

STEP THERAPY POLICY

- POLICY:** Tetracyclines (Oral) Step Therapy Policy
- Acticlate™ (doxycycline hyclate tablets – Aqua Pharmaceuticals, generics)
 - Avidoxy™ DK Kit (doxycycline monohydrate tablets – Avidas Pharmaceuticals)
 - Doryx® DR (doxycycline hyclate delayed-release tablets – Mayne Pharma; generics)
 - Doryx® MPC (doxycycline hyclate delayed-release tablets – Mayne Pharma)
 - Doxycycline IR-DR 40 mg capsules (Owen Laboratories [brand product])
 - Minocin® (minocycline hydrochloride pellet-filled capsules – Valeant, generics)
 - Minolira™ (minocycline extended-release tablets – Promius Pharma)
 - Mondoxyne™ NL (doxycycline monohydrate capsules – IntraDerm; generics)
 - Monodox® (doxycycline monohydrate capsules – Aqua Pharmaceuticals, generics)
 - Morgidox® Kit (doxycycline hyclate capsules – Medimetriks)
 - Oracea™ (doxycycline delayed-release capsules – Galderma)
 - Seysara™ (sarecycline tablets – Allergan)
 - Solodyn® (minocycline hydrochloride extended-release tablets – Valeant or Medicis, generics)
 - Targadox™ (doxycycline hyclate tablets – Journey Medical)
 - Vibramycin® (doxycycline hyclate capsules – Pfizer, generics)
 - Ximino™ (minocycline hydrochloride extended-release capsules – Ohm Pharmaceuticals)

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OVERVIEW

In general, these medications are FDA-approved to treat a wide variety of infections such as those caused by gram-negative and gram-positive microorganisms; in adjunct with other therapies for severe acne; and in situations where penicillin is contraindicated due to allergy.¹⁻¹⁰ Table 1 summarizes the FDA-approved indications for these products; please refer to the prescribing information for specific details.

Demeclocycline, doxycycline, minocycline, and tetracycline are broad-spectrum oral antibiotic agents.¹⁻¹⁰

Table 1. General FDA-approved Indications for the Tetracycline Products.¹⁻¹⁰

General Indications	Products
<p>Rickettsial Infections</p> <ul style="list-style-type: none"> Rocky Mountain spotted fever, typhus fever and the typhus group, Q fever, rickettsial pox, and tick fevers caused by <i>Rickettsiae</i>. <p>Sexually Transmitted Infections</p> <ul style="list-style-type: none"> Uncomplicated urethral, endocervical or rectal infections caused by <i>Chlamydia trachomatis</i>. Nongonococcal urethritis caused by <i>Ureaplasma urealyticum</i>. Lymphogranuloma venereum caused by <i>Chlamydia trachomatis</i>. Granuloma inguinale caused by <i>Klebsiella granulomatis</i>. Uncomplicated gonorrhea caused by <i>Neisseria gonorrhoeae</i>. Chancroid caused by <i>Haemophilus ducreyi</i>. <p>Respiratory Tract Infections</p> <ul style="list-style-type: none"> Respiratory tract infections caused by <i>Mycoplasma pneumoniae</i>. Psittacosis (ornithosis) caused by <i>Chlamydophila psittaci</i>. Indicated for treatment of infections caused by the following microorganisms, when bacteriological testing indicates appropriate susceptibility to the drug: <ul style="list-style-type: none"> Respiratory tract infections caused by <i>Haemophilus influenzae</i>. Respiratory tract infections caused by <i>Klebsiella</i> species. Upper respiratory infections caused by <i>Streptococcus pneumoniae</i>. <p>Specific Bacterial Infections</p> <ul style="list-style-type: none"> Relapsing fever due to <i>Borrelia recurrentis</i>. Plague due to <i>Yersinia pestis</i>. Tularemia due to <i>Francisella tularensis</i>. Cholera caused by <i>Vibrio cholerae</i>. Campylobacter fetus infections caused by <i>Campylobacter fetus</i>. Brucellosis due to <i>Brucella</i> species (in conjunction with streptomycin). Bartonellosis due to <i>Bartonella bacilliformis</i>. Skin/skin structure infections caused by <i>Staphylococcus aureus</i>. Indicated for treatment of infections caused by the following gram-negative microorganisms, when bacteriological testing indicates appropriate susceptibility to the drug: <ul style="list-style-type: none"> <i>Escherichia coli</i>. <i>Enterobacter aerogenes</i>. <i>Shigella</i> species. <i>Acinetobacter</i> species. Urinary tract infections caused by <i>Klebsiella</i> species. <p>Ophthalmic Infections</p> <ul style="list-style-type: none"> Trachoma caused by <i>Chlamydia trachomatis</i>, although the infectious agent is not always eliminated as judged by immunofluorescence. Inclusion conjunctivitis caused by <i>Chlamydia trachomatis</i>. <p>Anthrax</p> <ul style="list-style-type: none"> Due to <i>Bacillus anthracis</i>. <p>Alternative Treatment for Selected Infections when Penicillin is Contraindicated</p> <ul style="list-style-type: none"> Syphilis caused by <i>Treponema pallidum</i>. Yaws caused by <i>Treponema pallidum</i> subspecies <i>pertenue</i>. Listeriosis due to <i>Listeria monocytogenes</i>. Vincent's infection caused by <i>Fusobacterium fusiforme</i>. Actinomycosis caused by <i>Actinomyces israelii</i>. Infections caused by <i>Clostridium</i> species. <p>Adjunctive Therapy for Acute Intestinal Amebiasis and Severe Acne</p> <ul style="list-style-type: none"> In acute intestinal amebiasis, useful adjunct to amebicides. In severe acne, useful adjunctive therapy. 	Demeclocycline, Doxycycline, Minocycline, Tetracycline

Table 1 (continued). General FDA-approved Indications for the Tetracycline Products.¹⁻¹⁰

General Indications	Products
<p>Miscellaneous Infections</p> <ul style="list-style-type: none"> • Treatment of asymptomatic carriers of <i>Neisseria meningitidis</i> to eliminate meningococci from the nasopharynx. Oral minocycline is not indicated for the treatment of meningococcal infection • Limited clinical data show that oral minocycline has been used successfully in the treatment of infections caused by <i>Mycobacterium marinum</i>. 	Minocycline
<p>Skin/Skin Structure Infections</p> <ul style="list-style-type: none"> • Skin/skin structure infections caused by <i>Staphylococcus aureus</i>. 	Demeclocycline, minocycline, tetracycline
<p>Anthrax Including Inhalational Anthrax (Post-Exposure)</p> <ul style="list-style-type: none"> • Anthrax due to <i>Bacillus anthracis</i>, including inhalational anthrax (post-exposure): to reduce the incidence of progression of disease following exposure to aerosolized <i>Bacillus anthracis</i>. 	Doxycycline only
<p>Prophylaxis of Malaria</p> <ul style="list-style-type: none"> • Due to <i>Plasmodium falciparum</i> in short-term travelers (< 4 months) to areas with chloroquine and/or pyrimethamine-sulfadoxine resistant strains. 	Doxycycline (some of the products)

There are some doxycycline and minocycline products with unique indications: **Oracea** (brand only) and **doxycycline immediate-release – delayed-release 40 mg capsules** (an authorized generic) are indicated for the treatment of only inflammatory lesions (papules and pustules) of rosacea in adults.^{11,12} **Minolira, Seysara, Solodyn** (some strengths are available as generics), and **Ximino** are indicated for the treatment of only inflammatory lesions of non-nodular moderate to severe acne vulgaris; Seysara is indicated for use in patients ≥ 9 years of age and Minolira, Solodyn and Ximino are indicated for use in patients ≥ 12 years of age.¹³⁻¹⁶ **Doxycycline 20 mg** tablets are indicated only for use as an adjunct to scaling and root planning to promote attachment level gain and reduce pocket depth in patients with adult periodontitis.¹⁰

In addition, some of the doxycycline and minocycline products are packaged with other items and sold as kits for specific uses. Table 2 summarizes these kits.^{17,18} The doxycycline/minocycline products in these kits can be purchased separately.

Table 2. Kits that include doxycycline or minocycline antibiotics.^{17,18}

Product	Doxycycline/Minocycline Component	Other Items; Intended Use
Avidoxy™ DK defence™ Kit	doxycycline monohydrate 100 mg	<ul style="list-style-type: none"> • defence acne wash (deep-cleansing foaming emollient acne wash) • defence solare SPF 30+ (sun block) • For management of acne
Morgidox® Kit	doxycycline hyclate 50 or 100 mg	<ul style="list-style-type: none"> • AccuWash® moisturizing cleanser • For management of acne

Dermatologic Conditions

Available guidelines for the management of acne recommend oral antibiotics for the management of moderate to severe acne (generally not as monotherapy) and do not differentiate between brand name and generic products.¹⁹⁻²³ Tetracycline derivatives (tetracycline, doxycycline, and minocycline) should not be used in children < 8 years of age. The second-generation tetracyclines (doxycycline, minocycline) are sometimes preferred to tetracycline because of less-frequent dosing, greater lipophilicity that can augment follicular penetration, and lower prevalence of resistant *Cutibacterium acnes* (formerly known as *Propionibacterium acnes*) strains as compared with tetracycline.

POLICY STATEMENT

This program has been developed to encourage the use of a Step 1 Product prior to the use of a Step 2 Product. If the Step Therapy rule is not met for a Step 2 Product at the point of service, coverage will be determined by the Step Therapy criteria below. All approvals are provided for 1 year in duration.

Automation: A patient with a history of one Step 1 Product within the 130-day look-back period is excluded from Step Therapy.

Step 1:

Product Name and Formulation	Strengths
Demeclocycline tablets	All strengths
Doxycycline hyclate tablets	20 mg, 100 mg
Doxycycline hyclate/Morgidox capsules	50 mg, 100 mg
Doxycycline monohydrate capsules/tablets	50 mg, 75 mg, 100 mg, 150 mg (tablet only)
Doxycycline monohydrate/Avidoxy tablets	All strengths
Doxycycline monohydrate/Mondoxyne capsules	50 mg, 75 mg, 100 mg
Doxycycline monohydrate suspension	All strengths
Minocycline hydrochloride IR capsules	All strengths
Minocycline hydrochloride IR tablets	All strengths
Tetracycline hydrochloride capsules	All strengths

IR – Immediate release.

Step 2:

Product Name and Formulation	Strengths
Acticlate tablets	75mg, 150 mg (brand and generic)
Avidoxy DK Kit	brand
Doryx DR tablets	50 mg, 80 mg, 200 mg (brand and generic)
Doryx MPC tablets	120 mg (brand)
doxycycline hyclate DR tablets	75 mg, 100 mg (generic)
doxycycline hyclate DR tablets/Soloxide	150 mg (generic)
Doxycycline IR-ER 40 mg capsules	Authorized generic
doxycycline monohydrate capsules	150 mg (generic)
Minolira ER tablet	All strengths (brand)
Monodox capsules	All strengths (brand)
Morgidox-Kit	All strengths (brand)
Oracea	All strengths (brand)
Seysara tablets	All strengths (brand)
Solodyn ER tablets	All strengths (brand and generic)
Targadox tablets	50 mg (brand and generic)
Vibramycin cap, suspension, syrup	All strengths (brand)
Ximino ER capsules	All strengths (brand)

DR – Delayed-release; ER – Extended-release.

CRITERIA

1. If the patient has tried one Step 1 Product, approve a Step 2 Product.
2. No other exceptions are recommended.

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