

### Discussion/General Information

Powered wheeled mobility devices are generally used by individuals with permanent neurological, orthopedic or cardiopulmonary conditions who cannot achieve independent or assisted movement with devices such as canes, walkers or manual mobility devices (wheelchairs). Mobility impairments include a broad range of disabilities that affect a person's independent movement and cause limited mobility. According to the National Center for Medical Rehabilitation Research, an estimated 25 million people have mobility impairments, which may take the form of paralysis, muscle weakness, nerve damage, stiffness of the joints, or balance/coordination deficits. About two million of these individuals use wheelchairs.

Not all environments are accessible for motorized mobility; however, improvements in devices have made previously inaccessible areas more accessible. Selection of a powered/motorized wheelchair or POV is individualized. The user's impairment, level of function, surrounding environment, activity level, seating and positioning needs must be considered. For example, powered/motorized wheelchairs have more propel and position features (e.g. sip/puff control, head control, touch or foot control) than a scooter. These features may be appropriate for someone with profound weakness or other complicating issues such as spasticity, paralysis or movement disorders. Powered wheelchairs may be equipped with seating options such as a tilt-in-space seating system that allows the user to perform independent pressure relief in the chair as well as a reclining system that changes the user's head elevation. Scooters have more limited options and are typically used by individuals who can operate a device using a joystick or steering control. Scooters primarily offer ergonomic seating.

In 2009 Salminen and colleagues performed a systematic review of the literature to determine the effectiveness of mobility assistive devices. The review found that mobility devices improve users' participation and mobility however it was not possible to draw any general conclusions about the effectiveness of mobility device interventions. The authors emphasized that well-designed research is required to accurately assess the effectiveness of mobility assistive devices.

In another review, Souza and colleagues (2010) found that 68% of those with multiple sclerosis (MS) used wheelchairs for mobility assistance. This disease causes a wide variety of neurological deficits with ambulatory impairment being the first symptom and most common form of disability in those with MS. The authors found only a limited number of articles with higher levels of evidence addressing mobility assistance specifically for persons with MS and concluded that further research is necessary to develop an accurate assessment and measurable clinical performance model addressing the use of mobility assistive devices for the

different aspects of MS-related motor impairments.

Powered mobility devices are sized according to the individual's body size (e.g., bariatric, pediatric, and adult wheelchairs). Powered wheeled mobility devices are often considered for individuals with limited functional strength or endurance in their arms and torso, who need and can operate the various maneuverability controls.

Powered wheeled mobility devices include, but are not limited to pediatric and adult powered/motorized wheelchairs as well as power operated vehicles (POVs). Powered/motorized wheelchairs use a rechargeable battery pack to propel the device as well as powering other components (e.g. position, steering controls) of the wheelchair.

Power Operated Vehicles (POVs), also called Scooters, are a category of battery powered mobility devices with tiller steering and three or four wheel construction designed for indoor use on hard surfaces with minimal to moderate surface irregularity and moderate outdoor use on flat terrain. Scooters are designed for individuals who have sufficient trunk and upper extremity functional use to safely and effectively operate the tiller control as well as maintain upright functional sitting balance and postural support.

**Reference:** [http://www.anthem.com/medicalpolicies/guidelines/gl\\_pw\\_a048545.htm](http://www.anthem.com/medicalpolicies/guidelines/gl_pw_a048545.htm)