Mandated Benefit Review of House Bill 4549
Submitted to the 194th General Court:

An Act to Improve Outcomes for Persons with Limb Loss and Limb Difference

June 2026

Prepared for Massachusetts Center for Health Information and Analysis
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CHIA

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1.0 Executive Summary H.B. 4549 "An Act to improve outcomes for persons with limb loss and limb difference"

The Massachusetts Legislature has charged the Center for Health Information and Analysis (CHIA) with reviewing the impact of H.B. 4549. The bill was submitted in the 194th General Court and is entitled "An Act to improve outcomes for persons with limb loss and limb difference."[1] The report references H.B. 4549 hereafter as the "the bill."

The bill requires commercial insurers to provide coverage for prosthetic and orthotic devices, including devices beyond those used for activities of daily living, as well as related services. Coverage must include the prosthetic or orthotic device that best meets the medical and functional needs of the patient, including devices that support participation in physical activities such as running, biking, and swimming, as well as activities of daily living such as bathing and maximizing upper limb function. Insurers must cover the repair, replacement, and adjustment of prosthetic and orthotic devices when medically necessary to maintain functionality or accommodate changes in a patient's condition.

The bill prohibits insurers from imposing benefit caps, restrictive coverage limitations, or cost-sharing requirements for prosthetic and orthotic devices that are more restrictive than those applied to other medical and surgical benefits. Coverage determinations must be made in a nondiscriminatory manner, and insurers may not deny coverage solely because a device supports physical activity or because an individual uses more than one prosthetic or orthotic device. The bill also requires insurers to maintain contracts with at least two providers and to reimburse agreed-on out-of-network providers for medically necessary prosthetic and custom orthotic services when in-network providers are unavailable.

1.1 What Are Prosthetic and Orthotic Devices?

Prosthetic and orthotic devices are externally applied medical devices prescribed to restore function for individuals with limb loss or limb difference. A prosthesis replaces a limb or part of a limb that is absent due to amputation or congenital difference. An orthosis modifies the structural or functional characteristics of the neuromuscular and skeletal system, providing support, alignment, or corrective function to a limb that is present but functionally impaired.[2]

Many individuals require more than one device to meet their full range of functional needs. A primary prosthesis supports activities of daily living such as walking and self-care. Secondary prostheses are prescribed for specific activities, including running, swimming, and bathing, that a primary device is not engineered to support.[3]

1.2 Current Coverage

Under the Affordable Care Act (ACA), non-legacy individual and small group health plans are required to cover EHBs, including rehabilitative and habilitative services and devices. Orthotic and prosthetic devices fall within this category, which establishes a federal baseline for coverage nationwide.[4,5] In Massachusetts, the EHB Benchmark Plan, based on the Health Maintenance Organization (HMO) Blue New England plan offered by Blue Cross Blue Shield of Massachusetts, requires coverage of prosthetic devices without annual or lifetime dollar limits.[6,7] Existing state mandates further require commercial insurers to cover medically necessary prosthetic devices and repairs, defined as artificial limb devices replacing an arm or leg in whole or in part, with allowable in-network coinsurance not exceeding 20%.[8] Massachusetts law currently requires coverage of prosthetic devices (defined as artificial limbs replacing an arm or leg) on the same terms as durable medical equipment (DME) but does not explicitly address orthotic devices or activity-specific, waterproof, or work-related prostheses.[9] The bill would expand required coverage to include these currently excluded device types.

BerryDunn surveyed Massachusetts insurance carriers regarding current coverage of prosthetic and orthotic devices and the bill's potential impact. Carriers reported that these devices are generally covered when medically necessary. Coverage is typically limited to one device per affected body part for activities of daily living and is subject to medical necessity review, prior authorization, and plan-specific cost-sharing. Carriers consistently indicated that activity-specific devices, including those used for sports, recreation, or bathing, are not currently covered. Carriers noted that coverage is often limited to the least costly device that meets basic functional needs, and duplicate or additional devices are generally excluded. Additionally, responses indicated that repair and replacement are typically covered when medically necessary, including damage due to wear and tear or changes in condition, but upgrades are generally not covered unless required to restore function. Policies were reported as largely consistent across age groups. Carriers reported mixed expectations regarding utilization under the proposed legislation. Some anticipated increased utilization, particularly for activity-specific or more advanced devices, while others indicated uncertainty. Carriers also noted that current utilization and denial data might not fully reflect demand for non-covered devices. Most carriers did not anticipate significant increases in out-of-network utilization, though one carrier noted potential impacts on provider contracting. Some carriers also identified potential cost implications associated with expanded coverage requirements.

1.3 Analysis Overview

The legislative sponsors indicated that the bill's intent is to align commercial insurance coverage with the clinical standard of care for individuals with limb loss and limb difference The bill seeks to ensure that coverage reflects the full range of devices necessary to meet patients' medical and functional needs. It is also intended to expand required coverage beyond devices limited to activities of daily living to include activity-specific and waterproof devices and strengthen parity protections. The analysis evaluates the potential impact of these requirements on health insurance premiums. It estimates the incremental cost of

covering activity-specific and showering or bathing devices under current utilization patterns, as well as the additional cost associated with anticipated increases in utilization under expanded coverage. The analysis focuses on individuals enrolled in fully insured commercial health plans in the Commonwealth under age 65.

1.4 Estimated Cost of Enactment

Requiring coverage for this benefit by fully insured health plans would result in an average annual increase to the typical member's health insurance premium of between $0.04 and $0.15 per member per month (PMPM) or between 0.005% and 0.019% of premium, over a projection period of five years.

1.5 Efficacy Impact

The evidence supporting the medical efficacy of prosthetic and orthotic devices for individuals with limb loss and limb difference is well established. However, outcomes vary based on the affected limb, the cause and location of amputation or limb difference, and patient characteristics. This analysis draws primarily on authoritative clinical guidelines from the U.S. Department of Veterans Affairs and Department of Defense (VA/DoD) and the Agency for Healthcare Research and Quality (AHRQ). The analysis also incorporates clinical and observational evidence and focuses on the commercially insured population in Massachusetts.[10,11,12]

Authoritative guidelines recommend prescription of secondary upper limb prostheses when an individual's functional, vocational, or recreational needs cannot be met by a single device; clinical evidence is consistent with this recommendation.[13,14] Guidelines for lower limb prosthetics similarly support activity-specific secondary devices to enable full functional participation.[15,16] Guidelines further recommend repair, replacement, and customization when necessary to maintain proper socket fit, recognizing that residual limb changes over time make ongoing modification clinically necessary.[17] Evidence for pediatric devices, while limited, indicates improvements in functional, participation, and health outcomes, with children requiring more frequent replacement and adjustment than adults due to growth and developmental needs.[18,19]

Prosthetic and orthotic care is delivered by a multidisciplinary team. A physician or physiatrist coordinates care and determines medical necessity. A prosthetist designs, fabricates, and fits the device and maintains an ongoing relationship with the patient through adjustment, repair, and replacement. Physical and occupational therapists train the individual in device use, focusing on mobility, strength, and the ability to perform activities of daily living. Organizations that craft clinical guidelines consistently identify that a lack of interdisciplinary collaboration negatively impacts functional outcomes.[20]

Endnotes

[1] H.B. 4549. An Act to Improve Outcomes for Persons with Limb Loss and Limb Difference. https://malegislature.gov/Bills/194/H4549.

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[6] Massachusetts Essential Health Benefit Benchmark Plan. Mass.gov. Accessed April 3, 2026. https://www.mass.gov/info-details/essential-health-benefit-benchmark-plan

[7] Blue Cross and Blue Shield of Massachusetts HMO Blue, Inc. HMO Blue® New England $2,000 Deductible Plan Option, Schedule of Benefits. Accessed April 3, 2026. https://www.mass.gov/doc/ehbbp-hmoblue-2017pdf/download

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M.G.L. c.32A §17I https://malegislature.gov/Laws/GeneralLaws/PartI/TitleIV/Chapter32A/Section17I.

[9] *Op. cit.* M.G.L. c. 175 §47Z.

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An Act to Improve Outcomes for Persons with Limb Loss and Limb Difference

MEDICAL EFFICACY ASSESSMENT

2.0 Medical Efficacy Assessment

The bill requires commercial health insurers to provide coverage for prosthetic and orthotic devices and related services for individuals with limb loss or limb difference. Coverage must include devices that meet a patient's medical and functional needs, including those that support physical activity and independence. The bill also requires coverage of associated services, including evaluation, fitting, training, and the repair, replacement, and adjustment of prosthetic and orthotic devices when medically necessary to maintain function or to respond to changes in a patient's condition.

The bill establishes prosthetic and orthotic benefits and prohibits insurers from imposing benefit caps, restrictive coverage limitations, or cost-sharing requirements that are more restrictive than those applied to other medical and surgical benefits. Coverage determinations must be made in a nondiscriminatory manner, and insurers may not deny coverage based on a device's use for physical activity or because an individual requires more than one device. The bill further requires insurers to maintain an adequate provider network, including at least two qualified providers, and to reimburse agreed-upon out-of-network providers for medically necessary prosthetic and custom orthotic services when in-network providers are unavailable.[1]

The legislative sponsors indicated the bill's intent is to:

- Clarify existing coverage obligations under the ACA, rather than create a new mandate. Sponsors assert that prosthetic and orthotic care is already required as an EHB under the ACA's habilitative and rehabilitative services category (42 U.S.C. § 18022).[2] The bill reflects the sponsors' interpretation that this requirement extends to devices that support the "fullest possible function," including devices for physical activity and showering or bathing, though this specific standard is not explicitly grounded in the ACA's statutory text.
- Address a discriminatory coverage gap. Insurance often currently covers a single prosthetic or orthotic device per limb for daily activities but denies coverage for additional devices needed for physical activity or showering and bathing. The bill would prohibit insurers from categorically excluding these devices as "not medically necessary" and would bring commercially insured individuals to the same standard of care afforded to veterans.
- Standardize coverage while preserving clinical oversight. The bill would require coverage for up to three categories of devices, daily use (already covered), physical activity, and showering or bathing, when medically necessary, as determined by a prescribing clinician and prosthetist/orthotist. It would not change existing medical necessity documentation requirements, prior authorization processes, or expected device useful life standards.

2.1 Limb Loss and Limb Difference: Clinical Background and Care Model

Definitions and Prevalence

Limb loss, also referred to as acquired limb difference, is a condition in which a limb or part of a limb is absent due to post-birth factors such as amputation from trauma, vascular disease, cancer, or infection. Limb difference, also referred to as congenital limb difference, is a condition in which a limb or part of a limb is absent or functionally irregular due to congenital factors. The impact of either condition varies widely depending on the individual, including which limb is affected and the severity of the condition.

As of 2019 an estimated 2.3 million individuals in the United States are living with limb loss, 91% of which underwent lower extremity amputation and 9.2% underwent upper extremity amputation.[3] Data on nationwide prevalence of limb loss is limited, however according to the Centers for Disease Control and Prevention (CDC) 1 in 1,852 babies in the United States is born with a type of limb difference, congenital limb reduction.[4]

Among individuals with limb loss, lower limb amputations accounted for 83% of total amputations from 2016 to 2021, with the most common sites being the toe, lower leg, foot, and upper leg. Diabetes is a primary driver of lower limb amputation; one study found that individuals with diabetes were more than twice as likely to die within three years of amputation compared to those without diabetes, and that individuals not fitted with a prosthetic were more than 50% more likely to die during that period than those who were fitted.[5]

Clinical Guidelines

Clinical guidelines from the U.S. Department of Veterans Affairs and Department of Defense (VA/DoD) provide the most comprehensive and authoritative frameworks for prosthetic and orthotic care. The VA/DoD Clinical Practice Guideline for Rehabilitation of Individuals with Lower Limb Amputation recommends a structured rehabilitation pathway beginning with a comprehensive pre-amputation evaluation based on the individual's rehabilitation goals, functional level, and psychosocial health.[6] The companion VA/DoD guideline for upper limb amputation rehabilitation outlines four phases of care, perioperative, pre-prosthetic, prosthetic training, and lifelong care, and emphasizes integration of prosthetic care into a broader treatment plan tailored to individual needs.[7]

The World Health Organization (WHO) and International Society for Prosthetics and Orthotics (ISOP) similarly emphasize restoring mobility for individuals with lower limb loss or difference and manipulation of objects for those with upper limb involvement, underscoring the functional goals that guide prosthetic prescription.[8]

Outcomes

Outcomes for individuals with limb loss and limb difference differ across functional, participation, and health domains, and are highly dependent on the type and severity of the condition, the limb affected, and the timeliness and quality of prosthetic care. For individuals with lower limb loss, prosthetic fitting is associated with meaningfully improved survival, mobility, and ability to perform activities of daily living (ADLs).[9] For individuals with upper limb loss, clinical evidence is limited. Clinical guidelines support the use of prosthetic and orthotic devices to improve functional outcomes. For individuals with limb difference, evidence on functional outcomes is more limited, and clinical benefit varies; prosthetic use has been associated with improvements in psychosocial outcomes, including social participation, though evidence of improvements in physical function is less consistent.[10,11]

Care Model and Provider Roles

Prosthetic care is inherently multidisciplinary. Research consistently identifies a lack of interdisciplinary collaboration as a factor associated with poorer functional outcomes. The primary provider roles in the continuum of care are as follows:[12]

- Physician/Physiatrist: Serves as the clinical coordinator and medical decision-maker for the prosthetic care team. Physicians are typically the first point of contact, responsible for coordinating care, determining medical necessity, and prescribing specific devices.[13]
- Prosthetist: Carries primary responsibility for the construction and fitting of the prosthetic device. The prosthetist determines device specifications to maximize functional outcomes and maintains an ongoing relationship with the individual through fitting, testing, and repair or replacement. Stakeholder interviews conducted for this review emphasized the long-term prosthetist-patient relationship as an important factor in successful rehabilitation.[14]
- Physical/Occupational Therapist: Following prosthetic fitting, the physical or occupational therapist trains the individual to use the device effectively, including instruction on walking, running, or performing ADLs, as well as building strength and gait balance for those with lower limb loss or difference.[15]

Table 1: Relevant Definitions

Term	Definition
Limb Loss (Acquired Limb Difference)	A condition in which a limb, or part of a limb, is absent due to post-birth factors.
Limb Difference (Congenital Limb Difference)	A condition in which a limb, or part of a limb, is absent, or functionally irregular, at birth.
Prosthesis	An externally applied device used to replace wholly, or in part, an absent or deficient limb segment.
Orthosis	An externally applied device used to modify the structural and functional characteristics of the neuromuscular and skeletal system.
Terminal Device	A component of a prosthesis attached to the end of the limb that allows the user to interact with their environment or perform a specific function.
Physiatrist	A physician specializing in physical medicine and rehabilitation who leads the prosthetic care team, manages medical conditions, and coordinates functional recovery and rehabilitation goals.
Prosthetist	A healthcare professional who designs, fabricates, fits, and adjusts prosthetic devices, and evaluates their function to meet the patient's clinical and functional needs.
Physical Therapist	A licensed healthcare provider who trains patients to safely use prosthetic devices, focusing on gait, strength, balance, and mobility to restore functional movement.
Occupational Therapist	A licensed healthcare provider who helps patients regain independence in ADLs, including using prosthetic devices for self-care, work, and daily tasks.
Primary Prosthesis	The first prosthetic device fitted to an individual, usually designed to enable ADLs, and not suitable for specific, activity-based use.
Secondary Prosthesis	An additional prosthetic device, usually designed to enable participation in specific activities, and not suitable for everyday use.
Modular Prosthesis	A prosthetic device with multiple configurations or terminal devices to enable a variety of functional use.

2.2 Applications of Prosthetic and Orthotic Devices

Activity-Specific Prostheses

Many individuals with limb loss or limb difference require devices beyond those used for ADLs to safely participate in physical activity, recreation, and employment. Using a general-purpose prosthesis for activities outside its design parameters can result in device damage, biomechanical complications or injury, and inability to continue the activity.[16,17]

Activity-specific prostheses are engineered to withstand the forces and functional demands of particular activities. Running prostheses, or running blades, are the most commonly prescribed activity-specific device. A running blade is a lower limb prosthetic, fit either above or below the knee, constructed of lightweight carbon fiber that provides the energy return necessary for running. Unlike walking prostheses,

which may include microprocessor-controlled ankle or knee components, running blades are simpler by design to optimize performance and minimize weight.[18]

Physical activity has demonstrated benefits for individuals with limb loss or limb difference across multiple domains, including physical health, mental health, body image, and community participation.[19] The WHO/ISOP guidelines and other major clinical guidelines explicitly support the use of activity-specific prostheses, including running blades, swimming prosthetics, and showering and bathing devices, recognizing these as necessary for full participation in daily and recreational life.[20]

Waterproof Prostheses

Standard prostheses are not suitable for use in water due to electronic components, weight, and materials not designed for aquatic environments. Swimming prostheses are designed to enable mobility on wet surfaces and function in water. Shower or bath prostheses are designed for safe use during personal hygiene and are more common among older or less physically active individuals.[21] Because waterproof prostheses serve distinct functional requirements, standard devices cannot be substituted for them.

Work-Related Prostheses

Individuals with upper limb loss or difference might be unable to perform fine motor tasks or handle tools necessary for employment without a prosthetic device designed for that purpose. Upper limb prostheses prescribed for occupational use often include interchangeable terminal devices that allow manipulation of tools and operation of electronic equipment.[22] Some individuals with lower limb deficiency also require work-specific devices, though upper limb applications are more common.

2.3 Efficacy of Prosthetic and Orthotic Devices

Overview

The evidence base for prosthetic and orthotic devices is characterized by heterogeneity: outcomes vary significantly by individual, device type, limb affected, and clinical setting. Conducting randomized controlled trials is challenging, given the individualized nature of prosthetic fitting and the ethical constraints on withholding devices from those in need. This section draws primarily on authoritative clinical practice guidelines, particularly those of the VA/DoD and the AHRQ, supplemented by available clinical studies. The review addresses upper and lower limb devices separately, consistent with the structure of major guidelines.

Relevance to the Commercially Insured Population

The focus of this review is on the fully insured commercial population in Massachusetts. Commercially insured individuals tend to have higher income than those covered by Medicaid. Research specific to the commercially insured population is limited, and accordingly, when necessary, this review draws inferences from broader population data. Research conducted for this review found that individuals under 65 are significantly more likely to be prescribed at least one prosthetic device, consistent with the higher functional demands of the working-age population. While research does exist around the Medicare population with limb loss or limb difference, it is not included in this analysis.

Outcome Measures

Prosthetic efficacy is assessed across three primary domains: functional outcomes, participation outcomes, and health outcomes.

- Functional outcomes: For lower limb prostheses, mobility is the primary functional measure. The Medicare Functional Classification (K-level) system is the standard instrument for classifying mobility in lower limb prosthesis users.[23] For activity-specific secondary prostheses, outcome measures include biomechanics, terrain navigation, and device-specific performance metrics. For upper limb prostheses, hand function and dexterity are the primary measures.
- Participation outcomes: These outcomes assess a person's ability to engage in athletics, employment, education, and community life. These are particularly relevant when evaluating activity-specific devices.
- Health outcomes: Health outcomes encompass morbidity and mortality, as well as mental health measures such as rates of social isolation, anxiety, and depression, which may be influenced by functional limitations or restricted participation.

Upper Limb Prosthesis and Orthosis Efficacy

The two most authoritative sources on upper limb prosthetic efficacy are the 2022 VA/DoD Clinical Practice Guideline for the Management of Upper Limb Amputation Rehabilitation[24] and the Consensus Clinical Standards of Care for Prosthetic Management of Unilateral Transradial Amputation and Limb Deficiency, developed using a Delphi survey methodology.[25i]

[i]Note: A Delphi survey involves selecting a panel of experts, conducting iterative surveys, and providing anonymous feedback until a consensus is reached.

Both sources support the prescription of secondary and activity-specific prosthetic devices when required to achieve functional goals. The VA/DoD guideline states that prosthetic care decisions should incorporate consideration of adaptive sports and leisure activities, and that follow-up assessments should evaluate the need for additional prosthetic components or technology. The guideline specifically recommends activity-specific prostheses to enable individuals to better perform recreational or vocational activities.[26]

The Delphi Consensus Standards state that a prosthesis should be considered whenever a person has functional, vocational, or avocational needs that cannot be met by an existing device and explicitly recommend multiple prostheses or terminal devices when individual needs require them.[27]

Clinical study evidence for upper limb prostheses is limited but consistent with guideline recommendations. A study on modular upper limb prosthetics found that individuals with access to a greater variety of functional configurations performed better on standardized functional assessments than those with more limited options.[28]

Lower Limb Prosthesis and Orthosis Efficacy

The VA/DoD Clinical Practice Guideline for Rehabilitation of Individuals with Lower Limb Amputation[29] and the AHRQ Comparative Effectiveness Review for Lower Limb Prostheses[30] are the primary authoritative sources for lower limb prosthetic efficacy.

The VA/DoD guideline explicitly endorses the prescription of secondary prostheses when clinically appropriate, directing providers to assess whether each patient requires an activity-specific prosthesis and, if so, to identify the most appropriate device. The guideline recommends annual reassessment of activity-specific devices and fitting of additional components when they would be beneficial.[31]

The AHRQ review identified substantial evidence supporting the efficacy of 30 lower limb prosthetic devices, finding improvements across ambulation, function, quality of life, and other patient-centered outcomes. The review underscores the importance of individualized device selection and of fitting multiple devices for patients whose functional needs cannot be met by a single device.[32]

A retrospective claims-based analysis of commercially insured individuals with lower limb loss found that individuals who do not receive a prosthesis have 2.6 times higher odds of mortality than individuals who were fitted with prosthesis.[33]

Clinical study evidence for secondary lower limb prostheses is limited but instructive. An observational study of 1,566 lower limb prosthesis users found that 13.5% used activity-specific prostheses despite frequently lacking insurance coverage for them, suggesting that individuals perceive meaningful value in

these devices even when bearing out-of-pocket costs.[34] A 2018 study of crossover feet[35,ii] found improvements across a range of activities compared to traditional walking prosthetics, demonstrating the functional relevance of activity-specific design.

Replacement, Repair, and Customization

Both the upper and lower limb VA/DoD guidelines frame prosthetic care as a long-term process requiring periodic reassessment, with repair, replacement, and modification as essential mechanisms for maintaining device efficacy over time.

Prosthetic fit is widely recognized as the most important factor in effective prosthetic rehabilitation. A 2020 study found that poor socket fit directly impaired functional ability, quality of life, and health outcomes.[36] Because residual limb volume changes over time, ongoing modification and reassessment are clinically necessary to maintain proper fit.

Customization of prosthetic devices has been shown to improve comfort, mobility, and user satisfaction. A review of custom prosthetic devices found that individualized devices improve socket comfort, functionality, and accessibility, while standardized or non-adjusted devices are often clinically suboptimal and might result in adverse functional or health outcomes.[37][38]

Pediatric Limb Loss and Limb Difference

Children with limb loss or limb difference present distinct clinical considerations, as devices must not only address current functional limitations but also support age-appropriate development and participation. Due to growth and physical development, children require more frequent prosthetic replacement and modification than adults; typically, within six to nine months of fitting, according to clinical expert interviews conducted for this review.[39]

The evidence base for pediatric prosthetics, particularly lower limb devices, is limited. A 2024 scoping review of clinical outcomes in pediatric lower limb prosthetics found that few studies report data sufficient to assess overall function and called for further research to validate outcomes in this population.[40] For children with congenital limb difference, guidelines focus on pediatric care, with debate remaining about the optimal age for initial prosthetic fitting. One systematic review found lower prosthesis rejection rates among children fitted before age two, though other studies have yielded inconclusive results.

[ii]Note: A crossover foot is a prosthetic device designed to incorporate features of generalized daily use prosthetic feet with running-specific feet.

2.4 Access, Utilization and Health Equity

A study on prosthetic utilization among commercially insured individuals with lower limb loss found that 87% of individuals were fit with a prosthetic within one year of amputation.[41] Current utilization of prosthetic devices among commercially insured individuals in Massachusetts is primarily limited to prosthetic or orthotic devices designed for ADLs. According to responses from Massachusetts insurance carriers, coverage extends only to a single device per limb, and insurers often only cover the lowest cost option that meets the standards of medical necessity.[42] According to Massachusetts experts interviewed for this report, access to additional activity-specific prostheses or orthoses currently relies on philanthropic financing or on individuals paying out-of-pocket, which restricts utilization. Individuals who receive prosthetic devices from philanthropy typically receive only one device, with no coverage for replacement, customization, or repair.[43]

The bill would require that coverage determinations for prosthetic and orthotic devices be made in a nondiscriminatory manner, consistent with how other medical and surgical benefits are administered. Insurers would be prohibited from applying benefit caps, restrictive limitations, or cost-sharing requirements more restrictive than those applied to comparable medical and surgical benefits. Coverage decisions would rely on physician assessment of medical necessity rather than categorical insurer exclusions.[44] Prosthetic replacements would also be determined by provider assessment of medical necessity, and insurers cannot impose limits on replacement frequency. [45]

Information on Massachusetts-specific disparities in access to prosthetic and orthotic care is limited. However, national studies provide context on disparities observed across the United States. A 2024 nationwide study on racial and gender disparities in outcomes for individuals with major limb loss found that white individuals scored higher on all prosthetic outcome measures than people of color, though differences were modest. The study also found that men scored significantly higher on functional outcomes than women.[46]

Massachusetts has a robust network of physicians, prosthetists, and orthotists who provide prosthetic and orthotic treatment. Massachusetts physicians specializing in pediatric and adult limb loss and limb difference indicated that current provider capacity is sufficient to meet any increased demand that might occur, should the bill pass.[47]

2.5 Comparison to Other States and Coverage Approaches

Prosthetic and orthotic coverage mandate legislation has been enacted or is under active consideration in 20 states.[48] As of May 2025, 11 of these states have passed mandates, and nine have mandates currently in legislative processes.[49] Most contain language similar to this bill, requiring coverage for activity-specific devices and delegating medical necessity determinations to providers rather than insurers. [50] Notable variations in other states' approaches include:

- Illinois SB 2195, New Hampshire SB132-FN, and Maine H.P. 741 - L.D. 1003 only mandate coverage for individuals aged 18 or younger.
- Illinois, New Hampshire, and Maine have enacted narrower mandates covering only individuals aged 18 or younger.[51,52,53]
- Vermont requires insurers to offer coverage equivalent to Medicare, rather than specifying particular coverage requirements.[54]
- Some states have included quantity limits, e.g., a cap of three devices per affected limb over any three-year period.[55,56]

Evidence on the impact of prosthetic and orthotic coverage mandates on utilization is limited, as most laws have only recently taken effect.

3.0 Conclusion

Clinical evidence and national guidelines support that individuals with limb loss or limb difference may require more than one prosthetic or orthotic device to achieve optimal functional outcomes. These recommendations reflect a broader standard of care in which device needs vary based on specific activities and environments.[57,58] The bill addresses gaps between clinical standards and current coverage practices in Massachusetts.[59] Commercial insurance coverage in the state often limits individuals to one device per limb, typically focused on ADLs, with limited coverage for additional devices. As a result, individuals who require multiple devices might incur out-of-pocket costs or forgo certain types of use. Massachusetts-specific data on the extent of these impacts are limited, though similar coverage patterns have been observed nationally.[60]

The bill would modify coverage requirements while maintaining existing utilization management frameworks. Medical necessity review and prior authorization processes would continue, and insurers would retain the ability to evaluate clinical documentation. The bill would also limit the use of categorical exclusions for certain types of devices, allowing coverage determinations to be made based on individual clinical circumstances.[61]

Available information suggests that utilization of additional devices might be limited in the near term. Practitioner estimates indicate that a portion of eligible individuals would utilize expanded coverage, and early experience from other states with similar policies shows relatively low initial uptake. As with other coverage changes, utilization might evolve over time as implementation progresses.

The proposed bill is consistent with recent legislation in several other states, where similar requirements have been enacted or are under consideration. In this context, the bill reflects one of several policy approaches being used to address coverage of prosthetic and orthotic devices. [62,63,64]

Equity considerations could arise to the extent that coverage limitations interact with differences in access to providers, benefit design, or cost-sharing obligations across populations. While Massachusetts-specific data are limited, national evidence identifies variation in prosthetic outcomes across demographic groups, including race and gender.[65] The extent to which changes in coverage would affect these patterns is uncertain and would depend on multiple factors, including implementation details and access to providers.

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An Act to Improve Outcomes for Persons with Limb Loss and Limb Difference

ACTUARIAL ASSESSMENT

4.0 Actuarial Assessment

4.1 Background

The bill requires commercial health insurers to cover prosthetic and orthotic devices and related services for individuals with limb loss or limb difference, including devices that best meet a patient's medical and functional needs and support physical activity and independence beyond basic daily use. Coverage must also include evaluation, fitting, training, and the medically necessary repair, replacement, and adjustment of devices. The bill prohibits insurers from applying more restrictive cost-sharing, benefit limits, or coverage criteria than those used for other medical and surgical services. It also requires nondiscriminatory coverage determinations, prohibits denials based on use for physical activity or multiple devices, and establishes network adequacy standards, including reimbursement for out-of-network providers when in-network options are unavailable.[1]

4.2 Plans Affected by the Proposed Mandate

The bill amends statutes that regulate commercial health care carriers in the Commonwealth. It includes the following sections, each of which addresses statutes dealing with a particular type of health insurance policy when issued or renewed in the Commonwealth:

- Chapter 32A – Plans Operated by the Group Insurance Commission (GIC) for the Benefit of Public Employees
- Chapter 175 – Commercial Health Insurance Companies
- Chapter 176A – Hospital Service Corporations
- Chapter 176B – Medical Service Corporations
- Chapter 176G – Health Maintenance Organizations (HMOs)

The bill includes MassHealth, although an analysis of the impact on its members is outside the scope of this review. This analysis includes members under 65 years of age who have fully insured commercial plans.

Plans Not Affected by the Proposed Benefit Mandate

Self-insured plans (i.e., where the employer or policyholder retains the risk for medical expenses and uses a third-party administrator or insurer to provide only administrative functions), except for those provided by the GIC, are not subject to state-level health insurance mandates. State mandates do not apply to Medicare, Medicare Advantage plans, or other federally funded plans, including TRICARE (covering military personnel and dependents), the Veterans Administration, and the Federal Employees Health Benefit Plan, the benefits for which are determined by, or under the rules set by, the federal government.

Although the bill includes Chapter 118, this analysis does not estimate the bill's impact to MassHealth, nor does it address any potential effect on Medicare supplement plans—even to the extent they are regulated by state law.

The bill would require coverage for a benefit that may be beyond what is within the Division of Insurance (DOI)- designated essential health benefits (EHBs), but further analysis is required. Any state benefit mandate that exceeds the state's definition of EHBs could require the defrayal of the additional cost incurred by enrollees in qualified health plans (QHPs) under federal law.

4.3 Existing Laws Affecting the Cost of the Mandate

Under the ACA, non-legacy individual and small group health plans are required to cover EHBs, including rehabilitative and habilitative services and devices. [2,3] Orthotic and prosthetic devices are recognized as a subset of this category, and the ACA's establishment of uniform definitions created a federal baseline for coverage, minimizing variability in orthotic and prosthetic coverage across states.[4] Coverage is generally subject to medical necessity criteria and applicable cost-sharing requirements.

In Massachusetts, the EHB Benchmark Plan defines the EHBs required in all small group and individual plans offered in the state, both within and outside of the Health Connector, and is based on the HMO Blue New England plan offered by Blue Cross Blue Shield of Massachusetts. EHB-compliant plans may not impose combined limits on habilitative and rehabilitative services and devices, and EHBs may not carry any annual or lifetime dollar limit.[5,6]

Massachusetts also maintains existing state mandates governing prosthetic device coverage for commercial insurers under Massachusetts General Law (M.G.L.) c.175 §47Z, c.176A §8AA, c.176B §4AA, c.176G §4S, and c.32A §17I.[7] These statutes define a prosthetic device as an artificial limb to replace, in whole or in part, an arm or leg, and require coverage under the same terms and conditions as any durable medical equipment (DME) benefit.[8] The statutes prohibit annual or lifetime dollar maximums specific to prosthetic devices, permit coinsurance not exceeding 20% of the allowable cost for in-network services, allow prior authorization, and limit required coverage to the most medically appropriate model that adequately meets the member's needs.[9] Orthotic devices are not explicitly addressed under current law, and coverage can vary by plan design.

The bill would expand on this existing framework by broadening covered devices to include those supporting physical activity and upper limb function beyond daily use and prohibiting cost-sharing or benefit limitations more restrictive than those applied to other medical and surgical benefits under the plan.[10]

4.4 Current Coverage

BerryDunn surveyed Massachusetts insurance carriers in the Commonwealth, with respondents representing 82% of the Commonwealth's fully insured commercial membership.[iii]

Key findings from this survey include:

- Carriers reported that prosthetic and orthotic devices are covered when medically necessary under durable medical equipment benefits. Coverage is generally limited to one device per affected body part and to the least costly device sufficient to support ADLs. Devices intended for activities beyond basic function, including sports or recreational use, are generally not covered.
- Coverage determinations are based on clinical review, including physician prescription and functional assessment, with some carriers applying additional review for advanced or specialized components. Member cost-sharing follows plan-specific DME structures, typically including deductibles and coinsurance. Carriers reported limited utilization data and noted that existing utilization and denial patterns might not capture demand for non-covered devices.
- Repair and replacement are generally covered when medically necessary, including due to wear and tear, irreparable damage, or changes in medical condition. Replacement may also be permitted when repair is not cost-effective. Upgrades are typically not covered unless clinically required. Policies were reported as largely consistent across age groups, with limited exceptions.
- Carriers provided mixed expectations regarding utilization under the proposed legislation, with some anticipating increased use of activity-specific or higher-cost devices and others indicating uncertainty. Most carriers do not expect substantial increases in out-of-network utilization, citing existing provider networks, though some noted that reimbursement requirements could affect provider contracting dynamics. Denials generally reflect failure to meet medical necessity criteria, including requests for non-covered or investigational components. Carriers also identified potential cost implications associated with expanded coverage requirements.

[iii]BerryDunn surveyed 10 insurance carriers in the Commonwealth (although Tufts Health Plan and Harvard Pilgrim Health Care recently merged, they are accounted for separately); responses represent five carriers and 82% coverage of members.

5.0 Methodology

5.1 Overview

Estimating the impact of this mandate on premiums requires evaluating the cost and utilization of the mandated services relative to current coverage levels. These components were combined, with adjustments for carrier retention, to produce a baseline estimate of the proposed mandate's incremental effect on premiums. This impact was then projected over a five-year period beginning January 1, 2027, as the implementation date, should the bill become law.

5.2 Data Sources

The primary data sources used in the analysis are as follows:

- Input from legislative sponsors regarding the intended effect of the bill
- Survey of commercial carriers in the Commonwealth regarding descriptions of current coverage
- Interviews with medical experts
- Massachusetts All Payers Claims Database (APCD) data
- Published scholarly literature, reports, and population data, cited as appropriate

5.3 Steps in the Analysis

1. Estimated the marginal costs for insurers to cover activity-specific and showering or bathing prosthetic and orthotic devices.

A. Users of prosthetic devices identified in the 2020 – 2024 APCD data were used to define the base target population assumed to potentially utilize an activity-specific and/or showering or bathing device under the mandate. Users were stratified into children and adults, with children defined as individuals under age 18. Children were assumed to have higher uptake rates for activity-specific devices.

B. Developed a range of uptake rates by age cohort for activity-specific devices based on literature research.

C. Calculated the estimated number of activity-specific device users by multiplying the eligible users from Step 1A by the uptake rates from Step 1B.

D. Developed a range of average device cost for activity-specific devices based on literature research and APCD data.

E. Calculated the annual incremental cost of covering activity-specific devices by multiplying the users from Step 1C by the average device cost from Step 1D and dividing by the average useful life[iv] assumption for each age cohort.

F. Developed a range of uptake rates for showering or bathing devices for all users based on literature research.

G. Calculated the estimated number of showering or bathing device users by multiplying the total target users from Step 1A and the uptake rates from Step 1F.

H. Developed a range of average device costs for showering or bathing devices based on literature research.

I. Calculated the annual incremental cost of covering showering or bathing devices by multiplying the users from Step 1G by the average device cost from Step 1H and dividing by the average useful life assumption.

J. Added results from Step 1E and Step 1I to calculate the total annual incremental cost for covering activity-specific and showering or bathing devices.

K. Divided the total dollar impact from Step 1J by the total calendar year 2024 membership for all commercial carriers to calculate the marginal cost PMPM associated with the mandate.

2. Calculated the impact of the projected claim costs on insurance premiums.

A. Estimated the fully insured Commonwealth population under age 65 for the next five years (2027 – 2031).

B. Projected the incremental PMPM costs for 2027 – 2031 by applying an average annual medical inflation factor to the PMPM developed in Step 1K.

C. Multiplied the projected PMPM incremental net cost of the mandate from Step 2B by the projected population estimate from Step 2A to calculate the total estimated marginal claims cost of the bill.

D. Estimated insurer retention (i.e., administrative costs, taxes, and profit) and applied it to the final incremental claims cost calculated in Step 2C to calculate the effect of the bill on premiums.

5.4 Assumptions and Limitations

The need for activity-specific devices and showering or bathing devices for individuals with limb loss or limb difference can vary substantially among individuals with limb loss or limb difference, depending on such factors as health status, functional needs, participation in specific activities, and personal hygiene preferences. BerryDunn relied on APCD data to identify individuals who received prosthetic devices during the five-year period from 2020 through 2024. These individuals were assumed to represent the population

[iv] Average useful life refers to the expected period of serviceable use before replacement is clinically or functionally warranted. See Section 5.4 for a discussion of BerryDunn's useful life assumptions and their relationship to the federal reasonable useful lifetime standard.

most likely to utilize activity-specific devices and showering or bathing devices, as they have already obtained primary devices, indicating both clinical eligibility and engagement with the prosthetic care system.

In addition to cost and insurance coverage, individuals with limb loss or limb difference may choose not to pursue activity-specific prosthetic devices or showering or bathing devices for a variety of reasons. These may include, but are not limited to, their personal assessment of the added benefit of such devices, the burden of appointments, fitting, adjustments, paperwork, and maintenance, and practical challenges related to storage, transportation, and device use. Because carriers do not generally cover activity-specific devices or showering or bathing devices currently, claims data are not available to directly observe the uptake rates. As a result, BerryDunn developed a range of uptake assumptions informed by literature review, including reported rates of current activity-specific device use among individuals with primary prosthetic devices. BerryDunn assumed that current users, as well as a portion of individuals who have primary devices but do not currently use activity-specific devices, would obtain these devices through insurance coverage under the mandate.[11]

The average useful life of these devices is likely to vary considerably based on the type of device, manufacturer, materials, and each individual user's utilization patterns. Some activity-specific devices are designed to withstand high-impact use and may have a longer useful life than other devices. The Centers for Medicaid & Medicare Services (CMS) generally applies a five-year reasonable useful lifetime standard for DME.[12] For purposes of this analysis, average useful life refers to the expected period of serviceable use before replacement is clinically or functionally warranted. BerryDunn assumed a useful life of four years for adults and one year for children — assumptions that are more conservative than the minimum five-year reasonable useful lifetime floor established under federal regulation. For children, BerryDunn assumed an average useful life of one year to account for the need to refit or replace devices as children develop and grow.[13] These assumptions are intended to account for normal maintenance and repair costs. BerryDunn also assumed that adoption of these devices would be spread evenly across the assumed useful life, recognizing that obtaining these devices can be a lengthy process that may include initial clinical visits, fitting, device production, and follow-up adjustments.

Device costs also vary substantially by device type, brand, model, materials, and intended use. Because insurers generally do not currently cover activity-specific prosthetic devices or showering or bathing devices, estimating the average cost per device using claims data alone is challenging. To address this uncertainty, BerryDunn conducted literature research across multiple types of devices and developed a wider-than-usual cost range. BerryDunn also reviewed APCD claims data and observed that most users were lower limb device users. Lower limb device costs tend to be lower than some of the more expensive upper limb prosthetic devices. In addition, BerryDunn focused its cost assumptions on prosthetic devices, given their higher expected cost, and assumed that the cost of orthotic devices would be captured within the broader device cost range used in this analysis, as certain activity-specific orthotic devices may already be covered under existing benefits and are generally less costly than prosthetic devices. BerryDunn further

assumed that insurers would continue to apply case management practices and would not be required to cover all high-cost options, provided that at least one device satisfying the individual's clinical needs is available.

6.0 Analysis and Results

This section describes the calculations outlined in the previous section in more detail. The analysis includes a best estimate middle-cost scenario, a low-cost scenario, and a high-cost scenario using more conservative assumptions. The analysis section proceeds as follows: Section 6.1 describes the steps used to calculate the incremental cost of the bill. Section 6.2 projects the fully insured population aged 0 – 64 in the Commonwealth over the years 2027 – 2031. Section 6.3 calculates the total marginal medical expense. Section 6.4 adjusts these projections for carrier retention to arrive at an estimate of the bill's effect on premiums for fully insured plans.

6.1 Incremental Cost of Mandate

As discussed above, BerryDunn used APCD data to identify unique individuals with prosthetic device claims from 2020 through 2024 as the population most likely to pursue activity-specific devices and showering or bathing devices under the mandate. The five-year lookback period captures the current target population, including individuals who recently obtained either their first or a replacement primary prosthetic device. This approach assumes that individuals with recent prosthetic device claims are the most relevant population for estimating potential uptake, as they have already obtained a primary prosthetic device through insurance coverage.

Table 2. Users of Primary Prosthetic Devices From 2020 to 2024

	Users of Primary Prosthetic Devices
Children (under 18)	23
Adults	773
Total	796

Activity-specific and showering or bathing devices are generally not covered by commercial insurance. Therefore, BerryDunn relied on literature research and information provided by experts to develop uptake assumptions. BerryDunn developed separate assumptions for children and adult users of activity-specific devices. For children under 18, higher uptake rates were assumed to reflect their greater likelihood of participating in sports and recreational activities, consistent with expert input. Assumed uptake rates of 80%, 85%, and 90% are used as the low, midpoint, and high scenarios, respectively. For adults, BerryDunn relied on a recent study indicating that 65.8% of individuals with a primary prosthetic device did not have a secondary device, while 13.5% reported having a sport-specific device, and 6.3% reported having a device

for hygiene purposes.[14] BerryDunn assumed that current users of sport-specific devices would seek insurance coverage under the mandate and that a portion of individuals without a secondary device would newly seek coverage. Based on this approach, adult uptake rates were estimated at approximately 20% in the low scenario and 35% in the high scenario, with the midpoint calculated as the average of the two. Similarly, BerryDunn assumed uptake rates for showering or bathing devices of 10%, 13%, and 15% under the low, midpoint, and high scenarios, respectively.

Table 3. Uptake Assumptions for Activity-Specific Devices

	Low	Mid	High
Children (under 18)	80%	85%	90%
Adults	20%	28%	35%

Table 4. Uptake Assumptions for Showering or Bathing Devices

	Low	Mid	High
Overall	10%	13%	15%

Due to a lack of claims data for activity-specific and showering or bathing devices, BerryDunn relied on literature research to develop assumptions for average cost of devices. As noted above, BerryDunn used a broader-than-typical cost range to reflect variation across device types and individual user needs.[15,16,17,18,19,20] The range was intended to capture the expected cost of prosthetic devices while encompassing orthotic devices, which are generally expected to be lower cost.

Table 5. Average Device Cost Assumptions

	Low	Mid	High
Activity-Specific Devices	$10,000	$17,500	$25,000
Showering or Bathing Devices	$5,000	$7,500	$10,000

To calculate annual costs, BerryDunn assumed a conservative average useful life of four years for adults and one year for children,[21] reflecting the need for more frequent refitting or replacement as children grow. These estimates reflect an overall expectation for device frequency, but individual replacement frequency may vary, especially for children. These assumptions are intended to account for typical maintenance and repair costs. BerryDunn further assumed that adoption would occur evenly over the useful life, recognizing that obtaining a device may be time consuming and can involve steps such as clinical visits, fitting, production, and follow-up adjustments.

Annual cost under each scenario was calculated by multiplying the number of target users by the assumed uptake rate and average device cost, then dividing by the assumed useful life. Total cost was calculated as the sum of the adult and children cohorts across both activity-specific devices and showering or bathing devices. The total dollar impact was divided by the fully insured commercial membership to calculate the overall PMPM impact of the mandate.

Table 6. Marginal Costs to Insurers for Mandated Coverage

	Total Incremental PMPM Cost Under Mandate
Low Scenario	$0.03
Mid Scenario	$0.06
High Scenario	$0.10

BerryDunn trended the PMPM impact shown in Table 6 from the 2024 base year to the five-year projection period presented in Table 7 using the long-term average national projection for cost increases to DME (calculated at 5.4%[22]).

Table 7. Projected PMPM Costs to Insurers for Mandated Coverage

	2027	2028	2029	2030	2031
Low Scenario	$0.03	$0.03	$0.04	$0.04	$0.04
Mid Scenario	$0.07	$0.07	$0.08	$0.08	$0.09
High Scenario	$0.12	$0.13	$0.13	$0.14	$0.15

6.2 Projected Fully Insured Population in the Commonwealth

Table shows the Commonwealth's fully insured population (ages 0 – 64) projected for the next five years. Appendix A describes the sources of these values.

Table 8. Projected Fully Insured Population in the Commonwealth, Ages 0 – 64

Year	2027	2028	2029	2030	2031
Total (0 – 64)	2,034,557	2,044,527	2,036,221	2,028,278	2,024,429

6.3 Total Marginal Medical Expense

The analysis assumes the mandate would be effective for policies issued and renewed on or after January 1, 2027. Based on an assumed renewal distribution by month, market segment, and the Commonwealth market segment composition, 72.1% of the member months exposed in 2027 will have the proposed mandate coverage in effect during calendar year 2027. The annual dollar impact of the mandate in 2027 was estimated using the estimated PMPM and applying it to 72.1% of the member months exposed.

Multiplying the total estimated PMPM cost by the projected fully insured membership over the analysis period results in the total cost (medical expense) associated with the proposed requirement, shown in Table

Table 9. Estimated Marginal Claims Cost

	2027	2028	2029	2030	2031
Low Scenario	$558,460	$820,195	$860,770	$903,498	$950,254
Mid Scenario	$1,215,861	$1,785,704	$1,874,041	$1,967,068	$2,068,863
High Scenario	$2,089,588	$3,068,924	$3,220,740	$3,380,616	$3,555,563

6.4 Carrier Retention and Increase in Premium

Assuming an average retention rate of 11.3%—based on CHIA's analysis of administrative costs and profit in the Commonwealth[23]—the increase in medical expenses was adjusted upward to approximate the total impact on premiums. Table 10 displays the result.

Table 10. Estimate of Increase in Carrier Premium

	2027	2028	2029	2030	2031
Low Scenario	$629,295	$924,230	$969,950	$1,018,098	$1,070,785
Mid Scenario	$1,370,082	$2,012,204	$2,111,745	$2,216,572	$2,331,279
High Scenario	$2,354,633	$3,458,188	$3,629,261	$3,809,416	$4,006,553

7.0 Results

7.1 Five-Year Estimated Impact

For each year in the five-year analysis period, Table 11 displays the projected net impact of the proposed language on medical expenses and premiums using a projection of the Commonwealth's fully insured membership. Note that the relevant provisions are assumed to take effect on January 1, 2027.[v]

Table 11. Summary Results

	2027	2028	2029	2030	2031	Weighted Average	Five-year Total
Average Members (000s)	2,035	2,045	2,036	2,028	2,024	N/A	N/A
Medical Expense Low ($000s)	$558	$820	$861	$903	$950	$867	$4,093
Medical Expense Mid ($000s)	$1,216	$1,786	$1,874	$1,967	$2,069	$1,888	$8,912
Medical Expense High ($000s)	$2,090	$3,069	$3,221	$3,381	$3,556	$3,244	$15,315
Additional Premium Low ($000s)	$629	$924	$970	$1,018	$1,071	$977	$4,612
Additional Premium Mid ($000s)	$1,370	$2,012	$2,112	$2,217	$2,331	$2,127	$10,042
Additional Premium High ($000s)	$2,355	$3,458	$3,629	$3,809	$4,007	$3,656	$17,258
PMPM Low	$0.04	$0.04	$0.04	$0.04	$0.04	$0.04	$0.04
PMPM Mid	$0.08	$0.08	$0.09	$0.09	$0.10	$0.09	$0.09
PMPM High	$0.13	$0.14	$0.15	$0.16	$0.16	$0.15	$0.15
Estimated Premium PMPM	$729	$761	$794	$829	$865	$796	$796
Premium % Rise Low	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%
Premium % Rise Mid	0.011%	0.011%	0.011%	0.011%	0.011%	0.011%	0.011%
Premium % Rise High	0.018%	0.019%	0.019%	0.019%	0.019%	0.019%	0.019%

7.2 Impact on GIC

The proposed mandate would apply to self-insured plans operating for state and local employees by the GIC. The benefit offerings of GIC plans are similar to most other commercial plans in Massachusetts. This section describes the results for the GIC.

[v] With an assumed start date of January 1, 2027, dollars were estimated at 72.1% of the annual cost, based upon an assumed renewal distribution by month (Jan – Dec) by market segment and the Massachusetts market segment composition.

Findings from BerryDunn's carrier survey indicate that benefit offerings for GIC and other commercial plans in the Commonwealth are similar. For this reason, the cost of the bill for GIC will likely be similar to the cost for other fully insured plans in the Commonwealth.

BerryDunn assumed the proposed legislative change will apply to self-insured plans that the GIC operates for state and local employees, with an effective date of July 1, 2027, in alignment with the Commonwealth's fiscal year. Because the effective date is in July, the 2027 results reflect approximately half of a full year of impact. Table 12 outlines the GIC's self-insured membership, as well as the corresponding incremental medical expense.

Table 12. GIC Summary Results

	2027	2028	2029	2030	2031	Weighted Average	Five-year Total
Members (000s)	308	306	305	303	302	N/A	N/A
Medical Expense Low ($000s)	$59	$123	$129	$135	$142	$131	$587
Medical Expense Mid ($000s)	$128	$267	$280	$294	$309	$284	$1,278
Medical Expense High ($000s)	$219	$460	$482	$505	$531	$489	$2,197

Endnotes

[1] *Op. cit.* H.B. 4549. An Act to Improve Outcomes for Persons with Limb Loss and Limb Difference.

[2] *Op. cit.* 42 U.S.C. § 18022; 45 C.F.R. § 156.110.Information on Essential Health Benefits (EHB) Benchmark Plans.

[3] *Op. cit.* Centers for Medicare & Medicaid Services. Information on Essential Health Benefits (EHB) Benchmark Plans.

[4] American Orthotic & Prosthetic Association. Letter to the Honorable R. Alexander Acosta Re: Definition of Employer, 29 CFR Part 2510 (March 6, 2018). Accessed April 3, 2026. https://www.dol.gov/sites/dolgov/files/ebsa/laws-and-regulations/rules-and-regulations/public-comments/1210-AB85/00594.pdf.

[5] *Op. cit.* Massachusetts Essential Health Benefit Benchmark Plan. Mass.gov.

[6] *Op. cit.* Blue Cross and Blue Shield of Massachusetts HMO Blue, Inc. HMO Blue® New England $2,000 Deductible Plan Option, Schedule of Benefits.

[7] *Op. cit.* M.G.L. c.175 §47Z; M.G.L. c.176A §8AA; M.G.L. c.176B §4AA; M.G.L. c.176G §4S; M.G.L. c.32A §17I.

[8] *Op. cit.* M.G.L. c.175 §47Z.

[9] *Op. cit.* M.G.L. c.175 §47Z; M.G.L. c.176A §8AA; M.G.L. c.176B §4AA; M.G.L. c.176G §4S; M.G.L. c.32A §17I.

[10] *Op. cit.* H.B. 4549. An Act to Improve Outcomes for Persons with Limb Loss and Limb Difference.

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[21] *Op. cit.* Bosques, G., & Holden, J. Pediatric Acquired Upper and Lower Limb Deficiency. PM&R Knowledge Now.

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Appendix A: Membership Affected by the Proposed Language

Membership potentially affected by the proposed mandated change includes Commonwealth residents with fully insured, employer sponsored health insurance (ESI) issued by a Commonwealth-licensed company (including through the GIC); nonresidents with fully insured, ESI issued in the Commonwealth; Commonwealth residents with individual (direct) health insurance coverage; and lives covered by GIC self-insured coverage. Other populations within the self-insured commercial sector are excluded from the state coverage mandate due to federal Employee Retirement Income Security Act (ERISA) protections of self-insured plans. The membership projections are used to determine the total dollar impact of the proposed mandate in question; however, variations in the membership forecast will not affect the general magnitude of the dollar estimates. To assess how recent volatility in commercial enrollment levels might affect these cost estimates, please note the PMPM and percentage of premium estimates are unaffected because they are per-person estimates, and the total dollar estimates will vary by the same percentage as any percentage change in enrollment levels.

CHIA-reported enrollment data formed the basis for membership projections. CHIA publishes a biannual enrollment trends report and supporting databook (enrollment-trends-Data Through September 2025 databook),[1] which provide enrollment data for Commonwealth residents by insurance carrier for most carriers, excluding some small carriers. CHIA uses supplemental information beyond the data in the APCD to develop its enrollment trends report and adjust the resident totals from the APCD. For the base year 2020 in the membership projection, the 2020 APCD and published 2020 membership reports available from the Massachusetts Division of Insurance (DOI)[2,3] were used to develop a factor to adjust the CHIA enrollment data for the few small carriers not present in the enrollment report. The adjustment was trended forward to 2025 and applied to CHIA enrollment data.

In 2021, commercial, fully insured membership was 5.6% less than in 2019, with a shift to both uninsured and MassHealth coverage. As part of the public health emergency (PHE), members were not disenrolled from MassHealth coverage even when they no longer passed eligibility criteria. Shortly before the PHE ended, redetermination efforts began in April 2023 and were anticipated to occur over a 12-month period. Many of the individuals subject to redetermination will no longer be eligible for MassHealth coverage. It is anticipated that a portion of individuals losing coverage will be eligible for coverage in individual ACA plans and ESI. MassHealth's monthly caseload reports[4] indicated coverage redeterminations were largely completed by June 2024. The Massachusetts Health Connector's monthly reports[5] showed membership growth stabilized through December 2024, likely due to disenrolled MassHealth members enrolling in individual plans. CHIA's quarterly enrollment trends report[6] showed stable total membership in private commercial group insurance, with a shift from fully insured to self-insured plans. Based on this information, BerryDunn estimated the final 2024 membership impacted by the proposed mandate.

The distribution of members by age and gender was estimated using APCD population distribution ratios, checked for reasonableness and validated against U.S. Census Bureau data.[7] Membership was projected from 2025 to 2050, with growth rate estimates by age and gender derived from a Massachusetts population projection from UMass Donahue Institute.[8]

Projections for the GIC self-insured lives were developed using the GIC base data for 2018, 2019, and 2025, which BerryDunn received directly from the GIC, as well as the same projected growth rates from the Census Bureau used for the Commonwealth population. BerryDunn accounted for municipalities that are expected to join GIC effective July 2026. This information was incorporated into the GIC membership projection. Breakdowns of the GIC self-insured lives by gender and age were based on U.S. Census Bureau distributions.

Endnotes

[1] Center for Health Information and Analysis. Estimates of fully insured and self-insured membership by insurance carrier. Accessed May 29, 2026. https://www.chiamass.gov/enrollment-in-health-insurance.

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