

Modular Wheelchair Attachments with Unique Limb Supports

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Technology description

Background

Many stroke survivors may develop, hemiparesis, which is a partial weakness on one side of the body. This weakness can involve the arms, hands, legs, face or a combination. Symptoms of hemiparesis can include muscle stiffness and difficulty balancing in walking, resulting in individuals becoming wheelchair-bound. Current available technologies for patients with hemiparesis include footdrive chair wheelchairs and one-hand drive wheelchairs. Nonetheless, a problem with existing technologies is limited comfort and safety for patients experiencing hemiparesis. Current market adaptations do not offer a product for patients expecting to recover all or part of their mobility. A solution is to create a specially-designed wheelchair that will look into improvements for current wheelchair limitations. Creating an impactful wheelchair accessory for patients, particularly with hemiparesis, will improve the wheelchair market for all patients requiring unique adaptations for comfort and safety.

Technology Description

Researchers at the University of New Mexico have developed specialized wheelchair components designed to fill a gap in the market for affordable, safe, and comfortable wheelchair accessories, particularly for patients experiencing hemiparesis. Researchers incorporated improvements to securely and comfortably hold limbs. The attachments are adjustable to fit the patient's needs and customizable throughout recovery process. Furthermore, these accessories are compatible with any ADA standard wheelchair.

Application area

Affordable, safe, and comfortable accessories

Customizable for a range of patients experiencing hemiparesis

Wheelchair adaptations for patients expected to recover all or part of their mobility

Potential for models using embedded pressure sensors allowing for feedback and control

Institution

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