APTA
American Physical Therapy Association

The Digitally Enabled Physical Therapist: An APTA Foundational Paper

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Executive Summary

For a profession that has never been afraid to evolve, the time has come again to consider what's next.

Innovation has advanced within the physical therapy profession over the years as it has in health care overall. This progress is visible in many different forms — from the turn toward recognizing and addressing the impacts of social determinants of health to the willingness to embrace new practice and payment models — but many would agree some of the most exciting developments have to do with emerging digital technologies.

In physical therapy, as in other health care professions, physical therapists and physical therapist assistants are regularly using digital solutions such as mobile apps and telehealth to augment and modify care delivery in order to optimize clinical outcomes. As digital health technologies continue to grow in the marketplace, especially in the wake of the COVID-19 pandemic, providers are evaluating their utility and efficacy, as well as when deployment makes sense.

The American Physical Therapy Association has a long history of supporting new technologies that promise to help clinicians and patients alike. For years, for example, the association has promoted the use of electronic health records in practice, and more recently APTA has affirmed its advocacy for PTs and PTAs providing services via telehealth. In the right applications, technology can advance quality of care, provide clinician support, increase and speed access to services, increase patient engagement and self-efficacy, and reduce overall spending. Digital solutions also can improve patient experiences while making health care more convenient.

Digital health in physical therapy includes a broad spectrum of devices, software, and platforms and services, each of which may have a place in the patient-client management model defined by APTA's Guide to Physical Therapist Practice. It's the association's position that digital health — the integration of medical knowledge with technology to improve care and self-efficacy — has the potential to transform health care delivery as long as certain challenges are overcome. These include ensuring patient safety and privacy, making sound clinical decisions as to appropriate applications that will enhance patient care and outcomes, and complying with current standards of practice and all legal, ethical, and regulatory requirements.

The benefits — along with the challenges to be addressed — make this an important moment for the physical therapy profession. As more digital technologies are introduced in health care, therapists have a responsibility to consider and evaluate their possible applications when the evidence supports them.

APTA has identified the concept of the digitally enabled physical therapist as a framework for addressing digital health and its role in the physical therapy care delivery model. Digital technologies can never replace the value or role of the physical therapist or the physical therapist assistant; rather, over time, these tools can enable clinicians to expand their reach, improve access to their services, and deliver critical data on patient progress and outcomes to ultimately drive improvements in care. The access to data that technology can provide also can inform those within the profession about best practices and innovative ways to advance care in the future.

This foundational paper is intended to provide APTA members with information on the current landscape of digital health in physical therapy. In the end, we hope it will help clinicians safely and confidently embrace innovation in step with the evolving health care landscape around them.

Introduction

“The right care in the right setting at the right time.”

For years, it’s been the rallying call for countless providers focused on health care’s “Triple Aim” and the push for better value and quality. Today, however, it’s time to expand it: It should also include “using the right technologies.”

This is true across health care disciplines, and physical therapy is no exception. Digital technology is critical to nearly every aspect and function of physical therapist practice.

From electronic health record systems to business management software and mobile applications for patient communication, digital technology solutions have become ubiquitous in practice settings everywhere. Physical therapists, physical therapist assistants, and practice administrators rely on these and similar tools as they go about their daily work.

The American Physical Therapy Association has closely tracked the profession’s adaptation to the world of digital health, concluding that its members would benefit from a thorough exploration of the subject and its implications. The association recognizes that digital technologies not only are deeply woven into clinical practice but also are expanding rapidly in scope and impact — and they will continue to do so into the future.

To be clear, APTA asserts any service labeled “physical therapy” that’s delivered using digital technologies must be performed by a physical therapist or physical therapist assistant under the PT’s supervision. Digital technologies are tools that augment physical therapist services. They do not and will never substitute for a human clinician. Given that digital health is here to stay, PTs, PTAs, and the practices in which they work would do well to embrace it for the advantages it offers.

Digital Health Care 101

The term “digital health” refers to the use of electronic communications tools and processes to deliver health care services or facilitate better health. The concept is broad and constantly evolving, but digital health today can be categorized generally into the following technology areas:

- Electronic health records.
- Mobile health applications.
- Virtual care, such as telehealth and telemedicine.
- Artificial intelligence and machine learning.
- Augmented reality/mixed reality/virtual reality.
- Connected sensor technology.
- Digital therapeutics.

These areas fall into one of three categories:

Digital health technologies are used to support clinical decision making, delivery of services, and practice management. In physical therapy, these tools most often include EHRs, telehealth solutions, and online platforms and mobile apps that allow for data and information capture, transmission, storage, and display. Physical therapists and physical therapist assistants use digital technologies to document care, inform decisions about treatment, and monitor and communicate with patients. Increasingly, clinicians also rely on data analytics and artificial intelligence to glean insight into individual and population-level health trends using data from across the health care continuum. Administrators use technologies designed to manage office and billing tasks. Patients, too, are using digital health technologies such as mobile monitoring tools that track and encourage adherence to therapeutic exercise and general fitness.

Digital Health Technologies: Definitions

While there is no standard definition of what digital health encompasses, the U.S. Veteran’s Health Administration and the Digital Medicine Society collaborated to create a guide that the organizations published together in August 2022. “The Playbook: Digital Healthcare Edition,” is intended to establish consistent and clear communication among researchers, providers, and digital health consumers. It categorizes elements within digital health care based on clinical evidence and regulatory oversight requirements. Digital health, according to the Digital Medicine Society, “is a broad category that encompasses digital medicine, which in turn includes digital therapeutics.”

Digital medicine, a subcategory of digital health technology, includes evidence-based software and hardware products such as digital diagnostics and biomarker tools, remote patient monitoring products, and technologies that measure and treat without human intervention, including the process of automating biofeedback. Such technologies usually require some level of regulatory oversight.

Finally, **digital therapeutic products (digital therapeutics)**, as defined by the Digital Therapeutics Alliance, are used to “deliver medical interventions directly to patients using evidence-based, clinically evaluated software to treat, manage, and prevent a broad spectrum of diseases and disorders.” The alliance further explains that all digital therapeutic products are subjected to the same regulatory oversight as other medical treatments, and that they may be used “independently or in concert with medications, devices, or other therapies to optimize patient care and health outcomes.” It also notes that digital therapeutics are not meant to replace health care providers, but instead are tools providers can use both during and between in-person visits; and that all digital therapeutic products must incorporate patient privacy and security protections.

The Digital Health Industry — Defined by Function

	Digital Health		
		Digital Medicine	
			Digital Therapeutics
Clinical Evidence	Digital health products typically do not require clinical evidence.	Clinical evidence is required for all digital medicine products.	Clinical evidence and real world outcomes are required for all digital therapeutic products.
Regulatory Oversight	These products **do not meet the regulatory definition of a medical device**, according to local regulatory requirements in each jurisdiction the product is manufactured, registered, or used in, and do not require regulatory oversight.	**Requirements for regulatory oversight vary.** Digital medicine products that are classified as medical devices required clearance. Digital medicine products used as a tool to develop other drugs, devices, or medical products require regulatory acceptance by the appropriate review division.	Digital therapeutics evidence must be reviewed and cleared or certified by regulatory bodies as required to support product claims of risk, efficacy, and intended use.
Product Examples	**Data & information capture, storage, and display:** • User-facing technologies. • Health Information Technology (HIT)1. • Consumer health information. **Data & information transmission:** **Telehealth** • Decision support software. • Enterprise support. • Clinical care administration & management tools.	**Measurement products:** • Digital diagnostics. • Digital biomarkers. • Electronic clinical outcome assessments. • Remote participant monitoring. • Decision support software. **Measurement & intervention products:** • Digital companions. • Digital products that both 1) measure and intervene, and 2) do not require human intervention to serve primary purpose.	**Software that delivers a therapeutic intervention:** Medical claims include: • Treat a disease. Digital therapeutics that deliver a medical intervention to treat a disease. • Manage a disease. Digital therapeutics that deliver a medical intervention to manage a disease. • Improve a health function. Digital therapeutics that deliver a medical intervention to improve a health function and/or prevent a disease.

Source: DiME-VHA The Playbook: Healthcare Team Analysis. Adapted with permission.

The Physical Therapist and Digital Health

Within the profession of physical therapy, use of digital health technologies now goes well beyond EHRs and telehealth systems. Today, a wide array of digital tools is deployed by practices to increase patient access, encourage better engagement, and improve patient health and quality of life.

Current Applications in the Profession

Digital health products can be used for a variety of objectives including, but not limited to:

- Conducting telehealth visits.
- Monitoring patient status, performance, or conditions synchronously or asynchronously.
- Gaining insights on patient adherence and outcomes.
- Evaluating, assessing, and developing treatment plans to address patient needs or conditions.
- Treating aspects of disease, illness, or injury.

One common example of digital technology in physical therapist practice involves remote monitoring using a mobile app or motion capture technology to collect and transmit patient health information without in-person interaction as the patient performs their home-exercise or self-management program. The physical therapist analyzes the information to determine the need for any modifications or adjustments to the plan of care.

RTM Versus RPM: What's the Difference?

The term "remote physiologic monitoring" is similar to "remote therapeutic monitoring," but they are not the same thing and shouldn't be used interchangeably.

Remote Physiologic Monitoring: According to the U.S. Department of Health and Human Services, RPM entails deploying technology to gather and analyze patient physiologic data. A remote blood pressure monitoring cuff, for example, can allow a patient to take a self-reading and transmit the data directly to their provider's EHR. Internet-connected glucose monitors and Bluetooth-enabled "smart scales" that connect to wearable fitness-tracking devices are other common examples of RPM.

Remote Therapeutic Monitoring: RTM refers to the monitoring of non-physiologic data related to a patient's response to a therapeutic intervention. In physical therapy, this might include pain interference, for example, or a patient's adherence to their exercise or self-management program. RTM technologies include mobile applications that facilitate communication and therapy adherence with patients when they're not in the clinic.

Tipping Point for Telehealth?

A 2021 APTA report on the impact of COVID-19 on the profession found that one year into the pandemic, 48% of physical therapists were providing telehealth services to their patients. That compared with just 2% of PTs who had offered video-based care before the pandemic and aligned with findings from other surveys revealing that telehealth usage spiked in specialties across health care.

Still, this surge in telehealth usage in physical therapy isn't as uniform as it first seems. The same APTA report revealed that among PTs who were providing telehealth, the majority were using live video consults with fewer than one patient per week, on average; and only 1 in 10 were doing so with an average of at least six patients per week.

Telehealth in 2021

- Telehealth utilization ranged from **13% to 17%** across all health care specialties, according to a report from McKinsey.
- Per the APTA COVID-19 impact report, **48%** of PTs offered telehealth as a service:
  - **54%** of PTs providing telehealth did so fewer than once per week.
  - **10%** of PTs providing telehealth did so with six or more patients per week.

The McKinsey report further described three areas of opportunity for telehealth services: increasing convenience to receive routine care; improving access, especially for behavioral health and specialty care; and improving care models and health outcomes, particularly for those with chronic conditions or in need of post-acute care support.

Hoping to better understand the reasons for telehealth utilization or non-utilization in the physical therapy profession, APTA also addressed the subject as part of a 2021 consumer survey to gauge awareness of physical therapy. The online survey polled 400 adults, including 282 who said they'd used physical therapy previously, and 118 who identified as "nonusers" of physical therapy.

When asked how likely they were to use telehealth for physical therapy, 63% of physical therapy users and 75% of nonusers said they were "not at all likely" to do so. Follow-up questions posed to participant focus groups later revealed that the reasons for their reluctancy centered around efficacy, comfort level, and insurance coverage.

Those who said they would not consider remote visits did so because they believed:

- They would not get the hands-on therapy and guidance physical therapists provide.
- They would be denied access to specific exercise equipment or machinery.
- They would not have the same level of intimacy established between them and their PT.

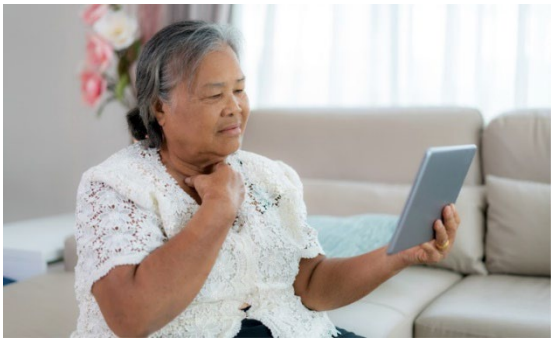
Those who said they would consider seeing a PT remotely said they would do so primarily for follow-up visits or for check-ins about their exercise programs.

Based on the feedback from both surveys, APTA suggests that physical therapists be prepared to provide or expand telehealth services to patients according to best practice and for whom distance or convenience is a concern. The profession's challenge is to respond to potential consumer misgivings about efficacy and insurance coverage.

Advantages of Digital Physical Therapy

Used appropriately, digital health technologies stand to benefit providers and patients alike. They can improve access to and availability of physical therapy services; promote consistent evidence-based treatment; reduce utilization of riskier treatments as well as other, more costly treatments that may be unnecessary; and deliver critical data on patient progress and outcomes that can help physical therapists improve care. These advantages are also of potential benefit to communities and society by contributing to greater health equity.

Patient Benefits: Better Access and Opportunities for Engagement



Deploying digital tools in practice can potentially **increase patient access to care** by making physical therapy more convenient. Through telehealth, for example, care can be accessed from anywhere, as long as the patient has an internet connection and a smartphone or other connected device. Telehealth eliminates the need for long-distance travel and can help patients who may not have transportation. It also can be an option for patients who have work or family obligations that limit their ability to come in for appointments.

Digital technologies also can drive **better patient engagement** outside of the clinic by giving patients asynchronous access to their therapist between in-person visits. Using a secure smartphone app, for example, a patient might message their PT with questions about their exercise program or unexpected changes in their condition.

Mobile apps can allow the patient to set goals related to their treatment, receive notifications when it's time to do their exercises, and track progress over time. Some apps also include gamification tools that can make home exercise and activities more interesting by awarding digital badges in recognition of achievements.

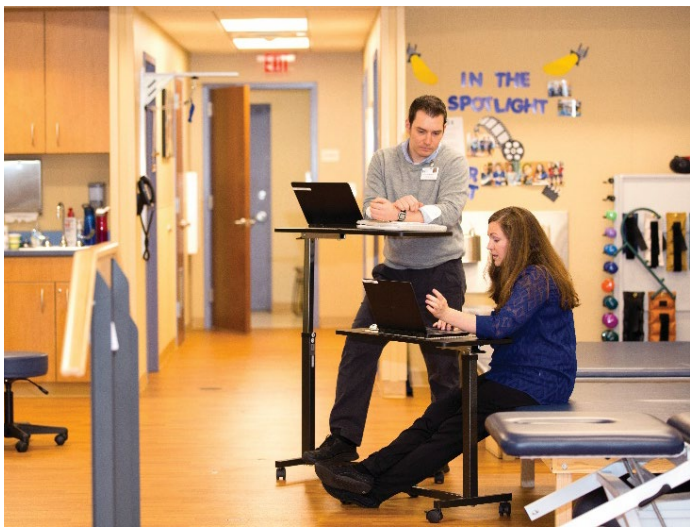
Finally, just knowing that their therapist is "watching" and will occasionally be communicating via telehealth, text, or email may help some patients with engagement. Patients become more accountable to the goals they set for themselves, but they also become more accountable to their provider, who can see exactly what they did or didn't do regarding their care plan.

Benefits for Clinicians and Physical Therapy Practices

Digital health technologies can help PTs and PTAs in numerous ways, from higher clinician satisfaction to lower rates of burnout and moral injury as schedule flexibility and staffing shortages are addressed — all of which ultimately also benefit patients by enhancing care delivery. Practices that have deployed digital solutions report seeing:

- More flexibility in scheduling and use of workspace.
- Improved convenience/patient access to their providers.
- Better patient adherence to the plan of care.
- Enhanced access to objective and patient reported data to inform the plan of care.
- Better access to specialists who are geographically far away.
- Greater insight into patient-generated health data.
- Improved communication with patients to help inform care decisions.
- New growth opportunities for clinicians and clinics (increased revenue driven by fewer cancellations/no-shows, more services, etc.).

Challenges of Digital Physical Therapy



While digital technologies stand to benefit the physical therapy profession in many ways, they also come with many real and potential challenges. Used appropriately, for example, digital tools open up the possibilities for improving care to underserved populations. But they could just as soon exacerbate existing health inequities if the costs of technologies, differing levels of digital literacy, poor health insurance coverage, or inadequate broadband availability impact access to services. Among the factors and possible concerns practices should consider when adopting any digital health solution — everything from "digital inclusion" to the need to ensure data security:

- Because the digital health industry is evolving so quickly, new and better tools are constantly entering the market.
- Accessibility to technology and connectivity isn't the same for all patients.
- Ability to use technology (digital literacy) varies among patients and providers.
- Uncertainties remain concerning payment and insurance coverage.
- Misrepresentations related to the services being provided and the providers delivering the services threaten consumer protection and safety implications related to term and title of providers and professions.
- The clinical evidence for or against the use of specific technologies continues to evolve.
- Standardized provider education and training in digital health remain highly variable.
- Patient privacy and data confidentiality and security must be ensured.

Ethical, Safety, and Legal Considerations

Other challenges related to digital technology deployment have to do with potential ethical, legal, and safety issues. Because the world of digital health is essentially uncharted territory, new ethical dilemmas arise nearly every day in practices that are early adopters. Rules and regulations, meanwhile, can depend on the state in which a practice is located, and safety concerns remain hard to define. This much is certain: Physical therapists and physical therapist assistants must uphold their professional expectations and responsibilities whether they're using digital tools to provide care or working with patients in person.

Ethical and Safety Concerns

These are among the ethical and safety questions practices should ask when using digital technologies for patient care:

- Is intervention with digital technology the most effective way to provide care for this patient? Is it "the right tool at the right time for the right patient in the right setting"?
- What process is in place if the patient requires or requests an in-person visit at any point in the episode of care?
- Will digital health provide the desired outcomes?
- What are the ethical and legal obligations when it comes to billing and reimbursement?

- Is it possible to monitor patient safety along with participation and performance as they use the technology?
- Where is the potential for harm to the patient engaged in digital health practices?
- HIPAA rules apply whether a patient receives treatment in person or virtually. Does the technology protect patient privacy and data confidentiality and security?
- Does the solution reduce or increase disparities in access to care? Does successful deployment require the patient to have access to resources like a smartphone and Wi-Fi? Can the patient be provided with the tools they need to participate successfully?
- Will malpractice insurance cover telehealth services?

The Regulatory Landscape

Regardless of its delivery model or application — in person or remotely via technology — care represented as physical therapy must be provided by a licensed physical therapist or by a physical therapist assistant under the supervision of a physical therapist in accordance with state and federal regulations. Adhering to all applicable laws is important for many different reasons, from ensuring patient safety and privacy to upholding the profession's standards for care quality.

Federal regulations: The U.S. Food and Drug Administration regulates digital health products, not health care. The FDA does not generally regulate wellness apps and devices, but if a solution claims to have a medical application or impact the FDA will review the evidence that supports the claim. Practices that choose to develop their own mobile apps should consult the Federal Trade Commission's online assessment resource for applications intended for health care. The site covers the various laws that apply to such tools, including the Health Insurance Portability and Accountability Act, the Federal Food, Drug, and Cosmetic Act, the Federal Trade Commission Act, and FTC's Health Breach Notification Rule.

State regulations: To ensure public safety, state licensure laws define qualified providers of services within specified scopes of practice. To become a physical therapist, an individual must graduate from a program accredited by the Commission on Accreditation in Physical Therapy Education and pass the National Physical Therapy Examination administered by the Federation of State Boards of Physical Therapy. Only then can they apply for licensure in the state or states in which they intend to practice.

Some states have additional requirements, such as jurisprudence examinations that must be passed in order for a license to be issued. Only individuals who meet all such requirements can use the term physical therapy and the title "physical therapist."

Term and Title Protection

Misuse and inappropriate advertisement of physical therapist services has led many U.S. jurisdictions to afford protections to the profession related to the use of certain terms and titles. These terms may include "physical therapy" and "physiotherapy," while titles include "physical therapist," "physiotherapist," and "physical therapist assistant," and those associated with licensure and educational degrees such as "PT," "DPT," "MPT," and "PTA."

Term and title protection is essential for the protection of the public and the integrity of the services provided and paid by the consumer, commercial payers, government programs, employers, and others involved in providing health care services to the public.

Suspected violations of state term and title protection laws should be reported to the applicable state physical therapy licensing board.

APTA's Position on Digital Health

APTA recognizes that digital health technologies will not replace traditional in-clinic care nor impact the value or role of the physical therapist, but instead be used as a valuable resource for physical therapists and physical therapist assistants to expand their ability to meet the needs of patients when and where those needs arise. Physical therapist treatment and technology should coexist with the health and experience of the consumer in mind.

Technological advances have served to improve care and outcomes in physical therapy over many decades, and APTA has long supported new solutions that help clinicians and consumers navigate the evolving health care landscape. The organization has been engaged in telehealth and its applications since the late 1990s, for example. This work has included policy advocacy for recognition and payment for PTs and PTAs who use telehealth, as well as the development of standards and practice guidelines.

As has always been the case, determining which technology is appropriate to employ in any given circumstance is an area of continuing competence for providers. Physical therapists have expanded their scope of practice over time in part based on the capabilities of emerging technologies, and APTA expects this expansion will only continue into the future.

Digital Health Technologies and Therapeutics in Physical Therapist Practice: Official APTA Position

The American Physical Therapy Association believes digital health technologies and therapeutics have the potential to augment physical therapist practice by expanding access, enhancing care delivery models, promoting safety, and improving outcomes when all of the following criteria are met:

- Physical therapists, in collaboration with the patient or client, shall determine the optimal modes to access physical therapist services, whether this is in person, remotely, or some combination.
- A physical therapist is responsible for all aspects of patient and client management.
- Physical therapist services shall be conducted in a manner that allows for patient and client engagement and supports the therapeutic alliance (i.e., fosters participation in the patient and client-provider relationship).
- The physical therapist and the physical therapist assistant adhere to scope of practice, including requirements that are based on the jurisdiction in which the patient or client is located when receiving physical therapist services.
- Physical therapist services shall be provided consistent with appropriate direction and supervision requirements of assistive personnel and other support personnel, as well as all relevant association policies, positions, and binding ethical documents.
- Physical therapy is represented, provided, and promoted only when it meets term and title protections as defined in state law and in accordance with federal health, communications, and trade authorities.

(APTA House of Delegates Position HOD P08-22-07-10)

Supporting the Digitally Enabled Clinician

APTA promotes the education and training of physical therapists and physical therapist assistants in the utilization of digital technologies to improve patient access to physical therapy. The organization stands ready to collaborate with the makers of these digital platforms and other partners to ensure these care models are consistent with existing laws and regulations, uphold consumer protections, and advance quality practice provided by licensed health professionals in accordance with their professional obligations and state defined scope of practice.

To serve its members and the physical therapy profession overall and advance the use of digital technologies to augment physical therapist practice, APTA will pursue the following initiatives:

- Create an evaluation-assessment instrument for categories of digital technologies for physical therapists to assess the related evidence and efficacy and to ensure patient protection and privacy.
- Work with the Organization for the Review of Care and Health Apps to assess new health technologies and educate PTs and PTAs on their use.
- Advocate for the use of, and equitable payment for, digital technologies in the practice of physical therapy.
- Establish an advisory group to guide association policy related to digital technologies and consult with APTA Board-appointed committees such as the Scientific and Practice Affairs Committee and the Public Policy and Advocacy Committee.
- Determine best practices for smooth and effective care transitions from digital to in-person care and vice versa, including supporting the initiation of virtual care, longitudinal co-management or collaborative care between in-person and virtual care providers, and managing transitions that support downstream referrals.

APTA continues to advocate for consumer transparency and appropriate use of protected terminology when digital technologies are used to augment physical therapist practice. APTA maintains that “physical therapy,” whether provided in person or virtually, is performed or directed by licensed physical therapists.

Action Steps

APTA calls on the profession, state and federal agencies, and other appropriate parties to undertake the following actions to promote the digitally empowered and enabled physical therapist:

- Adherence to promoting services as virtual physical therapy programs only when they are performed or directed by a licensed physical therapist. APTA already has garnered support from more than 15 companies that have signed our digital health transparency pledge, making a formal commitment to this essential consumer protection.
- Greater consistency in the scope of physical therapist practice across all U.S. jurisdictions, especially regarding referral requirements in terms of digital technologies and therapeutics, as well as a reduction in regulations that reduce patient access to digital health.
- Development of a clinical practice guideline for digitally enabled care when the body of evidence supports it.
- Greater utilization and application of the physical therapy licensure compact in collaboration with the Federation of State Board of Physical Therapy to allow for economic and administrative efficiencies to obtain greater licensure mobility and portability; this also would benefit patients and clients who relocate frequently or live in multistate metro areas.
- Investment by the physical therapy profession (including via the Foundation for Physical Therapy Research), digital physical therapy companies, vendors, and leaders in research to study the clinical outcomes, accessibility to all communities and populations, and value of digital technologies and therapeutics in physical therapist practice.
- Education on digital technologies and therapeutics at national, component, and industry conferences as well as through APTA's Learning Center to address digital literacy.

Conclusion

Digitally empowered, informed, and enabled physical therapists can increase the accessibility and availability of physical therapy services to improve patient care and drive better health care outcomes. Digital health technologies and therapeutics are integral and essential for the continued advancement and value of physical therapist services. They're also important for the data collection that is needed to inform current and future care models.

Research conducted by the Healthcare Information and Management Systems Society shows that digital health and the use of digital health tools will continue to expand into the future. APTA urges its members to use these tools when the evidence supports their use and when doing so is within the scope of physical therapist practice.

The technologies included in this paper are not an exclusive list, and it's fair to assume that one year from now, physical therapists will have many new digital tools from which to choose as they evolve their digital health strategies. With that in mind, PTs should continue to monitor technology as part of their research and clinical practice. And when these technologies are found to be clinically applicable, as well as safe and effective and of interest to patients, they should be put to use in care delivery.

Resources

APTA Guide to Physical Therapist Practice. American Physical Therapy Association.

Digital Therapeutics Definition and Core Principles. Digital Therapeutics Alliance, November 2019.

Getting Started With Telehealth. U.S. Department of Health and Human Services August 2022.

"Impact of COVID-19 on the Physical Therapy Profession Over One Year." American Physical Therapy Association, May 2021.

"Ethics in Practice: When is Physical Therapy 'Digital'?" APTA Magazine, August 2022.

Mobile Health Apps Interactive Tool. Federal Trade Commission, April 2016.

Physical Therapy and Remote Patient Monitoring. U.S. Department of Health and Human Services, August 2022.

"Report of the WCPT/INPTRA Digital Physical Therapy Practice Task Force." World Physiotherapy, March 2020.

The Future of Health Care 2022 Infographic. Health Care Information and Management Systems Society, August 2022.

"The Playbook: Digital Healthcare Edition." Digital Medicine Society and U.S. Department of Veterans Affairs.

"The Triple Aim: Care, Health, and Cost." Health Affairs, June 2008.

What Are Examples of Software as a Medical Device? U.S. Food and Drug Administration, December 2017.

What is Digital Health? U.S. Food and Drug Administration, September 2020.