

# **Lower Limb Prostheses Clinical Coverage Criteria**

## Overview

A lower limb prosthesis refers to a prosthesis that replaces part of the lower limb to restore the function of the lower limb. This may include artificial components that replace the hip, thigh, knee, ankle and/or foot. A prosthesis is an artificial substitute for a missing body part.

Only those lower limb prostheses that are both medically necessary and reasonable for the treatment of the plan member's condition are covered. This includes prostheses that:

- (1) can reasonably be expected to make a meaningful contribution to the treatment of the plan member's condition or the performance of activities of daily living; and
- (2) are not more costly than a comparable and suitable alternative that serves essentially the same purpose as equipment already available to the plan member.

Necessary adjustments, repairs, and replacements are covered as long as the device continues to be medically necessary.

An adjustment is a modification to the prosthesis due to a change in the plan member's condition or to improve the function of the prosthesis.

A repair is a restoration of the prosthesis to correct problems due to wear or damage. Repairs are covered when medically necessary to make the prosthesis functional. If the estimated expense for repairs exceeds the estimated expense of purchasing another entire prosthesis, no payments can be made for the amount of the excess. Repairs must be performed by a certified prosthetist, or technician working under the supervision of a certified prosthetist.

Replacement is defined as the provision of an entire identical or nearly identical item. There are special rules for the replacement of limb prostheses, replacement of a limb prosthesis, or replacement of any part of a limb prosthesis, is covered without regard to continuous use or useful lifetime restrictions when the ordering physician determines that replacement of the limb prosthesis or replacement of any part of the limb prosthesis is medically necessary because of one of the following:

- A change in the physiological condition of the plan member resulting in need for a replacement, examples include, but are not limited to, changes in the plan member's weight, changes in the residual limb, functional need changes.
- Irreparable wear of a prosthetic limb or part of a prosthetic limb resulting in need for replacement.
- The prosthetic limb or part requires repairs and cost of such repairs will be more than 60% of the cost of replacement.

No coverage is provided for the repair or replacement of prosthetic devices covered under manufacturer warranty.

No separate payment is allowed for:

- (1) the fitting of the prosthesis;
- (2) instructing the member in the use of the prosthesis:
- (3) the cost of the component parts and accessory equipment;

(4) repairs due to normal wear and tear within 90 days of the date of delivery; and

(5) adjustments to the prosthesis and any prosthetic component made when fitting the prosthesis and for 90 days from the date of delivery, when the adjustments are not necessitated by changes in the member's functional abilities.

#### **Definitions**

Transtibial amputation, or below-knee amputation, is a surgical procedure performed to remove the lower limb below the knee when that limb has been severely damaged or is diseased. Most transtibial amputations (60%–70%) are due to peripheral vascular disease. Other indications include infection and trauma.

Transfemoral (above knee) amputation is a surgical procedure performed to remove the lower limb at or above the knee joint when that limb has been severely damaged via trauma, disease, or congenital defect. Most transfemoral amputations are performed due to peripheral vascular disease. Other indications include infection and trauma.

## Policy

This Policy applies to the following Fallon Health products:

- ☑ Medicare Advantage (Fallon Medicare Plus, Fallon Medicare Plus Central)
- ⋈ NaviCare HMO SNP
- ☑ NaviCare SCO
- ☑ PACE (Summit Eldercare PACE, Fallon Health Weinberg PACE)
- □ Community Care

Lower limb prostheses (including additions to/substitutions/component parts thereof) require prior authorization.

## Medicare Advantage (Fallon Medicare Plus, Fallon Medicare Plus Central)

Fallon Health complies with CMS's national coverage determinations (NCDs), local coverage determinations (LCDs) of Medicare Contractors with jurisdiction for claims in the Plan's service area, and applicable Medicare statutes and regulations when making medical necessity determinations for Medicare Advantage members. When coverage criteria are not fully established in applicable Medicare statutes, regulations, NCDs or LCDs, Fallon Health may create internal coverage criteria under specific circumstances described at § 422.101(b)(6)(i) and (ii).

Medicare statutes and regulations do not have coverage criteria for continuous glucose monitoring or insulin delivery devices. Medicare has a longstanding NCD for Prosthetic Shoe (280.10). A prosthetic shoe (a device used when all or a substantial portion of the front part of the foot is missing) can be covered as a terminal device, i.e., a structural supplement replacing a totally or substantially absent hand or foot. The function of the prosthetic shoe is quite distinct from that of excluded orthopedic shoe and supportive foot devices which are used by individuals whose feet, although impaired, are essentially intact. Section 1862(a)(8) of the Social Security Act excludes payment for orthopedic shoes or other supportive devices for the feet, other than shoes furnished pursuant to section 1861(s)(12). Noridian Healthcare Solutions, LLC is the Durable Medical Equipment Medicare Administrative Contractor (DME MAC) with jurisdiction in the Plan's service area. Noridian Healthcare Solutions, LLC has an LCD for Lower Limb Prostheses (L33787) (MCD search 09/23/2024).

Coverage criteria for lower limb prostheses are fully established by Medicare, therefore, the Plan's coverage criteria are not applicable.

Links:

NCD: Prosthetic Shoe (280.10)

#### LCD: Lower Limb Prostheses (L33787)

Additionally, the Medicare Benefit Policy Manual, Chapter 15, Sections 120 – Prosthetic Devices, and 130 - Leg, Arm, Back, and Neck Braces, Trusses, and Artificial Legs, Arms, and Eyes, describes Medicare coverage for lower limb prostheses. The Medicare Claims Processing Manual, Chapter 20 provides additional guidance on coverage and reimbursement.

Coverage criteria for lower limb prostheses are fully established by Medicare, therefore, the Plan's clinical coverage criteria are not applicable.

#### MassHealth ACO

Fallon Health follows Medical Necessity Guidelines published by MassHealth when making medical necessity determinations for MassHealth members. In the absence of Medical Necessity Guidelines published by MassHealth, Fallon Health may create clinical coverage criteria in accordance with the definition of Medical Necessity in 130 CMR 450.204.

MassHealth does not have Medical Necessity Guidelines for lower limb prostheses currently (MassHealth website search 09/23/2024), therefore, the Plan's clinical coverage criteria will be used to determine medical necessity for lower limb prostheses for MassHealth ACO members.

Fallon Health's clinical coverage criteria for lower limb prostheses have been developed in accordance with the definition of Medical Necessity in 130 CMR 450.204 and the MassHealth Program Regulations at 130 CMR 428.00: Prosthetics Services (effective 04/28/2023).

#### NaviCare (NaviCare HMO SNP, NaviCare SCO)

For plan members enrolled in NaviCare, Fallon Health first follow's CMS's national coverage determinations (NCDs), local coverage determinations (LCDs) of Medicare Contractors with jurisdiction for claims in the Plan's service area, and applicable Medicare statutes and regulations when making medical necessity determinations.

When coverage criteria are not fully established in applicable Medicare statutes, regulations, NCDs or LCDs, or if the NaviCare member does not meet coverage criteria in applicable Medicare statutes, regulations, NCDs or LCDs, Fallon Health then follows Medical Necessity Guidelines published by MassHealth when making necessity determinations for NaviCare members.

## PACE (Summit Eldercare PACE, Fallon Health Weinberg PACE)

Each PACE plan member is assigned to an Interdisciplinary Team. PACE provides participants with all the care and services covered by Medicare and Medicaid, as approved by the interdisciplinary team, as well as additional medically necessary care and services not covered by Medicare and Medicaid. With the exception of emergency care and out-of-area urgently needed care, all care and services provided to PACE plan members must be approved by the interdisciplinary team.

# Fallon Health Clinical Coverage Criteria

Fallon Clinical Coverage Criteria only apply to MassHealth members, including NaviCare members who do not meet coverage criteria in the Noridian LCD for Lower Limb Prostheses (L33787), and Community Care members.

A lower limb prosthesis (including additions to/substitutions/component parts thereof) is considered medically necessary when all of the following criteria are met:

1. All lower limb prostheses (including additions to/substitutions/component parts thereof) require a written order/prescription from the treating/prescribing practitioner. A copy of the written order/prescription must be submitted with the prior authorization request.

- For Community Care members, consistent with the Noridian LCD for Lower Limb Prostheses (L33787), treating/prescribing practitioner means physician, physician assistant, nurse practitioner or clinical nurse specialist.
- For MassHealth members, including NaviCare members who do not meet coverage criteria in the Noridian LCD for Lower Limb Prostheses (L33787), treating/prescribing practitioner refers to a physician or independently practicing nurse practitioner (130 CMR 428.409. Prescription Requirements).
- For Community Care members, consistent with the Noridian LCD for Lower Limb Prostheses (L33787), the written order/prescription must meet requirements outlined in the Medicare Program Integrity Manual, Chapter 5, Section 5.22, and signatures on the written order/prescription must comply with the signature requirements outlined in the Medicare Program Integrity Manual, Chapter 3, Section 3.3.2.4. Signature and date stamps are not allowed.
- For MassHealth members, including NaviCare members who do not meet coverage criteria in the Noridian LCD for Lower Limb Prostheses (L33787), the written order/prescription must meet requirements outlined in 130 CMR 428.409. Prescription Requirements. The prescription must be written on the prescriber's prescription form and must include all the following information:
  - (1) the member's name and address;
  - (2) the member's MassHealth identification number;
  - (3) specific identification of the prescribed item;
  - (4) medical justification for the use of the item, including the member's diagnosis;
  - (5) the prescriber's address and telephone number; and
  - (6) the date on which the prescription was signed by the prescriber
- A new written order/prescription is required for when there is a change in the original order, when a lower limb prosthesis is replaced and when there is a change in supplier (prosthetist).
- Requests for prior authorization of lower limb prostheses (including additions
  to/substitutions/component parts thereof) must include a description of what is being
  requested, the brand name and model number; the applicable HCPCS code(s) and HCPCS
  code description.
  - For Community Care members, consistent with the Noridian LCD for Lower Limb Prostheses (L33787), the following requirements will apply: The Medicare Pricing, Data Analysis and Coding (PDAC) contractor maintains the Durable Medical Equipment Coding System (DMECS). DMECS is the official source for Medicare Durable Medical Equipment, Prosthetics, Orthotics and Supplies (DMEPOS) product code verification and assignment. Coding verification is a voluntary process unless mandated by Durable Medical Equipment Medicare Administrative Contractor (DME MAC) policy. Noridian Healthcare Solutions, LLC, the DME MAC with jurisdiction in our service area specifies in the Lower Limb Prostheses Policy Article (A52496) that the only products that may be billed using the following list of HCPCS codes are those for which a written coding verification review has been made by the Pricing, Data Analysis, and Coding (PDAC) contractor and subsequently published on the Product Classification List:
    - Effective for claims with dates of service on or after January 1, 2014: L5969.
    - Effective for claims with dates of service on or after January 1, 2021: L5856, L5857, L5858, L5973, L5980, L5987.

If a lower limb prosthesis is requested for a Community Care member using a HCPCS code that requires written coding verification review, but the product is not on the Product Classification List for that HCPCS code, then the request will be denied in accordance with Policy Article (A52496).

The DMECS DMEPOS Product Classification List website is available at: https://www4.palmettogba.com/pdac\_dmecs/initProductClassificationResults.do.

The effective date of the coding verification review is included for each code.

- For MassHealth members, including NaviCare members who do not meet coverage criteria in the Noridian LCD for Lower Limb Prostheses (L33787), the request for prior authorization must contain the following documentation:
  - (1) a copy of the invoice or invoices from the manufacturer for the equipment, disclosing all discounts;
  - (2) a copy of a current prescription that must not be older than 90 days from the requested
  - (3) date of service (see 130 CMR 428.409 for information that must be included in the
  - (4) prescription);
  - (5) if requested by the MassHealth agency, a current prosthetic evaluation for the equipment,
  - (6) performed independently of the provider by a licensed physician or prosthetist;
  - (7) the date or projected date of service;
  - (8) the projected duration of need for the equipment; and
  - (9) if replacing existing equipment, the date the existing equipment was purchased.
- 3. A lower limb prosthesis is considered medically necessary when the member:
  - a. Will reach and maintain a defined functional state within a reasonable period of time; and
  - b. Is motivated to ambulate.
- 4. A determination of the medical necessity for certain additions to, substitutions or component parts of a lower limb prosthesis is based on the member's potential functional abilities. Potential functional ability is based on the reasonable expectations of the prosthetist and treating practitioner, considering factors including, but not limited to:
  - a. The member's past history (including prior prosthetic use if applicable); and
  - b. The member's current condition including the status of the residual limb and the nature of other medical problems; and
  - c. The member's desire to ambulate.
- Clinical assessments of member's rehabilitation potential must be based on the following functional classification levels:
  - Level 0: Does not have the ability or potential to ambulate or transfer safely with or without assistance and a prosthesis does not enhance their quality of life or mobility.
  - Level 1: Has the ability or potential to use a prosthesis for transfers or ambulation on level surfaces at fixed cadence. Typical of the limited and unlimited household ambulator.
  - Level 2: Has the ability or potential for ambulation with the ability to traverse low level environmental barriers such as curbs, stairs, or uneven surfaces. Typical of the limited community ambulator.
  - Level 3: Has the ability or potential for ambulation with variable cadence. Typical of the community ambulator who has the ability to traverse most environmental barriers and may have vocational, therapeutic, or exercise activity that demands prosthetic utilization beyond simple locomotion.
  - Level 4: Has the ability or potential for prosthetic ambulation that exceeds basic ambulation skills, exhibiting high impact, stress, or energy levels. Typical of the prosthetic demands of the child, active adult, or athlete.

Medical records must document the member's current functional capabilities and expected functional potential, including an explanation for the difference, if that is the case. It is recognized, within the functional classification hierarchy, that bilateral amputees often cannot be strictly bound by functional level classifications.

Lower limb prostheses will be denied as not reasonable and necessary if the member's potential functional level is "0," i.e., the member does not have the ability or potential to ambulate or transfer safely with or without assistance and a prosthesis does not enhance their quality of life or mobility.

If a prosthesis is denied as not medically necessary, additions to or component parts will also be denied as not medically necessary.

## Replacement

Replacement of lower limb prosthesis, or the replacement of any addition to or component part of a lower limb prosthesis, is considered medically necessary, without regard to continuous use or useful lifetime restrictions if the treating practitioner determines that the replacement of the prosthesis, or replacement of a major component, is medically necessary. Requests involving replacement of a prosthesis or major component (foot, ankle, knee, socket) must be supported by a new treating practitioner's order and documentation supporting the reason for the replacement. The reason for replacement must be documented by the treating practitioner, either on the order or in the medical record, and must fall under one of the following:

- A change in the physiological condition of the patient resulting in the need for a replacement, examples include but are not limited to, changes in member weight, changes in the residual limb, changes in member functional need; or
- An irreparable change in the condition of the prosthesis, or in a part of the prosthesis resulting in the need for a replacement; or
- The condition of the prosthesis, or the part of the prosthesis, requires repairs and the cost of such repairs would be more than 60 percent of the cost of a replacement device, or of the part being replaced.

#### 1. Immediate Prostheses

Immediate post-surgical or early fitting prostheses are rigid dressings provided while the residual limb is healing, prior to the provision of an initial or preparatory prosthesis. Immediate prostheses include non-removable rigid dressings, removable rigid dressings, and immediate post-operative protheses (IPOPs). Immediate protheses are alternatives to soft dressings. IPOPs are similar to rigid prostheses but have a pylon and sach foot attached to allow limited weight-bearing.

Immediate prostheses (L5400, L5410, L5420, L5430, L5450, L5460) are complete systems.

Additional components, add-ons, upgrades, substitution of components, etc. for use with immediate prostheses are not covered.

Test sockets (L5618, L5620, L5622, L5624, L5626, L5628) for use with an immediate prosthesis (L5400, L5410, L5420, L5430, L5450, L5460) are not covered.

#### 2. Initial and Preparatory Prostheses

An initial or preparatory prosthesis may be prescribed when the residual limb has healed, usually 6 to 10 weeks postoperatively, but longer if there are complications. A preparatory prosthesis allows progressive weight-bearing and switching of components, which may be necessary as the patient becomes accustomed to walking and other activities. Some patients use their preparatory prosthesis as their definitive prosthesis.

The determination of coverage for substitutions and/or additions with respect to potential functional levels represents the usual case. Exceptions will be considered in an individual case if additional documentation is included which justifies the medical necessity.

Initial (L5500, L5505) and preparatory prostheses (L5510, L5520, L5530, L5535, L5540, L5560, 5570, L5585, L5590, L5595, L5600) are complete systems.

Substitutions and/or additions to an initial or preparatory prosthesis may be covered in accordance with functional level assessment, except as indicated below:

 When an initial below knee prosthesis (L5500) or a preparatory below knee prosthesis (L5510, L5520, L5530, L5540) is covered, prosthetic substitutions and/or additions of components are covered in accordance with the functional level assessment, <u>except for codes L5629, L5638, L5639, L5646, L5647, L5704, L5785, L5962, and L5980 which will be denied as not medically necessary.</u>

- When a below knee preparatory prefabricated prosthesis (L5535) is covered, prosthetic substitutions and/or additions of components are covered in accordance with the functional level assessment, except for codes L5620, L5629, L5645, L5646, L5670, L5676, L5704, and L5962 which will be denied as not medically necessary.
- When an above knee initial prosthesis (L5505) or an above knee preparatory (L5560, L5570, L5580, L5590, L5595, L5600) prosthesis is covered, prosthetic substitution and/or additions of components are covered in accordance with the functional level assessment, except for codes L5610, L5631, L5640, L5642, L5644, L5648, L5705, L5706, L5964, L5980, and L5710, L5711, L5712, L5714, L5716, L5718, L5722, L5724, L5726, L5728, L5780, L5790, L5795 which will be denied as not medically necessary.
- When an above knee preparatory prefabricated prosthesis (L5585) is covered, prosthetic substitution and/or additions of procedures and components are covered in accordance with the functional level assessment, except for codes L5624, L5631, L5648, L5651, L5652, L5705, L5706, L5964, and L5966 which will be denied as not medically necessary.

#### 3. Definitive Lower Limb Prostheses

When residual limb volume and shape has stabilized, the patient can be fitted with a definitive prosthesis for long term use. For most adults, this is 12–18 months post-amputation. The treating practitioner and prosthetist will work with the patient to identify the additions, substitutions, components needed for a prosthesis that will be appropriate for the member's activity level, functional needs and goals.

The determination of coverage for substitutions and/or additions with respect to potential functional levels represents the usual case. Exceptions will be considered in an individual case if additional documentation is included which justifies the medical necessity.

Basic lower limb prostheses (L5000, L5010, L5020, L5050, L5060, L5100, L5105, L5150, L5160, L5200, L5210, L5220 L5230, L5250, L5270, L5280, L5301, L5312, L5321, L5331, L5341) are complete systems.

Substitutions and/or additions of components may be covered in accordance with functional level assessment.

- L5000 includes a shoe insert with toe filler. L5010 and L5020 include a molded socket with toe filler.
- L5210 is an above knee, short prosthesis with no knee joint, no ankle joint and a foot block. L5220 is an above knee, short prosthesis with no knee joint, and an articulated ankle/foot.
- L5050 and L5060 include a Syme ankle disarticulation molded socket and SACH foot.
- L5100, L5105, L5301 include a below knee molded prosthetic socket, and a SACH foot.
- L5150 and L5160 include a knee disarticulation molded prosthetic socket, external knee joints, and a SACH foot.
- Endoskeletal prosthetic lower limb codes L5312, L5321, L5331, L5341 include molded prosthetic socket, an endoskeletal single axis knee-shin system and a SACH foot.
- Exoskeletal prosthetic lower limb codes L5200, L5230, L5250, L5270, L5280 include a molded prosthetic socket, and exoskeletal single axis knee-shin system, and a SACH foot.

#### 4. Additions to Lower Limb Prostheses

The determination of coverage for substitutions and/or additions with respect to potential functional levels represents the usual case. Exceptions will be considered in an individual case if additional documentation is included which justifies the medical necessity.

#### a. Foot/Ankle

A determination of the type of foot will be made by the treating practitioner and/or the prosthetist based upon the functional needs of the member. Basic lower limb prostheses include a SACH foot. Other prosthetic feet are considered for coverage based upon functional classification (K1-K4). Functional (K-level) determination is required for coverage.

There must be sufficient clinical documentation of functional need for the technologic or design feature of a given type of foot. This information must be retained in the medical records.

Addition codes for foot prostheses (L5970, L5971, L5972, L5973, L5974, L5975, L5976, L5978, L5979, L5980, L5981, L5987) are considered an upgrade to the SACH foot. A member may qualify for an upgraded prosthetic foot based on their functional classification. Each addition code (L5970, L5971, L5972, L5974, L5975, L5976, L5978, L5979, L5980, L5981, L5987) describes a complete foot and thus the use of more than one code would be considered incorrect coding (unbundling).

An external keel SACH foot (L5970) or single axis ankle/foot (L5974) is covered for a member whose functional level is 1 or above.

A flexible-keel foot (L5972) or multiaxial ankle/foot (L5978) is covered for a member whose functional level is 2 or above.

An energy storing foot (L5976), dynamic response foot with multi-axial ankle (L5979), flex foot system (L5980), flex-walk system or equal (L5981), or shank foot system with vertical loading pylon (L5987) is covered for a member whose functional level is 3 or above.

See Microprocessor-Controlled Ankle-Foot Systems below for requirements for L5973.

L5968, L5982, L5984, L5985, L5986, L5988, L5990 are additional features and/or functions that do not describe a complete prosthetic foot and may be used in combination with L5970, L5971, L5972, L5974, L5975, L5976, L5978, L5979, L5980, L5981, and L5987. The use of additional feature codes may depend on the assigned K-Level modifier (K1-K4).

See Ankle and Lower Extremity Motion Units for L5968, L5982, L5984, L5985, L5986 and L5988.

A user-adjustable heel height feature (L5990) will be denied as not reasonable and necessary for Medicare members in accordance with LCD Lower Limb Prostheses (L33787).

#### Ankle and Lower Extremity Motion Units

Codes L5968, L5982, L5984, L5985, L5986 and L5988 describe separate products which provide either a single motion or a combination of motions generally attributed to functional movement of the lower limb during ambulation. The use of these codes can be used to fully describe additional features or functions not found in the prosthetic foot system (L5969, L5970, L5971, L5972, L5973, L5974, L5975, L5976, L5978, L5979 L5980, L5981 and L5987). The use of additional feature L-codes may also depend on the assigned K-Level modifier (K0-K4).

Codes L5968, L5982, L5984, L5986 describe separate products which provide either a single motion or a combination of motions commonly attributed to the anatomic ankle. The use of these codes can be used to fully describe additional features or functions not found in the prosthetic foot system (L5969, L5970, L5971, L5972, L5973, L5974, L5975, L5976, L5978, L5979 L5980, L5981 and L5987). Use of L5968, L5982, L5984 or L5986 is based on the member's K-level modifier (K0-K4).

An axial rotation unit (L5982, L5984, L5985, L5986) is covered for members whose functional level is 2 or above.

#### i. Microprocessor-Controlled Ankle-Foot System

Microprocessor-controlled ankle-foot prostheses have been developed for transtibial amputees.

A microprocessor ankle-foot system is coded as L5973 (endoskeletal ankle foot system, microprocessor-controlled feature, dorsiflexion and/or plantar flexion control, includes power source). L5973 describes an endoskeletal device with integrated energy storage and release foot and microprocessor ankle system. The integrated microprocessor is programmable along with sensors to optimize plantar and dorsiflexion angles for stance and swing phase. L5973 includes foot cover, power source(s) and charger.

Several microprocessor-controlled ankle-foot systems have received a coding verification review by the PDAC contractor and are published on the Product Classification list for HCPCS code L5973, including Proprio Foot (Ossur Americas, Inc.), Meridium Microprocessor Controlled Ankle Foot System (Otto Bock Healthcare), Kinnex 2.0 (Freedom Innovations, LLC), Elanic (Blatchford, Inc.), and Elan Foot (Endolite North America).<sup>1</sup>

A microprocessor-controlled ankle foot system (L5973), energy storing foot (L5976), dynamic response foot with multi-axial ankle (L5979), flex foot system (L5980), flex-walk system or equal (L5991), or shank foot system with vertical loading pylon (L5987) is covered when one of the following criteria is met:

- 1. The member's functional K level is 3 or above; or
- 2. The member's functional K level is 2, and
  - a. Meets the functional level 2 coverage criteria for a fluid, pneumatic, or electronic/microprocessor control addition for a prosthetic knee; and,
  - b. A higher-level (i.e., functional level 3) foot is required for the safe and proper use of the prescribed knee system.

#### Microprocessor-Controlled Ankle-Foot System with Power Assist

A microprocessor-controlled ankle-foot system with power assist is a below knee prosthesis designed for use by individuals with transtibial amputation. This prosthesis, which replaces the foot, ankle, and lower calf, uses robotics to replicate the calf muscles and Achilles tendon. With each step, the prosthesis provides a powered push-off to propel the wearer forward.

A microprocessor ankle-foot system with power assist is coded as the combination of L5969 (addition, endoskeletal ankle-foot or ankle system, power assist, includes any type of motor(s)) and L5973 (endoskeletal ankle foot system, microprocessor-controlled feature, dorsiflexion and/or plantar flexion control, includes power source).

Two microprocessor-controlled ankle-foot systems with power assist have received a coding verification review by the PDAC contractor and are published on the Product Classification list for HCPCS code L5969: the BiOM Ankle-Foot System (iWalk, Inc.) and Empower (Ottobock).<sup>2</sup>

Small, nonrandomized studies have reported results for powered ankle-foot prostheses for transtibial amputees (Mancinelli et al., 2011, Ferris et al., 2012, Kim et al., 2021, Davidson et al., 2021, Pröbsting et al., 2022). The current evidence does not establish improved functional or quality of life outcomes for microprocessor-controlled ankle-foot system with power assist (L5969) compared to other ankle-foot prostheses. Fallon Health considers microprocessor-controlled ankle-foot systems with power assist (L5969) experimental/ investigational and not medically necessary for Community Care members.

Regarding power assist ankle-foot prostheses, the CMS Lower Limb Consensus Workgroup (2017) believes that at the present time, the literature does not support coverage of the power assist ankle for Medicare beneficiaries. However, the Workgroup is hopeful that advances in

<sup>&</sup>lt;sup>1</sup> Durable Medical Equipment Coding System (DMECS). Search DMEPOS Product Classification List HCPCS code L5973 04/02/2023

<sup>&</sup>lt;sup>2</sup> Durable Medical Equipment Coding System (DMECS). Search DMEPOS Product Classification List HCPCS code L5969 04/02/2023.

research will eventually describe the benefit of this component to a defined subgroup of the Medicare population.

Noridian Healthcare Solutions, LLC has determined that microprocessor-controlled ankle-foot systems with power assist (L5969) are not reasonable and necessary for Medicare beneficiaries. Therefore, in accordance with Medicare guidance (Noridian Healthcare Solutions, LLC LCD Lower Limb Prostheses, L33787), microprocessor-controlled ankle-foot systems with power assist (L5969) are not covered for Medicare Advantage plan members.

Microprocessor-controlled ankle-foot systems with power assist (L5969) are covered for MassHealth ACO members and NaviCare members who do not meet coverage criteria in the Noridian LCD for Lower Limb Prostheses (L33787), when the member's functional K level is 3 or above, in accordance with MassHealth regulations at 130 CMR 428.406: Covered Services.

#### b. Knee

A determination of the type of knee for the prosthesis will be made by the treating practitioner and/or the prosthetist based upon the functional needs of the member. Basic lower limb prostheses include a single axis, constant friction knee. Other prosthetic knees are considered for coverage based upon functional classification (K1-K4). Functional (K-level) determination is required for coverage.

Coverage is extended only if there is sufficient clinical documentation of functional need for the technologic or design feature of a given type of knee. This information must be retained in the treating practitioner's or prosthetist's medical records.

Basic lower limb prostheses (L5200, L5230, L5250, L5270, L5280, L5312, L5321, L5331, L5341) include a single axis, constant friction knee. Upgraded prosthetic knees are considered for coverage based upon the member's functional classification.

#### **Endoskeletal Systems**

The basic endoskeletal prosthetic lower limb codes L5312, L5321, L5331, L5341 describe a complete prosthetic knee-shin system and include molded prosthetic socket, an endoskeletal single axis knee-shin system and a SACH foot. These prostheses are also referred to as knee-shin systems.

#### Additions to Endoskeletal Systems

Codes L5610, L5611, L5613, L5616, L5810, L5811, L5812, L5814, L5816, L5818, L5822, L5824, L5826, L5828, L5830, L5840 are upgrades to the basic endoskeletal knee-shin systems. A member may qualify for an upgraded knee-shin system depending on their assigned K-Level modifier (K0-K4). Codes L5610, L5611, L5613, L5616, L5810, L5811, L5812, L5814, L5816, L5818, L5822, L5824, L5826, L5828, L5830, L5840 describe a complete prosthetic knee-shin system (commonly referred to as a "base knee code"), thus the use of two codes from this list would be considered incorrect coding (unbundling).

Codes L5925, L5930, L5845, L5848, L5850, L5856, L5857, L5858, L5859 describe additional features and/or functions that are not complete endoskeletal knee-shin system and would be used in combination with one of the addition codes for a complete endoskeletal knee-shin system (L5610, L5611, L5613, L5616, L5810, L5811, L5812, L5814, L5816, L5818, L5822, L5824, L5826, L5828, L5830, L5840). The use of additional features and/or functions L-codes may also depend on the assigned K-Level modifier (K0-K4),

#### Exoskeletal Systems

The basic exoskeletal prosthetic lower limb codes L5200, L5250, L5270, L5280 describe a complete prosthetic knee-shin system and include a molded prosthetic socket, and exoskeletal single axis knee-shin system, and a SACH foot.

## Additions to Exoskeletal Systems

Codes L5710, L5711, L5712, L5714, L5716, L5718, L5722, L5724, L5726, L5728, L5780 are upgrades to the basic exoskeletal knee-shin systems. A member may qualify for an upgraded exoskeletal knee-shin system depending on their assigned K-level modifier (K0-K4). Codes L5710, L5711, L5712, L5714, L5716, L5718, L5722, L5724, L5726, L5728, L5780 describe a complete prosthetic knee-shin system. A single addition code can fully describe a complete knee-shin system (commonly referred to as a "base knee code"), thus the use of two codes from this list would be considered incorrect coding (unbundling).

Additions described by codes L5611, L5616, L5710, L5711, L5712, L5714, L5716, L5718, L5810, L5811, L5812, L5816, L5818 are covered for members whose functional level is 1 or above.

A high activity knee control frame (L5930) is covered for members whose functional level is 4.

A fluid, pneumatic, or electronic/microprocessor knee (L5610, L5613, L5614, L5722, L5724, L5726, L5728, L5780, L5814, L5822, L5824, L5826, L5828, L5830, L5840, L5848, L5856, L5857, L5858) is covered for members whose functional level is 3 or above.

A fluid or pneumatic knee unit (L5610, L5613, L5614, L5615, L5722, L5724, L5726, L5728, L5780, L5814, L5822, L5824, L5826, L5828, L5830, L5840, and L5841), or control addition, fluid (L5848), or electronic/microprocessor (L5856, L5857, L5858) is also covered under limited circumstances for beneficiaries whose functional level is 2, when all of the following criteria (1-3) are met:

- 1. The member has had a clinical evaluation to determine their functional level; and,
- 2. Supporting documentation in the medical record outlines, in the context of the member's overall medical health, the rationale for selection of a fluid, pneumatic, or electronic/microprocessor-controlled knee, including (at minimum) how the selected knee will:
  - a. Improve the member's functional health outcomes (e.g., fall reduction, injury prevention, lower energy expenditure); and,
  - b. Help the member accomplish their activities of daily living (ADLs); and,
- Lower-level knee systems (e.g., knee systems which exclude use of fluid, pneumatic, or microprocessor) have been considered and ruled out based on the beneficiary's specific functional and medical needs.

#### i. Microprocessor-Controlled Knee

Microprocessor-controlled knee prostheses have been available and widely used for some time. While the studies addressing these devices are often relatively small and may not be randomized. the clinical benefits of the devices are well established. Sensors within microprocessor knees constantly gather movement and timing data, which the knees then interpret to make any necessary adjustments. They detect stumbles in real time, automatically adjusting their stiffness and allowing the user to catch themselves to avoid a fall. Many prosthetic knees are available and there are subtle but meaningful differences between the products. The currently available scientific evidence demonstrates benefits for individuals with a K-3 or K-4 functional level. Such individuals are capable of performing physical tasks requiring significant strength, coordination, aerobic fitness, and cognitive capacity. These tasks include ambulation at variable cadences and for extended distances or time periods (for example, 400 yards or more), or the ability to traverse challenging environmental barriers (for example, stairs). These individuals may also be capable of participating in athletic activities involving high impact or aerobic needs. For those individuals who do have K-3 or K-4 functional levels, but do not encounter a regular need to ambulate for long distances over significant environmental challenges beyond what may be encountered in the average home or workplace, there is little benefit provided from the use of microprocessorcontrolled knee prostheses. The data does not show significant benefits of microprocessorcontrolled knee prostheses for individuals who do not have high-level physical needs, such as those with K-1 or K-2 functional levels, or those who do not have a demand for extensive physical

A microprocessor-controlled prosthetic knee is covered for members whose functional level is 3 or 4.

A microprocessor-controlled knee system (L5856, L5857, or L5858 plus associated components) is also covered for members whose functional level is 2, when all of the following criteria (1-4) are met:

- 1. The electronic/microprocessor knee is indicated for functional level 2; and,
- 2. The electronic/microprocessor knee has integrated technology that allows the knee to detect when the user trips or stumbles and can automatically adjust to stabilize the knee unit (e.g., stumble recovery); and,
- 3. The member is able to make use of a product that requires daily charging; and,
- 4. The member is able to understand and respond to error alerts and alarms indicating problems with the function of the unit.

Codes L5856, L5857 and L5858 describe only the microprocessor-control feature of the knee.

The following are examples of microprocessor-controlled knees with coding verification on the PDAC DMECS website<sup>3</sup>

- The Otto Bock C-Leg is billed using L5856, L5828, L5845 and L5848.
- Proteor Allux and Allux 2 are billed using L5856, L5848, L5845 and K1014.
- Otto Bock Kenevo is billed using L5856, L5828, L5845 and L5848.
- Ossur Americas Rheo Knee is billed using L5856, L5828, L5845, L5848, L5850 and L5925.
   Proteor Freedom Quattro is billed using L5856, L5828, L5845, L5848, L5850 and L5925.
   Blatchford Orion 3 is billed using L5856, L5828, L5845 and L5848.
- DAW Industries SLK and SLK KD Microprocessors are billed using L5856, L5613, L5845 and L5848.

Only one product has received a coding verification review by the PDAC contractor for HCPCS code L5987: Smart IP (Blatchford, Inc) is a microprocessor-controlled knee and is coded as L5857 (microprocessor control feature), L5930 (high activity knee control frame) and L5845 (adjustable stance flexion feature). The high activity knee control frame (L5930) is only covered for plan members whose functional level is 4. Therefore, the Smart IP microprocessor-controlled knee is only covered for members whose functional level is 4.

At this time, there are no microprocessor knees described by L5858 listed on the DMECS Product Classification List.

#### ii. Microprocessor-Controlled Knee with Power Assist

A microprocessor-controlled knee with power assist is designed to provide active assistance while walking on level-ground, climbing and descending ramps or stairs and when sitting down and standing up. Advanced sensors detect the user's movements and inform the microprocessor which enables the knee to respond to the user's needs.

Only one powered knee prosthesis is widely available in the United States and has received DMECS coding verification: the Power Knee (Ossur Americas). Ossur Americas Power Knee is billed using L5856, L5828, L5845, L5848, and L5859.

Code L5859 (Addition to lower extremity prosthesis, endoskeletal knee-shin system, powered and programmable flexion/extension assist control, includes any type motor(s)).

Published evidence for Power Knee (Ossur Americas) is limited. Small case studies comparing Power Knee to microprocessor-controlled knees without power assist in the laboratory setting (Wolf et al., 2012, Wolf et al., 2013, Hafner and Askew, 2015) have shown a significant benefit for Power Knee during stair ascent, a result that is expected because of the design of the Power Knee, which provides active propulsion. However, participants showed significantly increased

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<sup>&</sup>lt;sup>3</sup> DMECS. Product Classification List. Search for code L5856 04/02/2023. For correct coding of microprocessor knees visit the PDAC Durable Medical Equipment Coding System (DMECS) website at: https://www4.palmettogba.com/pdac\_dmecs/.

Timed Up and Go (TUG) test times (TUG-comfortable and TUG-fast) and timed ramp test (TRT) times for Power Knee compared to microprocessor-controlled knees without power assist (Hafner and Askew, 2015). Functional mobility is a fundamental goal for people who have experienced lower limb amputation (Hafner et al., 2017). Additional studies are needed to determine if there are functional and clinically important differences among users of the Power Knee compared with other knee prostheses. Fallon Health considers microprocessor-controlled ankle-foot systems with power assist (L5969) experimental/ investigational and not medically necessary for Community Care members.

Clinical trials for Power Knee are ongoing (NCT05267639, NCT05831696).

A microprocessor-controlled knee with power assist (L5859) is not covered for MassHealth ACO members in accordance with regulations at 130 CMR 428.406: Covered Services.

#### c. Hip

A pneumatic or hydraulic polycentric hip joint (L5961) is covered for a member whose functional level is 3 or above.

#### d. Sockets

More than 2 test (diagnostic) sockets (L5618, L5620, L5622, L5624, L5626, L5628) for an individual prosthesis are not reasonable and necessary unless there is documentation in the medical record which justifies the need.

Exception: A test socket is not reasonable and necessary for an immediate prosthesis (L5400, L5410, L5420, L5430, L5450, L5460).

No more than two of the same socket inserts (L5654, L5655, L5656, L5658, L5661, L5665, L5673, L5679, L5681, L5683) are allowed per individual prosthesis at the same time.

Socket replacements are considered reasonable and necessary if there is adequate documentation of functional and/or physiological need. It is recognized that there are situations where the explanation includes but is not limited to: changes in the residual limb; functional need changes; or irreparable damage or wear/tear due to excessive beneficiary weight or prosthetic demands of very active amputees.

#### e. Suspension systems

Code L5671 includes both the part of the suspension locking mechanism that is integrated into the prosthesis socket and the pin(s), lanyard, or other component which is attached to the socket insert. L5671 does not include the socket insert itself. The socket inserts used in conjunction with a suspension locking mechanism are billed with codes L5673, L5679, L5681, or L5683, as appropriate. These codes include socket inserts with or without a distal umbrella adapter for attaching the pin or lanyard of the locking mechanism.

Codes L5681 and L5683 are for use only with the initial issue of a custom fabricated socket insert. Additional inserts (either custom fabricated or prefabricated) provided at the time of initial issue or replacement socket inserts are coded L5673 and L5679, whichever is applicable.

Codes L5647 and L5652 describe a modification to a prosthetic socket that incorporates a suction valve in the design. The items described by these codes are not components of a suspension locking mechanism (L5671).

Code L7700 (gasket or seal, for use with prosthetic socket insert, any type, each) describes a stand-alone (i.e., not integrated into or a part of a prosthetic socket insert) sealing ring that is added to a socket insert to assist in providing or maintaining negative pressure for socket suspension. The ring creates a seal against the outer surface of the insert and against the inner wall of the socket. L7700 is not intended for use with mechanical socket suspensions such as a pin-lock system. It may be made of any suitable material. L7700 may be used with upper or lower extremity sockets. Unit of service (UOS) is 1 (one) item. This code is not to be used to bill for gaskets, seals, or other sealing materials that are included as part of an insert. Integrated seals

are included in the code for the insert. Separate billing of integrated gaskets or seals as L7700 is unbundling.

Code L7700 (gasket or seal, for use with prosthetic socket insert, any type, each) is not covered for MassHealth members in accordance with MassHealth regulations at 130 CMR 428.406: Covered Services.

#### f. Protective covers

Lower limb prosthetic covers (L5704, L5705, L5706, and L5707) are complete products and afford shape, protection and waterproofing for normal daily usage of the prosthesis. They offer sufficient protection and weatherproofing for beneficiaries who require lower limb prosthetics.

Protective outer surface covering systems (L5962, L5964, and L5966) are specialized covers intended to be worn over an existing prosthesis. They are used by a member who has special needs for protection against unusually harsh environmental situations where it is necessary to protect the lower limb prosthesis beyond the level of protection that is afforded by L5704, L5705, L5706, and L5707. They are not for cosmetic or convenience reasons, or for everyday usage in a typical environment. Protective outer surface coverings are different from the covering that is already reimbursed as part of L5704, L5705, L5706, and L5707.

Foot covers are included in the codes for a prosthetic foot component and are not separately payable.

#### g. Batteries and chargers

Powered base items are those that contain the power source (battery). At the time that a base item is billed (L5781, L5782, L5856, L5857, L5858, L5859, L5973) all necessary batteries and/or battery chargers are considered as included in the payment for the powered base item. There is no separate payment for batteries (L7360, L7364, and L7367) and/or battery chargers (L7362, L7366, and L7368) billed concurrently with a powered base item.

Payments for items listed in Column II are included in the payment for each Column I code. Claims for Column II items billed with the provision of a Column I item will be denied as unbundling.

Base codes with battery, charger and/or power included E L5781	Batteries
I 5781	<b>D</b> atto::00
20.01	L7360
L5782	L7364
L5856 L	L7367
L5857	Chargers
L5858 L	L7362
L5859 L	L7366
L5973	L7368

## **Exclusions**

- Osseointegrated lower limb prostheses (L5991).
- A prosthetic donning sleeve (L7600) will be denied as not covered for Medicare Advantage and Community Care members in accordance with Noridian Healthcare Solutions, LLC Lower Limb Prostheses - Policy Article (A52496)

## Coding

The following codes are included below for informational purposes only; inclusion of a code does not constitute or imply coverage or reimbursement.

#### **Coding Information**

**Date of Service** - The date of service for prosthetics is the date the member receives the item. If the prosthetic service involves a series of fittings and adjustments, the date of service is the date on which the final adjustment is made. If the prosthetic service involves only the provision of a service (for example, a repair), then the date of service is the date on which the service was completed.

The right (RT) and left (LT) modifiers must be used with lower limb prosthesis codes. When the same code for prostheses, sockets, or components are billed on the same date of service, bill each item on two separate claim lines using the RT and LT modifiers and 1 unit of service on each claim line.

For MassHealth members, Fallon Health follows the *MassHealth Orthotics and Prosthetics Payment and Coverage Guideline Tool* with respect to billing requirements and service limits.

National Correct Coding Initiative (NCCI) Medically Unlikely Edits (MUEs) are applied to DMEPOS claims. An MUE for a HCPCS/CPT code is the maximum units of service allowed for a plan member on a single date of service. Not all HCPCS/CPT codes have an MUE.

The following items are included in the reimbursement for a lower limb prosthesis and, therefore, are not separately billable or payable:

- Evaluation of the residual limb and gait
- Fitting of the prosthesis
- Cost of base component parts and labor contained in HCPCS base codes
- Repairs due to normal wear or tear within 90 days of delivery
- Adjustments of the prosthesis or the prosthetic component made when fitting the prosthesis
  or component and for 90 days from the date of delivery when the adjustments are not
  necessitated by changes in the residual limb or the member's functional abilities.

Payment for a prosthesis described by codes L5000, L5010, L5020, L5400, L5410, L5420, L5430, L5450, L5460, L5987, L8400, L8410, L8417, L8420, L8430, L8440, L8460, L8470, and L8480 is included in the payment to a Skilled Nursing Facility (SNF) if:

- The prosthesis is provided to a member during a covered SNF stay prior to the day of discharge; and
- 2. The member uses the prosthesis for reasonable and necessary inpatient treatment or rehabilitation.

A claim must not be submitted in this situation. Claims for other lower limb prostheses provided to a member in a covered SNF stay and claims for any lower limb prosthesis provided in a SNF when the stay is not a covered SNF stay are submitted to the Plan.

Payment for a prosthesis is included in the payment to a hospital if:

- 1. The prosthesis is provided to the member during an inpatient stay prior to the day of discharge; and
- 2. The member uses the prosthesis for reasonable and necessary inpatient treatment or rehabilitation.

A claim must not be submitted in this situation.

Payment for a lower limb prosthesis delivered to a plan member in a hospital or SNF is eligible for coverage if:

- 1. The prosthesis is reasonable and necessary for a member after discharge from a hospital or covered SNF stay; and
- 2. The prosthesis is provided to the member within two days prior to discharge to home; and
- 3. The prosthesis is not needed for inpatient treatment or rehabilitation but is left in the room for the member to take home.

#### Lower limb prosthesis repairs

Code L7510 is used to bill for any "minor" materials (i.e., those without specific HCPCS codes) used to achieve the adjustment and/or repair.

Code L7520 is used to bill for labor associated with adjustments and repairs that either do not involve replacement parts or that involve replacement parts billed with code L7510. Code L7520

must not be billed for labor time involved in the replacement of parts that are billed with a specific HCPCS code. Labor is included in the allowance for those codes.

One unit of service of code L7520 represents 15 minutes of labor time. Documentation must exist in the supplier's records indicating the specific adjustment and/or repair performed, and the time involved. The time reported for L7520 must only be for actual repair time. Time performing the following services (not all-inclusive) must not be billed using code L7520:

- Evaluation to determine the need for a repair or adjustment or follow-up assessment
- Evaluation of problems regarding the fit or function of the prosthesis
- General beneficiary education or gait instruction
- Programming of electronic componentry

#### Modifiers K0 - K4

Certain components/additions to the prosthesis are based on the member's potential functional abilities based on reasonable expectations of the prosthetist and treating physician considering factors including but not limited to:

- The member's past history (including prior prosthetic use if applicable); and
- The member's current condition including status of residual limb and nature of other medical problems; and
- The member's desire to ambulate.

The supplier then bills a modifier on the claim to indicate the member's potential functional level (K0 to K4). Although the specific modifier (K0-K4) is not required in either the prosthetist's or physician's notes, the records must clearly document the member's functional level to support the use of that particular functional level modifier.

When submitting a lower limb prosthetic claim for a Medicare member, the billed code for knee, foot, ankle and hip (HCPCS codes L5610, L5611, L5613, L5614, L5616, L5710, L5711, L5712, L5714, L5716, L5718, L5722, L5724, L5726, L5728, L5780, L5810, L5811, L5812, L5814, L5816, L5818, L5822, L5824, L5826, L5828, L5830, L5840, L5848, L5856, L5857, L5858, L5859, L5930, L5961, L5970, L5971, L5972, L5973, L5974, L5975, L5976, L5978, L5979, L5980, L5981, L5982, L5984, L5985, L5986, L5987) components must be submitted with modifiers K0 - K4, indicating the expected plan member functional level. This expectation of functional ability information must be clearly documented and retained in the prosthetist's records.

Modifier K0 = Lower extremity prosthesis functional level 0 - The member does not have the ability or potential to ambulate or transfer safely with or without assistance and a prosthesis does not enhance quality of life or mobility.

Modifier K1 = Lower extremity prosthesis functional level 1 - The member has the ability or potential to use a prosthesis for transfers or ambulation on level surfaces at fixed cadence. Typical of the limited and unlimited household ambulator.

Modifier K2 = Lower extremity prosthesis functional level 2 - The member has the ability or potential for ambulation with the ability to traverse low level environmental barriers such as curbs, stairs or uneven surfaces. Typical of the limited community ambulator.

Modifier K3 = Lower extremity prosthesis functional level 3 - The member has the ability or potential for ambulation with variable cadence. Typical of the community ambulator who has the ability to traverse most environmental barriers and may have vocational, therapeutic or exercise activity that demands prosthetic utilization beyond simple locomotion.

Modifier K4 = Lower prosthesis functional level 4 - The member has the ability or potential for prosthetic ambulation that exceeds the basic ambulation skills, exhibiting high impact, stress, or energy levels, typical of the prosthetic demands of the child, active adult, or athlete.

Code	Description
L5000	Partial foot, shoe insert with longitudinal arch, toe filler
L5010	Partial foot, molded socket, ankle height, with toe filler

L5020	Partial foot, molded socket, tibial tubercle height, with toe filler
L5050	Ankle, symes, molded socket, sach foot
L5060	Ankle, symes, metal frame, molded leather socket, articulated ankle/foot
L5100	Below knee, molded socket, shin, sach foot
L5105	Below knee, plastic socket, joints and thigh lacer, sach foot
L5150	Knee disarticulation (or through knee), molded socket, external knee joints, shin, sach foot
L5160	Knee disarticulation (or through knee), molded socket, bent knee configuration, external knee joints, shin, sach foot
L5200	Above knee, molded socket, single axis constant friction knee, shin, sach foot
L5210	Above knee, short prosthesis, no knee joint ('stubbies'), with foot blocks, no ankle joints, each
L5220	Above knee, short prosthesis, no knee joint ('stubbies'), with articulated ankle/foot, dynamically aligned, each
L5230	Above knee, for proximal femoral focal deficiency, constant friction knee, shin, sach foot
L5250	Hip disarticulation, canadian type; molded socket, hip joint, single axis constant friction knee, shin, sach foot
L5270	Hip disarticulation, tilt table type; molded socket, locking hip joint, single axis constant friction knee, shin, sach foot
L5280	Hemipelvectomy, canadian type; molded socket, hip joint, single axis constant friction knee, shin, sach foot
L5301	Below knee, molded socket, shin, sach foot, endoskeletal system
L5312	Knee disarticulation (or through knee), molded socket, single axis knee, pylon, sach foot, endoskeletal system
L5321	Above knee, molded socket, open end, sach foot, endoskeletal system, single axis knee
L5331	Hip disarticulation, canadian type, molded socket, endoskeletal system, hip joint, single axis knee, sach foot
L5341	Hemipelvectomy, canadian type, molded socket, endoskeletal system, hip joint, single axis knee, sach foot
L5400	Immediate post-surgical or early fitting, application of initial rigid dressing, including fitting, alignment, suspension, and one cast change, below knee
L5410	Immediate post surgical or early fitting, application of initial rigid dressing, including fitting, alignment and suspension, below knee, each additional cast change and realignment
L5420	Immediate post surgical or early fitting, application of initial rigid dressing, including fitting, alignment and suspension and one cast change 'ak' or knee disarticulation
L5430	Immediate post surgical or early fitting, application of initial rigid dressing, incl. Fitting, alignment and supension, 'ak' or knee disarticulation, each additional cast change and realignment
L5450	Immediate post surgical or early fitting, application of non-weight bearing rigid dressing, below knee
L5460	Immediate post surgical or early fitting, application of non-weight bearing rigid dressing, above knee
L5500	Initial, below knee 'ptb' type socket, non-alignable system, pylon, no cover, sach foot, plaster socket, direct formed
L5505	Initial, above knee - knee disarticulation, ischial level socket, non-alignable system, pylon, no cover, sach foot, plaster socket, direct formed
L5510	Preparatory, below knee 'ptb' type socket, non-alignable system, pylon, no cover, sach foot, plaster socket, molded to model

L5520	Preparatory, below knee 'ptb' type socket, non-alignable system, pylon, no cover,
	sach foot, thermoplastic or equal, direct formed
L5530	Preparatory, below knee 'ptb' type socket, non-alignable system, pylon, no cover, sach foot, thermoplastic or equal, molded to model
L5535	Preparatory, below knee 'ptb' type socket, non-alignable system, no cover, sach foot, prefabricated, adjustable open end socket
L5540	Preparatory, below knee 'ptb' type socket, non-alignable system, pylon, no cover, sach foot, laminated socket, molded to model
L5560	Preparatory, above knee- knee disarticulation, ischial level socket, non-alignable system, pylon, no cover, sach foot, plaster socket, molded to model
L5570	Preparatory, above knee - knee disarticulation, ischial level socket, non-alignable system, pylon, no cover, sach foot, thermoplastic or equal, direct formed
L5580	Preparatory, above knee - knee disarticulation ischial level socket, non-alignable system, pylon, no cover, sach foot, thermoplastic or equal, molded to model
L5585	Preparatory, above knee - knee disarticulation, ischial level socket, non-alignable system, pylon, no cover, sach foot, prefabricated adjustable open end socket
L5590	Preparatory, above knee - knee disarticulation ischial level socket, non-alignable system, pylon no cover, sach foot, laminated socket, molded to model
L5595	Preparatory, hip disarticulation-hemipelvectomy, pylon, no cover, sach foot, thermoplastic or equal, molded to patient model
L5600	Preparatory, hip disarticulation-hemipelvectomy, pylon, no cover, sach foot, laminated socket, molded to patient model
L5610	Addition to lower extremity, endoskeletal system, above knee, hydracadence system
L5611	Addition to lower extremity, endoskeletal system, above knee - knee disarticulation, 4 bar linkage, with friction swing phase control
L5613	Addition to lower extremity, endoskeletal system, above knee-knee disarticulation, 4 bar linkage, with hydraulic swing phase control
L5614	Addition to lower extremity, exoskeletal system, above knee-knee disarticulation, 4 bar linkage, with pneumatic swing phase control
L5616	Addition to lower extremity, endoskeletal system, above knee, universal multiplex system, friction swing phase control
L5617	Addition to lower extremity, quick change self-aligning unit, above knee or below knee, each
L5618	Addition to lower extremity, test socket, symes
L5620	Addition to lower extremity, test socket, below knee
L5622	Addition to lower extremity, test socket, knee disarticulation
L5624	Addition to lower extremity, test socket, above knee
L5626	Addition to lower extremity, test socket, hip disarticulation
L5628	Addition to lower extremity, test socket, hemipelvectomy
L5629	Addition to lower extremity, below knee, acrylic socket
L5630	Addition to lower extremity, symes type, expandable wall socket
L5631	Addition to lower extremity, above knee or knee disarticulation, acrylic socket
L5632	Addition to lower extremity, symes type, 'ptb' brim design socket
L5634	Addition to lower extremity, symes type, posterior opening (canadian) socket
L5636	Addition to lower extremity, symes type, medial opening socket
L5637	Addition to lower extremity, below knee, total contact
L5638	Addition to lower extremity, below knee, leather socket
L5639	Addition to lower extremity, below knee, wood socket
L5640	Addition to lower extremity, knee disarticulation, leather socket

L5642	Addition to lower extremity, above knee, leather socket
L5643	Addition to lower extremity, hip disarticulation, flexible inner socket, external frame
L5644	Addition to lower extremity, above knee, wood socket
L5645	Addition to lower extremity, below knee, flexible inner socket, external frame
L5646	Addition to lower extremity, below knee, air, fluid, gel or equal, cushion socket
L5647	Addition to lower extremity, below knee suction socket
L5648	Addition to lower extremity, above knee, air, fluid, gel or equal, cushion socket
L5649	Addition to lower extremity, ischial containment/narrow m-l socket
L5650	Additions to lower extremity, total contact, above knee or knee disarticulation socket
L5651	Addition to lower extremity, above knee, flexible inner socket, external frame
L5652	Addition to lower extremity, suction suspension, above knee or knee disarticulation socket
L5653	Addition to lower extremity, knee disarticulation, expandable wall socket
L5654	Addition to lower extremity, socket insert, symes, (kemblo, pelite, aliplast, plastazote or equal)
L5655	Addition to lower extremity, socket insert, below knee (kemblo, pelite, aliplast, plastazote or equal)
L5656	Addition to lower extremity, socket insert, knee disarticulation (kemblo, pelite, aliplast, plastazote or equal)
L5658	Addition to lower extremity, socket insert, above knee (kemblo, pelite, aliplast, plastazote or equal)
L5661	Addition to lower extremity, socket insert, multi-durometer symes
L5665	Addition to lower extremity, socket insert, multi-durometer, below knee
L5666	Addition to lower extremity, below knee, cuff suspension
L5668	Addition to lower extremity, below knee, molded distal cushion
L5670	Addition to lower extremity, below knee, molded supracondylar suspension ('pts' or similar)
L5671	Addition to lower extremity, below knee / above knee suspension locking
	mechanism (shuttle, lanyard or equal), excludes socket insert
L5672	Addition to lower extremity, below knee, removable medial brim suspension
L5673	Addition to lower extremity, below knee/above knee, custom fabricated from existing mold or prefabricated, socket insert, silicone gel, elastomeric or equal, for use with locking mechanism
L5676	Additions to lower extremity, below knee, knee joints, single axis, pair
L5677	Additions to lower extremity, below knee, knee joints, polycentric, pair
L5678	Additions to lower extremity, below knee, joint covers, pair
L5679	Addition to lower extremity, below knee/above knee, custom fabricated from existing mold or prefabricated, socket insert, silicone gel, elastomeric or equal, not for use with locking mechanism
L5680	Addition to lower extremity, below knee, thigh lacer, nonmolded
L5681	Addition to lower extremity, below knee/above knee, custom fabricated socket insert for congenital or atypical traumatic amputee, silicone gel, elastomeric or equal, for use with or without locking mechanism, initial only (for other than initial, use code l5673 or l5679)
L5682	Addition to lower extremity, below knee, thigh lacer, gluteal/ischial, molded
L5683	Addition to lower extremity, below knee/above knee, custom fabricated socket insert for other than congenital or atypical traumatic amputee, silicone gel, elastomeric or equal, for use with or without locking mechanism, initial only (for other than initial, use code I5673 or I5679)
L5684	Addition to lower extremity, below knee, fork strap

L5685	Addition to lower extremity prosthesis, below knee, suspension/sealing sleeve, with or without valve, any material, each
L5686	Addition to lower extremity, below knee, back check (extension control)
L5688	Addition to lower extremity, below knee, waist belt, webbing
L5690	Addition to lower extremity, below knee, waist belt, padded and lined
L5692	Addition to lower extremity, above knee, pelvic control belt, light
L5694	Addition to lower extremity, above knee, pelvic control belt, padded and lined
L5695	Addition to lower extremity, above knee, pelvic control, sleeve suspension,
	neoprene or equal, each
L5696	Addition to lower extremity, above knee or knee disarticulation, pelvic joint
L5697	Addition to lower extremity, above knee or knee disarticulation, pelvic band
L5698	Addition to lower extremity, above knee or knee disarticulation, silesian bandage
L5699	All lower extremity prostheses, shoulder harness
L5700	Replacement, socket, below knee, molded to patient model
L5701	Replacement, socket, above knee/knee disarticulation, including attachment plate, molded to patient model
L5702	Replacement, socket, hip disarticulation, including hip joint, molded to patient model
L5703	Ankle, symes, molded to patient model, socket without solid ankle cushion heel (sach) foot, replacement only
L5704	Custom shaped protective cover, below knee
L5705	Custom shaped protective cover, above knee
L5706	Custom shaped protective cover, knee disarticulation
L5707	Custom shaped protective cover, hip disarticulation
L5710	Addition, exoskeletal knee-shin system, single axis, manual lock
L5711	Additions exoskeletal knee-shin system, single axis, manual lock, ultra-light material
L5712	Addition, exoskeletal knee-shin system, single axis, friction swing and stance phase control (safety knee)
L5714	Addition, exoskeletal knee-shin system, single axis, variable friction swing phase control
L5716	Addition, exoskeletal knee-shin system, polycentric, mechanical stance phase lock
L5718	Addition, exoskeletal knee-shin system, polycentric, friction swing and stance phase control
L5722	Addition, exoskeletal knee-shin system, single axis, pneumatic swing, friction stance phase control
L5724	Addition, exoskeletal knee-shin system, single axis, fluid swing phase control
L5726	Addition, exoskeletal knee-shin system, single axis, external joints fluid swing phase control
L5728	Addition, exoskeletal knee-shin system, single axis, fluid swing and stance phase control
L5780	Addition, exoskeletal knee-shin system, single axis, pneumatic/hydra pneumatic swing phase control
L5781	Addition to lower limb prosthesis, vacuum pump, residual limb volume management and moisture evacuation system
L5782	Addition to lower limb prosthesis, vacuum pump, residual limb volume management and moisture evacuation system, heavy duty
L5785	Addition, exoskeletal system, below knee, ultra-light material (titanium, carbon fiber or equal)
L5790	Addition, exoskeletal system, above knee, ultra-light material (titanium, carbon fiber or equal)
L5795	Addition, exoskeletal system, hip disarticulation, ultra-light material (titanium, carbon

	fiber or equal)
L5810	Addition, endoskeletal knee-shin system, single axis, manual lock
L5811	Addition, endoskeletal knee-shin system, single axis, manual lock, ultra-light material
L5812	Addition, endoskeletal knee-shin system, single axis, friction swing and stance phase control (safety knee)
L5814	Addition, endoskeletal knee-shin system, polycentric, hydraulic swing phase control, mechanical stance phase lock
L5816	Addition, endoskeletal knee-shin system, polycentric, mechanical stance phase lock
L5818	Addition, endoskeletal knee-shin system, polycentric, friction swing, and stance phase control
L5822	Addition, endoskeletal knee-shin system, single axis, pneumatic swing, friction stance phase control
L5824	Addition, endoskeletal knee-shin system, single axis, fluid swing phase control
L5826	Addition, endoskeletal knee-shin system, single axis, hydraulic swing phase control, with miniature high activity frame
L5828	Addition, endoskeletal knee-shin system, single axis, fluid swing and stance phase control
L5830	Addition, endoskeletal knee-shin system, single axis, pneumatic/ swing phase control
L5840	Addition, endoskeletal knee/shin system, 4-bar linkage or multiaxial, pneumatic swing phase control
L5845	Addition, endoskeletal, knee-shin system, stance flexion feature, adjustable
L5848	Addition to endoskeletal knee-shin system, fluid stance extension, dampening feature, with or without adjustability
L5850	Addition, endoskeletal system, above knee or hip disarticulation, knee extension assist
L5855	Addition, endoskeletal system, hip disarticulation, mechanical hip extension assist
L5856	Addition to lower extremity prosthesis, endoskeletal knee-shin system, microprocessor control feature, swing and stance phase, includes electronic sensor(s), any type
L5857	Addition to lower extremity prosthesis, endoskeletal knee-shin system, microprocessor control feature, swing phase only, includes electronic sensor(s), any type
L5858	Addition to lower extremity prosthesis, endoskeletal knee shin system, microprocessor control feature, stance phase only, includes electronic sensor(s), any type
L5859	Addition to lower extremity prosthesis, endoskeletal knee-shin system, powered and programmable flexion/extension assist control, includes any type motor(s)
	Note: Code not payable per MassHealth Prosthetics Manual Subchapter 6 (eff 06/01/2019)
L5910	Addition, endoskeletal system, below knee, alignable system
L5920	Addition, endoskeletal system, above knee or hip disarticulation, alignable system
L5925	Addition, endoskeletal system, above knee, knee disarticulation or hip disarticulation, manual lock
L5930	Addition, endoskeletal system, high activity knee control frame
L5940	Addition, endoskeletal system, below knee, ultra-light material (titanium, carbon fiber or equal)
L5950	Addition, endoskeletal system, above knee, ultra-light material (titanium, carbon fiber or equal)

L5960	Addition, endoskeletal system, hip disarticulation, ultra-light material (titanium,
L5961	carbon fiber or equal)  Addition, endoskeletal system, polycentric hip joint, pneumatic or hydraulic control,
	rotation control, with or without flexion and/or extension control
L5962	Addition, endoskeletal system, below knee, flexible protective outer surface covering system
L5964	Addition, endoskeletal system, above knee, flexible protective outer surface covering system
L5966	Addition, endoskeletal system, hip disarticulation, flexible protective outer surface covering system
L5968	Addition to lower limb prosthesis, multiaxial ankle with swing phase active dorsiflexion feature
L5969	Addition, endoskeletal ankle-foot or ankle system, power assist, includes any type motor(s)
L5970	All lower extremity prostheses, foot, external keel, sach foot
L5971	All lower extremity prosthesis, solid ankle cushion heel (sach) foot, replacement only
L5972	All lower extremity prostheses, foot, flexible keel
L5973	Endoskeletal ankle foot system, microprocessor-controlled feature, dorsiflexion and/or plantar flexion control, includes power source
L5974	All lower extremity prostheses, foot, single axis ankle/foot
L5975	All lower extremity prosthesis, combination single axis ankle and flexible keel foot
L5976	All lower extremity prostheses, energy storing foot (seattle carbon copy ii or equal)
L5978	All lower extremity prostheses, foot, multiaxial ankle/foot
L5979	All lower extremity prosthesis, multi-axial ankle, dynamic response foot, one piece system
L5980	All lower extremity prostheses, flex foot system
L5981	All lower extremity prostheses, flex-walk system or equal
L5982	All exoskeletal lower extremity prostheses, axial rotation unit
L5984	All endoskeletal lower extremity prosthesis, axial rotation unit, with or without adjustability
L5985	All endoskeletal lower extremity prostheses, dynamic prosthetic pylon
L5986	All lower extremity prostheses, multi-axial rotation unit ('mcp' or equal)
L5987	All lower extremity prosthesis, shank foot system with vertical loading pylon
L5988	Addition to lower limb prosthesis, vertical shock reducing pylon feature
L5990	Addition to lower extremity prosthesis, user adjustable heel height
L5991	Addition to lower extremity prosthesis, osseointegrated external prosthetic connector
L5999	Lower extremity prosthesis, not otherwise specified
L7360	Six volt battery, each
L7364	Twelve volt battery, each
L7367	Lithium ion battery, rechargeable, replacement
L7362	Battery charger, six volt, each
L7366	Battery charger, twelve volt, each
L7368	Lithium-ion battery charger, replacement only
L7510	Repair of prosthetic device, repair or replace minor parts
L7510	Repair prosthetic device, labor component, per 15 minutes
L7600	Prosthetic donning sleeve, any material, each
L1000	i rosmene domining sieeve, any material, each

## References

- Medicare National Coverage Determination (NCD) Prosthetic Shoe (280.10). Version 1. Available at: https://www.cms.gov/medicare-coverage-database/view/ncd.aspx?NCDId=208&ncdver=1. Accessed 02/17/2022.
- Balk EM, Gazula A, Markozannes G, et al. Lower Limb Prostheses: Measurement Instruments, Comparison of Component Effects by Subgroups, and Long-Term Outcomes. Comparative Effectiveness Review No. 213. (Prepared by the Brown Evidence-based Practice Center under Contract No. 290-2015-00002-I.) AHRQ Publication No.18-EHC017-EF. Rockville, MD: Agency for Healthcare Research and Quality; September 2018.
- Noridian Healthcare Solutions, LLC. Local Coverage Determination (LCD) Lower Limb Prostheses (L33787). Original Effective Date For services performed on or after 10/01/2015. Revision Effective Date For services performed on or after 09/01/2024. Available at:https://www.cms.gov/medicare-coverage-database/view/lcd.aspx?LCDId=33787. Accessed 09/23/2024.
- Noridian Healthcare Solutions, LLC. Local Coverage Article (LCA) Lower Limb Prostheses Policy Article (A52496). Original Effective Date 10/01/2015. Revision Effective Date 09/01/2024. Available at: https://www.cms.gov/medicare-coveragedatabase/view/article.aspx?articleId=52496. Accessed 09/24/2024.
- Centers for Medicare & Medicaid Services. Health Technology Assessment. Lower Limb Prosthetic Workgroup Consensus Document. September 2017. Available at: https://www.cms.gov/Medicare/Coverage/DeterminationProcess/downloads/LLP\_Consensus Document.pdf. Accessed 03/24/2023.
- Commonwealth of Massachusetts MassHealth Provider Manual Series. Prosthetics Manual. Program Regulations 130 CMR 428.00. Effective 11/09/2012. Available at: https://www.mass.gov/lists/prosthetics-manual-for-masshealth-providers#subchapter-4:-prosthetics-providers-regulations-. Accessed 02/17/2022.
- Commonwealth of Massachusetts MassHealth Provider Manual Series. Prosthetics Manual. Subchapter 6. Service Codes. Effective 06/01/2019. Available at: https://www.mass.gov/doc/vision-care-regulations/download. Accessed 02/17/2022.
- 8. Kwah LK, Webb MT, Goh L, Harvey LA. Rigid dressings versus soft dressings for transtibial amputations. *Cochrane Database Syst Rev.* 2019 Jun 17;6(6):CD012427.
- 9. Reichmann JP, Stevens PM, Rheinstein J, Kreulen CD. Removable Rigid Dressings for Postoperative Management of Transtibial Amputations: A Review of Published Evidence. *PM R*. 2018 May;10(5):516-523.
- 10. Merck Manual Professional Version, Postoperative and Preprosthetic Considerations, Last Updated September 2022. Available at: https://www.merckmanuals.com/professional/special-subjects/limb-prosthetics/preparing-for-a-limb-prosthesis. Accessed April 11, 2023.
- 11. Highsmith MJ, Andrews CR, Millman C, et al. Gait Training Interventions for Lower Extremity Amputees: A Systematic Literature Review. *Technol Innov.* 2016 Sep;18(2-3):99-113.
- 12. McClellan BP, Cummings DR. Preparatory Prosthetics. *Clinical Prosthetics and Orthotics*. 1987;11(1):1-4.
- 13. Sanders JE, Fatone S. Residual limb volume change: systematic review of measurement and management. *J Rehabil Res Dev.* 2011;48(8):949-86.
- 14. Christiansen CL, Fields T, Lev G, Stephenson RO, Stevens-Lapsley JE. Functional Outcomes After the Prosthetic Training Phase of Rehabilitation After Dysvascular Lower Extremity Amputation. *PM R*. 2015 Nov;7(11):1118-1126.
- 15. Mancinelli C, Patritti BL, Tropea P, et al. Comparing a passive-elastic and a powered prosthesis in transtibial amputees. Conference proceedings: Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Conference. 2011;2011:8255-8.
- 16. Ferris AE, Aldridge JM, Rábago CA, Wilken JM. Evaluation of a powered ankle-foot prosthetic system during walking. *Arch Phys Med Rehabil*. 2012 Nov;93(11):1911-8.
- 17. Kim J, Wensman J, Colabianchi N, et al. The influence of powered prostheses on user perspectives, metabolics, and activity: a randomized crossover trial. *J Neuroeng Rehabil*. 2021;18(1):49.

- 18. Herr HM, Grabowski AM. Bionic ankle-foot prosthesis normalizes walking gait for persons with leg amputation, Proceedings Biological sciences/The Royal Society. 2012:279(1728):457-64.
- 19. Pröbsting E, Altenburg B, Bellmann M, Krug K, Schmalz T. How does ankle power on the prosthetic side influence loading parameters on the sound side during level walking of persons with transfemoral amputation? Prosthet Orthot Int. 2022 Aug 1;46(4):306-313.
- 20. Davidson AM, Childers WL, Chang YH. Altering the tuning parameter settings of a commercial powered prosthetic foot to increase power during push-off may not reduce collisional work in the intact limb during gait. Prosthet Orthot Int. 2021 Oct 1;45(5):410-416.
- 21. Centers for Medicare & Medicaid Services. Health technology assessment: lower limb prosthetic workgroup consensus document. September 2017. Available at: https://federalpt.org/pdfs/LLP Consensus Document.pdf. Accessed on April 7, 2022.
- 22. Stevens PM, Wurdeman SR. Prosthetic knee selection for individuals with unilateral transfemoral amputation; a clinical practice guideline. J Prosthet Orthot, 2019; 31(1):2-8.
- 23. U.S Department of Veterans Affairs. Department of Defense. VA/DoD clinical practice quideline for rehabilitation of individuals with lower limb amoutation. September 2017. Available at: https://www.healthquality.va.gov/quidelines/Rehab/amp/VADoDLLACPG092817.pdf.
- 24. Webster JB, Crunkhorn A, Sall J, et al. Clinical Practice Guidelines for the Rehabilitation of
- Lower Limb Amputation: An Update from the Department of Veterans Affairs and Department of Defense. Am J Phys Med Rehabil. Sep 2019; 98(9): 820-829.
- 25. Hafner BJ, Smith DG. Differences in function and safety between Medicare Functional Classification Level-2 and -3 transfemoral amputees and influence of prosthetic knee joint control. J Rehabil Res Dev. 2009; 46(3):417-433.
- 26. Hafner BJ, Willingham LL, Buell NC, et al. Evaluation of function, performance, and preference as transfemoral amputees transition from mechanical to microprocessor control of the prosthetic knee. Arch Phys Med Rehabil. 2007; 88(2):207-217.
- 27. Theeven P, Hemmen B, Rings F, et al. Functional added value of microprocessor-controlled knee joints in daily life performance of Medicare Functional Classification Level-2 amputees. J Rehabil Med. 2011; 43(10):906-915.
- 28. Wurdeman SR, Stevens PM, Campbell JH. Mobility analysis of amputees (MAAT 3): matching individuals based on comorbid health reveals improved function for above-knee prosthesis users with microprocessor knee technology. Assist Technol. 2019; 13;6:205566831882078.
- 29. Ossur Power Knee, Updated August 25, 2021, Available at: https://bionicsforevervone.com/ossur-power-knee/.
- 30. Wolf EJ, Everding VQ, Linberg AA, Czerniecki JM, Gambel JM. Comparison of the Power Knee and C-Leg during step-up and sit-to-stand tasks. Gait Posture. 2013 Jul;38(3):397-402.
- 31. Brandt A, Riddick W, Stallrich J, Lewek M, Huang HH. Effects of extended powered knee prosthesis stance time via visual feedback on gait symmetry of individuals with unilateral amputation: a preliminary study. J Neuroeng Rehabil. 2019 Sep 11;16(1):112.
- 32. Brandt A, Huang HH. Effects of extended stance time on a powered knee prosthesis and gait symmetry on the lateral control of balance during walking in individuals with unilateral amputation. J Neuroeng Rehabil. 2019 Nov 29;16(1):151.
- 33. Lawson BE, Ruhe B, Shultz A, Goldfarb M. A powered prosthetic intervention for bilateral transfemoral amputees. IEEE Trans Biomed Eng. 2015 Apr;62(4):1042-50.
- 34. Highsmith MJ. Kahle JT. Carey SL et al. Kinetic asymmetry in transfemoral amoutees while performing sit to stand and stand to sit movements. Gait Posture. 2011 May;34(1):86-91.
- 35. Hunt GR, Hood S, Gabert L, Lenzi T. Effect of Increasing Assistance from a Powered Prosthesis on Weight-Bearing Symmetry, Effort, and Speed During Stand-Up in Individuals with Above-Knee Amputation. IEEE Trans Neural Syst Rehabil Eng. 2023;31:11-21.
- 36. Hood S, Creveling S, Gabert L, Tran M, Lenzi T. Powered knee and ankle prostheses enable natural ambulation on level ground and stairs for individuals with bilateral above-knee amputation: a case study. Sci Rep. 2022 Sep 14;12(1):15465.

- 37. Creylman V, Knippels I, Janssen P, et al. Assessment of transfemoral amputees using a passive microprocessor-controlled knee versus an active powered microprocessor-controlled knee for level walking. *Biomed Eng Online*. 2016 Dec 19;15(Suppl 3):142.
- 38. Hafner BJ, Askew RL. Physical performance and self-report outcomes associated with use of passive, adaptive, and active prosthetic knees in persons with unilateral, transfemoral amputation: Randomized crossover trial. *J Rehabil Res Dev.* 2015;52(6):677-700.
- 39. Lathouwers E, Díaz MA, Maricot A, et al. Therapeutic benefits of lower limb prostheses: a systematic review. *J Neuroeng Rehabil*. 2023 Jan 13;20(1):4.
- 40. Ontario Health (Quality). Osseointegrated prosthetic implants for people with lower-limb amputation: A health technology assessment. *Ont Health Technol Assess Ser.* 2019;19(7):1-126.
- 41. Hebert JS, Rehani M, Stiegelmar R. Osseointegration for Lower-Limb Amputation: A Systematic Review of Clinical Outcomes. *JBJS Rev.* 2017 Oct;5(10):e10.
- 42. Diaz Balzani L, Ciuffreda M, Vadalà G, et al. Osseointegration for lower and upper-limb amputation a systematic review of clinical outcomes and complications. *J Biol Regul Homeost Agents*. 2020 Jul-Aug;34(4 Suppl. 3):315-326.

# **Policy history**

Origination date: 12/01/2023

Review/Approval date(s): Technology Assessment Committee: 03/28/2023, 08/22/2023 (policy

origination), 09/24/2024 (annual review, updated criteria for microprocessor-controlled ankle foot system to include members whose functional level is 2 when specified criteria are met, updated criteria for fluid or pneumatic knee unit to include coverage for members whose functional level is 2 when specified criteria are met, updated criteria for microprocessor-controlled knee to include coverage for members whose functional level is 2 when specified criteria are met, updated Coding section, updated References).

UM Committee: 10/15/2024 (annual review).

Not all services mentioned in this policy are covered for all products or employer groups. Coverage is based upon the terms of a member's particular benefit plan which may contain its own specific provisions for coverage and exclusions regardless of medical necessity. Please consult the product's Evidence of Coverage for exclusions or other benefit limitations applicable to this service or supply. If there is any discrepancy between this policy and a member's benefit plan, the provisions of the benefit plan will govern. However, applicable state mandates take precedence with respect to fully insured plans and self-funded non-ERISA (e.g., government, school boards, church) plans. Unless otherwise specifically excluded, federal mandates will apply to all plans.