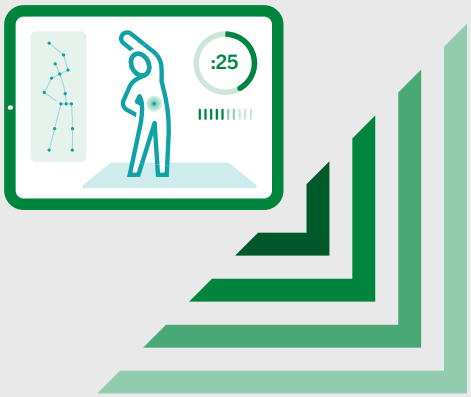
PETERSON HEALTH TECHNOLOGY INSTITUTE

PROVIDERS' GUIDE



Virtual Musculoskeletal Solutions

HEALTH TECHNOLOGY ASSESSMENT | JUNE 2024

An estimated one in three people in the United States experiences musculoskeletal (MSK) disorders, which impact their daily lives, affect their ability to work and earn a living, and contribute to high medical spending.[1] Access to timely, high-quality, and consistent MSK care can be challenging and costly for patients. Evidence finds that early use of physical therapy (PT) can improve health outcomes and avoid unnecessary spending for MSK disorders.

A range of virtual MSK solutions have come to market over the past decade to improve direct access to care — particularly virtual, exercise-based PT. By making care more available and convenient, these solutions aim to improve patient outcomes and avoid unnecessary treatment, including surgery, injections, imaging, and pain medication.

The Peterson Health Technology Institute (PHTI) is an independent, nonprofit organization that conducts rigorous, evidence-based evaluations of digital health tools. In June 2024, PHTI released an assessment of the clinical benefit and economic impact of eight virtual MSK solutions.

How the Solutions Work

All the solutions evaluated pair PT with mobile or web applications to guide therapeutic workflows as part of an active care plan. The therapeutic workflows themselves vary considerably and may include:

- live interactions with a licensed physical therapist to guide aspects of diagnosis and therapy;
- computer vision or AI-enabled hardware-guided feedback on patient exercise quality; and/or
- interaction with a range of clinical and non-clinical personnel to guide treatment.

In some instances, you — as a patient's physician — would have access to the data collected from these programs so you could remotely monitor the patient between in-person visits and discuss the data with the patient when you see them next or leverage the data to recommend changes to the patient's care plan.

[1] Nguyen, Andrew, Izzuddin Aris, Brian Snyder, et al., "Musculoskeletal Health: An Ecological Study Assessing Disease Burden and Research Funding," *The Lancet Regional Health Americas* no. 29 (January 2024): 100661. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10788788/#bib7.

What We Found

1 **Virtual MSK solutions produce similar results to in-person PT with respect to pain reduction.** In relevant studies comparing acute and chronic pain outcomes, patients in the groups using virtual MSK solutions achieved minimally important clinical differences (MCID)[2] in all studies, while patients receiving in-person PT achieved MCID in three of the four studies. These results indicate that virtual MSK solutions are comparable to in-person PT with regard to pain reduction.

2 **Virtual MSK solutions that involve a physical therapist in their ongoing workflow produce similar results to in-person PT for addressing function and disability.** The evidence base assessing the impact of virtual MSK solutions on function and disability is mixed but generally suggests that virtual MSK solutions that involve a physical therapist are comparable to in-person PT in terms of functional benefits. These solutions may be a good replacement option for in-person PT on a case-by-case basis.

3 **Study findings show patients are satisfied, engaged, and adherent to virtual MSK solutions — especially among patient populations that experience barriers to care.** Evidence shows that early and sustained adherence to a PT treatment plan results in decreased healthcare utilization, and users of virtual MSK solutions were found to have had more average PT sessions per week and slightly better study adherence when compared to in-person PT users. Additionally, retention rates were higher for rural communities and older patients. Taken together, virtual MSK solutions show a unique ability to increase access to convenient and quality care.

4 **When used as a substitute for in-person PT — rather than in addition to in-person care — virtual MSK solutions that involve a physical therapist in their ongoing workflow can be cost-saving from avoided care costs.** This is demonstrated by financial modeling based on evidence and outcomes specific to lower back pain. We estimate that virtual MSK solutions can save more than $700 per user per year in clinical expenses for commercially insured patients, compared to in-person PT.

[2] A wide range of clinical scales are used to report outcome measures. They reflect differences in research versus non-research environments, validated scales used for specific parts of the body, and pragmatic choices that are common in practice and reported as part of real-world studies. As a result, it can be difficult to interpret the implication of a few points or percent difference between an intervention and comparator group. Based on the input of our clinical advisors, guidance from within studies, and external references, the report utilizes MCID to assess clinical effectiveness across a range of studies.

Potential Risks

The review of the literature suggests that virtual MSK solutions are generally safe for use. In studies that monitored for adverse events, harms were found infrequently, and no serious adverse events were reported. Even without evidence of harm, there is potential risk that may arise from faulty or incorrectly used sensors, misinterpretation of results, or suboptimal care team support.

Virtual MSK solutions will not be appropriate for all patients. For instance, patients with more complex MSK disorders, those who require manual manipulation or other hands-on therapy treatments, and those who have high frailty or fall risk may still require in-person physical therapy or clinical care. Other patients may prefer in-person care over virtual engagement.

What It Means for Your Patients

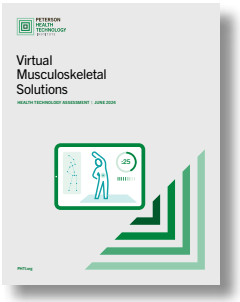
Based on PHTI's review of clinical evidence, virtual MSK solutions that involve a physical therapist in their ongoing workflow can offer a compelling alternative to in-person PT for patients whose condition would benefit from increased access or convenience. Specifically, virtual MSK solutions offer:

- **Effectiveness:** With these solutions demonstrating benefits comparable to in-person PT, they are a strong alternative to consider with your patients.
- **Convenience:** Patients receiving traditional in-person PT must travel to a clinic one to three times per week for treatment, which can be disruptive and time-consuming. Virtual MSK solutions can provide a more convenient option for patients whose access to in-person PT may be limited by factors such as distance to a provider, busy schedules, family obligations, mobility limitations, and transportation challenges.
- **Support for Adherence:** Many patients are instructed to complete PT exercises independently at home between sessions. Access to virtual guidance between sessions may impact a patient's willingness to initiate and continue PT.

Given that the purpose of these solutions is to increase effective, timely, convenient access to PT, these solutions meet the goal of being a comparable alternative for many patients. As with any treatment recommendation, you must assess the option that best meets the needs of your individual patient and their unique circumstances.

Accessing PHTI's Full Report

You can access the full report here.



PETERSON HEALTH TECHNOLOGY INSTITUTE

© 2024 PETERSON HEALTH TECHNOLOGY INSTITUTE. ALL RIGHTS RESERVED.