

**Clinical Policy: Pyrimethamine (Daraprim)**

Reference Number: CP.PMN.44

Effective Date: 11.01.15

Last Review Date: 02.22

Line of Business: Commercial, HIM, Medicaid

[Revision Log](#)

See [Important Reminder](#) at the end of this policy for important regulatory and legal information.

**Description**

Pyrimethamine (Daraprim<sup>®</sup>) is a folic acid antagonist.

**FDA Approved Indication(s)**

Daraprim is indicated for the treatment of toxoplasmosis when used conjointly with a sulfonamide.

**Policy/Criteria**

*Provider must submit documentation (such as office chart notes, lab results or other clinical information) supporting that member has met all approval criteria.*

It is the policy of health plans affiliated with Centene Corporation<sup>®</sup> that Daraprim is **medically necessary** when the following criteria are met:

**I. Initial Approval Criteria****A. Initial Therapy for Toxoplasmosis Infection – Active Disease (must meet all):**

1. Diagnosis of toxoplasmosis;
2. Prescribed by or in consultation with an infectious disease or HIV specialist;
3. Member meets one of the following (a or b):
  - a. Age < 18 years;
  - b. Failure of  $\geq 10$  days, or radiological deterioration within 7 days, of trimethoprim/sulfamethoxazole (TMP/SMX) at maximum indicated doses, unless contraindicated or clinically significant adverse effects are experienced;
4. Daraprim is prescribed with sulfadiazine or clindamycin, and leucovorin;
5. If request is for the brand product, member must use the generic product, unless contraindicated or clinically significant adverse effects are experienced;
6. Request meets one of the following (a, b, or c):
  - a. Immunocompromised member: Dose does not exceed an initial loading dose of 200 mg, followed by  $\leq 75$  mg per day for treatment duration;
  - b. Immunocompetent member: Dose does not exceed initial loading dose of 100 mg, followed by  $\leq 50$  mg per day for treatment duration;
  - c. Dose is supported by practice guidelines or peer-reviewed literature for the relevant use (*prescriber must submit supporting evidence*).

**Approval duration:****Congenital toxoplasmosis in newborns – 12 months****All other requests – Duration of request or 8 weeks (whichever is less)**

**B. Primary Prophylaxis for Toxoplasmosis – Preventing 1<sup>st</sup> Episode (off-label)** (must meet all):

1. Diagnosis of HIV infection;
2. Prescribed by or in consultation with an infectious disease or HIV specialist;
3. Request is for prevention for toxoplasmosis;
4. One of the following (a or b):
  - a. Age  $\geq$  6 years: CD4 count  $<$  100 cells/mm<sup>3</sup>;
  - b. Age  $<$  6 years: CD4 cell percentage  $<$  15%;
5. Seropositive for *Toxoplasma gondii* IgG;
6. Member is contraindicated or has experienced clinically significant adverse effects to TMP/SMX;
7. Daraprim is prescribed with leucovorin and dapsone;
8. If request is for the brand product, member must use the generic product, unless contraindicated or clinically significant adverse effects are experienced;
9. Dose does not exceed 75 mg per week.

**Approval duration: 6 months**

**C. Other diagnoses/indications**

1. Refer to the off-label use policy for the relevant line of business if diagnosis is NOT specifically listed under section III (Diagnoses/Indications for which coverage is NOT authorized): CP.CPA.09 for commercial, HIM.PA.154 for health insurance marketplace, and CP.PMN.53 for Medicaid.

**II. Continued Therapy**

**A. Chronic Maintenance – Following Initial Therapy for Active Disease (off-label)** (must meet all):

1. Currently receiving medication via Centene benefit or member has previously met initial approval criteria;
2. Member is HIV-infected with one of the following (a or b):
  - a. Age  $\geq$  6 years: CD4 count  $\leq$  200 cells/mm<sup>3</sup> at any time in the previous 6 months;
  - b. Age  $<$  6 years: CD4 percentage has risen  $<$  15% from baseline at any time in the previous 6 months;
3. Adherence to antiretroviral therapy as evidenced by pharmacy claims history or office notes;
4. If request is for the brand product, member must use the generic product, unless contraindicated or clinically significant adverse effects are experienced;
5. Request meets one of the following (a or b):
  - a. Dose does not exceed 50 mg per day;
  - b. Dose is supported by practice guidelines or peer-reviewed literature for the relevant use (*prescriber must submit supporting evidence*).

**Approval duration: 6 months**

**B. Primary Prophylaxis for Toxoplasmosis – Preventing 1<sup>st</sup> Episode (off-label)** (must meet all):

1. Currently receiving medication via Centene benefit or member has previously met initial approval criteria;

2. Member is HIV-infected with one of the following (a or b):
  - a. Age  $\geq$  6 years: CD4 count  $\leq$  200 cells/mm<sup>3</sup> at any time in the previous 3 months;
  - b. Age  $<$  6 years: CD4 percentage has risen  $<$  15% from baseline at any time in the previous 3 months;
3. Adherence to antiretroviral therapy as evidenced by pharmacy claims history or office notes;
4. If request is for the brand product, member must use the generic product, unless contraindicated or clinically significant adverse effects are experienced;
5. Dose does not exceed 75 mg per week.

**Approval duration: 3 months**

**C. Other diagnoses/indications (must meet 1 or 2):**

1. Currently receiving medication via Centene benefit and documentation supports positive response to therapy.  
**Approval duration: Duration of request or 12 months (whichever is less);** or
2. Refer to the off-label use policy for the relevant line of business if diagnosis is NOT specifically listed under section III (Diagnoses/Indications for which coverage is NOT authorized): CP.CPA.09 for commercial, HIM.PA.154 for health insurance marketplace, and CP.PMN.53 for Medicaid.

**III. Diagnoses/Indications for which coverage is NOT authorized:**

- A. Non-FDA approved indications, which are not addressed in this policy, unless there is sufficient documentation of efficacy and safety according to the off label use policies – CP.CPA.09 for commercial, HIM.PA.154 for health insurance marketplace, and CP.PMN.53 for Medicaid or evidence of coverage documents;
- B. Malaria.

**IV. Appendices/General Information**

*Appendix A: Abbreviation/Acronym Key*

CDC: Centers for Disease Control and Prevention

FDA: Food and Drug Administration

HHS: Department of Health and Human Services

HIV: human immunodeficiency virus

TMP/SMX: trimethoprim/sulfamethoxazole

*Appendix B: Therapeutic Alternatives*

*This table provides a listing of preferred alternative therapy recommended in the approval criteria. The drugs listed here may not be a formulary agent for all relevant lines of business and may require prior authorization.*

Drug Name	Dosing Regimen	Dose Limit/ Maximum Dose
trimethoprim/sulfamethoxazole (Bactrim <sup>®</sup> , Bactrim <sup>®</sup> DS)*	Treatment: TMP 5 mg/kg and SMX 25 mg/kg IV or PO BID  Primary prophylaxis: 1 DS PO QD (preferred) or 1 DS TIW or 1 SS QD	See regimen

Drug Name	Dosing Regimen	Dose Limit/ Maximum Dose
	Chronic maintenance: 1 DS PO QD or BID	

Therapeutic alternatives are listed as Brand name<sup>®</sup> (generic) when the drug is available by brand name only and generic (Brand name<sup>®</sup>) when the drug is available by both brand and generic.

\*Off-label uses; dosing recommendations per HHS guidelines

*Appendix C: Contraindications/Boxed Warnings*

- Contraindication(s): documented megaloblastic anemia due to folate deficiency, known hypersensitivity to pyrimethamine or to any component of the formulation
- Boxed warning(s): none reported

*Appendix D: General Information*

- On June 21, 2017, Daraprim’s FDA labeling was updated to exclude the previously approved indications for treatment and chemoprophylaxis of malaria. These uses are not recommended per the CDC malaria treatment guidelines due to prevalent worldwide resistance to pyrimethamine.
- For the treatment of toxoplasmosis, higher doses than what is recommended by the FDA, HHS, and CDC may be required for severe cases or cases affecting sequestered sites such as chorioretinitis.

**V. Dosage and Administration**

Indication	Dosing Regimen	Maximum Dose
Treatment of toxoplasmosis	<p>Administered PO in combination with a sulfonamide ± leucovorin; recommended dosing regimen varies per guideline referenced:</p> <p><u>FDA labeling</u> Adults: 50-75 mg daily for 1-3 weeks depending on the response of the patient and tolerance to therapy, followed by one-half of the initial dose continued for an additional 4 to 5 weeks Pediatrics: 1 mg/kg/day divided into 2 equal daily doses for 2-4 days, followed by one-half of the initial dose continued for approximately 1 month</p> <p><u>HHS guidelines</u> [<i>HIV-infected patients</i>] Initial loading dose of 200 mg, followed by 50 mg/day (if body weight ≤ 60 kg) or 75 mg/day (if body weight &gt; 60 kg) for the remainder of treatment duration</p> <p><u>CDC guidelines</u> [<i>ocular toxoplasmosis</i>]</p>	300 mg/day

Indication	Dosing Regimen	Maximum Dose
	<p>Adult: Initial loading dose of 100 mg, followed by 25-50 mg/day for the remainder of treatment duration (usually 4-6 weeks)</p> <p>Pediatric: Initial loading dose of 2 mg/kg, followed by 1 mg/kg/day for the remainder of treatment duration (usually 4-6 weeks) [congenital toxoplasmosis]</p> <p>Newborns: 2 mg/kg per day, divided twice per day for the first 2 days; then from day 3 to 2 months (or 6 months if symptomatic) 1 mg/kg per day, every day; then 1 mg/kg per day 3 times per week for a total of 12 months</p>	
Primary prophylaxis of toxoplasmosis*	<p>50-75 mg/week PO in combination with a sulfonamide</p> <p>Recommended treatment regimen is Daraprim 50 mg per week plus dapsone 50 mg once daily plus leucovorin 25 mg per week <u>or</u> Daraprim 75 mg plus dapsone 200 mg plus leucovorin 25 mg weekly</p>	75 mg/week
Chronic maintenance therapy (secondary prophylaxis of toxoplasmosis)*	25-50 mg/day PO in combination with a sulfonamide	50 mg/day

\*Off-label uses recommended by the HHS guidelines for prevention and treatment of opportunistic infections in HIV-infected adults and adolescents

## VI. Product Availability

Tablet: 25 mg

## VII. References

1. Daraprim Prescribing Information. Raleigh, NC: Salix Pharmaceuticals, Inc.; August 2017. Available at: [www.daraprimdirect.com](http://www.daraprimdirect.com). Accessed March 18, 2021.
2. Panel on Opportunistic Infections in HIV-infected Adults and Adolescents. Guidelines for prevention and treatment of opportunistic infections in HIV-infected adults and adolescents – Toxoplasma gondii encephalitis: recommendations from the Centers for Disease Control and Prevention, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America. Department of Health and Human Services. Available at <https://clinicalinfo.hiv.gov/en/guidelines/adult-and-adolescent-opportunistic-infection/toxoplasma-gondii-encephalitis>. Updated July 25, 2017. Accessed March 18, 2021.
3. Panel on Opportunistic Infections in HIV-exposed and HIV-infected Children. Guidelines for prevention and treatment of opportunistic infections in HIV-exposed and HIV-infected children – Toxoplasmosis: recommendations from the Centers for Disease Control and Prevention, the National Institutes of Health, and the HIV Medicine Association of the

Infectious Diseases Society of America. Department of Health and Human Services.

Available at <https://clinicalinfo.hiv.gov/en/guidelines/pediatric-opportunistic-infection/toxoplasmosis?view=full>. Updated October 29, 2015. Accessed January 14, 2022.

4. Global Health - Division of Parasitic Diseases and Malaria. Treatment of malaria: guidelines for clinicians (United States). Centers for Disease Control and Prevention. [http://www.cdc.gov/malaria/diagnosis\\_treatment/treatment.html](http://www.cdc.gov/malaria/diagnosis_treatment/treatment.html). Updated November 2, 2020. Accessed March 18, 2021.
5. Sulfamethoxazole/trimethoprim. In: DRUGDEX<sup>®</sup> System [Internet database]. Greenwood Village, Colo: Thomson Micromedex. Updated periodically. Accessed April 21, 2020.
6. Torre D, Casari S, Speranza F, et al. Randomized trial of trimethoprim-sulfamethoxazole versus pyrimethamine sulfadiazine for therapy of toxoplasmic encephalitis in patients with AIDS. Italian Collaborative Study Group. *Antimicrob Agents Chemother*. 1998; 42(6): 1346-1349.
7. Global Health - Division of Parasitic Diseases and Malaria. Resources for health professionals: toxoplasmosis. Centers for Disease Control and Prevention. Available at [http://www.cdc.gov/parasites/toxoplasmosis/health\\_professionals/index.html](http://www.cdc.gov/parasites/toxoplasmosis/health_professionals/index.html). Updated May 26, 2020. Accessed March 18, 2021.

Reviews, Revisions, and Approvals	Date	P&T Approval Date
3Q 2018 annual review: policies combined for Centene Medicaid, HIM and Commercial lines of business; no significant changes from previously approved corporate policy; all: HIV specialist added as prescriber option; Medicaid/HIM: removed recommended regimens from continued criteria; Commercial: added trial of TMP/SMX (unless age < 18 years) for treatment of toxoplasmosis, added recommended regimens to initial criteria, off-label coverage for chronic maintenance treatment added and max doses modified per guidelines, modified approval durations from 12 weeks to 8 weeks/6 months and 6 months/3 months per guidelines; references reviewed and updated.	04.02.18	08.18
3Q 2019 annual review: no significant changes; references reviewed and updated.	04.22.19	08.19
3Q 2020 annual review: added requirement for use of generic products before brand product; for treatment of toxoplasmosis, added additional pathway to allow for higher dosing in unique cases per specialist feedback; references reviewed and updated.	04.20.20	08.20
3Q 2021 annual review: added initial approval duration of 12 months for treatment of congenital toxoplasmosis in newborns per CDC guidelines; revised “medical justification” to “must use” language; added requirement for use of generic to continued criteria; references to HIM.PHAR.21 revised to HIM.PA.154; references reviewed and updated.	03.18.21	08.21

Reviews, Revisions, and Approvals	Date	P&T Approval Date
For primary prophylaxis initial criteria and for all indications continued therapy criteria, added CD4 percentage requirements for members aged < 6 years per HHS guidelines.	09.22.21	02.22

**Important Reminder**

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. The Health Plan makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved. “Health Plan” means a health plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Centene Management Company, LLC, or any of such health plan’s affiliates, as applicable.

The purpose of this clinical policy is to provide a guide to medical necessity, which is a component of the guidelines used to assist in making coverage decisions and administering benefits. It does not constitute a contract or guarantee regarding payment or results. Coverage decisions and the administration of benefits are subject to all terms, conditions, exclusions and limitations of the coverage documents (e.g., evidence of coverage, certificate of coverage, policy, contract of insurance, etc.), as well as to state and federal requirements and applicable Health Plan-level administrative policies and procedures.

This clinical policy is effective as of the date determined by the Health Plan. The date of posting may not be the effective date of this clinical policy. This clinical policy may be subject to applicable legal and regulatory requirements relating to provider notification. If there is a discrepancy between the effective date of this clinical policy and any applicable legal or regulatory requirement, the requirements of law and regulation shall govern. The Health Plan retains the right to change, amend or withdraw this clinical policy, and additional clinical policies may be developed and adopted as needed, at any time.

This clinical policy does not constitute medical advice, medical treatment or medical care. It is not intended to dictate to providers how to practice medicine. Providers are expected to exercise professional medical judgment in providing the most appropriate care, and are solely responsible for the medical advice and treatment of members. This clinical policy is not intended to recommend treatment for members. Members should consult with their treating physician in connection with diagnosis and treatment decisions.

Providers referred to in this clinical policy are independent contractors who exercise independent judgment and over whom the Health Plan has no control or right of control. Providers are not agents or employees of the Health Plan.

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**Note:**

**For Medicaid members**, when state Medicaid coverage provisions conflict with the coverage provisions in this clinical policy, state Medicaid coverage provisions take precedence. Please refer to the state Medicaid manual for any coverage provisions pertaining to this clinical policy.

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