



# Indian Health Service

## National Pharmacy and Therapeutics Committee

### Formulary Brief: Atopic Dermatitis

-January 2020-

#### **Background:**

Atopic dermatitis is the most common inflammatory skin condition, affecting 10-30% of children and 2-10% of adults worldwide with a chronic or relapsing course. Following the clinical and pharmacoeconomic review of the treatments(s) for atopic dermatitis at the 2020 Winter Meeting, the National Pharmacy and Therapeutics Committee voted to ADD (1) over-the-counter moisturizers (cream-based & petrolatum-based) and (2) topical tacrolimus, a calcineurin inhibitor, to the IHS National Core Formulary.

#### **Discussion:**

Given the propensity of initial onset during infancy/early childhood coupled with the increased risk in patients who either have a history of asthma and/or seasonal allergies or a family history of atopic dermatitis, prevention should be aimed at liberal use of a daily moisturizer to control the xerosis that often leads to itching and precedes flares. Regular moisturizer use also increases the time between flares and reduces the amount of topical corticosteroids required for the management of acute flares.

Topical corticosteroids are first-line agents used during atopic dermatitis flares with the choice of potency related to the degree of severity, location of the flare (e.g., acral sites requiring higher potency) and the degree of lichenification. Topical calcineurin inhibitors such as tacrolimus and pimecrolimus are indicated as steroid-sparing agents for flares on sites that are particularly prone to steroid-related cutaneous atrophy such as the face, eyelids, ears, neck, and intertriginous regions. Crisaborole, a topical phosphodiesterase-4 inhibitor, may also be used as a steroid-sparing agent but is prohibitively expensive while having indications for only mild-to-moderate disease.

While the majority of patients should respond to first-line management, the use of either ultraviolet light therapy or systemic immunomodulators is recommended for patients with refractory disease. Ultraviolet light therapy may be used as monotherapy or in combination with emollients and topical corticosteroids. Systemic immunomodulators such as cyclosporine, methotrexate, azathioprine and mycophenolate mofetil have been used as off-label safely for several decades. Each has its own unique set of serious adverse reactions, drug-drug interactions and contraindications such that the provider should be well-aware of before considering these options. Finally, dupilumab, the recently FDA-approved, interleukin-4 and interleukin-13 inhibitor for moderate-to-severe atopic dermatitis is also indicated for refractory atopic dermatitis but is not suggested due to its exorbitant cost.

Before consideration of any of the systemic immunomodulators, providers are encouraged to first treat any superinfection (e.g., bacterial, fungal, and viral) that may be reducing response of first-line therapy. Additionally, patients should be advised to remove triggers known to incite and potentially aggravate the condition, including extremes in temperature & humidity, exposure to irritants including wool, solvents including water, detergents, alkaline-based soaps, dust mites and environmental allergens. Finally, providers should consider that atopic dermatitis may also present with other concomitant dermatologic conditions such as keratosis pilaris and ichthyosis vulgaris which do not respond to topical corticosteroids and require different treatments. Long-standing lesions of atopic dermatitis may develop into either lichen simplex chronicus or prurigo nodularis that often require moderate-to-high potency topical corticosteroids. Adjunct treatments may include the use of sedating antihistamines to induce better sleep hygiene in patients with nighttime pruritus while non-sedating antihistamines are only indicated if the patient has concomitant urticaria, seasonal rhinoconjunctivitis and/or dermatographism. Use of topical antihistamines are strongly discouraged in the treatment of atopic dermatitis.

#### **Findings:**

The IHS National Core Formulary currently includes high-, medium-, and low-potency topical corticosteroids which represent the first-line therapeutic approach in the management of atopic dermatitis flares. Although long-term use of systemic steroids is discouraged in atopic dermatitis, a short-course of prednisone ( $\leq 1$

week) may be used to ameliorate a severe flare prior to bridging to either phototherapy or a systemic immunosuppressant for those with refractory atopic dermatitis. The National Pharmacy and Therapeutics Committee clinical review identified therapeutic opportunities for National Core Formulary inclusion that meet standards of care for management of atopic dermatitis, namely cream-based and petrolatum-based moisturizers (for prevention) and topical tacrolimus, a calcineurin inhibitor, to be used as a steroid-sparing agent or for body sites prone to steroid-induced cutaneous atrophy. Tacrolimus 0.03% ointment is FDA approved for the treatment of moderate-to-severe atopic dermatitis in adolescents and children ≥ 2 years old while the 0.1% ointment is only FDA-approved in adults.

*If you have any questions regarding this document, please contact the NPTC at [IHSNPTC1@ihs.gov](mailto:IHSNPTC1@ihs.gov). For more information about the NPTC, please visit the [NPTC website](#).*

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