

Manual Wheelchairs

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Introduction

Manual wheelchairs are addressed by this guideline.

Health Equity Consideration

Health equity is the highest level of health for all individuals; health inequity is the avoidable difference in health status or distribution of health resources due to the social conditions in which individuals are born, grow, live, work, and age. Social determinants of health are the conditions in the environment that affect a wide range of health, functioning, and quality of life outcomes and risks. Examples include the following: safe housing, transportation, and neighborhoods; racism, discrimination, and violence; education, job opportunities, and income; access to nutritious foods and physical activity opportunities; access to clean air and water; and language and literacy skills.

Criteria

Standard Wheelchair

A standard wheelchair (HCPCS K0001) is indicated when **all** of the following apply:

- The individual needs to use a wheelchair in the home to take care of their daily needs.
- The individual has tried walkers and other less restrictive assistive devices, but they are not supportive enough to enable them to take care of their daily needs.
- The individual or a caregiver can manage the wheelchair effectively.

Note:

May also include HCPCS E1140, E1150, E1160. Please see the Manual Wheelchair Accessories and/or Wheelchair Seating and Cushions policies for applicable guidelines.

Hemi (Low Seat) Wheelchair

A hemi wheelchair (HCPCS K0002) is indicated when **all** of the following apply:

- The individual needs to use a wheelchair in the home to take care of their daily needs.

- The individual has tried walkers and other less restrictive assistive devices, but they are not supportive enough to enable them to take care of their daily needs.
- The individual or a caregiver can manage the wheelchair effectively.
- The individual needs a low seat height due to short stature or they use their feet to move the wheelchair.

Note:

May also include HCPCS E1083, E1084, E1085, E1086. Please see the Manual Wheelchair Accessories and/or Wheelchair Seating and Cushions policies for applicable guidelines.

Lightweight Wheelchair

A lightweight wheelchair (HCPCS K0003) is indicated when **all** of the following apply:

- The individual needs to use a wheelchair in the home to take care of their daily needs.
- The individual has tried walkers and other less restrictive assistive devices, but they are not supportive enough to enable them to take care of their daily needs.
- The individual tried a standard manual wheelchair and was not able to use the device.
- The individual tried a lightweight wheelchair and was able to propel the device independently.

High Strength Lightweight Wheelchair

A high strength lightweight wheelchair (HCPCS K0004) is indicated when **all** of the following apply:

- The individual needs to use a wheelchair in the home to take care of their daily needs.
- The individual has tried walkers and other less restrictive assistive devices, but they are not supportive enough to enable them to take care of their daily needs.
- The individual needs specialized seating options that are only available with the high strength lightweight wheelchair.
- The individual tried a high strength lightweight wheelchair and was able to propel the device independently.
- The individual is not able to use a standard, lightweight, or hemi height wheelchair in the home to take care of their daily needs.

Note:

May also include HCPCS E1087, E1088, E1089, E1090. Please see the Manual Wheelchair Accessories and/or Wheelchair Cushion and Seating policies for applicable guidelines.

Ultra Lightweight Wheelchair

An ultra lightweight wheelchair (HCPCS K0005) is indicated when **all** of the following apply:

- The individual must use a wheelchair full time to take care of their daily needs.
- The individual has tried walkers and other less restrictive assistive devices, but they are not supportive enough to enable them to take care of their daily needs.
- The individual will use the ultra lightweight wheelchair independently.
- Due to specific custom fit needs, the individual is not able to use a different manual wheelchair in the home.
- The individual must have a wheelchair evaluation performed by a medical professional with specific training and expertise in wheelchair assessments.

Heavy Duty Wheelchair

A heavy duty wheelchair (HCPCS K0006) is indicated when **all** of the following apply:

- The individual needs to use a wheelchair in the home to take care of their daily needs.
- The individual has tried walkers and other less restrictive assistive devices, but they are not supportive enough to enable them to take care of their daily needs.
- The individual or a caregiver can manage the wheelchair effectively.
- The individual weighs over 250 pounds or has need for the heavy duty wheelchair due to a medical condition.

Note:

May also include HCPCS E1092, E1093, E1195. Please see the Manual Wheelchair Accessories and/or Wheelchair Cushion and Seating policies for applicable guidelines.

Extra Heavy Duty Wheelchair

An extra heavy duty wheelchair (HCPCS K0007) is indicated when **all** of the following apply:

- The individual needs to use a wheelchair in the home to take care of their daily needs.
- The individual has tried walkers and other less restrictive assistive devices, but they are not supportive enough to enable them to take care of their daily needs.
- The individual or a caregiver can manage the wheelchair effectively.
- The individual weighs over 300 pounds or has need for the extra heavy duty wheelchair due to a medical condition.

Manual Wheelchair with Tilt in Space

A manual wheelchair with tilt in space (HCPCS E1161) is indicated when **all** of the following apply:

- The individual needs to use a wheelchair in the home to take care of their daily needs.
- The individual has tried walkers and other less restrictive assistive devices, but they are not supportive enough to enable them to take care of their daily needs.
- The individual or a caregiver can manage the wheelchair effectively.
- The individual must have a wheelchair evaluation performed by a medical professional with specific training and expertise in wheelchair assessments.
- Due to specific need of the tilt feature, the individual is not able to use a different manual wheelchair in the home.

Note:

May also include HCPCS E1050, E1060, E1070, E1100, E1110, E1130. Please see the Manual Wheelchair Accessories and/or Wheelchair Cushion and Seating policies for applicable guidelines.

Transport Wheelchair

A transport wheelchair (HCPCS E1037, E1038, or E1039) is indicated when **all** of the following apply:

- The individual needs to use a wheelchair in the home and/or community to take care of their daily needs.
- The individual has tried walkers and other less restrictive assistive devices, but they are not supportive enough to enable them to take care of their daily needs.
- A caregiver can manage the wheelchair effectively.

Amputee Wheelchair

An amputee wheelchair (HCPCS E1200) is indicated when **all** of the following apply:

- The individual needs to use a wheelchair in the home to take care of their daily needs.
- The individual has tried walkers and other less restrictive assistive devices, but they are not supportive enough to enable them to take care of their daily needs.
- The individual or a caregiver can manage the wheelchair effectively.
- The individual had part of their leg removed and needs a wheelchair for all or part of their mobility requirements.

Note:

May also include HCPCS E1170, E1171, E1172, E1180, E1190. Please see the Manual Wheelchair Accessories and/or Wheelchair Cushion and Seating policies for applicable guidelines.

Custom Wheelchair

A custom wheelchair (HCPCS K0008, K0009, E1220–E1224, E1240-E1295) is indicated when **all** of the following apply:

- The individual needs to use a wheelchair in the home to take care of their daily needs.
- The individual has tried walkers and other less restrictive assistive devices, but they are not supportive enough to enable them to take care of their daily needs.
- The individual can manage the wheelchair effectively.
- Due to specific custom fit needs, the individual is not able to use a different manual wheelchair in the home.
- The individual must have a wheelchair evaluation performed by a medical professional with specific training and expertise in wheelchair assessments.

Additional Information

- A manual wheelchair may be considered a capped rental or purchase item.
- After 13 months of rental, the purchase price is satisfied and the equipment is then owned by the individual.
- Wheelchair coverage is limited to one device at a time.

Repair and Replacement of Manual Wheelchairs

- Same or Similar Durable Medical Equipment
 - Duplication of the same or similar wheelchair within the same case is not medically necessary.
- The anticipated reasonable useful lifetime for a manual wheelchair is three years.
- A replacement wheelchair is indicated when **all** of the following apply:
 - The individual has been seen recently by their provider and has a documented care plan that includes the use of the wheelchair.
 - There is clinical documentation of **any** of the following:
 - The individual is no longer able to use the wheelchair because their physical condition has changed.
 - The wheelchair has been lost or stolen.
 - The wheelchair is broken, unable to be repaired, and no longer under warranty.

Not Covered

Manual Wheelchairs considered not medically necessary, not primarily medical in nature, and/or convenience items, may include, but are not limited to, any of the following:

- Sports Wheelchairs
- Stair Climbing Wheelchairs

Definitions

- **Mobility** refers to the ability to move about in one's environment.
- **Mobility-related activities of daily living (MRADLs, daily needs)** are activities required for personal care including toileting, feeding, dressing, grooming, and bathing in customary locations within the home.
- A **manual wheelchair** is a wheeled chair with a seat width and back height available in a range of sizes. The typical seat width and seat depth of an adult manual wheelchair is 15 to 19 inches. A standard wheelchair has a seat height greater than or equal to 19 inches.
- A **standard hemi wheelchair** has a seat height less than 19 inches.
- A **lightweight wheelchair** weighs 34 to 36 pounds.
- A **high strength lightweight wheelchair** weighs less than 34 pounds. The back height and the wheelchair frame can be adjusted for seat width, depth, or height requirements that cannot be accommodated in a standard, lightweight, or hemi wheelchair.
- The **ultra lightweight wheelchair** has unique features (e.g., adjustable axle plates, adjustable squeeze, adjustable camber, tapered frames) not available on other manual wheelchairs.
- A **heavy duty wheelchair** can support individuals weighing 250 to 300 pounds.
- An **extra heavy duty wheelchair** is recommended for individuals weighing over 300 pounds. Reinforced back and seat upholstery are standard features of these wheelchairs.
- A **manual tilt in space wheelchair** is designed to tilt in space 40 to 60 degrees.
- A **transport chair** is lighter in weight than a standard wheelchair with smaller rear wheels than a standard wheelchair, and therefore cannot be self-propelled using the upper extremities.
- A **pediatric size wheelchair** is a manual wheelchair with a seat width and/or depth of 14 inches or less.
- **Rehabilitation Engineering and Assistive Technology Society of North America (RESNA)** is a multidisciplinary organization of medical professionals with specific training and expertise in wheelchair assessments. RESNA offers certification, continuing education, and professional development.

Evidence Discussion

Purpose of technology/description of device

A complete manual wheelchair base includes:

- A complete frame
- Propulsion wheels
- Casters
- Brakes
- A sling seat or a seat frame capable of accepting a seating system
- A sling back
- A seat back support which can accommodate a wheelchair back cushion or a back frame capable of accepting a back system
- Standard leg and footrests
- Standard armrests
- Safety accessories (other than those noted in the Manual Wheelchair Accessories guideline)

Medical Background

The United States Food and Drug Administration (FDA) considers wheelchairs and wheelchair components (including cushions) to be Class I devices (FDA, 2024). As such, they are considered to be low to moderate risk, and manufacturers are not required to complete premarket notifications prior to marketing the devices.

Literature Review

- Ganesh et al. (2007) performed a cohort study at a Veterans Affairs teaching hospital to describe the characteristics of manual wheelchair users. The study included 99 individuals with a mean age of 66 and 10 comorbid medical conditions. The authors found that falls and arthritis were present in greater than 50% of patients and highly impacted the need for a wheelchair. Notably, at one month, greater than 30% of individuals had wheelchairs that did not meet common criteria for wheelchair fit; 36% of individuals reported difficulty transferring; and 61% of individuals reported difficulty propelling the wheelchair. The wheelchairs were used for bathroom mobility by 38% of the individuals. In conclusion, the authors reported a high prevalence of perception of difficulty with wheelchair use in the population studied; and thus, the authors opined that wheelchair design for older individuals with multiple co-morbidities should be prioritized.
- Heinrichs et al. (2022) reported on a randomized controlled trial to test the hypotheses that, during manual wheelchair foot propulsion forward on smooth level surfaces, lowering the seat height decreases perceived difficulty, and increases

speed, push frequency, and push effectiveness. Fifty able-bodied participants used the Wheelchair Skills Test (WST) capacity scores and the Wheelchair Propulsion Test (WPT) to calculate speed (meters per second), push frequency (cycles per second), push effectiveness (meters per cycle), and the participants' perceived difficulty. Participants used one foot to propel a manual wheelchair five meters backward on a soft surface at five seat heights. The authors concluded that during manual wheelchair foot propulsion backward on a soft surface, lowering the seat height increased speed and push effectiveness, and decreased perceived difficulty. Thus, the authors opined that backward wheelchair foot propulsion on soft surfaces was affected by seat height.

- In 2023, Tefertiller et al. reported on a randomized crossover study which evaluated independence and exertion in individuals with brain injury when using lightweight wheelchairs in comparison with ultra-lightweight wheelchairs. Eighteen individuals with brain injury resulting in hemiplegia were randomly assigned to complete skills and endurance testing in three different wheelchair configurations over a three-week period: lightweight wheelchairs, ultra-lightweight folding wheelchairs, and ultra-lightweight rigid wheelchairs. The primary outcome was the percentage capacity score from the modified Wheelchair Skills Test 4.1. Secondary outcomes included the Wheelchair Propulsion Test, 100-meter Push Test, heart rate, and rate of perceived exertion. When compared with the lightweight wheelchairs, significant differences were found favoring the ultra-lightweight wheelchairs in the Wheelchair Skills Test and time to complete the 100-meter push test. Moreover, heart rate change and perceived exertion were significantly lower for the ultra-lightweight rigid group in comparison with the lightweight group. However, significant differences were not seen with the Wheelchair Propulsion Test measures across any of the wheelchair frames. Thus, the investigators concluded that using an ultra-light weight wheelchair may lead to improved ability to complete wheelchair skills needed for successful mobility; moreover, a rigid frame may also enable faster mobility in comparison to a folding frame when hemi-propelling.
- Michael et al. (2007) performed a systematic review to determine the effects of tilt-in-space seating on outcomes for non-ambulatory individuals with neurological or neuromuscular impairment. Nineteen studies were included in the analysis. All studies looked at populations with neurological impairment, and most included children with cerebral palsy (n=8) or adults with spinal cord injury (n=8). Studies included in the meta-analysis were randomized and non-randomized trials, and participants acted as their own controls. The authors noted that six studies reported that tilting the seat back reduced the pressure under the ischial tuberosities in a range of conditions. In summary, the authors concluded that there is some evidence to suggest a posterior seat tilt reduces pressures under the pelvis for people with neurological impairment.
- In 2020, Bossuyt and colleagues investigated a population-based sample of wheelchair users with a spinal cord injury to evaluate whether fatigue-inducing

wheelchair propulsion changes neuromuscular activation and propulsion biomechanics. The protocol included three bouts of four minutes of overground wheelchair propulsion along an eight-shaped course. The participants propelled their personal wheelchair for 40 seconds on a treadmill at 1.11 meters per second and at a fixed power output of 25 watts and 45 watts. During the last 30 seconds of propulsion, kinetics and electromyography (EMG) were recorded. The study demonstrated that with induced fatigue, wheelchair users propelled with increased neuromuscular activation in the pectoralis major, deltoids, and upper trapezius, and with a slightly reduced push angle. Moreover, wheelchair users who were older, with complete lesions, and had less years since injury were more susceptible to fatigue on testing. The authors noted that this group propelled with a shorter push angle and greater force, which required greater anaerobic capacity. Thus, the authors concluded that, in wheelchair users with spinal cord injury, compensation strategies in response to fatiguing propulsion could increase the risk for shoulder injury.

- Collinger et al. (2008) conducted a case series to evaluate shoulder kinematics during wheelchair propulsion in 61 individuals with paraplegia who use a manual wheelchair for mobility. Participants propelled their own wheelchairs on a dynamometer at three speeds (self-selected, 0.9 meters per second, 1.8 meters per second) while kinetic and kinematic data were recorded. The results demonstrated significant increases in shoulder joint loading with increased propulsion velocity. Body weight was the primary demographic variable that affected shoulder forces, whereas pain did not affect biomechanics. Peak shoulder joint loading occurs when the arm is extended and internally rotated. Thus, the investigators concluded that body weight maintenance and other interventions that reduce the force required to propel a wheelchair should be implemented to prevent shoulder injury in individuals with paraplegia who use a manual wheelchair for mobility.
- A longitudinal study performed by Walford et al. (2019) examined whether there are specific biomechanical measures that predict shoulder pain development in manual wheelchair users. Data were collected and analyzed from 102 individuals with paraplegia who were asymptomatic for shoulder pain at the time of baseline data collection [less than 12 points on the Wheelchair User's Shoulder Pain Index (WUSPI)]. Participants were categorized into either a pain or no pain group based on whether they experienced an increase of ≥ 10 points on the WUSPI from baseline. At 36 month follow-up assessment, participants who developed shoulder pain had weaker shoulder adductor muscles, higher positive shoulder joint work during recovery, and less trunk flexion than those who did not develop pain. Thus, the authors suggested that the findings of this study might provide insight into the optimization of rehabilitation training for manual wheelchair users.
- Rice et al. (2015) conducted a randomized controlled trial to examine the efficacy of a multifactorial intervention in nonambulatory individuals with multiple sclerosis (MS) based on wheelchair optimization, propulsion skill/technique training, and behavioral strategies. Fourteen participants were randomly assigned to two groups:

an intervention group that received custom-fit ultra lightweight manual wheelchairs with propulsion/skills training followed by three months of at-home use with the custom ultra lightweight wheelchair and weekly phone calls, and the control group that received no training and used their own wheelchairs at home. Participants were assessed at baseline and three months later for fatigue, upper extremity strength, and propulsion technique. The results of the study demonstrated that the intervention was well tolerated and no adverse events were reported. Moreover, the intervention group demonstrated increased strength, less fatigue, and a reduced application of braking torque during propulsion. Thus, the investigators concluded that a three-month physical activity intervention based on manual wheelchair propulsion and training was safe and feasible for some wheelchair users living with MS and may produce additional benefits in the areas of strength, fatigue, and propulsion technique.

- Smith et al. (2016) conducted a systematic review to identify factors associated with participation in social and community activities for adult wheelchair users. Thirty-five studies were included in the analysis. Twenty-nine studies were quantitative, including 28 cross-sectional designs, and one single-group pre-post study. The systematic review focused on social and community participation in the following International Classification of Functioning, Disability and Health (ICF) participation domains: community, social and civic life (including community life, political life and citizenship, and recreation and leisure), interpersonal interactions and relationships, and major life areas (including education, and work and employment). The authors found that wheelchair factors, accessibility, skills with wheelchair use, pain, finances, and education were modifiable factors frequently reported to be associated with participation. Thus, the authors opined that multi-modal interventions might be more effective at improving the participation of wheelchair users than a single intervention, which only targets one of these factors. For example, an intervention which focuses on improving wheelchair skills and reducing barriers to accessibility may be more effective than an intervention focusing on one of these factors alone.
- A cross-sectional study performed by Sakakibara et al. (2017) aimed to characterize the life-space mobility and social participation of manual wheelchair users. The study included 49 individuals aged 50 years or older who were using a manual wheelchair on a daily basis for the past six months. Life-space mobility and social participation were measured using the Life-Space Assessment and the Late Life Disability Instrument. The results of the study demonstrated that occupancy time and distance travelled are statistically significant predictors of life-space mobility. The authors opined that the finding that lower occupancy time and greater number of bouts were associated with participation that was more frequent, which raised accessibility and safety issues for manual wheelchair users. Those individuals who were more active in their social participation also used their wheelchairs to transition more often between their various activities.
- A study performed by Thomas and colleagues in 2018 aimed to characterize how wheelchair configuration changes, user variables, and usage conditions affected

dynamic tip probability while rolling down a slope and contacting a small block. Rigid body dynamic models of a manual wheelchair and test dummy were created using multi-body software and validated with 189 experiments. Dynamic stability was assessed for a range of seat angles (0° to 20° below horizontal), backrest angles (0° to 20°), rear axle positions (0 to 20 centimeters from base of backrest), ground slopes (0° to 15°), bump heights (0 to 4 centimeters), wheelchair speeds (0 to 20 kilometers per hour), user masses (50 to 115 kilograms), and user positions. The authors found that the probability of forward tipping, corresponding to the greatest risk of injury, was significantly reduced for decreased speeds, smaller bumps, a reclined backrest, and a lower rear seat height. For wheelchairs with dynamic seating adjustability, when travelling downhill, adjustments to the seat or backrest can increase the likelihood of safely rolling over a bump.

Professional Organizations/Societies

- A 2021 specialty practice review article by Sehgal and colleagues stated that wheelchairs should be considered for patients who do not have the lower limb strength, balance, or endurance needed for ambulation. Moreover, patients must have sufficient upper body strength and coordination to use manual wheelchairs. In summary, the authors provided a consensus recommendation that wheelchairs can provide patients with improved mobility and quality of life, but proper sizing and patient education were required to avoid injury to bony prominences and skin breakdown due to seat pressure.
- A 2023 update to the 2012 position paper published by RESNA (Worobey et al.) provided recommendations on the clinical application of ultralight manual wheelchairs (ULWCs). The review of the literature included 102 studies. The authors noted that ULWCs were customizable, including configuration and adjustability, while minimizing overall weight. Moreover, various seat configurations were available with ULWCs, which also accept external positioning devices such as cushions, back supports, and postural support accessories. When deciding on selection of an ULWC, the most frequent considerations were overall weight, configurability, and compatibility with seating and postural support needs. In addition, the authors noted that much of the original research on ULWCs focused on individuals with spinal cord injury; however, other populations may also benefit from individualized wheelchair configuration, such as pediatric individuals or those with a progressive disease such as multiple sclerosis or Parkinson's disease. In summary, the authors recommended that, for individuals who relied on manual wheelchairs as a primary means of mobility, ULWCs were recommended due to the customizable nature of these devices.
- A specialty clinical practice guideline for the prescription of a seated wheelchair or mobility scooter provided recommendations for individuals with spinal cord injury and brain injury (EnableNSW, Lifetime Care & Support Authority, 2011) ranging from topics on the goals and evaluation, assessment and review, capacity and performance, upper limb capacity and risk of injury, wheelchair features, through to

propulsion, training, transport, and maintenance. The authors noted that the mobility assistive equipment should significantly improve an individual's participation in MRADLs in the home. In addition, a willingness by the individual to use the mobility assistive equipment safely and on a routine basis should exist. The authors noted that existing conditions (e.g., limited cognition, impaired judgment, decreased vision) need to be evaluated when determining the appropriateness of any mobility assistive equipment. When mobility assistive equipment is selected to allow for participation in MRADLs, the respective environment (e.g., floor surfaces, turning radius, physical layout) must be able to accommodate the equipment. An assessment of upper extremity function (e.g., strength, range of motion, endurance, pain, deformity) should be conducted on individuals considering using a manual wheelchair to meet their MRADLs or primary role function. In circumstances where a user is unable to propel a manual wheelchair, but cannot safely and efficiently operate a powered mobility device (e.g., due to cognitive limitations, impaired judgment, decreased vision), a manual wheelchair would be clinically appropriate if a willing and able caregiver can safely maneuver the wheelchair.

Codes

HCPCS code descriptions

HCPCS Code	Description
E1037	Transport chair, pediatric size
E1038	Transport chair, adult size, patient weight capacity up to and including 300 pounds
E1039	Transport chair, adult size, heavy duty, patient weight capacity greater than 300 pounds
E1161	Manual adult size wheelchair, includes tilt in space
E1200	Amputee wheelchair, fixed full length arms, swing away detachable footrest
E1220	Wheelchair; specially sized or constructed, (indicate brand name, model number, if any) and justification
E1221	Wheelchair with fixed arm, footrests
E1222	Wheelchair with fixed arm, elevating legrests
E1223	Wheelchair with detachable arms, footrests
E1224	Wheelchair with detachable arms, elevating legrests

HCP Code	Description
E1240	Lightweight wheelchair, detachable arms, (desk or full length) swing away detachable, elevating legrest
E1250	Lightweight wheelchair, fixed full length arms, swing away detachable footrest
E1260	Lightweight wheelchair, detachable arms (desk or full length) swing away detachable footrest
E1270	Lightweight wheelchair, fixed full length arms, swing away detachable elevating legrests
E1280	Heavy duty wheelchair, detachable arms (desk or full length) elevating legrests
E1285	Heavy duty wheelchair, fixed full length arms, swing away detachable footrest
E1290	Heavy duty wheelchair, detachable arms (desk or full length) swing away detachable footrest
E1295	Heavy duty wheelchair, fixed full length arms, elevating legrest
E1140	Wheelchair, detachable arms, desk or full length, swing away detachable footrests
E1150	Wheelchair, detachable arms, desk or full length swing away detachable elevating legrests
E1160	Wheelchair, fixed full length arms, swing away detachable elevating legrests
E1083	Hemi-wheelchair, fixed full length arms, swing away detachable elevating leg rest
E1084	Hemi-wheelchair, detachable arms desk or full length arms, swing away detachable elevating leg rests
E1085	Hemi-wheelchair, fixed full length arms, swing away detachable foot rests
E1086	Hemi-wheelchair detachable arms desk or full length, swing away detachable footrests
E1087	High strength lightweight wheelchair, fixed full length arms, swing away detachable elevating leg rests
E1088	High strength lightweight wheelchair, detachable arms desk or full length, swing away detachable elevating leg rests

HCP Code	Description
E1089	High strength lightweight wheelchair, fixed length arms, swing away detachable footrest
E1090	High strength lightweight wheelchair, detachable arms desk or full length, swing away detachable foot rests
E1092	Wide heavy duty wheel chair, detachable arms (desk or full length), swing away detachable elevating leg rests
E1093	Wide heavy duty wheelchair, detachable arms desk or full length arms, swing away detachable footrests
E1195	Heavy duty wheelchair, fixed full length arms, swing away detachable elevating legrests
E1050	Fully-reclining wheelchair, fixed full length arms, swing away detachable elevating leg rests
E1060	Fully-reclining wheelchair, detachable arms, desk or full length, swing away detachable elevating legrests
E1070	Fully-reclining wheelchair, detachable arms (desk or full length) swing away detachable footrest
E1100	Semi-reclining wheelchair, fixed full length arms, swing away detachable elevating leg rests
E1110	Semi-reclining wheelchair, detachable arms (desk or full length) elevating leg rest
E1130	Standard wheelchair, fixed full length arms, fixed or swing away detachable footrests
E1170	Amputee wheelchair, fixed full length arms, swing away detachable elevating legrests
E1171	Amputee wheelchair, fixed full length arms, without footrests or legrest
E1172	Amputee wheelchair, detachable arms (desk or full length) without footrests or legrest
E1180	Amputee wheelchair, detachable arms (desk or full length) swing away detachable footrests
E1190	Amputee wheelchair, detachable arms (desk or full length) swing away detachable elevating legrests
K0001	Standard wheelchair

HCP Code	Description
K0002	Standard hemi (low seat) wheelchair
K0003	Lightweight wheelchair
K0004	High strength, lightweight wheelchair
K0005	Ultralight weight wheelchair
K0006	Heavy duty wheelchair
K0007	Extra heavy duty wheelchair
K0008	Custom manual wheelchair/base
K0009	Other manual wheelchair/base

References

1. Medicare Local Coverage Determination (LCD): Manual Wheelchair Bases (L33788) / LCA (A52497) <https://www.cms.gov/medicare-coverage-database/view/lcd.aspx?LCDId=33788>
2. Ganesh S, Hayter A, Kim J, Sanford J, Sprigle S, Hoenig H. Wheelchair use by veterans newly prescribed a manual wheelchair. Arch Phys Med Rehabil. 2007;88(4):434-439. doi:10.1016/j.apmr.2006.12.045
3. Heinrichs ND, Kirby RL, Smith C, Russell KFJ, Theriault CJ, Doucette SP. Effect of seat height on manual wheelchair foot propulsion, a repeated-measures crossover study: part 2 - wheeling backward on a soft surface. Disabil Rehabil Assist Technol. 2022;17(3):325-330. doi:10.1080/17483107.2020.1782490
4. Tefertiller C, Jones J, Sevigny M, Dahlin M. Manual wheelchair configuration in unilateral upper- and lower-extremity propulsion: a randomized crossover study to assess effects of rear wheel axle position and frame type. Arch Phys Med Rehabil. 2023;104(8):1188-1194. doi:10.1016/j.apmr.2023.03.014
5. Michael SM, Porter D, Pountney TE. Tilted seat position for non-ambulant individuals with neurological and neuromuscular impairment: a systematic review. Clin Rehabil. 2007;21(12):1063-1074. doi:10.1177/0269215507082338
6. Bossuyt FM, Arnet U, Cools A, et al. Compensation Strategies in Response to Fatiguing Propulsion in Wheelchair Users: Implications for Shoulder Injury Risk. Am J Phys Med Rehabil. 2020;99(2):91-98. doi:10.1097/PHM.0000000000001267
7. Collinger JL, Boninger ML, Koontz AM, et al. Shoulder biomechanics during the push phase of wheelchair propulsion: a multisite study of persons with paraplegia. Arch Phys Med Rehabil. 2008;89(4):667-676. doi:10.1016/j.apmr.2007.09.052

8. Walford SL, Requejo PS, Mulroy SJ, Neptune RR. Predictors of shoulder pain in manual wheelchair users. Clin Biomech (Bristol, Avon). 2019;65:1-12. doi:10.1016/j.clinbiomech.2019.03.003
9. Rice IM, Rice LA, Motl RW. Promoting Physical Activity Through a Manual Wheelchair Propulsion Intervention in Persons With Multiple Sclerosis. Arch Phys Med Rehabil. 2015;96(10):1850-1858. doi:10.1016/j.apmr.2015.06.011
10. Smith EM, Sakakibara BM, Miller WC. A review of factors influencing participation in social and community activities for wheelchair users. Disabil Rehabil Assist Technol. 2016;11(5):361-374. doi:10.3109/17483107.2014.989420
11. Sakakibara BM, Routhier F, Miller WC. Wheeled-mobility correlates of life-space and social participation in adult manual wheelchair users aged 50 and older. Disabil Rehabil Assist Technol. 2017;12(6):592-598. doi:10.1080/17483107.2016.1198434
12. Thomas L, Borisoff J, Sparrey CJ. Manual wheelchair downhill stability: an analysis of factors affecting tip probability. J Neuroeng Rehabil. 2018;15(1):95. doi:10.1186/s12984-018-0450-3
13. Sehgal M, Jacobs J, Biggs WS. Mobility Assistive Device Use in Older Adults. Am Fam Physician. 2021;103(12):737-744.
14. Worobey L, Bernstein J, Ott J, et al. RESNA position on the application of ultralight manual wheelchairs. Assist Technol. 2023:1-18. doi:10.1080/10400435.2023.2221148
15. EnableNSW, Lifetime Care & Support Authority. Technical report for the Guidelines for the prescription of a seated wheelchair or mobility scooter for people with a traumatic brain injury or spinal cord injury. 2011.
16. Center for Devices and Radiological. (2019, February 8). Regulatory Controls. FDA. <https://www.fda.gov/medical-devices/overview-device-regulation/regulatory-controls#gen>
17. Center for Devices and Radiological. (2024). Device Approvals and Clearances. FDA. <https://www.fda.gov/medical-devices/products-and-medical-procedures/device-approvals-and-clearances>