

Gaming for Good: How Virtual Therapy is Changing Stroke Recovery Forever **Rebuilding Lives Through Research** Transcript

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ANDREW: 00:04

[music] Welcome to Rehab Reimagined, where innovation meets recovery. I'm your host, and today's episode, Gaming for Good. How virtual therapy is changing stroke recovery forever is part of our 2024 Impact Report series.

We're diving into the world of virtual reality stroke rehabilitation, where immersive, game-based therapy is helping survivors overcome spatial neglect and regain independence, even years after their stroke. You'll hear from Dr. Pei Chun, a leader in neurorehabilitation, and meet Maria Martin, a stroke survivor whose journey with home-based VR therapy is nothing short of inspiring. Whether you're a caregiver, clinician, donor, or someone passionate about the future of healthcare, this episode is for you.

Let's get started.

XIAOXIAO: 00:59

Virtual reality plays a role in stroke recovery at home, even years later, thanks to donors like you.

Therapy that is fun and engaging motivates patients to actively participate in rehabilitation and speeds their recovery. Using virtual reality and game-based activities - and with the generosity of many donors including Terri and Michael Goldberg and the Wallerstein Foundation for Geriatric Life Improvement - scientists in the Center for Stroke Rehabilitation Research are expanding treatment options and developing ways to make them available beyond the rehabilitation clinic.

Pei Chen, PhD, senior research scientist, leads studies aimed at developing effective home-based treatment for the disabling symptoms of spatial neglect, a common, but under-recognized complication of stroke and brain injury. Often unaware of this condition, individuals with spatial neglect experience a range of difficulties that hinder recovery, limit independence, and jeopardize safety.

NOVA: 01:56

"Immersive virtual reality provides the intensive therapy needed to restore function,"

XIAOXIAO: 02:01

explains Dr. Chen.

Wearing a virtual reality headset, participants perform game-like activities under the direction of a therapist. The activities are designed to improve performance over a 15-session, five-week course. The therapist travels to participants' homes for each session, bringing a laptop computer, virtual reality headset, and a Wi-Fi hotspot.

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NOVA: 02:28 "The equipment is portable."

XIAOXIAO: 02:01 Dr. Chen notes.

NOVA: 02:45 "because the common goal of all our studies is to transition therapy to home."

XIAOXIAO: 02:01 Thanks to support from the Sea Grape Foundation, the development of a tele-rehab system is underway. The system will eliminate the need to travel to patients' homes and allow access from any location.

NOVA: 02:45 "Tele-rehab has the potential to transform the delivery of rehabilitative care,"

XIAOXIAO: 02:51 Dr Chen predicts.

A Team Effort

The success of home-based therapy for spatial neglect depends on the support of family caregivers. To actively engage them, the Center's stroke team has developed a manual that provides step-by-step guidance for working with their family members on tasks to improve symptoms of spatial neglect. Research shows that caring for family members with spatial neglect is especially stressful.

NOVA: 03:15 "Engaging caregivers in rehabilitation may not only improve patient outcomes but the quality of life for caregivers as well,"

XIAOXIAO: 03:25 says Dr. Chen.

RYAN: 03:29 Virtual game, real gains

Seven years ago, teacher Maria Martin had a devastating stroke. With the support of her husband Peter, she's come a long way, working hard to overcome challenges and volunteering to participate in research.

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Maria admits she is hooked on virtual reality. Wearing a headset, she completes tasks much like a gamer competing for points in a video game.

MONICA: 03:50

"The games are challenging but fun. I can see how people like me could benefit from this therapy."

RYAN: 03:57

Peter adds,

ERIC: 03:59

"Everyone in our life is raving about how well Maria is doing. They almost take for granted what she can do now. I can't thank Dr. Chen enough for helping us incorporate practices from the games into our routine. We're combating the neglect. It's incredible."

RYAN: 04:15

Dr. Chen notes,

NOVA: 04:17

"Although it has been years since her stroke, gains are still possible. That's why we are working toward more home-based therapy programs that are both effective and accessible. This is how we can change the outlook for stroke survivors."

ANDREW: 04:32

[music] Thank you for joining us on Rehab Reimagined. We hope Maria's story and Dr. Chen's insights have shown you the incredible potential of tele-rehab and virtual reality therapy in stroke recovery. This episode is part of our 2024 Impact Report, celebrating the donors and researchers who are making recovery more accessible, effective. If you'd like to learn more, support our mission, or explore additional stories of impact, visit our website and follow us wherever you get your podcasts. Until next time, stay inspired, stay connected, and keep imagining what's possible.

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