



INDIAN HEALTH SERVICE
National Pharmacy and Therapeutics Committee
Formulary Brief: Rosacea Treatment
-August 2022-



Background:

Rosacea is a common dermatologic condition that affects the face with a variety of clinical presentations, predominantly involving the centropacial skin. While most commonly seen in adults of Northern European descent, rosacea can affect males and females of all ethnicities and skin types. Although there are no studies that have established the prevalence of rosacea among American Indian/Alaskan Natives, according to diagnostic information from the IHS National Data Warehouse, rosacea remains a common diagnosis at IHS facilities. The most common subtypes of rosacea include erythematotelangiectatic rosacea (ETR), papulopustular rosacea (PPR), phymatous rosacea and ocular rosacea. It is important to note that the rosacea subtypes are not mutually exclusive and it is not uncommon to have overlapping clinical features.

Following the clinical and pharmacoeconomic review of the treatment of rosacea at the 2022 Summer Meeting, the NPTC voted to **MODIFY metronidazole** (currently named to the IHS National Core Formulary) to read “**metronidazole, oral**” and to **ADD (1) metronidazole, topical** and **(2) sunscreen, SPF ≥ 30** to the IHS National Core Formulary.

Discussion:

Any rosacea patient should be initially counseled on the importance of gentle skin care, avoidance of known triggers/aggravating factors associated with rosacea, and the use of a daily sunscreen with an SPF ≥ 30. Doxycycline and topical metronidazole remain the initial first-line treatments for rosacea and can be used solely or in combination depending on the severity of symptoms or the patient need for rapid response. Submicrobial dosing with doxycycline at 20 mg orally twice daily has been shown to be as effective for PPR as antimicrobial dosing without the untoward effects of modifying the microbiome. Azithromycin, clarithromycin, metronidazole, and minocycline serve as alternatives to doxycycline in cases of adverse effects of gastrointestinal upset, photosensitivity, and/or esophagitis. Erythromycin is advocated as a systemic alternative in the management of rosacea during pregnancy.

Vasoconstrictive topical agents (e.g., brimonidine, oxymetazoline) are used to reduce the erythema seen in ETR but their effects are temporary, which can also lead to rebound erythema and they have no effect on the papulopustular component of rosacea. Other topicals, such as azelaic acid, clindamycin/benzoyl peroxide gel, ivermectin, minocycline, permethrin cream, sulfacetamide and tacrolimus ointment have been demonstrated to improve PPR but have limited effectiveness in the management of ETR and phymatous rosacea. Isotretinoin has been used in the management of severe rosacea and early phymatous rosacea but the use of isotretinoin requires familiarity with the various side effects of isotretinoin and the enrollment of the clinician in the [I-PLEDGE program](#) prior to its use.

Rosacea patients who do not respond to combination therapy in the first 1-2 months of treatment, have ocular symptoms that do not respond to oral antibiotics, and have worsening and/or moderate/severe rhinophymatous changes should be referred to a dermatologist for further management (e.g., isotretinoin, laser treatment, and/or surgical management). Those with severe ocular symptoms should be referred to ophthalmology.

The use of sunscreen helps protect against UV radiation which is a trigger for rosacea and an aggravating factor during flares. Additionally, long-term UV exposure may potentiate dermal matrix damage, making the vascular changes seen in rosacea permanent. Finally, sunscreen use has broader applications for affecting other photoaggravated dermatologic conditions and reducing the risk of skin cancer. Specification of at least an SPF 30 is based on the exponential increase in

erythema radiation filtered up to SPF 30 and the percentage of UV blockage basically levels off above SPF 30.

Findings:

The IHS National Core Formulary currently includes azithromycin, doxycycline and erythromycin as systemic agents that can be used in the management of rosacea. Clindamycin/benzoyl peroxide gel, permethrin cream and tacrolimus ointment are available as alternative topical treatments on the IHS National Core Formulary and may be used as monotherapy or be combined with oral antibiotics in the management of moderate/severe rosacea. While topical azelaic acid appears to be more effective than topical metronidazole, the selection of topical metronidazole for inclusion is based on a cost-benefit analysis as well as the decreased likelihood of skin irritation. The addition of SPF \geq 30 sunscreen is warranted to reduce the impact of UV radiation on acute flares and permanent vascular changes related to rosacea. Other topicals such as ivermectin, minocycline, and sulfacetamide-sulfur have not been demonstrated to have a much more significant impact on rosacea than what is currently named to the IHS National Core Formulary.

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

References:

1. Del Rosso JQ, Thiboutot D, Gallo R, et al. [Consensus Recommendations from the American Acne & Rosacea Society on the Management of Rosacea, Part 1: A Status Report on the Disease State, General Measures, and Adjunctive Skin Care](#). *CUTIS*. 2013; 92(5):234-240.
2. Del Rosso JQ, Thiboutot D, Gallo R, et al. [Consensus Recommendations from the American Acne & Rosacea Society on the Management of Rosacea, Part 2: A Status Report on Topical Agents](#). *CUTIS*. 2013; 92(6):277-284.
3. Del Rosso JQ, Thiboutot D, Gallo R, et al. [Update on the Management of Rosacea, Part 3: A Status Report on Systemic Therapies from the American Acne & Rosacea Society](#). *CUTIS*. 2014; 93(1):18-28.
4. Del Rosso JQ, Thiboutot D, Gallo R, et al. [Update on the Management of Rosacea, Part 4: A Status Report Physical Modalities & Devices from the American Acne & Rosacea Society](#). *CUTIS*. 2014; 93(2):71-76.
5. Del Rosso JQ, Thiboutot D, Gallo R, et al. [Update on the Management of Rosacea, Part 5: A Guide on the Management of Rosacea](#). *CUTIS*. 2014; 93(3):134-138.
6. Feaster B, Cline A, Feldman SR, et al. [Clinical Effectiveness of Novel Rosacea Therapies](#). *Curr Opin Pharmacol*. 2019; 46:14-18.
7. Gallo RL, Granstein RD, Kang S, et al. [Standard Classification & Pathophysiology of Rosacea: The 2017 Update by the National Rosacea Society Expert Committee](#). *J Am Acad Dermatol*. 2018; 78(1):148-155.
8. Hampton PJ, Berth-Jones J, Williamson CE, et al. [British Association of Dermatologists Guidelines for the Management of People with Rosacea 2021](#). *Brit J Dermatol*. 2021; 185:725-735.
9. Juliandri J, Wang X, Liu Z, et al. [Global Rosacea Treatment Guidelines & Expert Consensus Points: The Differences](#). *J Cosmet Dermatol*. 2019; 18:960-965.
10. McGregor SP, Alinia H, Snyder A, et al. [A Review of the Current Modalities for the Treatment of Papulopustular Rosacea](#). *Dermatol Clin*. 2018; 36(2):135-150.
11. Nagler AR, James Del Rosso. [The Use of Oral Antibiotics in the Management of Rosacea](#). *J Drugs Dermatol*. 2019; 18(6):506-513.
12. Sharma A, Kroumpouzou G, Kassir M, et al. [Rosacea Management: A Comprehensive Review](#). *J Cosmet Dermatol*. 2022; 21:1895-1904.
13. Schaller M, Almeida LM, Bewley A, et al. [Recommendations for Rosacea Diagnosis, Classification & Management: Update from the Global Rosacea Consensus 2019 Panel](#). *Brit J Dermatol*. 2020; 182(5):1269-76.
14. van Zuuren EF, Federowicz Z, Carter B, et al. [Interventions for Rosacea](#). *Cochrane Database Syst Rev*. 2015; (4):CD003262.