Folding Frame Motorized Prone Cart
(VA Reference No. 07-025)

Novel design for a prone cart that improves the quality of life for individuals with spinal cord injury

Technology
The Department of Veterans Affairs has developed a motorized prone cart that is designed for use by individuals with spinal cord dysfunctions who cannot use a wheelchair for mobility.

Description
The prone cart is comprised of a frame, a pair of independently powered and suspended drive wheels located centrally off the frame, and a body support having relatively moveable tray, chest support, abdominal support and leg support sections. The body support section can be adjusted from a low position where the user lies in a horizontal position to a high position where the user’s head is elevated with respect to the patient’s abdomen and legs.

Competitive Advantage
Existing prone carts are typically designed to be relatively long because the user is supported horizontally, making it difficult to maneuver in tight spaces. In addition, the user is essentially supported by the same part of the body all of the time resulting in discomfort, fatigue, and the possible development of pressure ulcers.

This prone cart:
- Can improve circulation, respiration, digestion, and urination.
- Can elevate users and provide articulated body support, which will allow the user to position his or her body with the head comfortably elevated to see ahead of the cart and interact with ambulatory people at eye level.
- Has a body support angle that is adjustable from 0 to 45 degrees.
- Has center turn wheels and a centered base for a turning radius that is minimized for maneuvering and turning in tight spaces.

Status
The Department of Veterans Affairs is looking for a partner for further development and commercialization of this technology through a license and the VA inventors are available to collaborate with interested companies through a Cooperative Research and Development Agreement (CRADA).