

# Courage in Motion (CIM) Centre

The Glenrose acquired a CAREN extended system in the spring of 2011 through a partnership with the Canadian Department of National Defence, which led to the opening of the Courage in Motion (CIM) Centre.

The CAREN is a complex piece of technology involving a robotic platform with virtual reality, motion capture and a force sensing treadmill. In a typical CAREN application, the patient controls motion on the screen and the platform motion by weight shift, reaching, stepping, or walking. The CAREN allows assessment and training of balance and mobility with the option to add upper extremity reaching and coordination, visual field of view awareness, distractors and cognitive tasks. Patients become involved in motivating, engaging scenarios, clinicians have the ability to quantify outcome measures and the applications are fully customizable.



## Adam's Story

*Boxing Day, 2012 Adam was at work clearing snow off train tracks when his co-worker let go of his safety line. Adam was struck from behind by a freight train going 41 km/h. His right leg was amputated that day and, after complications months later, his left leg was also amputated.*

*The Computer-Assisted Rehabilitation Environment (CAREN) allowed Adam to practice skills that prepared him for his new life outside of the hospital.*

*"You don't have bars in real life," says Adam, "The CAREN allowed me to understand what the real world is like. Losing both legs, you have no feeling of the ground, stability can be a big issue." Adam was able to practice walking on uneven surfaces, at different paces and up and down hills while in a safe environment. He is now able to navigate through his day-to-day life, and get back to his favourite activities.*

## COLLABORATIONS

The Glenrose actively collaborates with NAIT, the University of Alberta and international centres on research and development projects. The Glenrose also participates in the annual Canadian Institute for Military & Veteran Health Research conference.

## INTERESTING FACT

Patients from age 4 - 95 have used the CAREN system as part of their rehabilitation at the Glenrose.