggest thing I'm looking for is that they're capturing the correct conversation in a room where you might have

other conversations going on in the background," he says. "And I'm looking for more accuracy — they're good, but I think that they could be better."

He's concerned that if individual practices develop different strategies for mapping their data, it will be difficult for organizations to compare outcomes and demonstrate value.

"This is especially true when attempting to look at value across the spectrum of care," he explains. "If we go about the process in a thousand different ways, I can't see how that's going to help."

Concerns like these are helping shape a more coordinated response across the profession. In January, the APTA Board of Directors launched the Use of Artificial and Augmented Intelligence in Physical Therapy Task Force, with a charge to assess current and future uses of artificial and augmented intelligence technologies, services, and platforms for their applicability and appropriateness for practice, education, and research in physical therapy.

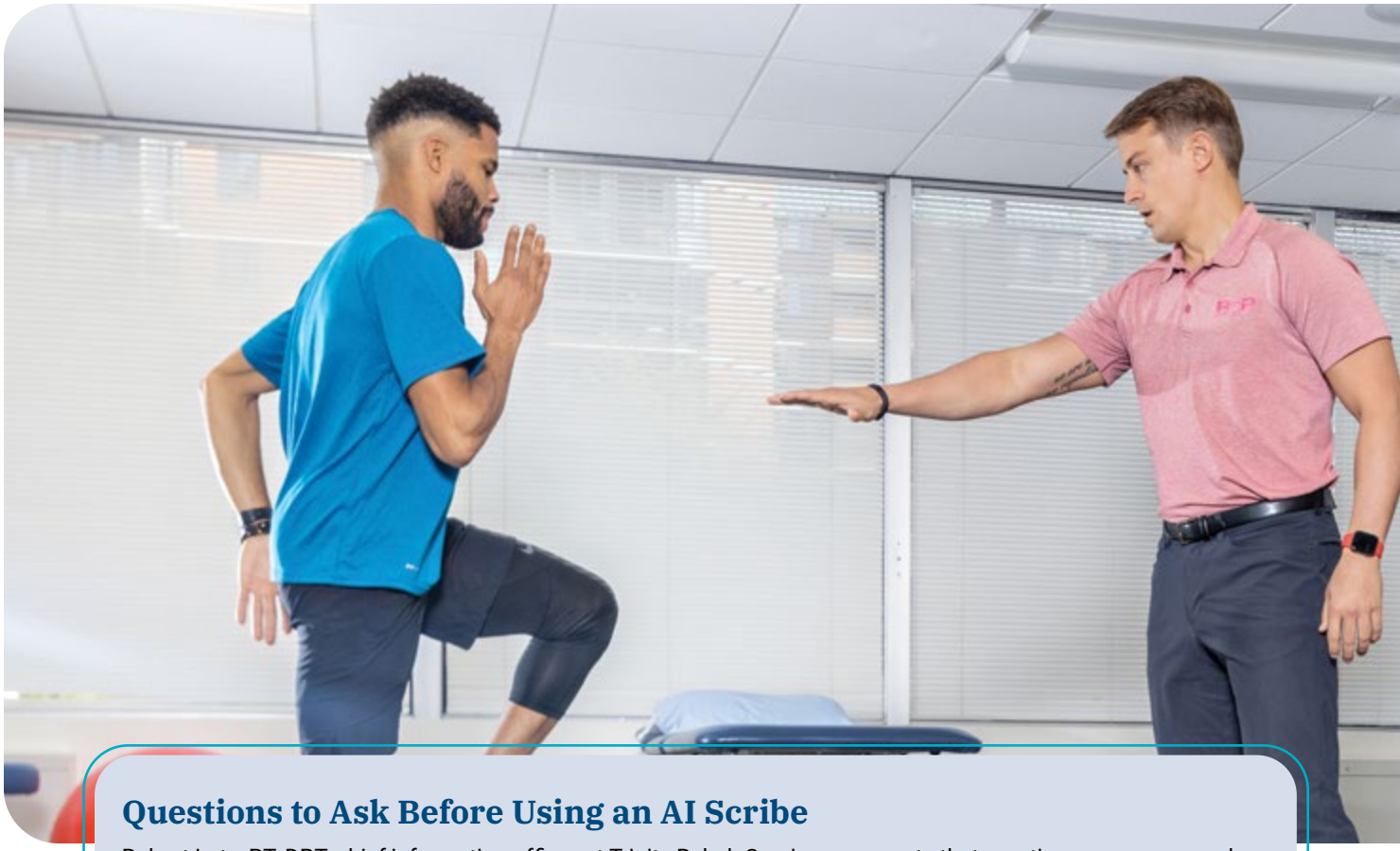
In the meantime, Latz says he's optimistic about the future of AI scribes in physical therapy, especially as documentation accuracy improves, which would increase the efficiency gains the technology already offers. "I think it could reduce administrative burden significantly and have a huge impact on practice workflows," he says.

Improving the Therapeutic Alliance

Another physical therapist who's evaluated AI scribes but has not deployed them in clinical practice is CJ Morrow, PT, DPT, OCS, managing director at CJM Strategic Consulting. In her case, she notes, it's not because she has serious concerns about the technology, but simply because she's not currently seeing patients.

"If I was in a clinic tomorrow, I would be putting an ambient listening device somewhere in my workflow," Morrow says. As a consultant, her core business involves translating technology-related regulations into operational and commercial opportunities for healthcare organizations. AI scribes, she predicts, will soon be found in nearly every physical therapy clinic.

"Yes, there are accuracy challenges and privacy issues and other things practices will have to consider, but I



Questions to Ask Before Using an AI Scribe

Robert Latz, PT, DPT, chief information officer at Trinity Rehab Services, suggests that practices answer several important questions before implementing an AI scribe.

Practical Considerations

- Who is the IT contact within your organization, and are they aware of the implementation?
- How strong is your Wi-Fi signal? Will you need to increase your network bandwidth?
- Can you create a segregated network for the service so the vendor doesn't have direct access to your EHR?
- What will you use for downtime documentation when the AI system is unavailable?

Contract Considerations

- What happens if the vendor goes out of business? Will you still have access to your data?
- Does the business associate agreement ensure the vendor is following current HIPAA requirements for breach notification and data protection?
- How might the vendor use your data in ways that are not compliant with HIPAA?
- Will the vendor compensate for data use if that data helps them make a better product?
- What does the system cost? Does this seem unexpectedly low? Could there be future increases after you start using the product?

Workflow Considerations

- Are you and your team willing to review the AI-provided documentation before signing your name?
- Are you protecting patient data in this process? Is there a chance this data could be shared outside your organization?
- What device will you use to collect your conversations? Will the data be protected on that device?
- Does your organization have a policy related to using any kind of AI technology? If yes, will you follow that policy? If not, who can you contact to make sure you can proceed?
- Have you practiced with the AI scribe outside of the clinical setting?

think the benefits for both clinicians and patients are far too big to ignore," she says.

Echoing the experiences of Chokshi, Morrow points to two major advantages of AI scribes.

"You can be more human with your patient and really develop that therapeutic alliance by not multitasking on your laptop and instead making eye contact and listening a lot better," she says.

"But then also think about the downstream benefit," Morrow says, where everything PTs are doing with their patients are instantly captured in their notes. "In a setting where you're strapped for time, that could not only help reduce burnout, it could make a big difference in the quality of care you provide."

Regarding the challenges that often arise with technology, Morrow says she advises her own clients to thoroughly understand the regulations and always err on the side of caution. When reviewing the note from an AI scribe, for example, "You need to be careful about asking whether what it says really happened," she explains. "Does it represent how you actually interacted with your patient? Are you OK with signing it?"

Morrow says she knows of cases in which patients claimed they never consented to the use of an AI scribe, even though the clinical note stated consent had been granted.

"In a setting where you're strapped for time, [an AI scribe] could not only help reduce burnout, it could make a big difference in the quality of care you provide."

— CJ Morrow

"So if that's the case, did the AI hallucinate that consent into the note? From a clinician's standpoint, it just points to the importance of being incredibly diligent," she says.

Practices should also ensure their AI scribe vendor is in compliance with HIPAA and data privacy and security requirements and closely review any business associate agreements, she says. "You don't need to perfectly understand everything going on under the hood, but you should know your vendor's policies and make sure you're protected if anything goes wrong."

Marla Ranieri, PT, DPT, OCS, head of clinical innovation and clinical strategy at Prompt Health, also says that physical therapists should get to know their AI scribe before they use it in the clinic. For its EMR and practice management platform, which is designed specifically for outpatient rehab practices, Prompt provides practices with free training and also allows physical therapy education programs to use the system.

In almost all cases, students are taught to write their own notes before they learn to leverage the company's scribe. "It's like learning basic math before you get to use a calculator," Ranieri explains.

The tool provides "real-time feedback on CPT code selection, and it's flagging when your note may not meet medical necessity standards for a specific payer," she says. "It's not just taking what you're saying and writing a note; it's helping make you a better physical therapist while giving you a better defense for your documentation."

Any physical therapist with the skills and experience can provide phenomenal care, Ranieri points out, but even the best PTs are at a disadvantage if they don't thoroughly document what they've done. An AI scribe solves that problem by providing clinicians with a hands-off tool that lets them keep their eyes and hands on their patients. "It allows you not to have to think about coding and the patient record every single second of the day."

AI Scribes 'Getting Better Every Day'

Ranieri's take on the value of AI scribes resonates with Chris Hoekstra, PT, DPT, PhD. As vice president of business development and operations at Hychara Health, Hoekstra leads the managed services organization's

efforts to help PT practices optimize their technology use. He's also an assistant professor in the School of Medicine at Oregon Health and Science University in Portland, where he teaches courses in qualitative research methods and organizational behavior and conducts research on AI scribes. He's also chief transformation officer for Therapeutic Associates Physical Therapy, a PT-owned network of about 300 providers in Oregon, Washington, Idaho, and Southern California.

In previous clinical practice, Hoekstra and others at Therapeutic Associates helped PredictionHealth develop its AI scribe before the company was acquired by Prompt in 2025. "We were one of the first users of the tool, and I used it myself through all of its iterations," he says. When Therapeutic Associates Physical Therapy eventually decided to roll out the solution across its practices, Hoekstra helped with implementation to ensure a smooth deployment.

"There were a lot of anecdotes of people crying once they saw what an AI scribe could do," he says of the rollout. "It was, 'I haven't been able to put my kids to bed in five years, and now I'm able to get my notes done at the point of care.'" In his own experience, Hoekstra recalls telling his practice administrators that he could see 10 new patients a day. "The hindrance to seeing new patients was the notes, and now that part was suddenly easy."

AI scribes do have drawbacks, Hoekstra says, including the fact that most are currently very difficult to individualize. "You're kind of left with what the LLM gives you," he notes,

AI Ambient Scribes and APTA

How APTA is guiding the ethical, effective use of AI-powered ambient scribe technology — and where members can find resources, community, and opportunities to get involved.

APTA Resources

Start with APTA's foundational guidance to better understand the standards, ethical considerations, and practical applications of AI in physical therapist practice, online at apta.org.

- **APTA Position Statement:** "Ethical and Effective Integration of Artificial Intelligence Across Physical Therapist Practice, Education and Research"
- **APTA Position Statement:** "Digital Health Technologies, Digital Therapeutics, and Artificial Intelligence in Physical Therapist Practice"
- **APTA Practice Advisory:** "Emerging Technology: AI-Enabled Ambient Scribe Technology in Physical Therapy Documentation"

Components and Special Interest Groups

Get involved with APTA Member Engagement Groups to help shape the discussion around AI. Discover more at apta.org/chapters-sections.

- APTA Leadership & Innovation: Technology in Physical Therapy Special Interest Group
- APTA Frontiers in Rehabilitation, Science, and Technology Network, aka FiRST

APTA Learning Center

Check out these AI-related courses in the APTA Learning Center, at learningcenter.apta.org.

- APTA Future of Rehab Therapy Summit, includes AI-focused sessions from this in-person event held in 2025, $89 for APTA members
- Ethical Considerations and Application of Artificial Intelligence in Physical Therapy: Navigating the Intersection of Technology and Ethics, 0.15 CEUs
- Implementing Technology in PT Practice, 0.2 CEUs, free
- AI in Physical Therapy, 0.2 CEUs, course 7 in the APTA Digital Health Certificate
- Introduction to Digital Health, 0.2 CEUs, free
- AI for PTs: Stop Charting Outside Clinical Hours and Take Your Time Back, recorded webinar, free

APTA Community

Connect with fellow APTA members to see how they are using AI technology. Start at communities.apta.org.

- Artificial Intelligence Network on the APTA Community
- APTA Community Innovation in Physical Therapy Forum

From the APTA Magazine Archives

Access APTA Magazine content from the past five years 24/7, online at apta.org/apta-magazine.

- "Ethics in Practice: Exploring AI Ethics," November 2024
- "AI as an 'Intelligent Assistant,'" May 2025
- "What's the Impact of AI on Physical Therapy?" December 2023

explaining that the large language models that power AI scribes aren't typically tailored to the intricacies of PT practice. "At the same time, though, that's changing fast — they're getting better every day."

There's also the issue of cost, Hoekstra says, noting that some organizations may demand that their AI-assisted clinicians be more productive as their administrative burdens decrease. "How are practices going to pay for these expensive tools after they can't live without them, and the vendors start raising their prices? The answer is they'll probably ask their therapists to start seeing more and more patients."

Other potential concerns include the concept of "unlearning," in which PTs who use scribes forget how to document without AI and, when the technology isn't available, don't know what to do.

"Or even if the scribe is available, maybe they get so used to relegating their thinking to AI that they no longer check their notes and just click 'accept'," Hoekstra says.

In any case, he believes solutions are at the ready for both practices that already use the technology and for those considering AI scribe adoption in the future. "There are plenty of risks, and there's a lot to figure out, but I think the bright side is too good to ignore."

Chris Hayhurst is a freelance writer and a frequent contributor to APTA Magazine.

Listen to the APTA Podcast, AI in PT Practice: Finding Balance, Embracing Innovation Without Losing Trust, and What's Next. The episode explores how artificial intelligence is transforming physical therapist practice, including the growing use of AI-enabled ambient scribe technology to support clinical documentation.

Check out this episode, along with all of the other APTA Podcasts, by scanning the QR code or going to www.apta.org/podcasts.

The Future of Physical Therapy Leadership Starts With Caring for People

Javier Othon, CEO of CORA Physical Therapy, on supporting clinicians so they can continue delivering exceptional patient care.

At CORA Physical Therapy, everything starts with patients. Our mission is **Treating Everyone Right**, and our first core value is Serve Everyone. That commitment drives how we care for patients, support clinicians, and continue building strong teams across the communities we serve.

For CEO Javier "Javi" Othon, that belief is personal. He began his career as a physical therapist in Miami more than 25 years ago and understands firsthand both the privilege and the responsibility of caring for patients every day.

Q: What guides your leadership philosophy today?

Javi: At the end of the day, our responsibility is to help patients get better and improve lives. That has to stay at the center of everything we do. I still remember what it felt like as a staff clinician wanting to give everything you had to your patients while also trying to manage documentation, family life, and the realities of day-to-day practice. Those experiences stay with you.

That's why I believe so strongly that if we want clinicians and support teams to continue delivering great care, we also have to take care of the people providing it. Clinicians and support teams want to feel supported, valued, and able to build meaningful careers while still having balance in their lives. When we create that kind of environment, patients benefit the most.

Q: Why is that especially important in today's environment?

Javi: Physical therapy is one of the most meaningful things you can do with your career. I say it as someone who has lived it. But I also want to be honest: this profession asks a lot of the people in it.

The documentation, the caseloads, the feeling that you're giving everything and the system isn't always giving back. Those pressures are real, and good clinicians feel them. When clinicians struggle, it's because they're in conditions that weren't built to support them. That's the problem worth solving. That's what we wake up thinking about every day at CORA.

> ***"When we create an environment where clinicians feel supported, patients benefit the most."***
>
> \- Javier Othon, CEO

Q: What is CORA's Long-Term Incentive Program?

Javi: As direct as I can be, the economics of this profession are not easy. Every clinician knows it. The cost of delivering care continues to rise, reimbursement pressure is real, and PT organizations are being asked to do more with less.

But that reality makes our investment in people more important, not less. The easy response would be to pull back. We chose a different path. In 2026, we launched our Long-Term Incentive Program because we believe clinicians should share in the long-term success they help create.

Eligible clinicians, including physical therapists, occupational therapists, speech therapists, and others, may have the opportunity to earn ***up to $5,000*** in annual awards while remaining in qualifying roles and meeting program requirements.

Not because the industry suddenly got easier. Because our people matter, and because organizations should keep investing in clinicians when the environment makes that harder, not easier.

The conversation continues online, where Javier shares why long-term clinician retention matters, how CORA is creating meaningful career pathways for therapists, and what he wants every clinician considering their next career move to know about building a future in physical therapy.

Scan to read the full interview.

Neuroplasticity

The Science, the Spark, and the Everyday Work of Physical Therapy

Better brain, better outcomes. Why neuroplasticity matters in every physical therapy session.

By Sheyna Myntti, PT, DPT, and Karen Pryor, PT, DPT, PhD

Neuroplasticity is an exciting, miraculous concept. If you've ever gone down an internet rabbit hole searching "neurons connecting," you've probably seen it: neuronal dendrites straining, reaching, inching with everything they've got toward each other, until … Success! Houston, we have liftoff. The eagle has landed. And the kick is good!

However you choose to narrate it, it's a powerful visual metaphor for what physical therapists help facilitate every day. But beyond that stunning imagery is something more important: a clinical reality.

As physical therapists and physical therapist assistants, we influence neuroplasticity with every patient we treat. And not just for patients with neurologic conditions.

How is this possible? Andrew Teare-Ketter, PT, DPT, NCS, OCS, recently presented at APTA Combined Sections Meeting about the role of neuroplasticity in postconcussion recovery.

"Neuroplasticity is our secret weapon when it comes to physical therapy, regardless of diagnosis or impairment," Teare-Ketter says.

More Than a Buzzword

Neuroplasticity. Just the word itself has a Star Trek sort of feel. From the Greek "plastikos," it means "can be shaped, molded, or formed." Neuroplasticity is the nervous system's ability to adapt, change, and reorganize in response to new experiences.

Because the nervous system connects to the entire body, every physical therapist influences neuroplasticity, whether intentionally or not.

Just ask Emily Dunlap, PT, PhD, an aquatic physical therapist who treats a wide range of patient populations. "What I have learned over the years is that every patient

Emily Dunlap, PT, PhD, leads a class through an aquatic exercise that includes a visual-walking challenge.

has a musculoskeletal system, nervous system, cardiovascular system, and metabolic system," Dunlap says. "And it is rare for dysfunction in one system not to influence the others.

Not just after injury. Not just in childhood. Always.

"Every time we teach a client a new motor skill or a new movement pattern, we are applying the principles of neuroplasticity," says Jill Stewart, PT, PhD, an associate professor in the physical therapy program at the University of South Carolina.

So while many of us first encountered the concept in a neuro classroom alongside discussions of stroke, traumatic brain injury, or pediatric development, the reality is broader.

"I would be hard-pressed to name a condition that does not require an appreciation for neuroplasticity toward a full remediation," says Mike Studer, PT, DPT, MHS, NCS, FAPTA, a practicing clinician, researcher, author, and educator.

Dunlap puts it plainly: "I don't think of neuroplasticity as something reserved for stroke, Parkinson's disease, or traumatic brain injury. Whenever a patient is learning a new movement strategy, the nervous system is adapting."

Refresher Crash Course on Neuroplasticity

Introduced in the late 1940s and early 1950s, the foundational concepts of neuroplasticity were based on Donald Hebb's summary, "neurons that fire together, wire together." The theory gained strong acceptance after the turn of the century and now provides a valuable lens for our modern-day clinical decision-making.

We now know that neuroplasticity involves:

- forming new synaptic connections
- strengthening existing connections
- pruning unused connections, or "use it or lose it"

In 2008, Jeffrey Kleim and Theresa Jones outlined 10 key principles for neuroplasticity techniques and treatment. While originally published in the Journal of Speech, Language, and Hearing, the article's focus on neural plasticity also applies to our profession.

Of the seminal article, Studer says, "In the ensuing 18 years, we have learned so

much more about the brain that we now know that engagement matters, belief matters, and dosage matters."

Still, several of the listed principles, such as those regarding repetitions, intensity, and timing, are reflected in proper exercise dosing, structured practice sessions, and selected forms of feedback still used today.

But one principle deserves a highlight: Salience matters.

> "I don't think of neuroplasticity as something reserved for stroke, Parkinson's disease, or traumatic brain injury. Whenever a patient is learning a new movement strategy, the nervous system is adapting."
>
> — Emily Dunlap

Why Salience Changes Everything

Since the publication of the Kleim and Jones article, we now know that neuroplasticity cannot occur when salient needs, such as safety, acceptance, and independence, are perceived to be at risk.

"I try to make every intervention functional and salient for the patient," Teare-Ketter says.

Salience activates attention, memory, and motivation — all critical ingredients for learning.

If salience drives learning, then the conditions around the patient matter

Jill Stewart (second from right) practices implementing the principles of neuroplasticity with some of her DPT students at the University of South Carolina.

"We can design a great treatment session or plan of care, but if the exercises are performed incorrectly, are not functional for the patient, or are just simply boring or don't make sense, we are missing so much potential."

— Andrew Teare-Ketter

just as much as the task itself. Chaos is confusing to the brain — when we are under stress, it reverts to the Stone Age throes of panic, as if evading a saber-toothed tiger.

"Our brains are very capable in their most important responsibility: survival," Studer says. "When we experience a threat in the form of pain, fear, or perceived danger, it makes sense that we would devote more attention and undergo a neuroplastic remodeling of the brain to begin to devote more brain territory to that symptom or that body part, be it weakness in a knee or pain in our back."

In that state, learning takes a back seat. As Studer reinforces, "A person … practicing in an environment that feels safe … will improve more than a person who does not receive such an enriched environment."

Fuel for the Brain

Neuroplasticity isn't just shaped by what patients do or feel — it's also influenced by what's happening biologically. It is initiated by various trophic factors, namely brain-derived neurotrophic factor, or BDNF: a protein often described as fertilizer for the brain. Quantities fluctuate over the lifespan, peaking in childhood and plateauing in early adulthood (Walsh et al., 2020).

But … there is a bright side! BDNF production can be turbocharged by healthy lifestyle choices.

Positive increases in BDNF are associated with sensory stimuli, physical

activity, a healthy diet, moderate sun exposure, and adequate sleep. Decreased BDNF quantities have been noted with stress, a sedentary lifestyle, and the heightened use of alcohol or tobacco.

This means recovery isn't just something that happens to the body — it's something patients can actively shape.

"When our movement is disrupted by injury or pain, our brain and nervous system adapt," Stewart says. "These changes in the nervous system can be helpful for recovery — or interfere with it. Luckily, we can drive positive changes in the brain with movement practice."

Make It Matter

So what does this mean in practice? How does a highly fluctuating quantity of a protein affect patients' functional goals? And how can we make sure we're driving positive changes in neuroplasticity?

This is where we keep our eyes on the true prize. Smart therapists help their patients to target smart, functional goals. Does the patient want to take a walk with their children or go up and down the stairs? What about getting back into pickleball or playing in the end-of-school kickball game?

Before any of that can happen, though, we must set the stage. For these patients, it is imperative to first de-escalate the chaos before the session even begins. Rehab environments and activities must be specifically designed to promote the patient's confidence and assure them that their individual, salient survival needs are being met every time they are with us.

Studer points to engagement as a central driver. "We look for ways to drive neuroplasticity by maximizing patient engagement."

And Dunlap reinforces that shift in thinking, noting, "Neuroplastic adaptation requires more than movement alone. It requires meaningful engagement, appropriate challenge, attention, and motivation."

Teare-Ketter agrees. "We can design a great treatment session or plan of care, but if the exercises are performed incorrectly, are not functional for the patient, or are just simply boring or don't make sense, we are missing so much potential."

The Sensory Side of Learning

We've focused on movement and environment. But there's another piece we can't ignore.

What other considerations and additives must be provided for optimal neuroplastic growth? The plethora of our tools speaks to motor and descending tract efforts. What about the ascending tracts?

The Toolbox: How to Put Neuroplasticity in Practice

Start with the person, not the protocol.

Neuroplasticity starts with patient-centered care, a thorough understanding of the individual's priorities and goals, and a commitment to focus on them. We work beyond established checklists of exercises, the prescribed three sets of 10. We also watch for asymmetries in performance, strength, and posture, and treat them as appropriate – and this is the tip of the evaluative iceberg!

Use the senses — on purpose.

Vision, vestibular input, hearing, touch, and even smell feed directly into the brain. Think of these as fast lanes (your brain's autobahn) delivering information upward. Remember: What fires together, wires together. The more systems you activate together, the stronger the learning opportunity.

Create a sensory-rich environment.

Music, nature sounds, and sports themes — auditory triggers of your patients' interests — can be incorporated to encourage wiring through connections from the limbic system. Fresh flowers, citrus, or a diffused scent will calm nerves, and a 2014 National Institutes of Health study found that smell stimulates new stem cell formation. Later research supports this (Kang 2025).

Get creative with simple tools.

Props to use might be a balance pad or couch cushion, a bell ball, a laser light, a noisy favorite toy, or a screen that flashes a bright image. A baseball cap with a laser pointer clipped to the brim is another useful tool. Postural and head control with visual feedback can be practiced, and other sensory enrichment factors can easily be incorporated.

Reduce fear before you expect learning.

Remember, positive neuroplasticity does not occur during the fight-or-flight sympathetic response. Our number one priority will be to support mental and emotional comfort to ensure patients reach the rest and digest state.

Environment matters more than we think.

Take into consideration the design, the layout, and even the décor of your treatment area. Introverted patients may not perform optimally in what they perceive as a crowded room full of watchful eyes. In that case, recorded home exercise plans can improve compliance. Walking outdoors may be more appealing and stimulating to a patient than the noisy, impersonal technology of a treadmill.

Add touch — intentionally.

Tactile cues deliver an added sensation to the skin, joints, and muscles. That internal awareness must be present if we hope to build functional, volitional control. Consider incorporating tactile cues, whether it's simple tapping, a piece of ice or an ice roller, vibrating prongs, or even varying settings of electrical stimulation.

Make it meaningful.

Find what is most important to your patient through communication, active listening, and feedback. Knee extension exercises, in and of themselves, are unlikely to be salient to our patients, but if they understand that these exercises will redevelop their kicking skill so they can continue coaching their child's soccer team, then the activity becomes salient.

Add play at any age.

All patients learn more when an activity is perceived as fun rather than work (Sow 2026). Pediatric PTs have long known that play fuels key cognitive pathways, including attention, focus, memory, and decision-making (Serino 2025). Unique settings like pools, parks, the patient's own home, or a hippotherapy barn might be just the right place to incorporate more play and have a greater impact on learning.

Use tech when it adds engagement.

Virtual reality therapies can increase motivation and salience and enhance sensory stimulation. Gaming systems can provide the same level of engagement, but with even more immersive sensory stimuli, particularly for vision. The neurological pathway for vision, from the retina to the primary and association cortices, is estimated to connect to 80% of the central nervous system.

Watch your words.

Positivity and affirming language help reduce the fight-or-flight response and foster better participation and performance. Your tone, cues, and framing directly influence the brain's readiness to learn.

Mike Studer presents on the role of learning in rehabilitation. He notes that neuroplasticity is influenced by factors like engagement, belief, and the environment.

> "Everything matters: our words, the environment, their sleep, our feedback, the intensity and challenge being delivered, time between sessions, evidence of progress, and most importantly, what this person believes and prefers."
>
> — Mike Studer

Exciting research is constantly revealing more sensory highways from the body, crossing systems and carrying precise data upward into the control center — feeding directly into the neuroplastic brain.

"Just as the nervous system can learn unhelpful patterns, it can also learn healthier and more efficient ones through gradual exposure to movement and positive movement experiences," Dunlap says.

Research over the last decade supports this, indicating that neuroplastic potential increases post-infarct with the provision of sensory experiences. An enriched sensory environment will nourish our neurons, offering hope for a longer window of improvement, up to 18 months and beyond (Ballester et al., 2019).

Teare-Ketter has witnessed this sensory magic firsthand. "I use tactile cues, manual facilitation or proprioceptive feedback, as well as mirrors, so patients can see how their movements compare with their expected performances," he says. "As the patient begins to demonstrate improved form or performance, I then add in more complexities in the environment, such as noise, visual stimuli, or busier environments, while I begin to retract my cues."

The end result? "Soon the patients will be able to correct themselves and provide themselves with feedback," he says.

Research shows that pairing two or more sensory stimuli with a motor skill will improve plasticity and motor performance (Asan, 2022).

"Repetition is necessary for learning, but real life is rarely repetitive," Dunlap explains — supporting the need for variability in sensory and motor input.

From Motor Learning to More

The nomenclature "motor learning" seems incomplete, considering this. We purport that "sensorimotor learning" should truly be the more accurate title.

Thus, we pivot. Because striving to gain or regain function is at the heart of what we do. We are experts in motion; we understand the brain and the neuromuscular, somatosensory, and sensory systems. And we take the time with our patients — never underestimate that. This, along with the neuroplastic considerations, can help create the perfect storm for learning.

And as Studer reminds us, "Everything matters: our words, the environment, their sleep, our feedback, the intensity and challenge being delivered, time between sessions, evidence of progress, and most

importantly, what this person believes and prefers."

So we issue a challenge. Take everything you know about neuroplastic treatments: proprioceptive neuromuscular facilitation techniques and patterns; practice and timing guidelines; feedback types and quantities; the component task analyses; the repeated, guided movements; and everything else. And now, consider how to incorporate even more sensory experiences.

Or, as Dunlap reframes it: "Rather than asking whether a patient is neurologic or orthopedic … the more important question is: How can we design the optimal conditions for adaptation and learning?"

Studer concurs, urging, "I would encourage all therapists to see that neuroplasticity is timeless from injury and ageless from birth."

In other words? Nothing short of that miraculous YouTube video that brought us here to begin with.

Sheyna Myntti, PT, DPT, is a member of the APTA Magazine Editorial Committee. She specializes in pediatric physical therapy and has worked at the Florida School for the Deaf and the Blind since 2013. She also has experience with hippotherapy and early-intervention programs.

Karen Pryor, PT, DPT, PhD, ND, is a member of the APTA Magazine Editorial Committee. She has over 45 years of experience and designed an advanced neuroplasticity program. She treats all ages but with an emphasis on pediatrics.

Further Reading on Neuroplasticity and Physical Therapy

Ackerman, S. "Discovering the Brain," National Academies Press, 1992.

Asan, A., et al. "Targeting sensory and motor integration for recovery of movement after CNS injury," Frontiers in Neuroscience, 2022.

Ballester, B. R., et al. "A critical time window for recovery extends beyond one-year post-stroke," Journal of Neurophysiology, 2019.

Bolognini, N., et al. "The sensory side of post-stroke motor rehabilitation," Restorative Neurology and Neuroscience, 2016.

Kang, Y., et al. "Stem cell niches for olfactory regeneration and their therapeutic applications," Journal of Rhinology, 2025.

Savettiere, A., et al. "Identifying biomarkers of neuroplasticity associated with exercise-induced cognitive change in older adults with MCI," Experimental Aging Research, 2025.

Serino, G., Ossmy, O. "Toward a causal science of early play?" Infancy, 2025.

Sow, C. "Serious learning through play: a decade of the self-directed learning playground," Korean Journal of Medical Education, 2026.

Thompson, R. "Early brain development and public health," Delaware Journal of Public Health, 2024.

Tomaszczyk, J. C., et al. "Negative neuroplasticity in chronic traumatic brain injury and implications for neurorehabilitation," Neuropsychology Review, 2014.

Walsh, J., et al. "Towards an understanding of the physical activity-BDNF-cognition triumvirate: A review of associations and dosage," Ageing Research Reviews, 2020.

Weiler, N. "Our plastic brains: learning, memory and aging with Carla Shatz," Wu Tsai Neurosciences Institute, Stanford University, 2024.

What are some of your own favorite techniques and tips for neuroplasticity? Send in your suggestions by scanning the QR code or emailing aptamag@apta.org.

Board-certified. Better paid. Built to lead.

Advance your career with APTA Specialist Certification.

Earn more
Board-certified PTs earn an average of $4,500 more per year. Certification pays for itself.

Stand apart
Join 43,000+ board-certified specialists. Show employers, patients, and peers that you deliver advanced clinical expertise.

Lead with confidence
You're committed to your profession. Board certification validates your skills and positions you as a trusted clinical leader.

Maximize your savings
APTA members save 45% on application and exam fees.

Final Application Deadline: Sept. 30

APTA Specialist Certification
Governed by ABPTS

Earn your specialist status.
Start your application today.
specialization.apta.org.

Stronger Together

How PT-PTA Teams Are Expanding Access to Care

By Keith Loria

As supervision models evolve and workforce pressures grow, physical therapists and physical therapist assistants are redefining collaboration to improve access, efficiency, and patient outcomes.

In acute care settings, patient conditions can change by the hour. For instance, a patient who was stable in the morning may be transferred back to the intensive care unit later in the day, or someone recovering from respiratory failure may suddenly require higher oxygen support. In moments like these, communication between physical therapists and physical therapist assistants becomes critical.

Abby Catamas, PTA, has seen those situations first-hand. She has worked in acute care settings in which collaborative communication enabled patients to continue receiving care without unnecessary delays.

"I have been in hospital systems where I think a patient would benefit from an increased frequency and the PT agreed, allowed me to change it, and then cosigned my note, as well as wrote a contact note stating why they agree and support the decision," she says.

In other cases, Catamas says collaborative communication allows patients to continue receiving therapy even as their medical condition evolves.

"The PT allows me to see a patient who transferred back to the ICU intubated because of hypoxia but is not sedated because there was a collaborative

conversation about what I reviewed in the chart, what has happened, and if we both think the plan of care is going to change or not," she says.

Those day-to-day interactions are becoming increasingly important as physical therapy practices navigate workforce shortages, growing patient demand, rural access challenges, and changing payment pressures. Optimizing and increasing the use of physical therapist assistants could be a major factor in addressing those issues.

PT-PTA Team-Based Care Is Gaining Momentum

In the APTA Strategic Framework for 2030, one of the core pillars is Advancing Our Payment, with the goal of increasing economic opportunities for PTs and PTAs. One of the key commitments in this area? Elevating and supporting "the use of physical therapist and physical therapist assistant teams as integral members of team-based care models to improve access, efficiency, and patient outcomes across settings."

Across the U.S., PTs and PTAs are already working together in increasingly collaborative ways to improve continuity of care, expand access to services, and help patients avoid falling through the cracks. At the same time, evolving supervision rules at both the state and federal levels are creating more flexibility in how care is delivered.

"Now more than ever, PTAs are recognized as essential to the profession," says Rachel Miller, MPH, senior specialist of health policy and payment at APTA. "In both federal and state policies, supervision is expanding to the benefit of the PT, PTA, and the patient."

That evolution is happening even though there are significant workforce and access challenges. Rural and underserved communities continue to face shortages of providers, while clinics in many settings

are balancing growing caseloads with staffing constraints.

Sean Bagbey, PTA, ATC, MHA, says PTAs play a critical role in helping bridge those gaps.

"In underserved communities, there are not enough PTs to go around," he says. "If we don't have a good mixture of that [PT-PTA] team, it is limiting care, especially in rural environments."

Indeed, research increasingly supports what clinicians are seeing in practice: PT-PTA collaboration can expand capacity without compromising care. A 2020 study in APTA's scientific journal, PTJ: Physical Therapy & Rehabilitation Journal, found that higher PTA involvement in stroke rehabilitation did not negatively affect functional outcomes, length of stay, or discharge rates.

A 2023 retrospective analysis in the Archives of Physical Medicine and Rehabilitation found similar results, with no significant differences in pain or functional improvement between patients treated by PT-only or PT-PTA team models.

For many clinicians, the conversation is no longer about whether PT-PTA collaboration matters. Instead, the focus is on how teams can evolve to better meet patient needs, allowing every clinician to work at the top of their license while maintaining high standards for patient care and safety.

PT-PTA Collaboration in Action

While supervision requirements and policy discussions often draw headlines, the success of PT-PTA teams still comes down to what happens during everyday patient care.

Rebecca Shakoske, PTA, LMT, MA, program director for a developing PTA program at Lake-Sumter State College in Clermont, Florida, says communication remains the foundation.

"I really think it comes down to communication," she says. "You just get to know the person or the people you're working with. You develop those relationships, but they all have to start from somewhere."

That collaboration often goes far beyond simply assigning treatments.

Shakoske says successful teams establish clear expectations early and check in regularly as patient needs and schedules evolve, "making sure that the PT and the PTA set the groundwork for the week or the day, depending on the needs of that relationship. I think a lot of people skip those moments for time. I understand productivity is certainly part of it, but I think that would eliminate more problems downstream."

Catamas, who is a PTA member-at-large for APTA Acute Care, says strong collaboration also requires mutual respect and a clear understanding of the PTA scope of practice.

"One of the biggest challenges I still see in everyday practice and even hear about from other PTA colleagues is the limited knowledge PTs have regarding the PTA practice act and how far or high our scope of practice is," she says, referencing the individual state practice acts that govern the supervisory rules and regulations for both PTs and PTAs. "This can really hinder how much a PT trusts a PTA to competently work with certain demographics and complexities."

Catamas says some of the strongest PT-PTA partnerships she has experienced are built on collaborative discussions and trust. That type of communication becomes especially important in high-acuity settings where patient conditions can change rapidly.

"In acute care, circumstances and patient conditions can change daily," Catamas says. "After a PT evaluates a patient and assigns them to an assistant, it is

"Now more than ever, PTAs are recognized as essential to the profession. In both federal and state policies, supervision is expanding to the benefit of the PT, PTA, and the patient.

— Rachel Miller

up to the assistant to make sure they are updating the therapist regularly about functional progress and changes so the therapist can adjust as needed."

Bagbey says the strongest PT-PTA partnerships are grounded in honest communication and a willingness to recognize one another's strengths.

"Open communication and the ability to trust each other" are hallmarks of strong partnerships, he says. "It's not an ego thing about 'I'm good at everything.' It's what's best for our patient."

That collaborative mindset allows clinicians to better match patient needs with provider strengths.

"I have no problem asking [a PT] to step over on a patient that I primarily manage because it might screen into something that is vestibular related, and that's not my strength," Bagbey says. "We have the ability to go back and forth with each other and know what each other's strengths and weaknesses are so that we can better care for the person that's in front of us."

Evolving PTA Supervision Models

As collaboration evolves clinically, supervision policies are also shifting in ways that many clinicians believe better reflect modern team-based care.

One of the most significant recent changes came through the 2025 Medicare Physician Fee Schedule, which changed the supervision requirement for PTAs in private practice from direct supervision to general supervision.

"We have the ability to bridge that gap of providers and help treat more patients by getting another set of hands that are skilled."

— Sean Bagbey

"This eliminates the requirement that the supervising physical therapist be physically present in the building, which provides greater scheduling and care flexibility," Miller says.

Additionally, APTA New York helped change the state's outdated direct supervision requirement to general supervision. Chapter advocacy efforts in Louisiana, Montana, and South Dakota led to reforms that allowed a greater frequency between patient visits with the supervising PT when care is being provided by a PTA, allowing for more flexibility.

"In Montana, supervision now requires the licensed physical therapist to make an on-site visit or visit by means of telehealth to the client at least once every eight visits made by the assistant or once every 30 days, whichever occurs first," Miller says. Previously, the supervising PT was required to make an on-site or telehealth visit to the patient at least once every six visits, or once every two weeks, whichever occurred first.

For many clinicians, those changes are not about reducing oversight. Instead, they reflect increasing confidence in collaborative care models while recognizing that rigid supervision structures can create barriers to timely care.

Still, clinicians stress that flexibility only works when communication systems are strong.

"Closed-loop communication is a key factor in collaborative efforts between PTs and PTAs," Catamas says.

Miller notes safeguards remain essential as practice models evolve.

"Clinics should utilize APTA's resources on PT-PTA relationships to ensure care quality and patient safety," she says. "They should also follow their state practice acts and ensure that they are meeting all payer requirements."

Expanding Access to Physical Therapist Services in Rural Communities

The impact of evolving PT-PTA models may be felt most strongly in rural and underserved communities.

"Because of labor shortages and PT recruitment challenges in rural and underserved communities, these regions are more likely to rely on PTAs to deliver care," Miller says. "Ensuring that PTAs are permitted

to practice under general supervision helps patients get timely access to care."

Shakoske believes PTAs are likely to play an even larger role in expanding access moving forward.

"I definitely think the trend that we're already seeing is job expansion into rural and underserved areas," she says. "Sending a PTA out to do those interventions as the extension of the physical therapist is going to be the most cost effective, but also really allows a PT, especially with a good team, to have a different set of eyes on that patient."

Additionally, those relationships can help uncover information patients may not initially communicate.

"I think patients have a tendency to fall back on something they've either rehearsed or, 'I just got to get the information out because I know this PT is busy,'" Shakoske says. "But then the PTA comes in and it's a little bit more comfortable for them to let some more of that information reveal itself."

That additional interaction can improve both patient engagement and continuity of care.

Catamas says teamwork is especially important in skilled nursing, acute care, and home health settings where patients may have complex medical conditions and rapidly changing needs.

"Home health is now becoming the same way," she says. "Hospitals are sending patients home sooner

than they used to, and the population is generally going home sicker and weaker, too."

Bagbey says extending care through team-based models ultimately benefits patients who might otherwise face delays or gaps in treatment.

"We have the ability to bridge that gap of providers and help treat more patients by getting another set of hands that are skilled," he says.

PT-PTA Models Are Improving Efficiency Without Sacrificing Quality

As clinics continue facing productivity pressures and staffing shortages, many PTs and PTAs say collaborative models can improve efficiency while still preserving quality and patient-centered care.

Abby Catamas (right) says trust and communication are key components of a strong PT-PTA relationship. She is pictured here with her supervising PT, Jamie Smith, PT.

Catamas says effective teamwork allows PTs to focus on responsibilities that are outside the PTA scope while ensuring patients continue receiving timely care.

"It allows the PTs to focus on higher-level tasks that are in fact outside of a PTA's scope of practice, like evaluations, reevaluations, and specific progress notes," she says.

Shakoske notes that well-structured teams can improve workflow without diminishing the role of the PT.

"We're obviously allowing a PT to be able to do the PT stuff — go in to do more evaluations," she says. "The PTA can kind of get down in the mud and really work the patient through that."

She describes the PT role as one focused on the broader management of patient care while PTAs help implement and progress treatment plans.

"The PT is able to kind of be up above and help organize and structure and educate from a different level," Shakoske says. "The PTA is kind of helping to bridge that gap."

For patients, that collaboration can translate into more consistent communication, clearer expectations, and better continuity of care.

"There's better continuity of care, better and more consistent progressions, and it provides better ability for PTs and PTAs to be on the same page when communicating with patients about their care and the plan of care," Catamas says.

Collaboration also creates opportunities for clinicians to catch issues that might otherwise be overlooked.

Bagbey says tasks PTs can focus on include understanding the biomechanics, movement patterns, progression, regression, and safety issues. "Is there something else needed that we need to look at? Is there a cardiac issue that can be identified? Is there a mental health issue that can be identified?"

He adds that PTs can start to practice holistically once they have time to step back and look at the whole picture.

> "Communicate early, not just when there is a problem. Focus on the patient, not being right."
>
> — **Abby Catamas**

APTA Resources for PT-PTA Collaboration

Tools, courses, and reading to help PTs and PTAs strengthen communication, clarify roles, and build more effective team-based care.

From clinical guidance to hands-on training, these APTA resources support stronger PT–PTA collaboration across every setting.

Online

APTA PTA Advanced Proficiency Pathways. **apta.org/app**

Supervision and Teamwork. **apta.org/supervision**

APTA Guide to Physical Therapist Practice 4.0. **guide.apta.org**

In-Person

APTA Master Class: Optimizing PT–PTA Collaboration: Communication, Scope, and Clinical Partnership Across the Plan of Care. Register online at **learningcenter.apta.org** for the in-person event August 28-29 at APTA Centennial Center in Alexandria, Virginia.

From the APTA Magazine Archives

Celebrating A Milestone: 50 Years of PTAs, APTA Magazine, May 2019.

On the Path to Greatness: APTA's Advanced Proficiency Pathways program, APTA Magazine, April 2023.

Everything You Need to Know About Supervision, APTA Magazine, February 2025.

"The PT might spend one visit with them, where it's not just about progressing exercise," Bagbey says. "It's about understanding the person and understanding the quality and how to integrate those all."

Clinicians stress that none of those efficiencies matter if quality and safety are compromised. That is why communication, trust, and role clarity remain central themes throughout discussions about evolving practice models.

"Trust is a huge part of effective PT-PTA collaboration," Catamas says. "Effective communication and willingness to hear one another out and collaborate can make for really strong relationships."

One of the biggest mistakes teams make is failing to understand and value what each provider brings to patient care.

"I think it comes down to really understanding and valuing what the other person is bringing, regardless of years of experience," Shakoske says.

Building the Future Workforce of PT-PTA Team-Based Care

As PT-PTA collaboration continues to evolve in the clinic, many leaders believe the profession must also better prepare students for team-based practice before they enter the workforce.

Bagbey notes DPT education programs often do not spend enough time teaching future PTs how to effectively work with PTAs.

"The PTA education system is set up along that team approach the entire way," he says. "But the PT education system, they might be lucky to have one lesson on what that relationship looks like and what it should look like."

He believes earlier collaboration between PT and PTA students could help strengthen future working relationships. Shakoske concurs.

"PTs are still coming out without solid understanding of how to delegate responsibility, and they're being expected to from day one," she says. "And PTAs are expected to come out well above entry level and just be able to jump in with any PT."

She says stronger integration between DPT and PTA programs could better prepare clinicians for collaborative care.

APTA's PTA Advanced Proficiency Pathways program is one effort designed to support continued growth and specialization among PTAs.

Ian Hunter, MA, specialist of professional development at APTA, says the assessment-based certificate program allows PTAs to build advanced skills within specialty practice areas while working alongside experienced mentors. The program

> "I think it comes down to really understanding and valuing what the other person is bringing, regardless of years of experience."
>
> — **Rebecca Shakoske**

includes specialty pathways in areas such as neurology, orthopedics, geriatrics, oncology, and acute care.

"We're seeing a clear trend toward PTAs seeking more structured, mentored specialization as practice becomes increasingly complex across settings," Hunter says. "We've seen growing interest not only from PTAs, but also from employers and supervising PTs who are looking for formal ways to support PTA development and create career pathways within their organizations."

According to Hunter, many PTAs are specifically looking to strengthen advanced clinical decision-making skills and confidence working within interdisciplinary teams.

"The combination of specialty content and mentored clinical experience is a major draw because it helps PTAs translate knowledge directly into practice," he says.

That focus on development aligns closely with broader efforts to help clinicians practice more effectively within collaborative care environments.

Catamas says one of the most important lessons for newer PTs and PTAs is understanding that successful teamwork does not happen overnight. She encourages clinicians to start with role clarity and a strong understanding of state practice acts.

"Communicate early, not just when there is a problem," Catamas says. "Focus on the patient, not being right."

A Physical Therapy Profession Moving Forward Together

As the physical therapy profession continues to change and progress, PTs and PTAs say the future of care will depend heavily on how well teams collaborate.

That collaboration is no longer viewed simply as a staffing model or productivity strategy. Increasingly, clinicians see it as central to expanding access, supporting workforce sustainability, and improving patient outcomes.

Shakoske believes the profession must continue moving away from outdated hierarchies and toward a more collaborative culture.

"We should be utilizing the state practice act's set PT to PTA ratio more," she says. "This allows more PTAs to work under one PT, sets up the PT-PTA team, and allows that PT to have greater access to more patients. That's going to only benefit the patient in the long run."

At the same time, clinicians say expanded utilization only succeeds when PTs and PTAs intentionally build strong communication habits and shared accountability.

"Great PT-PTA collaboration and teamwork isn't automatic; it is intentional," Catamas says. "The end goal should always be what is best for the patient."

Keith Loria is a freelance writer and frequent contributor to APTA Magazine.

Ask questions, share what's working, and help shape the future of the PTA role in the profession. Join the PTA Exchange community on APTA Community by scanning the QR code or going to communities.apta.org.

Advocacy Update

Updated Medicaid Payment Rate Guide, APTA Payment Advocacy Summit, and state chapter initiatives are part of APTA's coordinated advocacy efforts.

Be the SPARC for payment change by joining a national movement advancing fair payment and patient access to physical therapy. Continue your commitment to change by taking the APTA Payment Advocacy Pledge. Scan the QR code for more information or go to **apta.org/payment-advocacy-pledge**.

APTA and State Chapters Advocate for Improved Access and Payment Under Medicaid

State chapters are advocating to their state policymakers as Medicaid budget constraints put pressure on payment rates, patient access, and the sustainability of physical therapy practices. Coordinated advocacy efforts and newly updated member tools are helping protect access to physical therapist services under state Medicaid programs.

Why Protecting Physical Therapist Services Under Medicaid Remains a Top Priority

Advocating for improved Medicaid funding for physical therapist services remains a central focus of APTA state chapter advocacy. Cuts to Medicaid disproportionately affect vulnerable populations and the providers who serve them, particularly in rural and underserved areas. When states reduce already extremely low payment rates or eliminate optional benefits, access to physical therapist services is often among the first areas affected.

Sustained APTA advocacy helps ensure that Medicaid policy decisions account for patient outcomes, workforce stability, and long-term cost savings.

Updated Medicaid Payment Guide Supports Advocacy and Decision-Making

To support members who provide services to Medicaid beneficiaries, the updated APTA State Medicaid Payment Rate Guide reflects the 2026 Medicaid landscape across all 51 jurisdictions. The member-only resource provides fee-for-service payment rates for selected CPT codes, along with direct links to state Medicaid manuals.

The guide is offered as an interactive spreadsheet and includes a data dictionary, frequently asked questions, and an instructional video. Its scalable

design allows members to compare states, codes, and policies, making it valuable not only for individual members but also for state chapters building data-driven cases for payment reform.

Medicaid Advocacy Shows Momentum Amid Ongoing Challenges

In the 2025 and 2026 legislative seasons, state chapter advocacy has produced meaningful progress while also highlighting persistent challenges. In Washington state, advocacy efforts helped prevent proposed budget cuts that would have eliminated adult Medicaid services provided by physical therapists, occupational therapists, and speech-language pathologists. In Arkansas, legislation expanded Medicaid reimbursement for physical therapy in clinic-based settings, improving patient choice and reducing overall healthcare costs. In North Carolina, policy changes now allow Medicaid beneficiaries ages 21 and older to receive care in independent private physical therapy practices.

Sustained APTA advocacy helps ensure that Medicaid policy decisions account for patient outcomes, workforce stability, and long-term cost savings.

At the same time, major challenges remain. In Georgia, Medicaid managed care contractors have proposed significant reductions in rehabilitation payment rates, prompting ongoing advocacy related to contractual rights and access concerns.

Collaboration between state leaders for APTA, the American Occupational Therapy Association, and the American Speech-Language-Hearing Association has also led to significant change in Medicaid advocacy. In January, national association staff experts and state association leaders from all three organizations convened for a webinar to share extensive advocacy knowledge, insights, experiences, and strategies for addressing Medicaid concerns. Together, the professions aim to strengthen their impact and improve access to care.

Engaging Through the National Conference of State Legislatures

State advocacy is reinforced by broader education efforts aimed at policymakers nationwide, emphasizing the importance of preserving access to physical therapy under Medicaid to improve outcomes and reduce downstream costs. Recent APTA outreach includes an advertisement in "State Legislatures," an annual publication by the National Conference of State Legislatures released during its annual Legislative Summit, which reaches over 7,300 state legislators across all U.S. jurisdictions, state legislative staff, and state policymakers.

APTA also had a strong presence at the 2026 NCSL Annual Legislative Summit in Chicago in July. This bipartisan event brings together thousands of state legislators from across the country, and APTA was there to advocate on state-level payment issues. This work aligns with APTA's strategic priority to advance payment and reduce administrative burden, ensuring that physical therapist services remain accessible and sustainable within public programs.

APTA Payment Advocacy Summit and SPARC Create New Opportunities to Engage

Members built on state momentum by attending the APTA Payment Advocacy Summit, where Medicaid payment challenges were addressed head-on. Sessions highlighted state legislative strategies to improve Medicaid payments and reduce barriers, such as prior authorization, with a focus on approaches that can be replicated across states.

The summit also spotlighted collaboration through the State Payment Advocacy Resource Center, or SPARC. SPARC is the central hub for state payment advocacy, offering practical tools, guidance, and strategic insights to help members navigate today's complex payer environment. SPARC supports members with coordinated efforts that influence payer policy at the state and national levels, all aimed at strengthening operations and safeguarding appropriate reimbursement.

A member-only resource, the SPARC Forum in the APTA Community aims to connect fellow APTA members from across the country to share payment insights, resources, and advocacy strategies, and build their payment advocacy network.

Members can stay engaged in advocacy efforts throughout the year and track Medicaid-related legislation in their state using the APTA State Advocacy Map.

Save BIG With APTA's Early-Career Dues Discount

Renew your APTA membership postgraduation and save.

First Year Postgraduation	**50% off** national, chapter, and participating academy and section dues.
Second Year Postgraduation	**40% off** national and participating chapter, academy, and section dues.
Third Year Postgraduation	**30% off** national and participating chapter, academy, and section dues.
Fourth Year Postgraduation	**20% off** national and participating chapter, academy, and section dues.

How It Works

- Ensure that your APTA student membership is active at graduation.
- Maintain continuous APTA membership postgraduation.
- Enjoy the APTA Early-Career Dues Discount automatically applied at renewal.

Visit apta.org/EarlyCareerDues for details.

APTA
American Physical Therapy Association

Researcher Spotlight

New research explores whether embedding physical therapists full time in the NICU can boost infant development, increase parent engagement, and reshape care delivery.

BY NORA SANZO

Can Constant Physical Therapy Presence in the NICU Improve Outcomes for Infants and Families?

What happens when physical therapist services in the neonatal intensive care unit, or NICU, are no longer confined to a schedule? Too often, physical therapists arrive for scheduled interactions only to hear, "You just missed the parents."

Dana McCarty, PT, DPT, PhD, is leading a study to test this new approach at the University of North Carolina at Chapel Hill. Her research examines an immersive physical therapy model in which PTs are continuously present in the NICU, collaborating with care teams in real time and connecting with families as opportunities arise.

On this page and opposite, Dana McCarty (left) and a colleague visit with a NICU patient.

The goal is to understand whether greater PT presence, embedded within an interdisciplinary team, can improve infant development and provide greater support for parents.

From Parental Presence to a Broader Inquiry

McCarty is an assistant professor of physical therapy and a practicing clinician in the NICU at UNC Children's Hospital. Her research trajectory began with a public-health-focused PhD.

During her doctoral studies, partially supported by a Promotion of Doctoral Studies Scholarship from the Foundation for Physical Therapy Research, McCarty explored parental empowerment in neonatal physical therapy. Her PhD work examined the contextual factors that shape whether families can be present and engaged, and how PTs can facilitate parent-infant interaction to support early motor development.

"All of the physical therapy studies show that when parents are present, outcomes are better," McCarty shares. "But my question was: which parents are we missing, and why?"

Her dissertation revealed that socioeconomic status, as measured by Medicaid use, was the strongest predictor of maternal presence at the bedside, outweighing distance and other demographic factors.

"With fewer financial resources, it's simply harder to be at the bedside," she says. "That told us institutions and care models have a responsibility to adapt."

Testing a Continuous Physical Therapy Model

Building on her dissertation, McCarty's current study examines whether changing how physical therapist services are delivered in the NICU can meaningfully increase contact with families and improve outcomes for patients.

The Foundation for Physical Therapy Research supports studies focused on improving outcomes for patients and families. Find current funding initiatives and projects by scanning the QR code or going to **foundation4pt.org**.

> "This isn't just about proving therapy works. It's about understanding how we show up, when we show up, and whether that changes developmental trajectories for infants and helps families."
>
> — Dana McCarty

"What we're really studying is a delivery model," McCarty explains. "Instead of popping in and out on a schedule, what happens if physical therapy is just there: available when parents arrive, when a nurse needs support, or when a developmental opportunity presents itself?"

The study focuses on a critical 28-day window in early life and measures outcomes for both infants and their parents. Maternal stress and parenting confidence are assessed alongside infant neurobehavior and motor development using standardized, validated tools.

A PT on McCarty's team is able to meet with a parent and patient's caregiver.

In traditional NICU practice, physical therapist services are typically limited to scheduled care times. The immersive model removes that constraint, allowing PTs to engage in real time, support families during skin-to-skin transfers, assist with positioning, and offer early caregiver education as needs arise.

This includes PT presence on weekends and evenings to accommodate families who may not be able to visit the NICU during the day.

This approach is dependent upon deep interdisciplinary collaboration. Physical therapists, occupational therapists, nurses, neonatologists, and respiratory therapists all play a vital role in the NICU.

Before data collection began, nurses completed specialized developmental training, with PTs supporting education across both day and night shifts.

"In the NICU, nothing happens in isolation," McCarty shares. "PTs are present for a few hours, but nurses and medical teams are there 24/7. If we're not aligned, families feel that."

Why Early-Stage Funding Enables Big Questions

Early-stage Foundation funding for this study from the 2024 Paris Patla Physical Therapy Research Grant has enabled the study team to collect essential data needed to support a larger study.

"The kinds of questions we are asking are challenging because they push against existing staffing and productivity models," McCarty says. "But without early-stage research funding, we'd never get the data we need."

Ultimately, the goal is to inform how care is delivered in the NICU — from staffing models to policies that elevate family-centered care.

"This isn't just about proving therapy works," McCarty emphasizes. "It's about understanding how we show up, when we show up, and whether that changes developmental trajectories for infants and helps families."

PTPAC: APTA's Political Voice on Capitol Hill

Thank you to our generous members who have supported PTPAC to advance the profession. Our voice continues to grow in the halls of Congress. Unfortunately, our work is far from done. PTPAC fosters legislative champions in Congress who will benefit our clinics, patients, and the profession. Access to members of Congress through PTPAC is essential to telling our story about how we improve the health of society.

Your continued support for PTPAC is needed now more than ever as Congress considers reforming payment models under Medicare. Our voice must be heard and included.

Be an advocate for the profession. Join us by donating today to help our efforts in Congress.

Scan here to make a personal donation.

Scan here to make a corporate donation.

PTPAC
Physical Therapy Political Action Committee of APTA

Contributions to PTPAC are not tax deductible as charitable contributions. Contributions are voluntary. The amount given by the contributor, or the refusal to give, will not benefit or disadvantage the person being solicited. Only APTA members can contribute.

For more information visit PTPAC.org

Success Story

A six-week case study shows that combining Pilates with traditional therapy improved mobility — and helped patients regain confidence and independence.

BY ELYCE MARTINEZ, PTA

Do you have a Success Story to share? Scan the QR code or email the editor at aptamag@apta.org.

How Pilates in Long-Term Care Helped Patients Move Again — and Stay Engaged

Being problem solvers is part of the job description for physical therapists and physical therapist assistants. In each Success Story, APTA members share their insights into an issue they face at work and the creative solutions they used to address it. This installment features Elyce Martinez, PTA, and the rehabilitation team at Westover Hills Rehabilitation & Healthcare Center in San Antonio, Texas, who integrated Pilates into traditional physical therapy to improve outcomes for patients in a skilled nursing facility.

The Issue

In our setting, which provides both skilled nursing and long-term care, we often work with patients who face multiple barriers to recovery. Many are older adults with complex medical conditions, limited mobility, and, in some cases, cognitive impairments. Traditional physical and occupational therapy remains essential, but we noticed a recurring challenge: patient engagement.

Some residents were hesitant to participate in therapy because it forced them to confront their physical limitations. Others progressed slowly due to medical restrictions such as non-weight-bearing status, hypotension, or generalized weakness. Even when patients were physically able to participate, their motivation and confidence were often low.

We needed an approach that could meet patients where they were — physically and emotionally — while still driving meaningful clinical outcomes. The question we kept coming back to was simple: How do we energize patients to participate in their own recovery so they can improve?

The Solution

Our PT and PTA team began exploring Pilates as a complement to traditional physical therapy. Unlike many conventional exercises, Pilates can be highly adaptable. Movements can be modified for a wide range of physical and cognitive abilities, allowing patients to engage in exercises they might otherwise be unable or unwilling to perform.

At Westover Hills, we were uniquely positioned to test this approach. With a fully equipped on-site Pilates studio and therapists trained through Balanced Body education programs, we had both the tools and the expertise to integrate Pilates into patient care.

We designed a six-week case study involving long-term care residents between the ages of 68 and 89. Participants represented a wide spectrum of cognitive function, from severely impaired to fully intact. We divided them into three groups: one receiving traditional therapy only, one receiving a combination of Pilates and traditional therapy, and a control group that did not participate in therapy during the study period.

For the Pilates group, sessions were conducted up to three times per week, often lasting up to an hour. These were combined with additional physical therapy sessions. The Pilates exercises focused on neuromuscular reeducation, postural alignment, and strengthening of both upper and lower extremities — all critical components for improving balance, transfers, and gait.

We used clinical reformers designed to support safe transfers and accommodate patients with limited mobility. Additional tools such as springboards, resistance bands, and stability props allowed us to tailor each session to the individual. Every movement could be scaled, adjusted, or supported based on the patient's needs that day.

To measure outcomes, we used standardized assessments including the Timed Up and Go, or TUG, Test and the Functional Reach Test. Baseline measurements were taken at the start, midpoint, and conclusion of the six-week period.

The Outcome

What we saw over those six weeks changed how we think about rehabilitation.

While both the Pilates group and the traditional physical therapy group showed improvements in balance as measured by the Functional Reach Test, the difference in mobility outcomes was striking. Patients who participated in both Pilates and traditional therapy improved their TUG scores by an average of 10.64 seconds. In contrast, the traditional therapy group improved by just 0.68 seconds.

From a clinical perspective, this represents a meaningful reduction in falls risk and a significant gain in functional mobility.

Equally important, patients in both active therapy groups progressed from being classified as high falls risk at baseline to low falls risk by the end of the study. Meanwhile, those in the control group showed no measurable improvement.

But the numbers only tell part of the story. We observed clear improvements in posture, gait mechanics, and core strength. Patients moved with more control and stability. Tasks that once required assistance became more manageable, and in some cases, independent.

One patient who had not walked for three years stood and walked after six weeks of combined therapy. Moments like that stay with us as PTs and PTAs.

We also saw something less measurable but just as important: increased engagement. Patients were more willing to participate in sessions that incorporated Pilates. The exercises felt different — less clinical, more approachable. There was a sense of curiosity and even enjoyment that we don't always see in traditional physical therapy settings.

PTs and PTAs reported improvements in confidence, self-esteem, and overall

In Their Own Words

"Westover Hills is pioneering what the future of rehabilitation can look like. Their clinical commitment, paired with evidence-based Pilates programming, is producing life-changing results for patients who often have limited mobility or chronic conditions."

— **Ken Endelman,** founder and CEO of Balanced Body

"We wanted a solution that would not only improve mobility and reduce falls risk but also restore confidence and independence in our patients. Pilates has exceeded every expectation. We've seen residents improve posture, walk with greater stability, and, in one remarkable case, a patient who had not walked for three years stand and walk after just six weeks. This is just the beginning. Pilates not only improves physical outcomes, but it also restores hope, confidence, and independence. That's what rehabilitation should be."

— **Brady Donner,** director of outpatient services at Westover Hills Rehab

quality of life. Patients weren't just moving better. They were starting to believe in their ability to move again.

Reflection

This experience reinforced something I think many clinicians intuitively understand but can't always test: How we deliver care matters just as much as the care we deliver.

Pilates gave us a way to bridge that gap. It allowed us to maintain clinical rigor while creating a more engaging and empowering experience for patients. It met people at their current ability level while still challenging them to improve.

What stands out most to me is the shift in mindset among our patients. When therapy feels accessible and adaptable, it reduces fear. When patients feel successful, even in small ways, they're more likely to keep going. That shift can change everything.

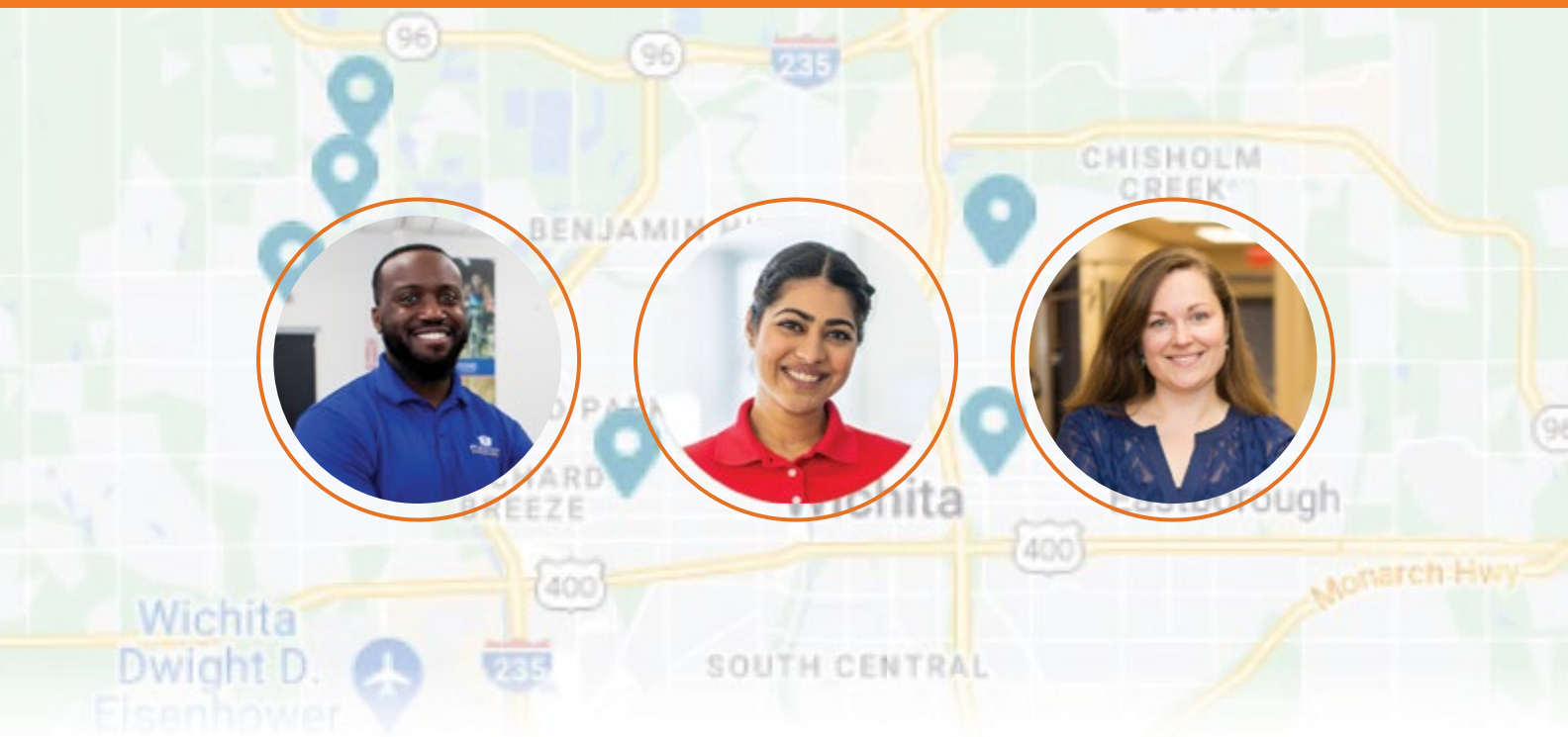
As a team, we've also grown. Integrating Pilates required us to think differently about movement, progression, and patient engagement. It pushed us to expand our skill sets and collaborate in new ways. The result has been not only better outcomes for our patients but a more dynamic and fulfilling clinical environment for our staff.

We're continuing to build on this work, expanding our Pilates programming and increasing access for more patients, including long-term care residents and outpatient clients. Our goal is to make this approach a standard part of rehabilitation, not an exception.

Rehabilitation should do more than restore function. It should restore confidence, independence, and a sense of possibility. For many of our patients, Pilates helped us do exactly that.

ELYCE MARTINEZ, PTA, specializes in geriatrics and is passionate about using reformer Pilates-based rehabilitation to help older adults enhance their strength, mobility, balance, and quality of life.

Attract New Patients and Clients With APTA's Improved Find a PT Tool!



Highlight your expertise, activate your profile, and tap into the power of ChoosePT.com, where millions of consumers can find physical therapist-recommended solutions to their health and wellness needs – and a PT when they need one.

Create or Update Your Find a PT profile

ChoosePT®
Provided by APTA

Free for Member PTs — Your APTA Dues Working For You

Advertiser Index

Abbvie 3
Apis 56
Cora 22-23
Encompass. 8-11
Haleon 1
HPSO LH. 56
Mobius Mobility 17
Myofascial Release Seminars . . . 56
Neo G C4
OPTP 21, 57
RKB. C2

/ By Kirby Mayer, PT, DPT, PhD

After his premature twin boys spent time in the NICU, one PT learned valuable lessons about patient advocacy and the power of communication.

The NICU Stay That Shaped My Career

Our twin boys, Graham and Grady, now are 7 years old. Graham is an adventurous and deeply sympathetic individual; he is 30 seconds older than his brother. Grady is analytical, loves numbers and books, and is even a foodie. You would never know that they were twins unless you asked. You would also never know that the boys spent three to four weeks in the neonatal intensive care unit: 22 and 28 days to be exact.

Twin pregnancy is inherently high-risk, and my family's experience was tumultuous. First, we had not established medical providers, as we were young, healthy, and not really planning for babies (not yet anyway). Second, my wife, a dental hygienist, worked for a private company that did not offer health insurance, and I was a student in the Rehabilitation and Health Sciences PhD program at the University of Kentucky.

Student insurance was adequate for me, but it did not support my wife. At that time in our lives, we qualified for federal assistance. Because our family was not tied to an employer plan, we used a private clinic and hospital system for maternity care. The process of finding and establishing care in the United States' healthcare system was challenging at times, but we found a team we genuinely trusted.

There is more to the story regarding navigating the care team, insurance, and bills, but more context is required.

Healthcare Through a Provider's Eyes

As a dental hygienist with more than five years of experience working in a busy private clinic, my wife understood the ebb and flow of healthcare. She also supported the office with insurance claims and billing. Likewise, before starting my PhD studies, I worked as a physical therapist in the cardiovascular intensive care unit, primarily caring for patients

Kirby Mayer, PT, DPT, PhD, is a physical therapist and clinician-scientist at Michigan State University in the College of Human Medicine. Mayer has been engaged in clinical science focused on outcomes for ICU patients for the past 10 years.

Kirby Mayer (far left) is pictured here with his family, including the twins, Graham and Grady. The following pages also feature photos of the twins.

To comment on this story or inquire about submitting a "Defining Moment" column in a future issue of APTA Magazine, email the editor by scanning the QR code.

Defining Moment spotlights a particular moment, incident, or case that either led the writer to a career in physical therapy or confirmed why they chose to become a physical therapist or physical therapist assistant.

I learned that when I am working as a physical therapist or engaged in clinical research, it is vital to be direct and clear with communication. One thing that I now emphasize with my colleagues, patients, and students is a deliberate focus on time for questions and listening.

pre- and post-thoracic surgery, including those on extracorporeal membrane oxygenation.

I developed a passion for providing rehabilitation interventions for patients with acute critical illness requiring life-sustaining therapies in the ICU, and to this day, my research continues to focus on improving outcomes for ICU patients. Before the boys, my perspective on healthcare was primarily one-sided as the "provider." At that point in my life, I had not experienced a major illness as either the patient or the loved one.

Fast forward to my wife's pregnancy. The first proverbial "bump" in the road was a diagnosis of gestational diabetes. My wife had failed her glucose challenge test at about 23 weeks of gestation. As mentioned above, we were not prepared financially or emotionally for either of us to stop working as recommended by our care team, but we understood the risks of gestational diabetes and twin pregnancy. My wife received excellent support and education for the condition, and she was able to control it through diet and without needing medications or insulin.

A Phone Call That Changed Everything

A few weeks later, my wife had a routine fetal ultrasound common in high-risk pregnancies. That day marks the start of reshaping my brain and approach as a physical therapist. My first defining moment, if you will.

First, I missed the appointment. We had decided that I should continue my dissertation research. My wife had insisted that this was just another routine check; she wasn't even seeing the care team, so I was enrolling patients in the medical ICU to understand why muscle mass is lost rapidly with critical illness.

But then, I received a phone call: "They are admitting me; there is an issue with Baby B's heart rate." I later found out from the care team that Baby B, or Grady, was having consistent heart rate decelerations, which is a highly concerning complication, reducing blood flow and oxygen to the baby. My wife was admitted, and I arrived as quickly as possible.

I noticed her voice was tremulous, but she appeared calm and confident in the care she and the boys were receiving. In conversations with my wife, we both were anxious, scared, and concerned about the unknown. I have difficulty remembering every feeling and emotion, but that initial fear is ingrained in my brain as a parent. We understood that twin pregnancy increased the risk of premature birth, but we failed to fully process the ramifications until we were in the moment.

My wife was admitted for a little over two days with continuous fetal heart rate monitoring. The team's medical differential diagnosis focused on Baby A (Graham), who was 6-7 ounces larger than Grady, putting excess pressure on Grady's cord.

The team was very concerned about cord compression or entanglement and even discussed a nuchal cord, which is when the umbilical cord wraps around the baby's neck. On the third day, the heart decelerations had crossed a threshold that elevated my wife to emergent cesarean section. As I mentioned, I don't recall all the events of this period in my life, but this moment will never leave my mind. Again, I was not at the hospital when this started!

Conversations with our medical team strongly suggested that my wife and the twins would be admitted to the hospital for monitoring. At this point, my wife was 32 weeks along. The care team was determined to allow the babies more time to develop, especially their lungs.

From pediatric and cardiopulmonary physical therapy education, I knew surfactant — the substance made in the lungs that helps us breathe — begins to develop around 24 weeks' gestational age and is completed by 35 weeks. Thus, we had decided that I should take a "rest break" to go home for a shower and to pack supplies for my wife. Everything happened so quickly on the first day that we didn't even have a "go-bag."

Decisions No Parent Expects

I do not think I was home more than a couple of hours when I got the call, "The team wants to move forward with C-section, you need to get here ASAP." I arrived at the hospital, and my wife had not yet been prepared for surgery. I managed to arrive before the consent for anesthesiology and the risk review of C-section.

I can still hear the list of risks to the babies and my wife, and one piece of that conversation still makes me emotional: "If sudden life-threatening complications occur, our priority will be to stabilize your wife first, since this will significantly increase the chance of saving the babies. Since you guys do not have advance directives, what is your choice [asking my wife] if a choice is necessary." In the moment, I am not sure I even processed the question to answer, and my wife immediately said, "the babies." I cannot

begin to type the emotions I feel with this answer, so I will not.

Due to the nature of the emergency, our obstetrician, who planned to do the surgery, was on vacation. This wrinkle was unsettling at first, but our care team, from the moment we were admitted, had an amazing bedside manner and excellent communication. As an ICU researcher, I would have preferred to know their statistics and success rates, but that was not an option nor important in that moment.

For the most part, my wife's C-section was uneventful and relatively quick. I was able to attend and provide support throughout. My wife did amazing, and our care team went above and beyond. I believe our care team did the best they could with communication. The surgeon knew I was involved in research in the ICU with adult patients, but in hindsight, being an ICU physical therapist was both a blessing and a curse.

The boys were six to eight weeks early, depending on who you ask. Graham was 4 pounds, 8 ounces, and Grady was 4 pounds, 2 ounces, both considered low birth weight. As parents, we missed the initial moment of holding and bonding with the babies. We were presented with each baby like Simba in The Lion King, and then they were rushed to the NICU. Describing my emotions and thoughts in that moment is still daunting: Fear intensified, relief for my wife, shock and awe of the surgery, and immense joy of being a father to two beautiful boys.

Mayer (left) works as an ICU researcher but was unprepared for his experience as a parent of NICU patients.

Learning to Be Parents in the NICU

The next few days and weeks are extremely blurry. The initial days were inundated with fear, anxiety, and the unknown. The boys required high-flow supplemental oxygen, which was preferred over invasive ventilation via an endotracheal tube that some premature babies need. Both Grady and Graham lost weight in the first weeks. How can a 4-pound baby lose weight?

Then there were moments of clarity: holding Graham for the first time, promoting skin-to-skin contact. Learning to change a premature diaper.

Being frustrated at Grady for not learning how to eat for days and weeks — he had significant periods of apnea with learning to suck and swallow. Graham was discharged a week before Grady, and I am not sure how we managed the time, schedule, and sanity of having one new baby at home and one still in the NICU. To this day, I cannot recall how we managed.

During our time in the NICU, I can genuinely say that 99% of the interactions, education, and support from staff and providers were above and beyond our expectations. A small number of individuals may have been suffering from internal battles and even experiencing burnout. But this 1% remains ingrained in my brain even seven years later. Those individuals and each event become embedded in our memory.

While isolated events will not define our experiences in the NICU, they should be evaluated through quality improvement and research studies, offering opportunities to learn and grow as healthcare professionals. Most events are resolved through simple communication among providers and between providers and the family.

I also strongly believe that supporting healthcare providers, such as physical therapists, occupational therapists, and speech-language pathologists, can play a pivotal role in communication. Unfortunately, our babies never received these consults, and hindsight is 20-20, but as a father and a physical therapist — I should have advocated. I now think about patient advocacy embedded in who I am as a physical therapist.

When Care Meets Communication Gaps

From my time in the NICU as a parent, I learned that when I am working as a physical therapist or engaged in clinical research, it is vital to be direct and clear with communication. One thing that I now emphasize with my colleagues, patients, and students is a deliberate focus on time for questions and listening. Even more important is creating multiple avenues to ask questions, especially when busy schedules conflict and prevent natural communication.

More importantly, my experience provided an appreciation for the emotional and traumatic experience of being a patient or a loved one. During the NICU and even the weeks after when the boys returned home, I felt an immense disconnect from the boys that led to periods of depression. To this date, I still have occasional nightmares or vague memories that trigger strong feelings.

The disconnection stemmed from two factors. First, the unnatural experience of watching my newborns in an incubator instead of holding them. And second, the universal anxieties of new parenthood — doubts about my ability to care for not just one, but two tiny, fragile lives. We must begin to discuss the emotional turmoil faced by mothers as well as fathers so that we can begin to learn, develop pathways for treatment, and advocate for parents. Again, I think this is a potential avenue for supporting patients and families, led by social workers and psychologists, with integrated education and supportive interventions from physical, occupational, and speech therapists.

Never stop advocating for yourself, family, and your patients or clients.

The Cost of Survival

Months after the NICU, the bills started to arrive at the house. Yes, our medical bills were still

> The NICU was a transformative experience, altering not only my family's life but also my professional approach. I am comforted by the lessons I continue to carry forward as both a healthcare provider and a father.

paper and delivered by mail. After our co-pays and the insurance paid their percentage, we personally owed $165,000.

As I mentioned, my wife and I were at a point in our lives where we did not have good insurance, nor did we have the financial stability to pay $165,000. Fortunately, we both understood the U.S. healthcare landscape. We had qualified for federal assistance and received funds from the federal supplemental nutrition program for women, infants, and children, known as WIC, to support the babies. In addition, we fell way below the poverty line since I was a PhD student on a limited income. Although we had the paperwork and documentation, the hospital did not adjust the final bill. We owed what we owed. But, we both had learned that the system can be challenged.

My wife called the hospital billing office once a week for over six months; yes, she called at least 25 different times. I called a few times, but I was scrambling to finish my dissertation to get a job that would hopefully provide insurance for the entire family. One day, my wife called, and we thought the financial office had started to get annoyed with our persistence, and we were finally transferred to the financial director.

"I can see from my notes that you and your husband qualify for federal assistance; I can also see that you have called the office weekly for the last few months. Today will be your last time you need to call because I will take care of the remaining balance." We both were in shock and disbelief, but also felt sincere gratitude. About two weeks later, we received a letter confirming the bill had been adjusted with a balance of $0.

Interestingly, we received a separate bill from the anesthesiologist who was contracted through the hospital for about $3,500. This bill was much more challenging, and the company did provide a discount, but we ended up paying around $2,000.

Again, we used knowledge and advocacy to communicate with the anesthesiology team to address the charges and our limited income. Throughout these experiences, we learned about the power of kindness and patience. We were never frustrated with humans performing their job duties; we were frustrated with the U.S. healthcare system.

I frequently reflect on these conversations, and I worry about family, friends, neighbors, acquaintances, and everyone in between that might not know the power of advocacy.

The NICU was a transformative experience, altering not only my family's life but also my professional approach. I am comforted by the lessons I continue to carry forward as both a healthcare provider and a father.

? THINGS TO THINK ABOUT

How do you increase reimbursement & reduce the documentation effort?

Can you keep up with payer changes?

APTA CONNECT **rehab EMR**

What would make it possible to care for more of your patient community?

intake | scheduling | documentation | compliance | patient engagement
productivity | telehealth | referrals | billing | analytics | MIPS

CEDARON

INFO@CEDARON.COM • CEDARON.COM/CONNECT

CEDARON

NEO G

Medical & Lifestyle Innovation

Registered as a Class 1 Medical Device • Registered as a Class 1 Medical Device •

CLASS 1 MEDICAL DEVICE

RECOMMEND A BUNION SUPPORT THAT FITS IN YOUR PATIENT'S SHOES

Provide your patients with the bunion relief they need without the bulk of traditional bunion supports. The Neo G Bunion Hallux Valgus Slimline Support is expertly designed to offer essential pressure relief and friction protection, fitting seamlessly into most everyday footwear and even under socks.

Featuring an integrated flexible metal stay, this support helps splint the big toe away from the toes to help slow bunion development. Lightweight, breathable material with bound seams and a slim profile allows this bunion support to be worn in most shoes and even under socks for all-day foot care. For targeted cushioning, this support features an adjustable gel pad that can be positioned to protect exactly where external friction occurs.

As Class 1 Medical Devices, our bunion supports meet the highest health and safety standards. Whether used as a pre- or post-surgery aid, they are an ideal bunion support for both men and women. Recommend a trusted bunion support with Neo G.

neo-g.com | Neo G | neo_g_official

Available at **Walmart**