



OVERVIEW

Neuro RecoVR is a Virtual Reality application designed to aid the process of **stroke rehabilitation**. It is provided through mass market VR headsets to facilitate recovery of patients with motor and cognitive impairments (i.e. vision, memory, etc.). Engaging in gamified **VR activity modules**, patients are instructed to complete challenges designed to restore lost brain function.

Neuro RecoVR focuses attention on two impairment areas suffered by a large portion of stroke survivors – Upper Body motor skills and visuospatial attention, while simultaneously helping patients with cognition and speech. In addition, the software features a web-based data tracking app for registered medical professionals to **track progress of their patients** and adjust difficulty levels in real time and remotely.

The lower body expansion of the program aims to help post-stroke survivors and others who have neurological disorders improve their gait (manner in how they walk).

This consists of a **VR platform** that is showcased through a large curved screen in front of patients that are walking on a split belt treadmill.

KEY STATISTICS



- According to the WHO, cerebrovascular accidents (strokes) are the second leading cause of death worldwide and the third leading cause of physical disability.



- In addition, due to aging world population trends, in many countries such as the United States, the number annual stroke incidents is expected to **more than double** from 2010 to 2050.



- The **cost of care** for stroke patients can range from \$74,000-108,000 CAD/patient spent for stroke survivors who require both inpatient and outpatient stroke therapy.

GOALS

- Successful development of a VR rehabilitation platform which incorporates first the development of activity modules (15 - 30 minutes for each module) which provide users the ability to exercise and rehabilitate two impairment areas; upper body motor skills and cognition (focus on visuospatial attention).
- Development of a tracking and analysis app that allows for medical professionals to track the progress of their patients online in real time.