

Hon Leesa Vlahos

Acting Minister for Health



Supporting seriously ill children

Thursday, 11 August, 2016

Australia's first robotic gym opens at Women's and Children's Hospital

Robotic technology will be used to aid the rehabilitation of children with serious neurological disorders and injuries thanks to a new \$1.5 million state-of-the-art robotic gym at the Women's and Children's Hospital.

The facility is the first of its kind in Australia to provide the latest in world-class rehabilitation technology and has been made possible through the generous support of The Little Heroes Foundation.

Two robotic machines have been installed in the gym, the Lokomat and the Armeo, as well as a tool used to assist visual awareness and eye-hand coordination known as the Dynavision.

The Lokomat is designed to improve walking pattern and function and the Armeo assists with developing muscle strength, power and range of movement in the arm.

Robotic assisted therapy can help facilitate the gradual reorganisation of the brain through many repetitions of movement allowing patients to regain independence.

Background

Young people who are current inpatients or day patients of the Paediatric Rehabilitation department at the Hospital will be able to access the high-tech equipment and new technology.

Each therapy session on the robotic machines is an interactive experience using avatars on a screen controlled by the child.

Controlling the avatars on the interactive screen allows the child to be fully immersed in the therapy. This is critical in assisting neuroplasticity and brain reorganisation to allow for improvement in function.

Quotes attributable to Acting Health Minister, Leesa Vlahos

This new facility will make a significant difference in the lives of children living with serious neurological disorders and injuries.

The robotic gym will bring a new level of technological sophistication to the rehabilitation treatment delivered to young patients.

I would like to thank the Little Heroes Foundation for having the vision and generosity to support this new centre.

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Quotes attributable to Head of Research with the WCH Paediatric Rehabilitation Department, Associate Professor Ray Russo

Research shows that despite the patient's disorder, neural plasticity of the brain is retained and new connections can be made through intensive, repetitive, task-oriented movements.

The equipment is very precise in the way they assist in the movement of a child's limbs and this allows for more efficient and effective therapy.

The more therapy a child with neurological dysfunction can access, the greater the benefits are likely to be.

Providing physical therapy for walking retraining for children with a high level of need would normally require two to three therapists during a rehabilitation session to support the child in taking steps. Now with the Lokomat you can do this with one trained assistant, after the child has been positioned within the robotic device by a robotics physiotherapist.

Quotes attributable to Women's and Children's Health Network, Chief Executive Officer Naomi Dwyer

This wonderful facility is the culmination of the dream of one of our senior clinicians who was encouraged to 'think big' and also the fruits of the long-term partnership between our Health Network and the Little Heroes Foundation.

This is a fantastic addition to the services we offer at the Women's and Children's Hospital and I would like to thank everyone involved for making it happen.

Quotes attributable to Little Heroes Foundation Chairman Chris McDermott

After beginning our relationship with the WCH 20 years ago, it is a great feeling to still be here two decades later creating a "world-class" facility.

There is a whole new field out there in rehabilitative medicine, and the more we researched, the more excited we became about the possibility of bringing this robotic equipment to South Australia to give seriously ill children the best chance to resume a full life.

It's an exciting time in the field of robotic technology and neurological rehabilitation -Recent advances have been significant, and we wanted to ensure the doctors and the rehabilitation team had access to this cutting edge technology.

The equipment will assist children and adolescents to re-learn many of the basic life skills we often take for granted, and regain mobility in their arms and legs in a motivating and interactive environment.

By providing children with the optimum environment for rehabilitation, we hope it will be the key to a faster and more enjoyable recovery.