

ADVANCING PM&R THROUGH TECHNOLOGY: KEY RECOMMENDATIONS FROM THE 2024 AAPM&R TECHNOLOGY SUMMIT

On December 6, 2024, the American Academy of Physical Medicine and Rehabilitation (AAPM&R) hosted a Technology Summit in Rosemont, IL, gathering clinicians, policy experts, and technology leaders to examine how digital innovations can reshape care delivery in physical medicine and rehabilitation (PM&R). The Summit focused on reducing administrative burdens, improving access through virtual and home-based models, and positioning PM&R and its physicians, also known as physiatrists, at the forefront of value-based care through effective use of emerging technologies.

During breakout sessions, participants explored both administrative and clinical barriers to care, collaboratively generating recommendations tailored to physiatrists and the broader PM&R specialty. Each group then presented their ideas to all attendees, mapping each recommendation on an effort-impact matrix to visualize feasibility and potential benefit. Following these presentations, all participants engaged in an individual consensus-building process, relying on both discussion and an online polling tool to identify the highest-priority, actionable recommendations. From this consensus process, key themes emerged—particularly around education, technology integration, and engagement strategies.

1. EDUCATION INITIATIVES: EMPOWERING PROVIDERS TO LEAD DIGITAL INNOVATION

Summit participants strongly emphasized the need to scale education on emerging technologies to ensure appropriate and confident adoption across PM&R practices. Participants recommended expanding education on **virtual musculoskeletal (MSK) tools**, including remote therapeutic monitoring (RTM)-augmented and app-based physical therapy (PT), which are demonstrating comparable outcomes to in-person care for mild-to-moderate MSK conditions [Bilika 2023].¹ These tools offer an effective response to workforce shortages while supporting therapy adherence through personalized, technology-enabled delivery models.

In parallel, the Summit underscored the need for clear **guidance on augmented intelligence (AI) for documentation**, including a list of “dos and don’ts.” Generative and ambient AI solutions have the potential to significantly reduce time spent on documentation and coding—tasks that contribute to burnout among physiatrists [Peng 2023].² Education is critical to ensuring these tools are used responsibly and that clinicians understand both their value and limitations, especially in environments where AI-generated notes may contain inaccuracies or biases [Anderson 2019].³

The AAPM&R members also called for **education on practical applications of AI** in prior authorization, triage, and patient messaging. As shown in recent studies, AI-based triage systems can aid in prioritizing care by analyzing symptoms and recommending the appropriate level of service, while also enhancing the efficiency of clinical workflows [Peng 2023; Yadav 2024].^{2,4}

2. TECHNOLOGY SOLUTIONS: ACCELERATING THE ADOPTION OF PM&R-CENTERED TOOLS

To minimize implementation barriers and support broader integration, Summit participants recommended development of a **shortlist of vetted AI vendors** and platforms specifically suited to PM&R practice. With the proliferation of new tools, clinicians need clear guidance to identify AI products that meet both regulatory standards and specialty-specific use cases.

Participants also advocated for the **creation of AI-driven templates and scripting tools** to automate documentation for medical necessity and prior authorization. These solutions could include custom-built GPT tools that incorporate knowledge of payor policies, similar to what has been explored in other specialties [Peng 2023; Anderson 2019].^{2,3}

Improving **accessibility of digital health tools** is also a pressing need, particularly for rural or underserved populations. Technologies like virtual PT, when integrated into existing workflows and supported by educational resources, can address inequities in care delivery and improve satisfaction and outcomes in chronic MSK conditions [Bilika 2023; Yadav 2024].^{1,4}

3. ENGAGEMENT STRATEGIES: RAISING THE VISIBILITY OF PM&R IN DIGITAL HEALTH

To amplify the specialty's impact, Summit participants recommended increasing **PM&R thought leadership** at technology-forward healthcare events (e.g., HLTH, HIMSS, CES) and through digital channels. Establishing physiatry's voice in these forums is essential to shaping the conversation around innovation in rehabilitation and musculoskeletal care.

Digital outreach strategies could include **expanded use of platforms like YouTube and TikTok** to communicate PM&R's value to broader audiences, including patients, payors, and policy stakeholders.

SUMMIT-DERIVED PRIORITIES AND POTENTIAL IMPACTS

PRIORITY AREA	ACTION ITEM	POTENTIAL IMPACT
Education	Develop virtual MSK education and AI guidance.	Increases clinician awareness, confidence and adoption, reduces variation in implementation
Technology Integration	Develop shortlist of AI vendors. Build templates for prior authorization. Promote accessibility and usability of digital health tools.	Improves workflow efficiency, reduces documentation burden, expands reach to underserved populations, improves care equity
Engagement	Elevate PM&R visibility in tech conferences and social media.	Positions PM&R as a leader in digital health and value-based care

CONCLUSION

The 2024 AAPM&R Technology Summit made clear that bold, strategic adoption of digital tools is an important part of the future of PM&R. The top-priority Summit recommendations—focused on education, technology solutions, and engagement—offer a framework for advancing innovation while ensuring that care remains patient-centered and accessible. With targeted investments in training, integration, and visibility, PM&R is poised to enter a new era of digital transformation—one where technology amplifies the human touch and enhances outcomes across the care continuum.

References

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