Mass General Brigham
Health Plan

Medical Policy
UVB Home Phototherapy Units for Skin Disease

Policy Number: 057

	Commercial and Qualified Health Plans	Mass General Brigham ACO	Medicare Advantage	OneCare	Senior Care Options (SCO)
Authorization required	X		X	X	X
No Prior Authorization					
Not payable		X			

Overview
The purpose of this document is to describe the guidelines Mass General Brigham Health Plan utilizes to determine medical necessity for UVB Home Phototherapy Units for Skin Disease.

Coverage Guidelines
Mass General Brigham Health Plan medical necessity for UVB home phototherapy units for skin disease is determined through a custom subset accessible through InterQual®. To access the criteria, log into Mass General Brigham Health Plan's provider website at MassGeneralBrighamHealthPlan.org and click the InterQual® Criteria Lookup link under the Resources Menu, or see below:
One of the following criteria is met:

1. The member has a diagnosis of moderate-to-severe psoriasis with a history of frequent flares with treatment documented for at least 6 months; OR
2. The member has a diagnosis of severe atopic dermatitis/eczema and has failed first line therapies.

And all of the following criteria are met:

3. The member has failed conventional treatment (oral or topical medications), or conventional treatment is contraindicated; and
4. The member has a positive response and adherence to outpatient UVB phototherapy treatment as demonstrated by a 50% improvement within a 3-month period as measured by total body surface area (TBSA); and
5. The UVB home phototherapy treatment is expected to be long-term; necessary for at least 12 months.
6. The member has been trained and deemed competent to use the UVB phototherapy unit; and
7. The UVB home phototherapy device is the smallest size appropriate for the treatment area (e.g., hand wand for hand); and
8. The unit is approved for home use by the Food and Drug Administration.

Documentation Requirements
Mass General Brigham Health Plan requires a prescription by the member's treating physician for both the UVB Home phototherapy unit as well as the specific UVB treatment protocol. Documentation must also include a detailed description illustrating the following:

1. A description of the severity of the member's psoriasis or atopic dermatitis; and

2. Documentation of a positive response as outlined above; and
3. A plan describing regularly scheduled follow-up appointments with the physician.

Exclusions

1. Tanning beds.
2. Ultraviolet A (UVA) phototherapy in the home setting.
3. Home UVB therapy for any medical condition other than those listed above.
4. Home UVB therapy for cosmetic purposes.
5. Modifications made to the home to suit member need.

Medicare Variation

Mass General Brigham Health Plan uses guidance from the Centers for Medicare and Medicaid Services (CMS) for medical necessity determinations for its Medicare Advantage plan members. National Coverage Determinations (NCDs), Local Coverage Determinations (LCDs), Local Coverage Articles (LCAs), and documentation included in the Medicare manuals are the basis for medical necessity determinations. When there is no guidance from CMS for the requested service, Mass General Brigham Health Plan's medical policies are used for medical necessity determinations. **As of Mass General Brigham Health Plan's most recent policy review, CMS had the following NCD:**

- **NCD - Durable Medical Equipment Reference List (280.1)**

When NCDs and LCDs lack sufficient specificity to ensure consistent medical review and coverage decisions, Mass General Brigham Health Plan applies additional coverage criteria to clarify medical necessity of the requested service. Mass General Brigham Health Plan coverage criteria align with the latest clinical evidence and accepted standards of practice, without contradicting existing determinations, and enhance the clarity of medical necessity criteria, documentation requirements, and clinical indications. Because NCD 280.1 lacks sufficient specificity to ensure consistent medical review and coverage determinations, Mass General Brigham Health Plan uses both the NCD and the criteria described in this policy to review requests for UVB home phototherapy units for skin disease.

MassHealth Variation

Mass General Brigham Health Plan uses guidance from MassHealth for medical necessity determinations for its Mass General Brigham ACO members. When there is no guidance from MassHealth for the requested service, Mass General Brigham Health Plan's medical policies are used for medical necessity determinations. **As of Mass General Brigham Health Plan's most recent policy review, MassHealth does not consider UVB home phototherapy payable.**

OneCare and SCO Variation

Mass General Brigham Health Plan uses guidance from CMS for medical necessity determinations for its OneCare and SCO plan members. NCDs, LCDs, LCAs, and documentation included in the Medicare manuals are the basis for medical necessity determinations. When there is no guidance from CMS for the requested service, Mass General Brigham Health Plan uses medical necessity guidelines from MassHealth. When there is no guidance from CMS or from MassHealth, Mass General Brigham Health Plan's medical policies are used for medical necessity determinations.

Definitions

Phototherapy: The exposure to nonionizing radiation for therapeutic benefit. It may involve exposure to ultraviolet A, wavelength 320-400 nanometers (UVA), ultraviolet B, wavelength 290-300 nanometers (UVB),

narrow band UVB, wavelength 311-313 nanometers (NB UVB), or various combinations of UVA and UVB radiation.

Related Policies

- Dermatology Provider Payment Guideline

Codes

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

Authorized CPT/HCPCS Codes	Code Description
E0691	Ultraviolet light therapy system, includes bulbs/lamps, timer and eye protection; treatment area 2 sq ft or less
E0692	Ultraviolet light therapy system panel, includes bulbs/lamps, timer and eye protection, 4 ft panel
E0693	Ultraviolet light therapy system panel, includes bulbs/lamps, timer and eye protection, 6 ft panel
E0694	Ultraviolet multidirectional light therapy system in 6 ft cabinet, includes bulbs/lamps, timer, and eye protection

Summary of Evidence

Randomized controlled trials (RCTs) consistently support the effectiveness of home-based narrowband UVB (NB-UVB) therapy for psoriasis and vitiligo. Koek et al. (2009) demonstrated that home-based NB-UVB treatment for psoriasis is non-inferior to other outpatient treatments, with 82% of patients achieving SAPASI 50 and 70% reaching PASI 50. Median SAPASI and PASI scores decreased by 82% and 74%, respectively, with significant quality-of-life improvements. Thomas et al. (2021) confirmed the efficacy of home-based handheld NB-UVB for vitiligo in the HI-Light trial, showing moderate success (27% of 517 participants achieved treatment success after nine months) when combined with topical corticosteroids. Comparative efficacy studies by Menter et al. (2010) demonstrate that while NB-UVB achieves 40% efficacy, it shows superior tolerability to PUVA, with NB-UVB achieving 88% histopathological resolution compared to BB-UVB's 59%. Notably, maintenance therapy improved one-year remission rates from 33% to 55%.

Meta-analyses by Ashraf et al. (2022) synthesized data from three RCTs (195 participants) comparing home-based phototherapy with institution-based phototherapy or placebo. Findings showed similar repigmentation rates across treatment groups (up to 75%), though adherence was significantly better in home-based therapy. However, adverse effects, including excessive hyperpigmentation, blistering, and Koebner phenomenon, were more frequent in home-treated patients. Despite variations in treatment regimens, the overall effectiveness was comparable.

Clinical guidelines provide structured frameworks for the safe and effective implementation of home phototherapy. Bhutani and Wilson (2010) emphasize minimal erythema dose (MED) determination to optimize UVB dosing, recommending treatment three times per week with dose adjustments based on patient response. Follow-ups should occur at least once every three months to monitor adverse reactions such as blistering. Combination therapies, including NB-UVB with systemic agents like methotrexate and cyclosporine, reduce cumulative UV exposure while maintaining efficacy (Torres et al. 2021). Treatment protocols vary by modality, with oral PUVA achieving clearance in 16-17 treatments compared to NB-UVB's 20-36 treatments for moderate

or severe psoriasis. Important contraindications identified by Menter et al. 2010 include lupus erythematosus, xeroderma pigmentosum, history of melanoma or multiple nonmelanoma skin cancers, heat intolerant medical conditions, and inability to stand for prolonged periods during therapy.

Long-term studies affirm the safety of home phototherapy with proper monitoring. Cameron et al. (2014) analyzed service outcomes over a 13-year period, demonstrating sustained safety profiles. The Ontario Health (2020) assessment underscores the need for patient education and adherence to monitoring protocols. Paradisi et al. (2014) and Teulings et al. (2013) assessed skin cancer risks in vitiligo patients, showing a significantly lower incidence of melanoma and nonmelanoma skin cancer (NMSC) compared to the general population (RR 0.24, 95% CI 0.13-0.45). However, patients receiving phototherapy demonstrated increased risk compared to non-phototherapy patients, emphasizing the importance of proper monitoring and dose management, particularly given the higher incidence of adverse effects in home-based treatment group.

Patient satisfaction with home phototherapy remains high, with Schrom et al. (2022) reporting increased adherence and ease of use. In a survey of 39 patients (97.4% male, ages 27-93), 54% continued therapy for over a year, with mean Likert scores of 4.54 for preference and 4.64 for usability. Cost analyses by Torres et al. (2021) indicate significant savings, with home phototherapy being 36 times less expensive than biologics over three years. A 2010 cost analysis estimated annual NB-UVB at $3,148 and PUVA at $7,582, while the least expensive biologic in 2016 cost over $58,000. Although home phototherapy requires the patient's initial investment ($2,500-$5,000), its long-term affordability surpasses office-based and biologic treatments. Torres et al. 2021 also note important gaps in combination therapy research, particularly regarding PUVA with biologics, though existing evidence suggests combination therapies may reduce cumulative UV exposure while maintaining efficacy.

Current evidence presents several limitations requiring consideration. These include variations in treatment protocols across studies, limited long-term safety data for combination therapies, inconsistent monitoring protocols, and need for standardization in home equipment specifications. Additionally, some patient satisfaction studies show limited demographic diversity (Schrom et al. 2022). Limitations of phototherapy include access to a center, time required for treatments, and insurance approval. Future research should address these gaps while building upon the promising cost-effectiveness and accessibility benefits of home phototherapy.

Overall, evidence supports home phototherapy as an effective, safe, and cost-efficient treatment when implemented with appropriate guidelines and monitoring. This approach enhances accessibility, patient convenience, and treatment adherence while mitigating the financial burden of systemic therapies.

Effective
January 2026: Ad hoc review. Updated prior authorization table and added variation for OneCare and SCO members. Fixed code disclaimer. Added reference to custom IQ subset and NCD. Updated Medicare Variation.
March 2025: Ad hoc review. Summary of Evidence added.
January 2025: Annual review. Added MassHealth Variation language. Clarified Medicare Variation language.
January 2024: Annual review. References updated.
February 2023: Annual review. The following changes were made:

- Page 1: Added Medicare Advantage language to table 1. Under Coverage Guidelines, added severe atopic dermatitis/eczema criteria. Added criteria requiring positive response and adherence to outpatient UVB phototherapy treatment. Under Documentation Requirements, added atopic dermatitis, and added positive response requirement.
- Page 2: Added Medicare Variation language. Added statement regarding coding applying to Commercial plans.
- Page 3: References updated.

January 2022: Annual review. References updated.
January 2021: Annual review. References updated.
January 2020: Annual review. References updated.
August 2019: Off-cycle review. Removed Home UVB phototherapy booths and Home UVB phototherapy cabinets from the Exclusion list.
January 2019: Annual review.
January 2018: Effective date.

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