



# DURABLE MEDICAL EQUIPMENT

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## Clinical Guidelines

V1.0.2022

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eviCore healthcare Clinical Decision Support Tool Diagnostic Strategies: This tool addresses common symptoms and symptom complexes. Requests for individuals with atypical symptoms or clinical presentations that are not specifically addressed will require physician review. Consultation with the referring physician, specialist and/or individual's Primary Care Physician (PCP) may provide additional insight.

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# Administrative Guidelines

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# Durable Medical Equipment (DME) General Criteria

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## HCPCS Codes

All

## DME, Prosthetics, Orthotics, and Supplies - General Criteria

### Clinical Information to Establish Medical Necessity

Current clinical information is necessary for determining the medical necessity of durable medical equipment, prosthetics, orthotics and supplies including **all** of the following:

- Information provided has clinical relevance to the request
- A pertinent clinical evaluation, or meaningful technological contact (telehealth visit, telephone call, electronic mail or messaging) is required including **both**:
  - A relevant history and physical (symptoms, laboratory results, imaging reports)
  - Medical treatments relevant to the request (medication records, therapy records)

Medical necessity cannot be supported if the provided information makes no reference to the indication for the request.

Requests for equipment when same or similar equipment has already been placed is not supported without clear documentation that fulfills guideline criteria.

Base DME Items and Accessories: When medical necessity for a base item of durable medical equipment has not been met, any accessories that are requested to use with the base item are also not considered medically necessary.

### Investigational and Experimental DME

Certain Durable Medical Equipment may be considered investigational and experimental if there is **any** of the following:

- A paucity of supporting evidence in the peer reviewed literature
- The evidence has not matured to exhibit improved health parameters
- The durable medical equipment lacks a collective opinion of support

### Same or Similar DME, Prosthetics, and Orthotics

Overutilization of durable medical equipment, prosthetics and orthotics occurs when HCPCS codes for same or similar devices are requested in one case or within a short

time frame. This can result in unnecessary duplication. As an example, two oxygen concentrators that have the same purpose have been requested at the same time when only one is medically necessary.

### Same or Similar Durable Medical Equipment

Duplication of same or similar durable medical equipment, prosthetics and orthotics within the same case is not medically necessary.

Same or similar durable medical equipment, prosthetics and orthotics may only be indicated when **one** of the following applies:

- The individual has a change in medical condition resulting in the need for a new device
- The individual has a new medical diagnosis resulting in the need for an additional device
- Medical necessity criteria for replacement have been met

### References

1. White NT, Delitto A, Manal TJ, Miller S. The American Physical Therapy Association's Top Five Choosing Wisely Recommendations. *Physical Therapy*. 2015;95(1):9-24. doi:10.2522/ptj.20140287.
2. Mak JCS, Fransen M, Jennings M, March L, Mittal R, Harris IA. Evidence-based review for patients undergoing elective hip and knee replacement. *ANZ Journal of Surgery*. 2013;84(1-2):17-24. doi:10.1111/ans.12109.
3. Harvey LA, Brosseau L, Herbert RD. Continuous passive motion following total knee arthroplasty in people with arthritis. *Cochrane Database of Systematic Reviews*. 2014. doi:10.1002/14651858.cd004260.pub3.
4. Centers for Medicare & Medicaid Services. National Coverage Determination (NCD) for Durable Medical Equipment Reference List (280.1). CMS.gov. <https://www.cms.gov/medicare-coverage-database/details/ncd-details.aspx?NCDId=190&ncdver=2&bc=AAAAQAAAAAA&>. Published May 5, 2005.
5. Shi C, Dumville JC, Cullum N. Support surfaces for pressure ulcer prevention: A network meta-analysis. *Plos One*. 2018;13(2). doi:10.1371/journal.pone.0192707.
6. National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure Ulcers: Quick Reference Guide. Emily Haesler (Ed.). Osborne Park, Western Australia: Cambridge Media; 2014.
7. CGS Administrators, LLC , Noridian Healthcare Solutions, LLC. Pressure Reducing Support Surfaces - Group 2. CMS.gov Centers for Medicare & Medicaid Services. <https://www.cms.gov/medicare-coverage-database/search/search-results.aspx?CoverageSelection=Local&ArticleType=All&PolicyType=Final&s=All&Keyword=Pre>

- ssure%2BReducing%2BSupport  
%2BSurfaces&KeyWordLookUp=Title&KeyWordSearchType=And&bc=gAAAAAAA  
AAAAAA%3D%3D&. Published October 1, 2015.
8. Gould L, Stuntz M, Giovannelli M, et al. Wound healing society 2015 update on guidelines for pressure ulcers. *Wound Repair and Regeneration*. 2016;24(1):145-162. doi:10.1111/wrr.12396.
  9. Titus L, Guilbault L, Mortenson B, et al. Wheeled Mobility and Seating Equipment. Spinal Cord Injury Research Evidence. <https://scireproject.com/evidence/rehabilitation-evidence/wheeled-mobility-and-seating-equipment/>. Published December 30, 2019.
  10. National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure Ulcers: Clinical Practice Guideline. Emily Haesler (Ed.). Cambridge Media: Osborne Park, Western Australia; 2014.
  11. Houghton PE, Campbell KE, CPG Panel. Canadian Best Practice Guidelines for the Prevention and Management of Pressure Ulcers in People with Spinal Cord Injury. A Resource Handbook for Clinicians. Katicka Integrated Communications Inc; 2013. <http://www.onf.org>.
  12. National Clinical Guideline Centre (UK). The Prevention and Management of Pressure Ulcers in Primary and Secondary Care. nice.org.uk. <https://www.ncbi.nlm.nih.gov/pubmed/25340232>. Published April 2014.
  13. Local Coverage Determination (LCD): Wheelchair Seating (L33312). Centers for Medicare & Medicaid Services, Baltimore, MD. CGS Administrators, LLC, Noridian Healthcare Solutions, LLC. <https://www.cms.gov/medicare-coverage-database/search/lcd-date-search.aspx?DocID=L33312&bc=gAAAAAAAAAAAAA>. Published October 1, 2015.
  14. Arias S, Cardiel E, Rogeli P, et al. An alternating pressure sequence proposal for an air-cell cushion for preventing pressure ulcers. 2014 36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. 2014:3480-3483. doi:10.1109/embc.2014.6944372.
  15. Glickman LB, Geigle PR, Paleg GS. A systematic review of supported standing programs. *J Pediatr Rehabil Med*. 2010;3(3):197-213. doi:10.3233/PRM-2010-0129.
  16. Nordström B, Näslund A, Eriksson M, et al. The impact of supported standing on well-being and quality of life. *Physiother Can*. 2013;65(4):344-352. doi:10.3138/ptc.2012-27.
  17. Paleg GS, Smith BA, Glickman LB. Systematic review and evidence-based clinical recommendations for dosing of pediatric supported standing programs. *Pediatr Phys Ther*. 2013;25(3):232-247. doi:10.1097/PEP.0b013e318299d5e7.
  18. Bushby K, Finkel R, Birnkrant DJ, et al. Diagnosis and management of Duchenne muscular dystrophy, part 2: implementation of multidisciplinary care [published

- correction appears in *Lancet Neurol.* 2010 Mar;9(3):237]. *Lancet Neurol.* 2010;9(2):177-189. doi:10.1016/S1474-4422(09)70272-8.
19. National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure Ulcers: Clinical Practice Guideline. Emily Haesler (Ed.). Cambridge Media: Osborne Park, Western Australia; 2014.
  20. Gupta S, Gabriel A, Lantis J, Téot L. Clinical recommendations and practical guide for negative pressure wound therapy with instillation. *Int Wound J.* 2016;13(2):159-174. doi:10.1111/iwj.12452.
  21. Centers for Medicare and Medicaid Services. Local Coverage Determination for Negative Pressure Wound Therapy Pumps (L33821). CMS.gov Centers for Medicare & Medicaid Services. <https://www.cms.gov/medicare-coverage-database/search/document-id-search-results.aspx?DocID=L33821&bc=iAAAAAAAAAAAAAAAA%3D%3D>. Published October 1, 2015.
  22. Washington Health Care Authority. Negative pressure wound therapy (NPWT). Washington State Health Care Authority. <https://www.hca.wa.gov/about-hca/health-technology-assessment/negative-pressure-wound-therapy>. Published 2016.
  23. Centers for Medicare and Medicaid Services. Local Coverage Article: Standard Documentation Requirements for All Claims Submitted to DME MACs (A55426). CMS.gov. Centers for Medicare & Medicaid Services. <https://www.cms.gov/medicare-coverage-database/details/article-details.aspx?articleId=55426&ver=76&Date=&DocID=A55426&bc=ggAAAAGAAAA&>. Published January 1, 2017.
  24. Centers for Medicare and Medicaid Services. Medicare Benefit Policy Manual Chapter 15 Section 110.2 Repairs, Replacement, Maintenance and Delivery. CMS.gov. Centers for Medicare & Medicaid Services <https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/bp102c15.pdf>. Published July 12, 2019.

# Replacement and Continued Use of DME

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## Replacement and Continued Use of DME - Criteria

- Continued durable medical equipment (DME) rental after initial rental period can be approved when **ALL** of the following apply:
  - Individual has been re-evaluated by treating practitioner
  - Documentation of continued use and medical need
- Replacement of DME can be approved when **all** of the following apply:
  - Individual has been evaluated by treating practitioner
  - There is documentation of continued medical need
  - There is documentation of **one** of the following:
    - Device has been lost or stolen
    - Device is no longer effective due to significant change in patient condition
    - Device is not operating **both**:
      - DME supplier has physically evaluated the device and determined that it is unable to be repaired
      - Device to be replaced is no longer covered under a warranty

## References

1. White NT, Delitto A, Manal TJ, Miller S. The American Physical Therapy Association's top five choosing wisely recommendations. *Phys Ther.* 2015;95(1):9-24. doi:10.2522/ptj.20140287.
2. Centers for Medicare & Medicaid Services. National Coverage Determination (NCD) for Durable Medical Equipment Reference List (280.1). CMS.gov. <https://www.cms.gov/medicare-coverage-database>. Published May 5, 2005.
3. National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure Ulcers: Clinical Practice Guideline. Emily Haesler (Ed.). Cambridge Media: Osborne Park, Western Australia; 2014.



4. Centers for Medicare and Medicaid Services. Local Coverage Article: Standard Documentation Requirements for All Claims Submitted to DME MACs (A55426). CMS.gov. Centers for Medicare & Medicaid Services.  
<https://www.cms.gov/medicare-coverage-database>. Published January 1, 2017.
5. Centers for Medicare and Medicaid Services. Medicare Benefit Policy Manual Chapter 15 Section 110.2 Repairs, Replacement, Maintenance and Delivery. CMS.gov. Centers for Medicare & Medicaid Services  
<https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/bp102c15.pdf>. Published July 12, 2019.

# General Clinical Use and Supplies

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# Custom Fabricated Devices

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## Custom Fabricated Device Criteria

Custom-fabricated equipment, prosthetics and orthotics may be indicated when basic coverage criteria have been met and there is documentation of any **one** of the following:

- Deformity precludes use of prefabricated device
- Body type precludes use of prefabricated device
- Need for stabilization that cannot be met with a prefabricated device
- Failed trial of prefabricated device

## References

1. White NT, Delitto A, Manal TJ, Miller S. The American Physical Therapy Association's Top Five Choosing Wisely Recommendations. *Physical Therapy*. 2015;95(1):9-24. doi:10.2522/ptj.20140287.
2. Mak JCS, Fransen M, Jennings M, March L, Mittal R, Harris IA. Evidence-based review for patients undergoing elective hip and knee replacement. *ANZ Journal of Surgery*. 2013;84(1-2):17-24. doi:10.1111/ans.12109.
3. Harvey LA, Brosseau L, Herbert RD. Continuous passive motion following total knee arthroplasty in people with arthritis. *Cochrane Database of Systematic Reviews*. 2014. doi:10.1002/14651858.cd004260.pub3.
4. Centers for Medicare & Medicaid Services. National Coverage Determination (NCD) for Durable Medical Equipment Reference List (280.1). CMS.gov. <https://www.cms.gov/medicare-coverage-database/details/ncd-details.aspx?NCDId=190&ncdver=2&bc=AAAAQAAAAAAA&>. Published May 5, 2005.
5. Shi C, Dumville JC, Cullum N. Support surfaces for pressure ulcer prevention: A network meta-analysis. *Plos One*. 2018;13(2). doi:10.1371/journal.pone.0192707.
6. National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure Ulcers: Quick Reference Guide. Emily Haesler (Ed.). Osborne Park, Western Australia: Cambridge Media; 2014.
7. CGS Administrators, LLC , Noridian Healthcare Solutions, LLC. Pressure Reducing Support Surfaces - Group 2. CMS.gov Centers for Medicare & Medicaid Services. <https://www.cms.gov/medicare-coverage-database/search/search-results.aspx?CoverageSelection=Local&ArticleType=All&PolicyType=Final&s=All&Keyword=Pressure%2BReducing%2BSupport>

- %2BSurfaces&KeywordLookUp=Title&KeywordSearchType=And&bc=gAAAAAAA  
AAAAAA%3D%3D&. Published October 1, 2015.
8. Gould L, Stuntz M, Giovannelli M, et al. Wound healing society 2015 update on guidelines for pressure ulcers. *Wound Repair and Regeneration*. 2016;24(1):145-162. doi:10.1111/wrr.12396.
  9. Titus L, Guilbault L, Mortenson B, et al. Wheeled Mobility and Seating Equipment. Spinal Cord Injury Research Evidence. <https://scireproject.com/evidence/rehabilitation-evidence/wheeled-mobility-and-seating-equipment/>. Published December 30, 2019.
  10. National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure Ulcers: Clinical Practice Guideline. Emily Haesler (Ed.). Cambridge Media: Osborne Park, Western Australia; 2014.
  11. Houghton PE, Campbell KE, CPG Panel. Canadian Best Practice Guidelines for the Prevention and Management of Pressure Ulcers in People with Spinal Cord Injury. A Resource Handbook for Clinicians. Katicka Integrated Communications Inc; 2013. <http://www.onf.org>.
  12. National Clinical Guideline Centre (UK). The Prevention and Management of Pressure Ulcers in Primary and Secondary Care. [nice.org.uk](http://www.nice.org.uk). <https://www.ncbi.nlm.nih.gov/pubmed/25340232>. Published April 2014.
  13. Local Coverage Determination (LCD): Wheelchair Seating (L33312). Centers for Medicare & Medicaid Services, Baltimore, MD. CGS Administrators, LLC, Noridian Healthcare Solutions, LLC. <https://www.cms.gov/medicare-coverage-database/search/lcd-date-search.aspx?DocID=L33312&bc=gAAAAAAAAAAAAA>. Published October 1, 2015.
  14. Arias S, Cardiel E, Rogeli P, et al. An alternating pressure sequence proposal for an air-cell cushion for preventing pressure ulcers. 2014 36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. 2014:3480-3483. doi:10.1109/embc.2014.6944372.
  15. Glickman LB, Geigle PR, Paleg GS. A systematic review of supported standing programs. *J Pediatr Rehabil Med*. 2010;3(3):197-213. doi:10.3233/PRM-2010-0129.
  16. Nordström B, Näslund A, Eriksson M, et al. The impact of supported standing on well-being and quality of life. *Physiother Can*. 2013;65(4):344-352. doi:10.3138/ptc.2012-27.
  17. Paleg GS, Smith BA, Glickman LB. Systematic review and evidence-based clinical recommendations for dosing of pediatric supported standing programs. *Pediatr Phys Ther*. 2013;25(3):232-247. doi:10.1097/PEP.0b013e318299d5e7.
  18. Bushby K, Finkel R, Birnkrant DJ, et al. Diagnosis and management of Duchenne muscular dystrophy, part 2: implementation of multidisciplinary care [published correction appears in *Lancet Neurol*. 2010 Mar;9(3):237]. *Lancet Neurol*. 2010;9(2):177-189. doi:10.1016/S1474-4422(09)70272-8.

19. National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure Ulcers: Clinical Practice Guideline. Emily Haesler (Ed.). Cambridge Media: Osborne Park, Western Australia; 2014.
20. Gupta S, Gabriel A, Lantis J, Téot L. Clinical recommendations and practical guide for negative pressure wound therapy with instillation. *Int Wound J*. 2016;13(2):159-174. doi:10.1111/iwj.12452.
21. Centers for Medicare and Medicaid Services. Local Coverage Determination for Negative Pressure Wound Therapy Pumps (L33821). CMS.gov Centers for Medicare & Medicaid Services. <https://www.cms.gov/medicare-coverage-database/search/document-id-search-results.aspx?DocID=L33821&bc=iAAAAAAAAAAAAAAAA%3D%3D>. Published October 1, 2015.
22. Washington Health Care Authority. Negative pressure wound therapy (NPWT). Washington State Health Care Authority. <https://www.hca.wa.gov/about-hca/health-technology-assessment/negative-pressure-wound-therapy>. Published 2016.
23. Centers for Medicare and Medicaid Services. Local Coverage Article: Standard Documentation Requirements for All Claims Submitted to DME MACs (A55426). CMS.gov. Centers for Medicare & Medicaid Services. <https://www.cms.gov/medicare-coverage-database/details/article-details.aspx?articleId=55426&ver=76&Date=&DocID=A55426&bc=ggAAAAGAAAA&>. Published January 1, 2017.
24. Centers for Medicare and Medicaid Services. Medicare Benefit Policy Manual Chapter 15 Section 110.2 Repairs, Replacement, Maintenance and Delivery. CMS.gov. Centers for Medicare & Medicaid Services <https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/bp102c15.pdf>. Published July 12, 2019.

# Custom Fit DME

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## Custom Fit DME Criteria

Custom-fit equipment, prosthetics and orthotics may be indicated when basic coverage criteria have been met and there is documentation of **one** of the following:

- Deformity precludes use of standard fitting
- Body type precludes use of standard fitting
- Need for stabilization that cannot be met with a standard fitting
- Failed trial of device with standard fitting

# Standing Frames

DME.CU.104.A

v1.0.2022

## HCPCS Codes

E0638, E0641, E0642

## Standing Frames - Criteria

A standing frame is indicated when there is documentation of **all** of the following:

- Inability to stand without support as a result of muscle tone abnormalities or decreased motor control
- Inability to ambulate
- Individual is under the care of a physician trained to evaluate function, rehabilitation and the neuromuscular system
- Device is prescribed by physician for daily home use
- Device will be used for at least 12 months
- Individual has had a trial of the device and can tolerate being upright
- Individual and/or caregiver can operate the device

## References

1. Glickman LB, Geigle PR, Paleg GS. A systematic review of supported standing programs. *J Pediatr Rehabil Med*. 2010;3(3):197-213. doi:10.3233/PRM-2010-0129.
2. Nordström B, Näslund A, Eriksson M, Nyberg L, Ekenberg L. The impact of supported standing on well-being and quality of life. *Physiother Can*. 2013;65(4):344-352. doi:10.3138/ptc.2012-27.
3. Paleg GS, Smith BA, Glickman LB. Systematic review and evidence-based clinical recommendations for dosing of pediatric supported standing programs. *Pediatr Phys Ther*. 2013;25(3):232-247. doi:10.1097/PEP.0b013e318299d5e7.
4. Bushby K, Finkel R, Birnkrant DJ, et al. Diagnosis and management of Duchenne muscular dystrophy, part 2: implementation of multidisciplinary care [published correction appears in *Lancet Neurol*. 2010 Mar;9(3):237]. *Lancet Neurol*. 2010;9(2):177-189.

# Cranial Hair Prosthesis (wig)

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A cranial hair prosthesis is a prosthetic appliance for hair loss that is used to conceal baldness.

## HCPCS Codes

A9282

## Cranial Hair Prosthesis (wig) - Criteria

A cranial hair prosthesis is indicated when an individual has hair loss due to **any** of the following conditions:

- Burns causing permanent alopecia
- Chemotherapy
- Congenital baldness
- Medication-induced hair loss unresponsive to other treatment
- Infections causing hair loss unresponsive to other treatment
- Lupus
- Radiation therapy
- Traumatic injury
- Other documented medical conditions that result in hair loss

## References

1. Alves R, Grimalt R. Hair loss in children. *Curr Probl Dermatol*. 2015;47:55-66. doi:10.1159/000369405.
2. Chon SY, Champion RW, Geddes ER, Rashid RM. Chemotherapy-induced alopecia. *J Am Acad Dermatol*. 2012;67(1):e37-e47. doi:10.1016/j.jaad.2011.02.026.
3. Freites-Martinez A, Shapiro J, Goldfarb S, et al. Hair disorders in patients with cancer. *J Am Acad Dermatol*. 2019;80(5):1179-1196. doi:10.1016/j.jaad.2018.03.055.
4. Pratt CH, King LE Jr, Messenger AG, Christiano AM, Sundberg JP. Alopecia areata. *Nat Rev Dis Primers*. 2017;3:17011. doi:10.1038/nrdp.2017.11.
5. Strazzulla LC, Wang EHC, Avila L, et al. Alopecia areata: Disease characteristics, clinical evaluation, and new perspectives on pathogenesis. *J Am Acad Dermatol*. 2018;78(1):1-12. doi:10.1016/j.jaad.2017.04.1141.



6. Udompanich S, Chanprapaph K, Suchonwanit P. Hair and Scalp Changes in Cutaneous and Systemic Lupus Erythematosus. *Am J Clin Dermatol*. 2018;19(5):679-694. doi:10.1007/s40257-018-0363-8.

# Home Care

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# Hospital Beds

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## HCPCS Codes

E0250, E0261, E0290, E0291, E0328, E0255, E0256, E0292, E0293, E0260, E0261, E0294, E0295, E0329, E0265, E0266, E0296, E0297, E0301, E0303, E0302, E0304

## Hospital Beds - Criteria

### Fixed Height Hospital Bed

#### HCPCS (E0250, E0261, E0290, E0291, E0328)

- A fixed height hospital bed is indicated when **one** the following applies:
  - The individual requires body positioning that is not feasible with a standard bed
  - The individual has a medical condition that requires the head of the bed to be elevated 30 degrees or more
  - The individual requires specialized equipment that can only be attached to a hospital bed

### Variable Height Hospital Bed

#### HCPCS (E0255, E0256, E0292, E0293)

- A variable height hospital bed is indicated when there is documentation of **both** of the following:
  - The individual requires a different bed height for transfers to chair, wheelchair or standing position
  - **One** or more of the following applies:
    - The individual requires body positioning that is not feasible with a standard bed
    - The individual has a medical condition that requires the head of the bed to be elevated 30 degrees or more
    - The individual requires specialized equipment that can only be attached to a hospital bed

## Semi-electric Hospital Bed

### HCPCS Codes (E0260, E0261, E0294, E0295, E0329)

- A semi-electric hospital bed is indicated when there is documentation of **both** of the following:
  - The individual requires frequent changes in body position or has an urgent need for a change in body position
  - **One** the following applies:
    - The individual requires body positioning that is not feasible with a standard bed
    - The individual has a medical condition that requires the head of the bed to be elevated 30 degrees or more
    - The individual requires specialized equipment that can only be attached to a hospital bed

## Total Electric Hospital Bed

### HCPCS Codes (E0265, E0266, E0296, E0297)

A total electric hospital bed is indicated when there is documentation of **all** of the following:

- The individual requires frequent changes in body position and/or has an urgent need for a change in body position
- The electric adjustable bed height is needed for independent transfers
- **One** or more of the following applies:
  - The individual requires body positioning that is not feasible with a standard bed
  - The individual has a medical condition that requires the head of the bed to be elevated 30 degrees or more
  - The individual requires specialized equipment that can only be attached to a hospital bed

## Heavy Duty Extra Wide Hospital Bed

### HCPCS Codes (E0301, E0303)

A heavy duty extra wide hospital bed is indicated when there is documentation of **both** of the following:

- The individual weighs more than 350 pounds but does not exceed 600 pounds
- **One** or more of the following applies:

- The individual requires body positioning that is not feasible with a standard bed
- The individual has a medical condition that requires the head of the bed to be elevated 30 degrees or more
- The individual requires specialized equipment that can only be attached to a hospital bed

## Extra Heavy Duty Hospital Bed

### HCPSC Codes (E0302, E0304)

An extra heavy duty hospital bed is indicated when there is documentation of **both** of the following:

- The individual weighs more than 600 pounds
- **One** or more of the following applies:
  - The individual requires body positioning that is not feasible with a standard bed
  - The individual has a medical condition that requires the head of the bed to be elevated 30 degrees or more
  - The individual requires specialized equipment that can only be attached to a hospital bed

## References

1. De D, Wynn E. Preventing muscular contractures through routine stroke patient care. *Br J Nurs*. 2014;23(14):781-786. doi:10.12968/bjon.2014.23.14.781.
2. Lo CC, Tsai SH, Lin BS. Novel non-contact control system of electric bed for medical healthcare. *Med Biol Eng Comput*. 2017;55(3):517-526. doi:10.1007/s11517-016-1533-6.
3. Caboor DE, Verlinden MO, Zinzen E, et al. Implications of an adjustable bed height during standard nursing tasks on spinal motion, perceived exertion and muscular activity. *Ergonomics*. 2000;43(10):1771-1780. doi:10.1080/001401300750004177.
4. Johnson KL, Meyenburg T. Physiological rationale and current evidence for therapeutic positioning of critically ill patients. *AACN Adv Crit Care*. 2009;20(3):228-242. doi:10.1097/NCI.0b013e3181add8db.
5. Lippoldt J, Pernicka E, Staudinger T. Interface pressure at different degrees of backrest elevation with various types of pressure-redistribution surfaces. *Am J Crit Care*. 2014;23(2):119-126. doi:10.4037/ajcc2014670.
6. Schallom M, Dykeman B, Metheny N, Kirby J, Pierce J. Head-of-bed elevation and early outcomes of gastric reflux, aspiration and pressure ulcers: a feasibility study. *Am J Crit Care*. 2015;24(1):57-66. doi:10.4037/ajcc2015781.

7. Khan BA, Sodhi JS, Zargar SA, et al. Effect of bed head elevation during sleep in symptomatic patients of nocturnal gastroesophageal reflux. *J Gastroenterol Hepatol*. 2012;27(6):1078-1082. doi:10.1111/j.1440-1746.2011.06968.
8. Healey F, Oliver D, Milne A, Connelly JB. The effect of bedrails on falls and injury: a systematic review of clinical studies. *Age Ageing*. 2008;37(4):368-378. doi:10.1093/ageing/afn112.

# Mobility

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# Manual Wheelchairs and Accessories

DME.WC.100.A

v1.0.2022

## Definitions

- **Mobility** — The ability to move about in one's environment
- **Activities of daily living (ADLs)** — Activities required for personal care including toileting, feeding, dressing, grooming and bathing

## HCPCS Codes

Paragraph

## Manual Wheelchairs

### Standard Wheelchair (HCPCS K0001)

A standard wheelchair may be indicated when **all** of the following apply:

- The individual has limited mobility that affects mobility-related activities of daily living (MRADLs)
- The individual's mobility needs cannot be met with a cane, walker or crutches
- The individual or caregiver can propel the wheelchair
- The individual's home has access and space for the wheelchair
- The wheelchair will be used in the home

### Hemi Wheelchair (HCPCS K0002)

A hemi wheelchair may be indicated when **all** of the following apply:

- The individual has limited mobility that affects mobility-related activities of daily living (MRADLs)
- The individual's mobility needs cannot be met with a cane, walker or crutches
- The individual or caregiver can propel the wheelchair
- The individual needs a low seat height due to (**any**):
  - Short stature
  - To enable patient's feet to touch the ground for self-propulsion
- The patient's home has access and space for the wheelchair
- The wheelchair will be used in the home



### **Lightweight Wheelchair (HCPCS K0003)**

A lightweight wheelchair may be indicated when **all** of the following apply:

- The individual has limited mobility that affects mobility-related activities of daily living (MRADLs)
- The individual's mobility needs cannot be met with a cane, walker or crutches
- The individual cannot propel a standard wheelchair
- The individual can propel a lightweight wheelchair
- The individual's home has access and space for the wheelchair
- The wheelchair will be used in the home

### **High Strength Lightweight Wheelchair (HCPCS K0004)**

A high strength lightweight wheelchair may be indicated when **all** of the following apply:

- The individual has limited mobility that affects mobility-related activities of daily living (MRADLs)
- The individual's mobility needs cannot be met with a cane, walker or crutches
- The individual will spend at least 2 hours per day in the wheelchair
- The individual can propel the high strength lightweight wheelchair
- The individual can propel the wheelchair while engaging in activities at home that cannot be accommodated by a standard, lightweight or hemi wheelchair OR the individual requires a seat depth, height or width that cannot be accommodated by a standard, lightweight or hemi wheelchair
- The individual's home has access and space for the wheelchair
- The wheelchair will be used in the home

### **Ultra Lightweight Wheelchair (HCPCS K0005)**

An ultra lightweight wheelchair may be indicated when **all** of the following apply:

- The individual has limited mobility that affects mobility-related activities of daily living (MRADLs)
- The individual's mobility needs cannot be met with a cane, walker or crutches
- The individual or a caregiver can propel the wheelchair
- The individual must use the wheelchair full-time
- The individual must require unique fitting and adjustments that cannot be provided by another wheelchair type
- The individual must have a wheelchair specialty evaluation performed by a medical professional with specific training and expertise in wheelchair assessments

- The individual's home has access and space for the wheelchair
- The wheelchair will be used in the home

### **Heavy Duty Wheelchair (HCPCS K0006)**

A heavy duty wheelchair may be indicated when **all** of the following apply:

- The individual has limited mobility that affects mobility-related activities of daily living (MRADLs)
- The individual's mobility needs cannot be met with a cane, walker or crutches
- The individual or caregiver can propel the wheelchair
- The individual's home has access and space for the wheelchair
- The wheelchair will be used in the home
- The individual weighs more than 250 pounds or has severe spasticity

### **Extra Heavy Duty Wheelchair (HCPCS K0007)**

An extra heavy duty wheelchair may be indicated when **all** of the following apply:

- The individual has limited mobility that affects mobility-related activities of daily living (MRADLs)
- The individual's mobility needs cannot be met with a cane, walker or crutches
- The individual or caregiver can propel the wheelchair
- The individual's home has access and space for the wheelchair
- The wheelchair will be used in the home
- The individual weighs more than 300 pounds

### **Manual Wheelchair with Tilt in Space (HCPCS E1161)**

A manual wheelchair with tilt in space may be indicated when **all** of the following apply:

- The individual has limited mobility that affects mobility-related activities of daily living (MRADLs)
- The individual's mobility needs cannot be met with a cane, walker or crutches
- The individual or caregiver can propel the wheelchair
- The individual's home has access and space for the wheelchair
- The wheelchair will be used in the home
- The individual must have a wheelchair specialty evaluation performed by a medical professional with specific training and expertise in wheelchair assessments

- The individual has documented medical or functional impairments that would preclude the use of a wheelchair without the tilt feature

### **Transport Wheelchair (HCPCS E1037, E1038, or E1039)**

A transport wheelchair may be indicated when **all** of the following apply:

- The individual has limited mobility that affects mobility-related activities of daily living (MRADLs)
- The individual's mobility needs cannot be met with a cane, walker or crutches
- The individual's caregiver can propel the wheelchair
- The individual's home has access and space for the wheelchair
- The wheelchair will be used in the home
- There is documentation why a standard wheelchair would not be appropriate for the individual

## **Wheelchair Accessories**

### **Adjustable Height Arm Rests (HCPCS E0973, K0017, K0018, K0020)**

Adjustable height wheelchair arm rests may be indicated when **both** of the following apply:

- Medical necessity criteria for a manual wheelchair have been met
- The patient has a medical or functional reason for the standard wheelchair arm height and spends 2 hours or more in the wheelchair each day

### **Elevating Leg Rests (HCPCS E0990, K0046, K0047, K0053, K0195)**

Elevating wheelchair leg rests may be indicated when **both** of the following apply:

- Medical necessity criteria for a manual wheelchair have been met
- The individual has **one** of the following:
  - Lower extremity edema
  - A condition that prevents 90 degree flexion at the knee
  - A reclining wheelchair back

### **Nonstandard Seat Frame (HCPCS E2201, E2202, E2203, E2204)**

A nonstandard wheelchair seat frame may be indicated when **both** of the following apply:

- Medical necessity criteria for a manual wheelchair have been met
- The patient has physical dimensions that preclude the use of a standard frame

### Manual Fully Reclining Back (HCPCS E1226)

A manual fully reclining wheelchair back may be indicated when **both** of the following apply:

- Medical necessity criteria for a manual wheelchair have been met
- The individual has **one** of the following:
  - not perform a functional weight shift
  - Individual uses intermittent catheterization for bladder management and cannot independently transfer from wheelchair to bed

### References

1. Stillman MD, Bertocci G, Smalley C, Williams S, Frost KL. Healthcare utilization and associated barriers experienced by wheelchair users: A pilot study. *Disabil Health J.* 2017;10(4):502-508. doi:10.1016/j.dhjo.2017.02.003.
2. EnableNSW and Lifetime Care & Support Authority, *Guidelines for the prescription of a seated wheelchair or mobility scooter for people with a traumatic brain injury or spinal cord injury.* EnableNSW and LTCSA Editor, 2011, Sydney.
3. 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.
4. Kwarciak AM, Cooper RA, Ammer WA, Fitzgerald SG, Boninger ML, Cooper R. Fatigue testing of selected suspension manual wheelchairs using ANSI/RESNA standards. *Arch Phys Med Rehabil.* 2005;86(1):123-129. doi:10.1016/j.apmr.2003.11.038.
5. 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
6. Medola FO, Elui VM, Santana Cda S, Fortulan CA. Aspects of manual wheelchair configuration affecting mobility: a review. *J Phys Ther Sci.* 2014;26(2):313-318. doi:10.1589/jpts.26.313.
7. Flemmer CL, Flemmer RC. A review of manual wheelchairs. *Disabil Rehabil Assist Technol.* 2016;11(3):177-187. doi:10.3109/17483107.2015.1099747.
8. Edelstein JE. Assistive devices for ambulation. *Phys Med Rehabil Clin N Am.* 2013;24(2):291-303. doi:10.1016/j.pmr.2012.11.001.

9. Hosseini SM, Oyster ML, Kirby RL, Harrington AL, Boninger ML. Manual wheelchair skills capacity predicts quality of life and community integration in persons with spinal cord injury. *Arch Phys Med Rehabil*. 2012;93(12):2237-2243. doi:10.1016/j.apmr.2012.05.021.
10. 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.
11. 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.
12. 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.
13. Taylor S, Gassaway J, Heisler-Varriale LA, et al. Patterns in Wheeled Mobility Skills Training, Equipment Evaluation, and Utilization: Findings from the SCIRehab Project. *Assist Technol*. 2015;27(2):59-68. doi:10.1080/10400435.2014.978511.
14. Cherubini M, Melchiorri G. Descriptive study about congruence in wheelchair prescription. *Eur J Phys Rehabil Med*. 2012;48(2):217-222.
15. Digiovine CP, Koontz AM, Berner TF, et al. Wheelchairs and Seating Systems. In: Cifu DX, ed. *Braddom's Physical Medicine and Rehabilitation*. 6th ed. Elsevier; 2020:261-290.
16. Nelson LM, Alexander TA. Wheeled mobility: device prescription and care. In: Webster JB, Murphy DP, editors. *Atlas of Orthoses and Assistive Devices*. 5th ed. Philadelphia, PA: Elsevier; 2019:390-397.
17. de Groot S, Vegter RJ, van der Woude LH. Effect of wheelchair mass, tire type and tire pressure on physical strain and wheelchair propulsion technique. *Med Eng Phys*. 2013;35(10):1476-1482. doi:10.1016/j.medengphy.2013.03.019.

# Power Operated Vehicles Guideline

DME.WC.109.A

v1.0.2022

## HCPCS Codes

K0800, K0801, K0802, K0806, K0807, K0808, K0812

## Power Operated Vehicles Guidelines

### Definitions

- **Mobility** — The ability to move about in one's environment
- **Activities of daily living (ADL's)** — Activities required for personal care including toileting, feeding, dressing, grooming and bathing
- **Power operated vehicle** — A 3- or 4-wheeled motorized mobility device with tiller steering and limited seat modification capabilities that is used for people with mobility limitations

### Standard Group 1 POV (K0800)

- A standard group 1 power operated vehicle may be indicated when **all** of the following apply:
  - The patient has limited mobility that affects mobility-related activities of daily living (MRADLs)
  - The patient's mobility needs cannot be met with a cane, walker or crutches
  - The patient cannot propel a manual wheelchair
  - The patient can safely and independently control the power operated vehicle
  - The patient can safely transfer into and out of the power operated vehicle
  - The patient's home has access and space to maneuver the power operated vehicle

### Heavy Duty Group 1 POV (K0801)

A heavy duty group 1 power operated vehicle may be indicated when **all** of the following apply:

- The patient has limited mobility that affects mobility-related activities of daily living (MRADLs)
- The patient's mobility needs cannot be met with a cane, walker or crutches
- The patient cannot propel a manual wheelchair
- The patient can safely and independently control the power operated vehicle

- The patient can safely transfer into and out of the power operated vehicle
- The patient's home has access and space to maneuver the power operated vehicle
- The patient weighs 301 to 450 pounds

### **Very Heavy Duty Group 1 POV (K0802)**

A very heavy duty group 1 power operated vehicle may be indicated when **all** of the following apply:

- The patient has limited mobility that affects mobility-related activities of daily living (MRADLs)
- The patient's mobility needs cannot be met with a cane, walker or crutches
- The patient cannot propel a manual wheelchair
- The patient can safely and independently control the power operated vehicle
- The patient can safely transfer into and out of the power operated vehicle
- The patient's home has access and space to maneuver the power operated vehicle
- The patient weighs 451 to 600 pounds

### **Standard Group 2 POV (K0806)**

A standard group 2 power operated vehicle may be indicated when **all** of the following apply:

- The patient has limited mobility that affects mobility-related activities of daily living (MRADLs)
- The patient's mobility needs cannot be met with a cane, walker or crutches
- The patient cannot propel a manual wheelchair
- The patient can safely and independently control the power operated vehicle
- The patient can safely transfer into and out of the power operated vehicle
- The patient's home has access and space to maneuver the power operated vehicle
- There is documentation of a medical reason why a group 1 power operated vehicle cannot be used in the home

### **Heavy Duty Group 2 POV (K0807)**

A heavy duty group 2 power operated vehicle may be indicated when **all** of the following apply:

- The patient has limited mobility that affects mobility-related activities of daily living (MRADLs)
- The patient's mobility needs cannot be met with a cane, walker or crutches

- The patient cannot propel a manual wheelchair
- The patient can safely and independently control the power operated vehicle
- The patient can safely transfer into and out of the power operated vehicle
- The patient's home has access and space to maneuver the power operated vehicle
- The patient weighs 301 to 450 pounds
- There is documentation of a medical reason why a group 1 power operated vehicle cannot be used in the home

### **Very Heavy Duty Group 2 POV (K0808)**

A very heavy duty group 2 power operated vehicle may be indicated when **all** of the following apply:

- The patient has limited mobility that affects mobility-related activities of daily living (MRADLs)
- The patient's mobility needs cannot be met with a cane, walker or crutches
- The patient cannot propel a manual wheelchair
- The patient can safely and independently control the power operated vehicle
- The patient can safely transfer into and out of the power operated vehicle
- The patient's home has access and space to maneuver the power operated vehicle
- The patient weighs 451 to 600 pounds
- There is documentation of a medical reason why a group 1 power operated vehicle cannot be used in the home

### **References**

1. Mortenson WB, Hoag E, Higgins R, Emery R, Joyce L. Stakeholders' perspectives related to the development of a scooter training program. *Disabil Rehabil Assist Technol*. 2016;11(4):289-294. doi:10.3109/17483107.2014.951975.
2. King EC, Dutta T, Gorski SM, Holliday PJ, Fernie GR. Design of built environments to accommodate mobility scooter users: part II. *Disabil Rehabil Assist Technol*. 2011;6(5):432-439. doi:10.3109/17483107.2010.549898.
3. Karmarkar AM, Dicianno BE, Cooper R, et al. Demographic profile of older adults using wheeled mobility devices. *J Aging Res*. 2011;2011:560358. doi:10.4061/2011/560358.
4. Cordes C, Heutink J, Brookhuis KA, et al. Mobility scooter driving ability in visually impaired individuals. *Disabil Rehabil*. 2018;40(12):1372-1378. doi:10.1080/09638288.2017.1295471.



5. Smith EM, Giesbrecht EM, Mortenson WB, Miller WC. Prevalence of Wheelchair and Scooter Use Among Community-Dwelling Canadians. *Phys Ther*. 2016;96(8):1135-1142. doi:10.2522/ptj.20150574.
6. Zagol BW, Krasuski RA. Effect of motorized scooters on quality of life and cardiovascular risk. *Am J Cardiol*. 2010;105(5):672-676. doi:10.1016/j.amjcard.2009.10.049.
7. Edwards K, McCluskey A. A survey of adult power wheelchair and scooter users. *Disabil Rehabil Assist Technol*. 2010;5(6):411-419. doi:10.3109/17483101003793412.
8. Dutta T, King EC, Holliday PJ, et al. Design of built environments to accommodate mobility scooter users: part I. Disability and Rehabilitation. *Assistive Technology*. 2011;6(1):67-76.
9. Souza AE, Pearlman JL, Cooper R, et al. Evaluation of scooters using ANSI/RESNA standards. *J Rehabil Res Dev*. 2013;50(7):1017-1034. doi:10.1682/JRRD.2011.03.0054.
10. Löfqvist C, Pettersson C, Iwarsson S, Brandt A. Mobility and mobility-related participation outcomes of powered wheelchair and scooter interventions after 4-months and 1-year use. *Disabil Rehabil Assist Technol*. 2012;7(3):211-218. doi:10.3109/17483107.2011.619224.
11. Mortenson WB, Clarke LH, Best K. Prescribers' experiences with powered mobility prescription among older adults. *Am J Occup Ther*. 2013;67(1):100-107. doi:10.5014/ajot.2013.006122.
12. Hagberg L, Hermansson L, Fredriksson C, Pettersson I. Cost-effectiveness of powered mobility devices for elderly people with disability. *Disabil Rehabil Assist Technol*. 2017;12(2):115-120. doi:10.3109/17483107.2014.1002540.
13. Rabadi MH, Vincent AS. Factors predictive of type of powered mobility received by veterans with disability. *Med Sci Monit*. 2015;21:1324-1332. doi:10.12659/MSM.893438.

# Skin Protection Wheelchair Cushion

DME.WC.102.A

v1.0.2022

## HCPCS Codes

E2603, E2604, E2622, E2523

## Skin Protection Wheelchair Cushion

- Skin protection wheelchair cushion is indicated when **both**:
  - The patient has a manual or power wheelchair with a sling/solid seat/back and basic wheelchair coverage criteria have been met
  - The individual has **one** of the following:
    - Current pressure ulcer or history of pressure ulcer in the area of contact with the seating surface
    - Absent or impaired sensation in area of contact with the seating surface or inability to perform a functional weight shift

## References

1. Titus L, Guilbault L, Mortenson B, et al. (2019). Wheeled Mobility and Seating Equipment Following Spinal Cord Injury. In Eng JJ, Teasell RW, Miller WC, et al, editors. Spinal Cord Injury Rehabilitation Evidence. Version 7.0: p 1-190. The SCIRE Project University of British Columbia Vancouver, BC.
2. National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure Ulcers: Clinical Practice Guideline. Emily Haesler (Ed.). Cambridge Media: Osborne Park, Western Australia; 2014
3. Houghton P. Canadian Best Practice Guidelines for the Prevention and Management of Pressure Ulcers in People with Spinal Cord Injury. A Resource Handbook for Clinicians. 2013. Available from: <http://onf.org>.
4. National Clinical Guideline Centre (UK). The Prevention and Management of Pressure Ulcers in Primary and Secondary Care. London: National Institute for Health and Care Excellence (UK); April 2014.
5. CGS Administrators, LLC, ed. Local Coverage Determination for Wheelchair Seating (L33312). CMS.gov. <https://www.cms.gov/medicare-coverage-database/>. Published October 1, 2015. Revised May 1, 2021

6. Arias S, Cardiel E, Rogeli P, et al. An alternating pressure sequence proposal for an air-cell cushion for preventing pressure ulcers. *Annu Int Conf IEEE Eng Med Biol Soc.* 2014;2014:3480-3483. doi:10.1109/EMBC.2014.6944372.

# Power Wheelchair Repairs and Replacement Accessories

DME.WC.103.A

v1.0.2022

## HCPCS Codes

E2359, E2361, E2363, E2365, E2371, K0733, E2366, E2367, E2397, E2358, E2360, E2362, E2364, E2372, E1002, E1003, E1004, E1005, E1006, E1007, E1008, E1009, E1010, E1012, K0739, K0839, K0840, K0843, K0860, K0861, K0862, K0863, K0864, K0890, K0891, E1399, K0669, A9900, A9999, E0978, E1028, E2351, K0015, K0017, K0018, K0019, K0020, E2209, E0973, E0951, E0952, E0954, E0990, E0995, E1020, K0037, K0038, K0039, K0040, K0041, K0042, K0043, K0044, K0045, K0046, K0047, K0050, K0051, K0052, K0053, E2367, E2366, E2300, E2301, E2310, E2311, E2312, E2313, E2321, E2322, E2323, E2324, E2325, E2326, E2327, E2328, E2329, E2330, E2331, E2373, E2374, E2375, E2376, E2377, E1016, E1019, E2351, E2368, E2369, E2370, E2378, E2381, E2382, E2383, E2384, E2385, E2386, E2387, E2388, E2389, E2390, E2391, E2392, E2394, E2395, E2396, K0098, E0705, E0950, E0978, E0981, E0982, E1029, E1030, E2207, E2208, K0105, K0108

## Power Wheelchair Repairs and Replacement Accessories - Criteria

- Power wheelchair repairs and replacement accessories may be indicated when **both** of the following apply:
  - The patient uses a medically necessary power wheelchair
  - There is documentation of a problem with the wheelchair and/or accessories that impact its ability to function

## References

1. National Coverage Determination (NCD) for mobility assistive equipment (MAE) (280.3). Medicare Coverage Database [Internet] Centers for Medicare and Medicaid Services. Accessed at: <https://www.cms.gov/medicare-coverage-database>.
2. Enable NSW Lifetime Care & Support Authority. Guidelines for the prescription of a seated wheelchair or mobility scooter for people with a traumatic brain injury or spinal cord injury. Sydney: 2011. Available from: <http://www.lifetimecare.nsw.gov.au/lifetime-care-and-supportscheme/guidelines,-policies-and-legislation>.
3. 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.

4. DiGiovine CP, Koontz A, Berner T, Kim DJ, Schmeler M. Wheelchairs and seating systems. In: Cifu DX, et al., editors. *Braddom's Physical Medicine and Rehabilitation*. 5th ed. Elsevier; 2016:289-320.
5. Ward AL, Hammond S, Holsten S, Bravver E, Brooks BR. Power Wheelchair Use in Persons With Amyotrophic Lateral Sclerosis: Changes Over Time. *Assist Technol*. 2015;27(4):238-245. doi:10.1080/10400435.2015.1040896.
6. Dolan MJ, Bolton MJ, Henderson GI. Comparison of seating, powered characteristics and functions and costs of electrically powered wheelchairs in a general population of users. *Disabil Rehabil Assist Technol*. 2019;14(1):56-61. doi:10.1080/17483107.2017.1393701.
7. Ogata Y, Katsumura M, Yano K, Nakao T, Hamada A, Torii K. Joystick Grip for Electric Wheelchair for Tension-Athetosis-Type Cerebral Palsy. *Annu Int Conf IEEE Eng Med Biol Soc*. 2019;2019:1666-1669. doi:10.1109/EMBC.2019.8857419.
8. Taylor S, Gassaway J, Heisler-Varriale LA, et al. Patterns in Wheeled Mobility Skills Training, Equipment Evaluation, and Utilization: Findings from the SCIRehab Project. *Assist Technol*. 2015;27(2):59-68. doi:10.1080/10400435.2014.978511.
9. Thorp EB, Abdollahi F, Chen D, et al. Upper Body-Based Power Wheelchair Control Interface for Individuals With Tetraplegia. *IEEE Trans Neural Syst Rehabil Eng*. 2016;24(2):249-260. doi:10.1109/TNSRE.2015.2439240.

# Musculoskeletal

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# Pediatric Foot Orthotics and Orthopedic Shoes

DME.MU.114.A

v1.0.2022

This policy applies to patients under the age of 18

## HCPCS Codes

A9283, L3000, L3001, L3002, L3003, L3010, L3020, L3030, L3031, L3070, L3080, L3090, L3100, L3140, L3150, L3160, L3201, L3202, L3203, L3204, L3206, L3207, L3215, L3216, L3217, L3219, L3221, L3222, L3224, L3225, L3230, L3250, L3251, L3252, L3253, L3254, L3255, L3257, L3300, L3310, L3320, L3330, L3332, L3334, L3340, L3350, L3360, L3370, L3380, L3390, L3400, L3410, L3420, L3430, L3440, L3450, L3455, L3460, L3465, L3470, L3480, L3485, L3500, L3510, L3520, L3530, L3540, L3550, L3560, L3570, L3580, L3590, L3595, L3600, L3610, L3620, L3630, L3640, L3649

## Pediatric Foot Orthotics and Orthopedic Shoes - Criteria

Foot orthotics and/or orthopedic shoes can be approved for pediatric patients when there is documentation of **one** or more of the following conditions:

- A foot or ankle deformity
- Abnormal foot or ankle range of motion
- Foot or ankle weakness
- Cerebral palsy with abnormal gait
- Juvenile arthritis

## References

1. Pasin Neto H, Grecco LAC, Ferreira LAB, et al. Postural insoles on gait in children with cerebral palsy: Randomized controlled double-blind clinical trial. *J Bodyw Mov Ther.* 2017;21(4):890-895. doi:10.1016/j.jbmt.2017.03.005.
2. Najafi B, Barnica E, Wrobel JS, Burns J. Dynamic plantar loading index: understanding the benefit of custom foot orthoses for painful pes cavus. *J Biomech.* 2012;45(9):1705-1711. doi:10.1016/j.jbiomech.2012.03.006.
3. Kedem P, Scher DM. Foot deformities in children with cerebral palsy. *Curr Opin Pediatr.* 2015;27(1):67-74. doi:10.1097/MOP.0000000000000180.
4. Karamitopoulos MS, Nirenstein L. Neuromuscular Foot: Spastic Cerebral Palsy. *Foot Ankle Clin.* 2015;20(4):657-668. doi:10.1016/j.fcl.2015.07.008.

5. Kadhim M, Miller F. Pes planovalgus deformity in children with cerebral palsy: review article. *J Pediatr Orthop B*. 2014;23(5):400-405. doi:10.1097/BPB.0000000000000073.
6. Janisse DJ, Janisse E. Shoe modification and the use of orthoses in the treatment of foot and ankle pathology. *J Am Acad Orthop Surg*. 2008;16(3):152-158. doi:10.5435/00124635-200803000-00006.
7. Coda A, Fowlie PW, Davidson JE, et al. Foot orthoses in children with juvenile idiopathic arthritis: a randomised controlled trial. *Arch Dis Child*. 2014;99(7):649-651. doi:10.1136/archdischild-2013-305166.
8. Conceição CS, Gomes Neto M, Mendes SM, et al. Systematic review and meta-analysis of effects of foot orthoses on pain and disability in rheumatoid arthritis patients. *Disabil Rehabil*. 2015;37(14):1209-1213. doi:10.3109/09638288.2014.961654.
9. Moreira E, Jones A, Oliveira HA, Jennings F, Fernandes A, Natour J. Effectiveness of insole use in rheumatoid feet: a randomized controlled trial. *Scand J Rheumatol*. 2016;45(5):363-370. doi:10.3109/03009742.2015.1110198



# Static Upper Extremity Orthoses

DME.MU.113.A

v1.0.2022

## HCPCS Codes

L3650, L3660, L3670, L3671, L3674, L3675, L3677, L3678, L3702, L3710, L3720, L3730, L3740, L3760, L3671, L3672, L3673, L3674, L3675, L3676, L3806, L3807, L3808, L3809, L3891, L3900, L3901, L3904, L3905, L3906, L3908, L3912, L3913, L3915, L3916, L3917, L3918, L3919, L3921, L3923, L3924, L3925, L3927, L3929, L3930, L3931, L3933, L3935, L3936, L3956, L3960, L3961, L3962, L3967, L3971, L3973, L3975, L3976, L3977, L3978, L3980, L3981, L3982, L3984, L3995, L3999

## General Information

Orthosis is an external device used to stabilize or immobilize a body part, prevent or correct deformity, protect healing tissues, treat injury and increase function

The following upper extremity orthoses are covered by these criteria

- shoulder
- shoulder-elbow
- shoulder-elbow-wrist-hand
- elbow
- elbow-wrist-hand
- elbow-wrist-hand-finger
- wrist-hand-finger
- wrist-hand
- hand-finger
- finger

## Static Upper Extremity Orthosis - Criteria

A static upper extremity orthosis can be approved for an individual with documentation of **both** of the following:

- **One** of the following conditions is present:
  - A recent injury or surgery
  - Arthritis
  - Peripheral nerve compression
  - Epicondylitis

- A fracture
- Tenosynovitis or tendinitis
- A medical condition resulting in upper extremity paresis, paralysis or muscle weakness
- An upper extremity contracture and **both** of the following:
  - There has been no or minimal progress with occupational or physical therapy
  - The patient's function is affected
- Spasticity and **both** of the following:
  - The patient's function is affected
  - Botulinum toxin injections are being used or have been discussed with the patient and/or caregiver
- Therapy or exercise is included in the plan of care

## References

1. Sameem M, Wood T, Ignacy T, et al. A systematic review of rehabilitation protocols after surgical repair of the extensor tendons in zones V-VIII of the hand. *J Hand Ther.* 2011 Oct-Dec;24(4):365-72; doi:10.1016/j.jht.2011.06.005.
2. Winstein CJ, Stein J, Arena R, et al. Guidelines for Adult Stroke Rehabilitation and Recovery: A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association. *Stroke.* 2016;47(6):e98-e169. doi:10.1161/STR.0000000000000098.
3. Vegt AE, Grond R, Grünschke JS, et al. The effect of two different orthoses on pain, hand function, patient satisfaction and preference in patients with thumb carpometacarpal osteoarthritis: a multicentre, crossover, randomised controlled trial. *Bone Joint J.* 2017;99-B(2):237-244. doi:10.1302/0301-620X.99B2.37684.
4. Valdes K, Marik T. A systematic review of conservative interventions for osteoarthritis of the hand. *J Hand Ther.* 2010;23(4):334-351. doi:10.1016/j.jht.2010.05.001.
5. Jackman M, Novak I, Lannin N. Effectiveness of hand splints in children with cerebral palsy: a systematic review with meta-analysis. *Dev Med Child Neurol.* 2014;56(2):138-147. doi:10.1111/dmcn.12205.
6. Mills PB, Finlayson H, Sudol M, O'Connor R. Systematic review of adjunct therapies to improve outcomes following botulinum toxin injection for treatment of limb spasticity. *Clin Rehabil.* 2016;30(6):537-548. doi:10.1177/0269215515593783.
7. College of Occupational Therapists and Association of Chartered Physiotherapists in Neurology. *Splinting for the Prevention and Correction of Contractures in Adults with Neurological Dysfunction: Practice Guideline for Occupational Therapists and*

- Physiotherapists*. (Kilbride C, ed.). London: College of Occupational Therapists Ltd; 2015.
8. Winstein CJ, Stein J, Arena R, et al. Guidelines for Adult Stroke Rehabilitation and Recovery: A Guideline for Healthcare Professionals from the American Heart Association/American Stroke Association. *Stroke*. 2016;47(6):e98-e169. doi:10.1161/STR.0000000000000098.
  9. Glasgow C, Tooth LR, Fleming J. Mobilizing the stiff hand: combining theory and evidence to improve clinical outcomes. *J Hand Ther*. 2010;23(4):392-401. doi:10.1016/j.jht.2010.05.005.
  10. Shinagawa K, Sugawara Y, Hatta T, et al. Immobilization in External Rotation Reduces the Risk of Recurrence After Primary Anterior Shoulder Dislocation: A Meta-analysis. *Orthop J Sports Med*. 2020;8(6):2325967120925694. doi:10.1177/2325967120925694.
  11. Royal College of Occupational Therapists. *Hand and Wrist Orthoses for Adults with Rheumatological Conditions: Practice Guideline for Occupational Therapists*. 2nd ed. (Sainty M, ed.). London: Royal College of Occupational Therapists; 2020.
  12. Aebischer B, Elsig S, Taeymans J. Effectiveness of physical and occupational therapy on pain, function and quality of life in patients with trapeziometacarpal osteoarthritis - A systematic review and meta-analysis. *Hand Ther*. 2016;21(1):5-15. doi:10.1177/1758998315614037.
  13. Roll SC, Hardison ME. Effectiveness of Occupational Therapy Interventions for Adults with Musculoskeletal Conditions of the Forearm, Wrist, and Hand: A Systematic Review. *Am J Occup Ther*. 2016;71(1). doi:10.5014/ajot.2017.023234.
  14. Huisstede BM, Gladdines S, Randsdorp MS, Koes BW. Effectiveness of Conservative, Surgical, and Postsurgical Interventions for Trigger Finger, Dupuytren Disease, and De Quervain Disease: A Systematic Review. *Arch Phys Med Rehabil*. 2018;99(8):1635-1649.e21. doi:10.1016/j.apmr.2017.07.014.

# Spinal Orthoses (Lumbar Sacral and Thoraco Lumabar Sacral)

DME.MU.111.A

v1.0.2022

## HCPCS Codes

L0450, L0452, L0454, L0455, L0456, L0457, L0458, L0460, L0462, L0464, L0466, L0467, L0468, L0469, L0470, L0472, L0480, L0482, L0484, L0486, L0488, L0490, L0491, L0492, L0621, L0622, L0623, L0624, L0625, L0626, L0627, L0628, L0629, L0630, L0631, L0632, L0633, L0634, L0635, L0636, L0637, L0638, L0639, L0640, L0641, L0642, L0643, L0648, L0649, L0650, L0651

## Spinal Orthoses (Lumbar Sacral and Thoraco Lumabar Sacral) - Criteria

A spinal orthosis may be indicated when **one** of the following applies:

- Individual has had an injury to the spine or surrounding soft tissue
- Individual has had surgery on the spine or related soft tissue
- Device will be used to decrease pain by restricting spinal movement
- Individual has a spinal deformity and/or weak spinal muscles

## References

1. McCarthy J, Davis A. Diagnosis and Management of Vertebral Compression Fractures. *Am Fam Physician*. 2016;94(1):44-50.
2. Chang V, Holly LT. Bracing for thoracolumbar fractures. *Neurosurg Focus*. 2014;37(1):E3. doi:10.3171/2014.4.FOCUS1477.
3. Phaner V, Fayolle-Minon I, Lequang B, et al. Are there indications (other than scoliosis) for rigid orthopaedic brace treatment in chronic, mechanical low back pain? *Ann Phys Rehabil Med*. 2009;52(5):382-393. doi:10.1016/j.rehab.2009.05.002.
4. Palazzo C, Sailhan F, Revel M. Scheuermann's disease: an update. *Joint Bone Spine*. 2014;81(3):209-214. doi:10.1016/j.jbspin.2013.11.012.
5. Celestini M, Marchese A, Serenelli A, Graziani G. A randomized controlled trial on the efficacy of physical exercise in patients braced for instability of the lumbar spine. *Eura Medicophys*. 2005;41(3):223-231.
6. Dailey AT, Ghogawala Z, Choudhri TF, et al. Guideline update for the performance of fusion procedures for degenerative disease of the lumbar spine. Part 14: brace

- therapy as an adjunct to or substitute for lumbar fusion. *J Neurosurg Spine*. 2014;21(1):91-101. doi:10.3171/2014.4.SPINE14282.
7. van Duijvenbode IC, Jellema P, van Poppel MN, van Tulder MW. Lumbar supports for prevention and treatment of low back pain. *Cochrane Database Syst Rev*. 2008;2008(2):CD001823. Published 2008 Apr 16. doi:10.1002/14651858.CD001823.pub3.
  8. Lawrence KJ, Elser T, Stromberg R. Lumbar spondylolysis in the adolescent athlete. *Phys Ther Sport*. 2016;20:56-60. doi:10.1016/j.ptsp.2016.04.003.
  9. Hoh DJ, Qureshi S, Anderson PA, et al. Congress of Neurological Surgeons Systematic Review and Evidence-Based Guidelines on the Evaluation and Treatment of Patients With Thoracolumbar Spine Trauma: Nonoperative Care. *Neurosurgery*. 2019;84(1):E46-E49. doi:10.1093/neuros/nyy369.
  10. Lowe TG, Line BG. Evidence based medicine: analysis of Scheuermann kyphosis. *Spine (Phila Pa 1976)*. 2007;32(19 Suppl):S115-S119. doi:10.1097/BRS.0b013e3181354501.
  11. Wood KB, Li W, Lebl DR, Ploumis A. Management of thoracolumbar spine fractures [published correction appears in *Spine J*. 2014 Aug 1;14(8):A18. Lebl, Darren S [corrected to Lebl, Darren R]]. *Spine J*. 2014;14(1):145-164. doi:10.1016/j.spinee.2012.10.041.
  12. Jenis LG. Osteoporosis and Spinal Fractures – Diseases and Conditions. *OrthoInfo*. American Academy of Orthopaedic Surgeons. 2010 [January 2016]. <https://orthoinfo.aaos.org/en/diseases--conditions/osteoporosis-and-spinal-fractures/>.
  13. Klein G, Mehlman CT, McCarty M. Nonoperative treatment of spondylolysis and grade I spondylolisthesis in children and young adults: a meta-analysis of observational studies. *J Pediatr Orthop*. 2009;29(2):146-156. doi:10.1097/BPO.0b013e3181977fc5.
  14. Bailey CS, Urquhart JC, Dvorak MF, et al. Orthosis versus no orthosis for the treatment of thoracolumbar burst fractures without neurologic injury: a multicenter prospective randomized equivalence trial. *Spine J*. 2014;14(11):2557-2564. doi:10.1016/j.spinee.2013.10.017.
  15. Chang V, Holly LT. Bracing for thoracolumbar fractures. *Neurosurg Focus*. 2014;37(1):E3. doi:10.3171/2014.4.FOCUS1477.
  16. Bakhsheshian J, Dahdaleh NS, Fakurnejad S, Scheer JK, Smith ZA. Evidence-based management of traumatic thoracolumbar burst fractures: a systematic review of nonoperative management. *Neurosurg Focus*. 2014;37(1):E1. doi:10.3171/2014.4.FOCUS14159.
  17. Bagga RS, Goregaonkar AB, Dahapute AA, Muni SR, Gokhale S, Manghwani J. Functional and radiological outcomes of thoracolumbar traumatic spine fractures managed conservatively according to Thoracolumbar Injury Severity Score. *J Craniovertebr Junction Spine*. 2017;8(4):369-373. doi:10.4103/jcvjs.JCVJS\_93\_17.

18. Takasaki H, Miki T. The impact of continuous use of lumbosacral orthoses on trunk motor performance: a systematic review with meta-analysis. *Spine J.* 2017;17(6):889-900. doi:10.1016/j.spinee.2017.03.003.
19. Virkki E, Holstila M, Mattila K, Pajulo O, Helenius I. Radiographic Outcomes of Immobilization using Boston Brace for Pediatric Spondylolysis. *Scand J Surg.* 2021;110(2):271-275. doi:10.1177/1457496919896998.
20. Lawrence KJ, Elser T, Stromberg R. Lumbar spondylolysis in the adolescent athlete. *Phys Ther Sport.* 2016;20:56-60. doi:10.1016/j.ptsp.2016.04.003. .

# Respiratory

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# High Frequency Chest Wall Oscillation Systems

DME.O2.101.A

v1.0.2022

## HCPCS Codes

E0483, A7025, A7026

## High Frequency Chest Wall Oscillation Systems - Criteria

A high frequency chest wall oscillation system is indicated when **both** of the following apply:

- There is documentation of **one** of the following:
  - The individual has neuromuscular disease
  - The individual has cystic fibrosis

The individual has bronchiectasis on imaging with **either**:

  - Daily productive cough
  - Frequent exacerbations requiring antibiotics
- The individual has had failure of, intolerance to, or contraindication to standard treatments such as chest percussion and/or postural drainage

## References

1. Panitch H.B. Respiratory implications of pediatric neuromuscular disease. *Respir Care*. 2017 Jun;62(6):828-848.
2. Hull J. et al. British thoracic society guideline for respiratory management of children with neuromuscular weakness. *Thorax* 2012, 67 Suppl 1: i1-40
3. Benditt, J.O. Respiratory care of patients with neuromuscular disease. *Respir Care*. 2019 Jun,64(6):679-688.
4. Lee, A. L. et al. Airway clearance techniques for bronchiectasis. *Cochrane Database Syst Rev*. 2015 Nov 23;2015(11)
5. Wilson, L.M. Airway clearance techniques for cystic fibrosis: an overview of cochrane systematic reviews. *Cochrane Database Syst Rev*. 2019 Jan 24;1(1)
6. Lechtzin N. The impact of high-frequency chest wall oscillation on healthcare use in patients with neuromuscular diseases. *Ann Am Thorac Soc*. 2016 Jun;13(6):904-9.



7. Nicolini A. et al. Effectiveness of treatment with high-frequency chest wall oscillation in patients with bronchiectasis. *BMC Pulm Med.* 2013 Apr 4;13-21.
8. Mikesell C. L. et al. Objective measurement of adherence to out-patient airway clearance therapy by high-frequency chest wall compression in cystic fibrosis. *Respir Care.* 2017 Jul;62(7):920-927.

# Skin and Wound Care

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# Pneumatic Compression Devices

DME.SW.101.A

v1.0.2022

## HCPCS Codes

E0650, E0651, E0652, E0655, E0660, E0665, E0666, E0667, E0668, E0669, E0670, E0671, E0672, E0673, E0675 (only for PAD), E0676 (only for DVT prevention)

## Pneumatic Compression Devices - Criteria

### Basic Pneumatic Compression Device

HCPCS codes (E0650, E0651)

- A basic pneumatic compression device is indicated when **one** of the following applies:
  - The individual has documented, symptomatic lymphedema and **both**:
    - Has documented skin changes or measurements have been taken over time
    - Has failed 4 or more weeks of conservative treatments ( ie compression garment or bandage, exercise and limb elevation, manual lymphatic drainage)
  - The individual has venous insufficiency with venous leg ulcers and **either**:
    - 6 months of compression treatment have failed
    - The individual cannot tolerate compression treatment

### Pneumatic Compression Device with Calibrated Gradient Pressure

HCPCS codes (E0652)

A pneumatic compression device with calibrated gradient pressure is indicated when **all** of the following apply:

- The individual has lymphedema extending to the chest, trunk and/or abdomen
- The individual has documented, symptomatic lymphedema and **both** of the following:
  - Has documented skin changes or measurements have been taken over time
  - Has failed 4 or more weeks of conservative treatments ( i.e., compression garment or bandage, exercise and limb elevation, manual lymphatic drainage)

## Pneumatic Compression Device

HCPCS codes (E0676)

A pneumatic compression device may be indicated when **both** of the following apply:

- The pump will be used to prevent deep venous thrombosis in an immobile individual
- There is a clinical reason that anticoagulation alone would not be effective

## References

1. Chang CJ, Cormier JN. Lymphedema interventions: exercise, surgery, and compression devices. *Semin Oncol Nurs*. 2013;29(1):28-40. doi:10.1016/j.soncn.2012.11.005 .
2. Pavon JM, Adam SS, Razouki ZA, et al. Effectiveness of Intermittent Pneumatic Compression Devices for Venous Thromboembolism Prophylaxis in High-Risk Surgical Patients: A Systematic Review. *J Arthroplasty*. 2016;31(2):524-532. doi:10.1016/j.arth.2015.09.043.
3. Sharfman ZT, Campbell JC, Mirocha JM, Spitzer AI. Balancing Thromboprophylaxis and Bleeding in Total Joint Arthroplasty: Impact of Eliminating Enoxaparin and Predonation and Implementing Pneumatic Compression and Tranexamic Acid. *J Arthroplasty*. 2016;31(6):1307-1312. doi:10.1016/j.arth.2015.11.046.
4. Karaca-Mandic P, Hirsch AT, Rockson SG, Ridner SH. The Cutaneous, Net Clinical, and Health Economic Benefits of Advanced Pneumatic Compression Devices in Patients With Lymphedema. *JAMA Dermatol*. 2015;151(11):1187-1193. doi:10.1001/jamadermatol.2015.1895.
5. Schaverien MV, Moeller JA, Cleveland SD. Nonoperative Treatment of Lymphedema. *Semin Plast Surg*. 2018;32(1):17-21. doi:10.1055/s-0038-1635119.
6. Feldman JL, Stout NL, Wanchai A, Stewart BR, Cormier JN, Armer JM. Intermittent pneumatic compression therapy: a systematic review. *Lymphology* 2012;45(1):13-25.
7. Vojackova N, Fialova J, Hercogova J. Management of lymphedema. *Dermatologic Therapy* 2012;25(4):352-357.
8. Nelson EA, Hillman A, Thomas K. Intermittent pneumatic compression for treating venous leg ulcers. *Cochrane Database Syst Rev*. 2014;(5):CD001899. Published 2014 May 12. doi:10.1002/14651858.CD001899.pub4.
9. Executive Committee of the International Society of Lymphology. The diagnosis and treatment of peripheral lymphedema: 2020 Consensus Document of the International Society of Lymphology. *Lymphology*. 2020;53(1):3-19.

10. Phillips JJ, Gordon SJ. Intermittent Pneumatic Compression Dosage for Adults and Children with Lymphedema: A Systematic Review. *Lymphat Res Biol*. 2019;17(1):2-18. doi:10.1089/lrb.2018.0034.
11. Muluk SC, Hirsch AT, Taffe EC. Pneumatic compression device treatment of lower extremity lymphedema elicits improved limb volume and patient-reported outcomes. *Eur J Vasc Endovasc Surg*. 2013;46(4):480-487. doi:10.1016/j.ejvs.2013.07.012.
12. Dolibog P, Franek A, Taradaj J, et al. A comparative clinical study on five types of compression therapy in patients with venous leg ulcers. *Int J Med Sci*. 2013;11(1):34-43. Published 2013 Dec 14. doi:10.7150/ijms.7548.
13. Kolluri R. Management of venous ulcers. *Tech Vasc Interv Radiol*. 2014;17(2):132-138. doi:10.1053/j.tvir.2014.02.012.

# Group 2 Pressure Reducing Support Surfaces

DME.SW.103.A

v1.0.2022

## HCPCS Codes

E0193, E0277, E0371, E0372, E0373

## Group 2 Support Surface Criteria

Group 2 Support Surfaces may be indicated when there is documentation of the one of the following:

- Multiple stage 2 pressure ulcers on the trunk or pelvis and **both**:
  - There is documentation of a comprehensive ulcer treatment program. A comprehensive ulcer treatment program includes **all** of the following elements:
    - Regular assessment by a physician, nurse, practitioner, or other licensed healthcare provider
    - Appropriate turning and positioning
    - Appropriate wound care
    - Management of moisture/incontinence
    - Nutritional assessment and treatment
  - There is documentation of **one** of the following:
    - Group 1 support surface tried and failed
    - Group 1 support surface contraindicated
- One or more stage 3 or stage 4 pressure ulcers on the trunk or pelvis
- A myocutaneous flap or a skin graft for a pressure ulcer of the trunk or pelvis within the last 60 days

## References

1. Shi C, Dumville JC, Cullum N. Support surfaces for pressure ulcer prevention: A network meta-analysis. *PLoS One*. 2018;13(2):e0192707. doi:10.1371/journal.pone.0192707.
2. National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure

- Ulcers: Quick Reference Guide. Emily Haesler (Ed.). Cambridge Media: Osborne Park, Australia; 2014.
3. National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure Ulcers: Clinical Practice Guideline. Emily Haesler (Ed.). Cambridge Media: Osborne Park, Western Australia; 2014.
  4. CGS Administrators, LLC, ed. Local Coverage Determination for Pressure Reducing Support Surfaces - Group 2 (L33642). CMS.gov. <https://www.cms.gov/medicare-coverage-database>. Published October 1, 2015. Revised May 1, 2021.
  5. Gould L, Stuntz M, Giovannelli M, et al. Wound Healing Society 2015 update on guidelines for pressure ulcers. *Wound Repair Regen*. 2016;24(1):145-162. doi:10.1111/wrr.123962.

# Negative Pressure Wound Therapy

DME.SW.105.A

v1.0.2022

## HCPCS Codes

A6550, A7000, E2402

## Negative Pressure Wound Therapy Continued Rental - Criteria

Continued rental of negative pressure wound therapy is indicated when **all** of the following apply:

- There is documentation that wound healing is progressing
- There is monthly documentation of wound length, width and depth
- There is physician documentation of proper use and continued benefit

## References

1. National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure Ulcers: Clinical Practice Guideline. Emily Haesler (Ed.). Cambridge Media: Osborne Park, Western Australia; 2014.
2. Gupta S, Gabriel A, Lantis J, Téot L. Clinical recommendations and practical guide for negative pressure wound therapy with instillation. *Int Wound J*. 2016;13(2):159-174. doi:10.1111/iwj.12452.
3. CGS Administrators, LLC, ed. Local Coverage Determination for Negative Pressure Wound Therapy Pumps (L33821). CMS.gov. <https://www.cms.gov/medicare-coverage-database/details/lcd-details.aspx?lcdid=33821>. Published October 1, 2015.
4. Hayes, Inc, ed. Negative Pressure Wound Therapy –Home Use: A Health Technology Assessment Prepared for Washington State Health Care Authority. [www.hca.wa.gov](http://www.hca.wa.gov). <https://www.hca.wa.gov/assets/program/npwt-final-report-20161012.pdf>. Published October 14, 2016.



# Stimulators

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# Transcutaneous Electrical Nerve Stimulation (TENS) Unit

DME.ST.112.A

v1.0.2022

## Transcutaneous Electrical Nerve Stimulation (TENS) Unit - Criteria

A transcutaneous electric nerve stimulation (TENS) unit is a medical device that sends electrical currents to affect pain signals, resulting in pain relief.

### HCPCS Codes

E0720, E0730, A4557, A4595 , K1023

### 2 Lead TENS Unit

#### HCPCS Codes (E0720, A4557, A4595)

A 2 lead TENS unit is indicated when **either**:

- The individual has acute post-operative pain and **both** of the following:
  - There have been 30 days or less since surgery
  - The TENS unit will be used in addition to or in place of medication
- The individual has chronic intractable pain other than low back pain and **all** of the following:
  - The pain has lasted at least 3 months
  - Other standard treatments have been tried and failed
  - A 30 day trial period has taken place

### 4 Lead TENS Unit

#### HCPCS Codes (E0730, A4557, A4595)

A 4 lead TENS unit is indicated when **either**:

- The individual has acute post-operative pain and **all** of the following:
  - There have been 30 days or less since surgery
  - The TENS unit will be used in addition to or in place of medication
  - There is a medical reason why a 2 lead unit cannot meet the individual's needs

- The individual has chronic intractable pain other than low back pain and **all** of the following:
  - The pain has lasted at least 3 months
  - Other standard treatments have been tried and failed
  - A 30 day trial period has taken place
  - There is a medical reason why a 2 lead unit cannot meet the individual's needs

## References

1. Qaseem A, Wilt TJ, McLean RM, Forciea MA; Clinical Guidelines Committee of the American College of Physicians. Noninvasive Treatments for Acute, Subacute, and Chronic Low Back Pain: A Clinical Practice Guideline From the American College of Physicians. *Ann Intern Med*. 2017 Apr 4;166(7):514-530. doi:10.7326/M16-2367.
2. Johnson M, Martinson M. Efficacy of electrical nerve stimulation for chronic musculoskeletal pain: a meta-analysis of randomized controlled trials. *Pain*. 2007 Jul;130(1-2):157-65. doi:10.1016/j.pain.2007.02.007.
3. Dailey DL, Rakel BA, Vance CGT, et al. Transcutaneous electrical nerve stimulation reduces pain, fatigue and hyperalgesia while restoring central inhibition in primary fibromyalgia. *Pain*. 2013 Nov;154(11):2554-2562. doi: 10.1016/j.pain.2013.07.043.
4. Rees MK. 2019 HHS Task Force Report. *Pain Medicine*. 2020;21(12):3732-3732. doi:10.1093/pm/pnaa085.
5. Wu LC, Weng PW, Chen CH, et al. Literature Review and Meta-Analysis of Transcutaneous Electrical Nerve Stimulation in Treating Chronic Back Pain. *Reg Anesth Pain Med*. 2018 May;43(4):425-433. doi:10.1097/AAP.0000000000000740.
6. Zhang Y, Zhang J, Wang L, et al. Effect of transcutaneous electrical nerve stimulation on jaw movement-evoked pain in patients with TMJ disc displacement without reduction and healthy controls. *Acta Odontol Scand*. 2020 May;78(4):309-320. doi:10.1080/00016357.2019.1707868.
7. Jahangirifard A, Razavi M, Ahmadi ZH, Forozeshfard M. Effect of TENS on Postoperative Pain and Pulmonary Function in Patients Undergoing Coronary Artery Bypass Surgery. *Pain Manag Nurs*. 2018 Aug;19(4):408-414. doi:10.1016/j.pmn.2017.10.018.
8. Nizard J, Lefaucheur JP, Helbert M, et al. Non-invasive stimulation therapies for the treatment of refractory pain. *Discov Med*. 2012 Jul;14(74):21-31.
9. Ghoseiri K, Allami M, Soroush MR, Rastkhadiv MY. Assistive technologies for pain management in people with amputation: a literature review. *Mil Med Res*. 2018 Jan 23;5(1):1. doi: 10.1186/s40779-018-0151-z.
10. Sbruzzi G, Silveira SA, Silva DV, et al. Transcutaneous electrical nerve stimulation after thoracic surgery: systematic review and meta-analysis of 11 randomized

- trials. *Rev Bras Cir Cardiovasc*. 2012 Jan-Mar;27(1):75-87. English, Portuguese. doi: 10.5935/1678-9741.20120012.
11. Freynet A, Falcoz PE. Is transcutaneous electrical nerve stimulation effective in relieving postoperative pain after thoracotomy? *Interact Cardiovasc Thorac Surg*. 2010 Feb;10(2):283-8. doi:10.1510/icvts.2009.219576.
  12. American Society of Anesthesiologists Task Force on Chronic Pain Management; American Society of Regional Anesthesia and Pain Medicine. Practice guidelines for chronic pain management: an updated report by the American Society of Anesthesiologists Task Force on Chronic Pain Management and the American Society of Regional Anesthesia and Pain Medicine. *Anesthesiology*. 2010 Apr;112(4):810-33. doi: 10.1097/ALN.0b013e3181c43103.
  13. Modest JM, Raducha JE, Testa EJ, Ebersson CP. Management of Post-Amputation Pain. *R I Med J*. 2020 May 1;103(4):19-22.
  14. Dubinsky RM, Miyasaki J. Assessment: efficacy of transcutaneous electric nerve stimulation in the treatment of pain in neurologic disorders (an evidence-based review): report of the Therapeutics and Technology Assessment Subcommittee of the American Academy of Neurology. *Neurology*. 2010 Jan 12;74(2):173-6. doi:10.1212/WNL.0b013e3181c918fc.

# Electrical Bone Growth Stimulation (Spine)

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v1.0.2022

## HCPCS Codes

E0748

## Electrical Bone Growth Stimulation (Spine) - Criteria

### Indications

- Noninvasive (beginning at any time from the time of surgery until up to 6 months after surgery with the exception of this timeline for an urgent/emergent condition for spinal fusion surgery excluding primary or metastatic neoplastic disease) electrical bone growth stimulation may be considered medically necessary for spinal fusion surgery in patients at high risk for pseudarthrosis with **one or more** of the following risk factors for fusion failure when associated with an approved spinal fusion surgery:
  - Alcohol Use Disorder (AUD)
  - Body mass index (BMI) > 30
  - Diabetes, renal disease, or other metabolic diseases when bone healing is likely to be compromised
  - Glucocorticoid dependent
  - Meyerding Grade III or worse lumbar/lumbosacral spondylolisthesis
  - Multi-level spinal fusion including three (3) or more vertebrae
  - Nutritional deficiency/malnutrition
  - One or more previously failed spinal fusion(s)
  - Osteoporosis defined as T-score of -2.5 on a recent (within one year) DEXA
  - Severe anemia
  - Smoking history
  - Immunocompromised status
- Noninvasive electrical bone growth stimulation is considered medically necessary as a treatment for patients with failed spinal fusion when **both** of the following are met:
  - A minimum of 6 months has passed since the date of the original surgery

- Serial plain X-rays or appropriate imaging studies confirm there is no evidence of progression of healing/consolidation of the spinal fusion for 3 months during the later portion of the 6 month post-fusion surgery period
- Urgent/emergent conditions for spine fusion surgery are exceptions to the above timelines for noninvasive electrical bone growth stimulation excluding primary or metastatic neoplastic disease

### Non-Indications

Noninvasive electrical bone growth stimulation is considered experimental, investigational, or unproven (EIU) for **all** of the following:

- Acute or chronic lumbar spondylolysis (pars interarticularis defect) with or without spondylolisthesis
- Failed cervical or lumbar disc arthroplasty
- Spinal malignancy
- As nonsurgical treatment of an established pseudarthrosis

### References

1. Centers for Medicare and Medicaid Services (CMS). NCD for Osteogenic Stimulators, Manual Section Number 150.2.
2. ECRI Institute. Hotline Response [database online]. Plymouth Meeting (PA): ECRI Institute; 2007, Jan 29. Electrical bone growth stimulation to enhance cervical vertebrae fusion.
3. Foley KT, Mroz TE, Arnold PM et al. Randomized, prospective, and controlled clinical trial of pulsed electromagnetic field stimulation for cervical fusion. *Spine J* 2008; 8(3):436-42. doi:10.1016/j.spinee.2007.06.006
4. Hotta S. Electrical bone-growth stimulation and spinal fusion. Health technology assessment review No. 8. 1998. Agency for Health Care Policy and Research (AHCPR) Pub No. 94-0014.
5. Kaiser MG, Eck JC, Groff MW, et al. Guideline update for the performance of fusion procedures for degenerative disease of the lumbar spine. Part 17: bone growth stimulators as an adjunct for lumbar fusion. *J Neurosurg Spine*. 2014;21(1):133-139. doi:10.3171/2014.4.SPINE14326.
6. Koslosky E, Gendelberg D. Classification in Brief. *Clin Orthop Relat Res*. 2020;478(5):1125-1130. doi:10.1097/corr.0000000000001153.
7. Mooney V. A randomized double-blind prospective study of the efficacy of pulsed electromagnetic fields for interbody lumbar fusions. *Spine (Phila Pa 1976)*. 1990;15(7):708-712. doi:10.1097/00007632-199007000-00016.

8. Resnick DK, Choudhri TF, Dailey AT, et al. Guidelines for the performance of fusion procedures for degenerative disease of the lumbar spine. Part 17: bone growth stimulators and lumbar fusion. *J Neurosurg Spine*. 2005;2(6):737-740. doi:10.3171/spi.2005.2.6.0737.
9. Simmons JW Jr, Mooney V, Thacker I. Pseudarthrosis after lumbar spine fusion: nonoperative salvage with pulsed electromagnetic fields. *Am J Orthop (Belle Mead NJ)*. 2004;33(1):27-30.
10. Stasinopoulos D. Treatment of spondylolysis with external electrical stimulation in young athletes: a critical literature review. *Br J Sports Med*. 2004;38(3):352-354. doi:10.1136/bjism.2003.010405.
11. Washington State Health Care Authority. Health Technology Assessment, Bone Growth Stimulators. July 2009.

# Non-Spinal Electrical Osteogenesis Stimulator

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## HCPCS Codes

E0747

## Definitions

- **Electrical osteogenesis stimulator** — An electrical osteogenesis stimulator is a medical device that provides electrical stimulation to enhance bone healing
- **Non-union fracture** — Failure of healing after a broken bone
- **Congenital pseudoarthrosis** — Rare condition that can result in non-union, most frequently of the tibia

## Non-spinal Electrical Osteogenesis Stimulator - Criteria

A non-spinal electrical bone stimulator is indicated when **one** of the following applies:

- Individual has a non-spinal nonunion fracture with no progress in bone healing on repeat imaging studies
- Individual has a failed non-spinal surgical joint fusion
- Individual has congenital pseudoarthrosis

## References

1. Aleem IS, Aleem I, Evaniew N, et al. Efficacy of Electrical Stimulators for Bone Healing: A Meta-Analysis of Randomized Sham-Controlled Trials. *Sci Rep*. 2016;6:31724. Published 2016 Aug 19. doi:10.1038/srep31724.
2. Gross CE, Hsu AR, Lin J, et al. Revision MTP arthrodesis for failed MTP arthroplasty. *Foot Ankle Spec*. 2013;6(6):471-478. doi:10.1177/1938640013502725.
3. Tay WH, de Steiger R, Richardson M, et al. Health outcomes of delayed union and nonunion of femoral and tibial shaft fractures. *Injury*. 2014;45(10):1653-1658. doi:10.1016/j.injury.2014.06.025.
4. Welck MJ, Hayes T, Pastides P, et al. Stress fractures of the foot and ankle. *Injury*. 2017;48(8):1722-1726. doi:10.1016/j.injury.2015.06.015.



5. Kohata K, Itoh S, Takeda S, et al. Enhancement of fracture healing by electrical stimulation in the comminuted intraarticular fracture of distal radius. *Biomed Mater Eng.* 2013;23(6):485-493. doi:10.3233/BME-130774.
6. Khalifeh JM, Zohny Z, MacEwan M, et al. Electrical Stimulation and Bone Healing: A Review of Current Technology and Clinical Applications. *IEEE Rev Biomed Eng.* 2018;11:217-232. doi:10.1109/RBME.2018.2799189.
7. Shah H, Rousset M, Canavese F. Congenital pseudarthrosis of the tibia: Management and complications. *Indian J Orthop.* 2012;46(6):616-626. doi:10.4103/0019-5413.104184.
8. CGS Administrators, Noridian Healthcare Solutions. Local Coverage Determination (LCD) Osteogenesis Stimulators (L33796). Centers for Medicare & Medicaid Services. Published OCT 1, 2015. Revised JAN 1, 2020. <https://www.cms.gov/medicare-coverage-database/details/lcd-details.aspx?lcdid=33796&ver=17&bc=CAAAAAAAAAAAAA>.
9. Centers for Medicare & Medicaid Services. National Coverage Decision for Osteogenic Stimulators (150.2). 2005; <https://www.cms.gov/medicare-coverage-database/details/ncd-details.aspx?NCDId=65&ncdver=2&DocID=150.2&bc=gAAAABAAAA&>.
10. AAOS. Diseases and conditions - Nonunions. Orthoinfo. American Academy of Orthopedic Surgeons (AAOS). <https://orthoinfo.aaos.org/en/about-orthoinfo/privacy-policy/>. March 2014.