

## Clinical Policy: Doxycycline Hyclate (Acticlate, Doryx), Doxycycline (Oracea)

Reference Number: CP.PMN.79

Effective Date: 05.01.17

Last Review Date: 05.18

Line of Business: Commercial, Medicaid

[Revision Log](#)

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

### Description

Doxycycline (Acticlate, Doryx<sup>®</sup>, Doryx<sup>®</sup> MPC, Oracea<sup>®</sup>) is a tetracycline-class drug.

### FDA Approved Indication(s)

Acticlate and Doryx/Doryx MPC are indicated for:

- Rickettsial infections
- Sexually transmitted infections
- Respiratory tract infections
- Specific bacterial infections
- Ophthalmic infections
- Anthrax, including inhalational anthrax (post-exposure)
- Alternative treatment for selected infections when penicillin is contraindicated
- Adjunctive therapy in acute intestinal amebiasis and severe acne
- Prophylaxis of malaria

Oracea is indicated for the treatment of only inflammatory lesions (papules and pustules) of rosacea in adult patients. No meaningful effect was demonstrated for generalized erythema (redness) of rosacea.

Limitation(s) of use: This formulation of doxycycline has not been evaluated in the treatment or prevention of infections. Oracea should not be used for treating bacterial infections, providing antibacterial prophylaxis, or reducing the numbers or eliminating microorganisms associated with any bacterial disease. To reduce the development of drug-resistant bacteria as well as to maintain the effectiveness of other antibacterial drugs, Oracea should be used only as indicated. Efficacy of Oracea beyond 16 weeks and safety beyond 9 months have not been established. Oracea has not been evaluated for the treatment of the erythematous, telangiectatic, or ocular components of rosacea.

### 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 Acticlate, Doryx, Doryx MPC, and Oracea are **medically necessary** when the following criteria are met:

**I. Initial Approval Criteria**

**A. Rosacea (must meet all):**

1. Diagnosis of rosacea with inflammatory lesions (papules and pustules);
2. Request is for Oracea;
3. Age  $\geq 18$  years;
4. Medical justification supports inability to use immediate-release doxycycline (e.g., member experienced clinically significant adverse effects or has contraindication(s) to the excipients in immediate-release doxycycline);
5. Failure of  $\geq 4$  week trial of one additional preferred oral tetracycline antibiotic, unless contraindicated or clinically significant adverse effects are experienced;
6. Dose does not exceed 40 mg/day (1 capsule/day).

**Approval duration: 16 weeks**

**B. Acne Vulgaris (must meet all):**

1. Diagnosis of acne vulgaris;
2. Request is for Acticlate, Doryx or Doryx MPC;
3. Medical justification supports inability to use immediate-release doxycycline (e.g., member experienced clinically significant adverse effects or has contraindication(s) to the excipients in immediate-release doxycycline);
4. Failure of a  $\geq 4$  week trial of one additional preferred oral tetracycline antibiotic, unless clinically significant adverse effects are experienced;
5. Dose does not exceed:
  - a. Acticlate, Doryx: 300 mg/day;
  - b. Doryx MPC: 240 mg/day.

**Approval duration: 3 months**

**C. Prophylaxis of Malaria (must meet all):**

1. Prescribed for malaria prophylaxis;
2. Request is for Acticlate, Doryx, or Doryx MPC;
3. Medical justification supports inability to use immediate-release doxycycline (e.g., member experienced clinically significant adverse effects or has contraindication(s) to the excipients in immediate-release doxycycline);
4. Dose does not exceed:
  - a. Acticlate, Doryx: 100 mg per day;
  - b. Doryx MPC: 120 mg per day.

**Approval duration: 4 months or duration of travel and up to 4 weeks after member leaves the malarious area (whichever is less)**

**D. Other FDA Approved Indications for Acticlate, Doryx/Doryx MPC (must meet all):**

1. Prescribed for the treatment of one of the following conditions or diseases (refer to Appendix C for conditions or diseases that are applicable):
  - a. Rickettsial infections;
  - b. Sexually transmitted infections;
  - c. Respiratory tract infections;
  - d. Specific bacterial infections;
  - e. Ophthalmic infections;

- f. Anthrax, including inhalational anthrax (post-exposure);
  - g. Selected infections when penicillin is contraindicated;
  - h. Acute intestinal amebiasis;
2. Request is for Acticlate, Doryx, or Doryx MPC;
  3. Medical justification supports inability to use immediate-release doxycycline (e.g., member experienced clinically significant adverse effects or has contraindication(s) to the excipients in immediate release doxycycline);
  4. Failure of one additional preferred oral tetracycline antibiotic (e.g., immediate-release minocycline), unless clinically significant adverse effects are experienced or the other preferred tetracycline antibiotics are not indicated for the member's diagnosis;
  5. Dose does not exceed:
    - a. Acticlate, Doryx: 300 mg/day;
    - b. Doryx MPC: 240 mg/day.

**Approval duration: 60 days or duration of request (whichever is less)**

**E. 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 and CP.PMN.53 for Medicaid.

**II. Continued Therapy**

**A. Rosacea (must meet all):**

1. Currently receiving medication via Centene benefit or member has previously met initial approval criteria;
2. Request is for Oracea;
3. Member is responding positively to therapy;
4. Member has not received Oracea daily for > 16 weeks;
5. If request is for a dose increase, new dose does not exceed 40 mg/day (1 capsule/day).

**Approval duration: up to 16 weeks of treatment (total)**

**B. Acne Vulgaris (must meet all):**

1. Currently receiving medication via Centene benefit or member has previously met initial approval criteria;
2. Request is for Acticlate, Doryx/Doryx MPC;
3. Member is responding positively to therapy;
4. If request is for a dose increase, new dose does not exceed:
  - a. Acticlate, Doryx: 300 mg/day;
  - b. Doryx MPC: 240 mg/day.

**Approval duration: 3 months**

**C. Other Indications for Acute Infections and Malaria Prophylaxis (must meet all):**

1. Therapy for Acticlate, Doryx/Doryx MPC may not be renewed. Member must meet initial approval criteria for approval of Acticlate, Doryx/Doryx MPC.

**Approval duration: Not Applicable**

**D. 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 6 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 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 and CP.PMN.53 for Medicaid or evidence of coverage documents.

**IV. Appendices/General Information**

*Appendix A: Abbreviation/Acronym Key*

FDA: Food and Drug Administration

*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
doxycycline (Vibramycin®)	<p>Adults: 200 mg PO on the first day of treatment (administered 100 mg every 12 hours) followed by a maintenance dose of 100 mg/day.</p> <p>See Full Prescribing Information for additional indication specific dosage information</p> <p><u>Rosacea:</u> 40 mg or 50 mg PO QD</p>	300 mg/day
minocycline (Minocin)	<p>Adults: 200 mg PO initially, then 100 mg PO every 12 hours. Alternatively, if more frequent oral doses are preferred, 100 to 200 mg PO initially, then 50 mg PO every 6 hours</p> <p>See Full Prescribing Information for additional indication specific dosage information</p>	300 mg on day 1, then 200 mg/day
tetracycline	Adults: 500 mg PO BID or 250 mg QID	2 gram/day

Drug Name	Dosing Regimen	Dose Limit/ Maximum Dose
	See Full Prescribing Information for additional indication specific dosage information	

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

*Appendix C: Other FDA Approved Indications for Doryx/Doryx MPC and Acticlate*

FDA approved indications	Applicable conditions or diseases
Rickettsial infections	Rocky Mountain spotted fever, typhus fever and the typhus group, Q fever, rickettsialpox, and tick fevers caused by Rickettsiae
Sexually transmitted infections	Uncomplicated urethral, endocervical or rectal infections caused by Chlamydia trachomatis Nongonococcal urethritis caused by Ureaplasma urealyticum Lymphogranuloma venereum caused by Chlamydia trachomatis Granuloma inguinale caused by Klebsiella granulomatis Uncomplicated gonorrhoea caused by Neisseria gonorrhoeae Chancroid caused by Haemophilus ducreyi.
Respiratory tract infections	Respiratory tract infections caused by Mycoplasma pneumoniae Psittacosis (ornithosis) caused by Chlamydochlamydia psittaci  Doxycycline is indicated for treatment of infections caused by the following micro-organisms, when bacteriological testing indicates appropriate susceptibility to the drug: Respiratory tract infections caused by Haemophilus influenzae Respiratory tract infections caused by Klebsiella species Upper respiratory infections caused by Streptococcus pneumoniae
Specific bacterial infections	Relapsing fever due to Borrelia recurrentis Plague due to Yersinia pestis Tularemia due to Francisella tularensis Cholera caused by Vibrio cholerae Campylobacter fetus infections caused by Campylobacter fetus Brucellosis due to Brucella species (in conjunction with streptomycin) Bartonellosis due to Bartonella bacilliformis  Doxycycline is indicated for treatment of infections caused by the following gram- negative microorganisms, when bacteriological testing indicates appropriate susceptibility to the drug:

FDA approved indications	Applicable conditions or diseases
	Escherichia coli, Enterobacter aerogenes, Shigella species, Acinetobacter species, urinary tract infections caused by Klebsiella species
Ophthalmic infections	Trachoma caused by Chlamydia trachomatis Inclusion conjunctivitis caused by Chlamydia trachomatis
Anthrax including inhalational anthrax (post-exposure)	Anthrax due to Bacillus anthracis, including inhalational anthrax (post-exposure)
Alternative treatment for selected infections when penicillin is contraindicated	Syphilis caused by Treponema pallidum Yaws caused by Treponema pallidum subspecies pertenue Vincent's infection caused by Fusobacterium fusiforme Actinomycosis caused by Actinomyces israelii Infections caused by Clostridium species
Adjunctive therapy for acute intestinal amebiasis	Not applicable

**V. Dosage and Administration**

Drug Name	Indication	Dosing Regimen	Maximum Dose
Doxycycline hyclate (Acticlate), doxycycline hyclate delayed-release (Doryx, Doryx MPC)	All indications listed in the FDA approved indications section	<p><u>Acticlate</u></p> <p><i>Adults:</i> 200 mg on the first day of treatment (administered 100 mg every 12 hours) followed by a maintenance dose of 100 mg daily. In the management of more severe infections (particularly chronic infections of the urinary tract), 100 mg every 12 hours is recommended.</p> <p><i>For all pediatric patients weighing less than 45 kg with severe or life-threatening infections (e.g., anthrax, Rocky Mountain spotted fever):</i> 2.2 mg per kg of body weight administered every 12 hours.</p> <p><i>For pediatric patients with less severe disease (greater than 8 years of age and weighing less than 45 kg):</i> 4.4 mg per kg of body weight divided into two doses on the first day of treatment, followed</p>	<p>300 mg/day</p> <p>Doryx MPC: 240 mg/day</p>

Drug Name	Indication	Dosing Regimen	Maximum Dose
		<p>by a maintenance dose of 2.2 mg per kg of body weight (given as a single daily dose or divided into two doses. <i>For pediatric patients weighing over 45 kg:</i> the usual adult dose should be used.</p> <p style="text-align: center;"><u>Doryx</u></p> <p><i>Adults:</i> 200 mg on the first day of treatment (administered 100 mg every 12 hours) followed by a maintenance dose of 100 mg daily. In the management of more severe infections (particularly chronic infections of the urinary tract), 100 mg every 12 hours is recommended. <i>For children above eight years of age:</i> The recommended dosage schedule for children weighing 45 kg or less is 4.4 mg/kg of body weight divided into two doses on the first day of treatment, followed by 2.2 mg/kg of body weight given as a single daily dose or divided into two doses on subsequent days. For more severe infections up to 4.4 mg/kg of body weight may be used. For children over 45 kg, the usual adult dose should be used.</p> <p style="text-align: center;"><u>Doryx MPC</u></p> <p><i>Adults:</i> 240 mg on the first day of treatment (administered 120 mg every 12 hours) followed by a maintenance dose of 120 mg daily. In the management of more severe infections (particularly chronic infections of the urinary tract), 120 mg every 12 hours is recommended.</p>	



Drug Name	Indication	Dosing Regimen	Maximum Dose
		<p><i>For all pediatric patients weighing less than 45 kg with severe or life threatening infections (e.g., anthrax, Rocky Mountain spotted fever): 2.6 mg per kg of body weight administered every 12 hours.</i></p> <p><i>For pediatric patients with less severe disease (greater than 8 years of age and weighing less than 45 kg):</i></p> <p>5.3 mg per kg of body weight divided into two doses on the first day of treatment, followed by a maintenance dose of 2.6 mg per kg of body weight (given as a single daily dose or divided into twice daily doses).</p> <p><i>For pediatric patients weighing over 45 kg: the usual adult dose should be used.</i></p>	
Doxycycline capsule (Oracea)	Inflammatory lesions (papules and pustules) of rosacea	40 mg PO QD	40 mg/day

#### VI. Product Availability

Drug Name	Availability
Doxycycline hyclate (Acticlate)	Tablets: 75 mg, 150 mg
Doxycycline hyclate delayed-release tablets (Doryx, Doryx MPC)	Delayed release tablets: 50 mg, 200 mg Delayed release tablets (MPC): 120 mg Generic: 50 mg, 75 mg, 100 mg, 150 mg, 200 mg
Doxycycline (Oracea)	Capsules: 40 mg

#### VII. References

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9. Arguin PM, Tan KR. Chapter 3. Infectious diseases related to travel. Malaria. In. Centers for Disease Control and Prevention. 2014 Yellow Book - Traveler's Health. Atlanta: U.S. Department of Health and Human Services, Public Health Service. 2014. Available at: <http://wwwnc.cdc.gov/travel/yellowbook/2014/chapter-3-infectious-diseases-related-to-travel/malaria>.

Reviews, Revisions, and Approvals	Date	P&T Approval Date
<p>Policy split from CP.PMN.51 Tetracycline Antibiotics (Solodyn, Doryx, Oracea) to address all indications for the featured drugs</p> <ul style="list-style-type: none"> <li>-For acne vulgaris and rosacea, modified criteria related to trial and failure of PDL oral antibiotics to specifically require tetracycline class of antibiotics, one of which must be immediate-release doxycycline, as they are considered first-line for systemic antibiotic therapy; for rosacea, modified criteria to require failure of 2 (instead of 1) oral antibiotics;</li> <li>-Created criteria sets for other FDA approved indications of Doryx, including malaria prophylaxis</li> <li>-Converted to new template</li> <li>-Added no documentation of hypersensitivity to tetracyclines per PI</li> <li>-Added duration of trial to requirements related to trial and failure of topical therapies for clarity</li> <li>-Removed age requirement since tetracycline antibiotics on the PDL are not subjected to age restrictions</li> <li>-For acne, modified duration of trial of oral antibiotics from <math>\geq 6</math> weeks to <math>\geq 4</math> weeks; modified duration of approval for Doryx/Doryx MPC from 16 weeks to 12 weeks since PI does not specify time frame of use and per American Academy of Dermatology, systemic antibiotic use should be limited to shortest possible duration, typically 3 months, to minimize development of bacterial resistance</li> <li>-Updated references</li> </ul>	03.17	05.17
<p>2Q 2018 annual review: no significant changes from previously approved corporate policy; policies combined for commercial and Medicaid lines of business</p>	01.29.18	05.18

Reviews, Revisions, and Approvals	Date	P&T Approval Date
<p>Commercial: split from CP.CPA.210 doxycycline hyclate (Acticlate, Doryx), doxycycline (Oracea), and minocycline (Solodyn); rosacea: modified criterion pertaining to failure of immediate-release doxycycline to require medical justification supporting inability to use immediate-release doxycycline; added failure of a <math>\geq 4</math> week trial of one additional preferred oral tetracycline antibiotic, unless clinically significant adverse effects are experienced; modified initial/continued approval duration from length of benefit to 16 weeks of treatment per limitations stated in PI; Doryx and Acticlate requests: modified criterion pertaining to failure of immediate-release doxycycline to require medical justification supporting inability to use immediate-release doxycycline; added a requirement for failure of one additional preferred tetracycline antibiotic for Doryx 100, 150 mg; separated acne vulgaris and prophylaxis of malaria from other FDA approved indications and created specific criteria set for each; modified initial/continued approval duration from length of benefit to specific approval duration per indication; Medicaid: Added Acticlate to the policy; Removed criteria related to hypersensitivity to tetracyclines per safety guidance; Rosacea: added age requirement; removed criteria related to topical treatments; Acne vulgaris: removed criteria related to topical treatments; added max dose; Other FDA approved indications: added max dose. References reviewed and updated.</p>		

**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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