XRHealth Partners with HTC VIVE to Shape the Future of Virtual Therapy

XRHealth and HTC VIVE Deliver VR Solutions That Provide Quantified, Monitored Treatment Outcomes While Reducing Costs

Today's healthcare providers and insurers continue to grapple with the challenge of improving patient outcomes while increasing profitability.

As healthcare providers work to improve the quality of care, additional costs can begin to outweigh the improvements in patient outcomes. If they focus on cost-cutting, they diminish the value of care delivered to their patients. **Harvard Business Review**[1] found that administrators typically try to improve performance through P&L statement analysis, which can undermine patient service through aggressive cost-cutting or reducing the time doctors spend with patients.

Some providers have seen telehealth as an ideal solution to this fragile balance. These virtual sit-downs use two-way audio-video to allow patients to consult their doctor and receive basic treatments like prescriptions for medications, improving patient accessibility while lowering provider overhead.

But two-way audio-video telehealth has its challenges, especially when multiple providers are involved. Treatment plans and patient information are typically siloed, leading to poor outcomes as specialists can diagnose, measure, and address issues in conflicting ways.

Patients using a brick-and-mortar treatment model is another approach with pitfalls. Once a patient leaves the clinic, it's often impossible to accurately track patient follow-through or the efficacy of the at-home treatment, making continuity of care difficult at best.

But beyond these challenges, there is a fundamental problem with the standard two-way audio-video telehealth treatment model: As anyone who's endured an overlong two-way audio-video meeting can attest, remote sessions can be downright dull. While this might be acceptable in some cases, treatments that hinge on patient engagement — like rehabilitation protocols — are significantly undermined when motivation is lacking.

All these factors, from siloed data to poor progression tracking, extend the treatment horizon, degrade the quality of care, erode patient satisfaction, and ultimately undermine business performance. Providers need to address these shortcomings with an innovative approach to treatment that has the cost efficiency of telehealth with the efficacy of in-person care.

Solving the "Cost Versus Care" Dilemma

Technological capabilities have evolved far beyond the standard video chat treatment plan. Using virtual reality (VR), patients and providers are now meeting in digital environments that enable comprehensive, quantitative, and engaging treatment no other approach can match.

Remote therapy provider XRHealth has partnered with HTC VIVE to help providers adopt this game-changing medical treatment methodology through XRHealth's FDA and CE registered healthcare VR applications bundled with the HTC VIVE Flow. The kit* uses the VIVE Flow immersive VR glasses and XRHealth FDA registered medical applications to deliver end-to-end treatment plans that incorporate engaging VR sessions. These medical applications are used by licensed therapists treating stress, anxiety, ADHD, autism, multiple sclerosis, Parkinson's disease, neurological disorders, and more.

The patients do a portion of their VR sessions with a licensed therapist in real-time and do the rest on their own, according to the treatment plan the therapist sets in the headset for them. Their progress is tracked on a therapist dashboard accessible across providers, meaning every specialist the patient sees using the solution will all work off the same set of information. Combining the low overhead of telehealth with the attention to detail in VR appointments,

XRHealth with VIVE Flow is a viable solution for providers and insurers grappling with the tricky "cost versus care" dilemma.

"XRHealth, together with HTC, is excited to offer the public VR solutions specifically designed for the healthcare market," says Eran Orr, Chief Executive Officer of XRHealth. "We believe in creating healthcare solutions that are limitless and provide continuous access and healthcare opportunities to patients around the globe."

Exploring XRHealth with VIVE Flow

Upon sign-up, patients are matched with a licensed therapist, based on specialty, availability, location, etc. Each therapist is licensed within the state(s) where they provide service and undergo a comprehensive onboarding and training process. Therapists include experienced and licensed physical therapists, occupational therapists, licensed clinical social workers or psychologists.
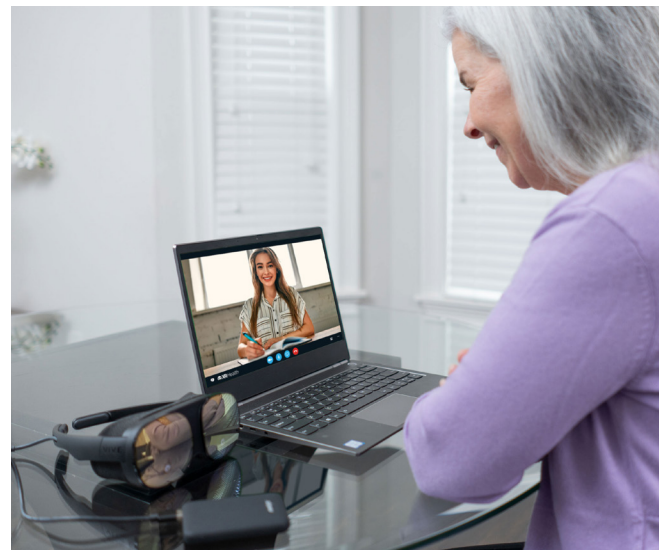
After enrolling for an online evaluation with a therapist, patients can access a dedicated mobile app. The mobile app helps patients track their progress through analytics and stay connected with their therapists during the treatment process via an easy and HIPAA Compliant messaging feature. They also receive the XRHealth with VIVE Flow package. This kit includes the compact and lightweight VR glasses — VIVE Flow — a hand controller, and a custom treatment plan compiled from XRHealth's FDA Registered medical applications and guided by a licensed therapist.

During a session, patients are sent to virtual treatment rooms configured according to the therapist's

*XRHealth with VIVE Flow kit is available only via XRHealth.

XRHealth with VIVE Flow

"At HTC, we believe in the power of VR to change lives," said Amir Khorram, VP of Enterprise Sales, at HTC VIVE. "We are honored XRHealth chose the all-in-one VIVE Focus 3 VR system and the compact and lightweight VIVE Flow VR glasses, to offer patients and clinicians immersive remote VR telehealth treatments."

XRHealth with VIVE Focus 3

Understanding the Impact of VR Therapy

As previously noted, healthcare providers have always grappled with the cost versus care dilemma. This "Catch-22" scenario can force them to prioritize one key concern to the detriment of the other. Fortunately, VR therapy can deliver on both of those fronts.

The Therapeutic Power of VR

Recent research has demonstrated that VR treatment enhances the patient experience and therapeutic outcomes. In a **study by OTA international**[2], orthopedic trauma patients with lower extremity injuries were treated with VR sessions and rated their experience afterward. On average, the patients gave the VR treatment an overall score of 7.5 out of 10.

The real-world data of XRHealth patients align with these positive findings. A 52-year-old woman with chronic back pain was referred to an XRHealth therapist by her provider. The patient gave the chronic pain an initial rating of 8 out of 10 and said that the pain impacted almost every aspect of her daily life. This included household chores, work tasks, stair ambulation, and community ambulation. She had gone through traditional physical therapy before starting treatment with XRHealth, but her condition had not improved — leading her to regularly medicate to manage the pain.

recommendations. The sessions themselves feature VR games and experiences designed to be fun and effective. Patients might explore a forest, swing a sword to pop balloons, or swing virtual fists. When not with a therapist, patients can use the treatment rooms on their own according to the treatment plan prescribed by their therapist.

The entire treatment experience is comprehensively tracked using the XRHealth with VIVE Flow kit. The device collects more than 500 data types, producing a standard dataset optimized for treatment plans requiring multiple specialists. The data access provided by the solution allows the therapist to make data-driven decisions and adjust the treatment plan as needed for a "virtual hands-on" process.

For therapists, the Data Portal is an end-to-end solution for telehealth and remote patient monitoring. The portal provides real-time, aggregated data of every measurement and training performed in the VR sessions. The portal's interface enables therapists to view progress over time, create training plans, adjust treatments, and more. But therapists don't have to wait until after a session to optimize the treatment methodology. The state-of-the-art External Control enables therapists to monitor patients' live VR sessions and make any needed adjustments in real-time.

After consulting with her XRHealth therapist, the patient was found to have significantly decreased range of motion (ROM), strength, endurance, and core stabilization. Her therapist designed a treatment plan that included twice-weekly telehealth sessions and five to seven VR therapy sessions per week.

After completing her treatment plan, the patient saw progress on every objective measure tracked using the VR device.

Enhanced physical performance: The patient improved her quality of movement by 20%, decreased average response time by 29%, increased flexion by an average of 146.5°, increased abduction by an average of 84°, and increased horizontal abduction by an average of 93.5°. Her core activation and spinal stabilization during the exercises also significantly improved.

Reduced pain: The patient cut their overall pain level in half, from the initial rating of eight out of 10 to a final rating of four out of 10.

Better quality of life: These gains led to improved engagement in daily activities, reduced stress, lower pain medication usage, improved sleep, and overall wellness.

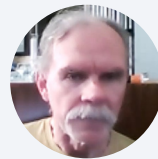The experience of other XRHealth patients mirrors these results:
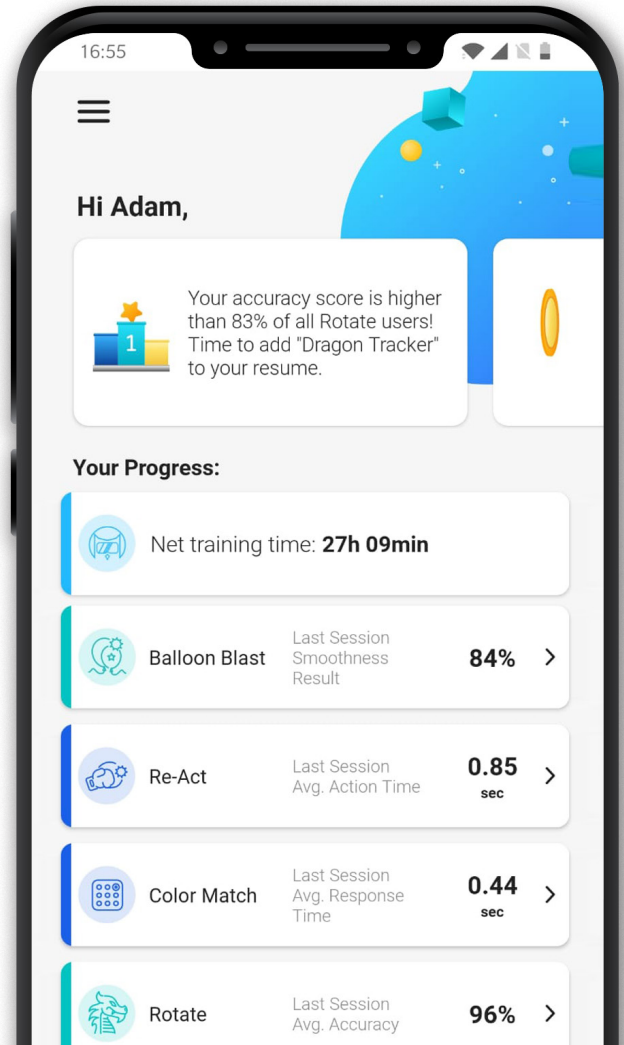
The Business Value of the VR Model

Stephanie, who was treated for pain management, observed that, because of the treatment, "I didn't have to get in the car, wait in a waiting room, then do my physical therapy. I was able to fully commit and get really good results."

Stephanie

Joseph, who's been treating his Parkinson's Disease, said that XRHealth "has really good physical therapists that work with you to create a personal plan…to be the best you can be and stay as healthy as you possibly can."

Joseph

Pamela, who has dealt with shoulder pain and stress, said, "I was pleasantly surprised by how much of a difference it made… I have much better range of motion, lowered stress, and actually want to take the next step in my healthcare journey."

Pamela
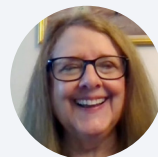
Recovering from a broken shoulder, Joni noted that after treatment by XRHealth "worked far better than I expected. I don't have any pain… this is the future of a lot of physical therapy."

Joni

According to Nature[3], **VR treatment reduced costs in almost 90% of trials.** Their research found that VR therapy used in inpatient treatment led to the following:

- **Increased savings across all patients:** VR treatment created "an average of $5.39 (95% confidence interval of −$11.00 to $156.17) in cost-savings per patient when compared to usual care."

- **High-cost savings in those treated:** Among the sub-group of patients both eligible to receive and willing to use VR therapy (19.3% in the base-case), there was on average $98.49 savings per patient.

This approach to treatment also increases the operational efficiency of providers. XRHealth's vertically integrated approach means that they own the entire process — clinician, technology, reimbursement, etc. — so healthcare companies can benefit from innovation without doing any operational heavy lifting. An in-network provider with most insurance companies, XRHealth offers three tiers of out-of-pocket plans so organizations can choose whatever model suits their specific goals and needs. Many insurance providers are accepted, including Blue Cross Blue Shield, Medicare, United, Aetna, and Harvard Pilgrim Healthcare.

While VR therapy may temporarily elevate overhead during the implementation phase, early adopters position themselves for long-term success by building technology efficiencies into their organization that will yield substantial dividends for years to come.

Joining The Future of Healthcare

Innovation can feel risky, but it's far more dangerous to cling to tradition in today's climate of rapid technological progress. It's only a matter of time before standard brick-and-mortar treatments are supplemented or replaced with immersive digital alternatives. Consequently, many forward-thinking healthcare providers and insurers are building the technological and infrastructural capabilities to meet this shift confidently.

For those ready to join the future of healthcare, XRHealth and HTC VIVE represent a straightforward path. Healthcare providers have been waiting for years for a solution that measurably improves patient outcomes while reducing costs. Now that day has finally arrived.

[1] How Not to Cut Health Care Costs
https://hbr.org/2014/11/how-not-to-cut-health-care-costs
[2] Virtual reality-based physical therapy for patients with lower extremity injuries: feasibility and acceptability
https://journals.lww.com/otainternational/Fulltext/2021/06000/Virtual_reality_based_physical_therapy_for.12.aspx?WT.mc_id=HPxADx20100319xMP
[3] Economic analysis of implementing virtual reality therapy for pain among hospitalized patients
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6550142/

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