

In Re: Ohio Department of Health Standing Medical Order/Protocol for Ohio
Local Health Departments: Prophylactic Use of Antibiotics and Vaccination

Director's Journal Entry

Recognizing the authority of the United States Food and Drug Administration (FDA) to promulgate an Emergency Use Authorization (EUA) as to the use of antibiotics and vaccine in the Strategic National Stockpile (SNS), in accordance with Ohio Revised Code 3701.13, this standing order for preventing the spread of contagious or infectious diseases is directed to the health officers of Ohio local health departments to establish mass clinics with approved protocols for the rapid and appropriate dispensing and administration of prophylactic antibiotics to persons with known or suspected exposure to *Bacillus anthracis* for the prevention of anthrax disease; *Yersinia pestis* for the prevention of plague; or *Francisella tularensis* for the prevention of tularemia; and for the rapid administration of vaccine to persons with known or suspected exposure to *Bacillus anthracis* for the prevention of anthrax disease.

This medical order does not cover treatment of persons with known or suspected disease from *Bacillus anthracis*, *Yersinia pestis*, or *Francisella tularensis*. Such persons must be under the care of a physician and public health authorities. All persons with known or suspected disease must be reported immediately to the Ohio local health jurisdiction in which the person resides.

I order public health staff employed in or anyone volunteering for a nationally, state, or locally declared emergency involving the public's health as contemplated and set forth in this medically informed standing public health order to directly, or by delegation and supervision, dispense antibiotic medications herein prescribed by me, to individuals and members of their households, in order to protect against infection by the bioterrorism agents *Bacillus anthracis*, *Yersinia pestis*, or *Francisella tularensis*.

If the licensed anthrax vaccine adsorbed (AVA) is made available for use under an Emergency Use Authorization and the Centers for Disease Control and Prevention (CDC) releases the vaccine to Ohio for post-exposure prophylaxis, I order public health staff employed in or anyone volunteering for a nationally, state, or locally declared emergency involving the public's health as contemplated and set forth in this medically informed standing public health order to directly, or by delegation and supervision, vaccinate individuals in order to protect them against infection by the bioterrorism agent *Bacillus anthracis*. This part of my order is not in effect if the CDC does not release the vaccine for use in a mass vaccination setting or the AVA is released under an Investigation New Drug protocol.

All medications are prescribed, and must be dispensed in accordance with the national prophylactic treatment recommendations and within the stated restrictions and guidelines of the CDC's Division of Strategic National Stockpile (SNS) Program. When a mass dispensing site is activated and operational in Ohio in response to a public health event involving anthrax, plague or tularemia, one of the attached post-exposure prophylaxis dispensing orders/algorithms must be followed:

1. *Bacillus anthracis* Dispensing Orders and Vaccination Recommendations
2. *Yersinia pestis* Dispensing Orders
3. *Francisella tularensis* Dispensing Orders

Review of this order, and agency policies and procedures related to carrying out this order, will occur annually with changes made as necessary.



Andrew Wapner, DO, MPH
Chief Medical Officer

4/21/2014

Date



Lance Himes, JD
Interim Director

4-21-14

Date

RECORD OF CHANGE AND REVIEW

DATE	CHANGE/REVIEW	BY
3/7/2013	Annual Review Tularemia recommendations updated Record of change/review document added	Rebecca Sandholdt
6/30/14	Annual Review by Dr. Wapner Updated signatures	Viola Webber

Bacillus anthracis Dispensing Orders and Vaccination Recommendations

Recommended initial antimicrobial agent and anthrax vaccine adsorbed (AVA) dosages for postexposure prophylaxis (PEP) after exposure to aerosolized *Bacillus anthracis* spores

TABLE 1		
Population	Antimicrobials for 60-day* PEP	AVA dosage and route†,∞
Adults (≥ 18 years)	One of the following for 60 days: Doxycycline, 100mg orally twice daily for 60 days <i>or</i> Ciprofloxacin,§ 500mg orally twice daily for 60 days	3-dose subcutaneous (SC) series: first dose administered as soon as possible, second and third doses administered 2 and 4 weeks after the first dose
Children (<18 years)††	One of the following for 60 days: Doxycycline, ††, ¶¶ (maximum of 100 mg/dose) <ul style="list-style-type: none"> • >8 years and >45 kg: 100 mg every 12 hours for 60 days • >8 years and ≤45 kg: 2.2 mg/kg every 12 hours for 60 days • ≤8 years: 2.2 mg/kg every 12 hours for 60 days <i>or</i> Ciprofloxacin,§, ††, §§ 15 mg/kg every 12 hours for 60 days If isolate is proved susceptible: Amoxicillin, **, *** 45 mg/kg/day orally divided into 3 daily doses given every 8 hours for 60 days; each dose should not exceed 500 mg	Recommendations for use of AVA in children are made on an event-by-event basis
Pregnant women¶¶	One of the following for 60 days: Doxycycline, 100 mg orally twice daily for 60 days <i>or</i> Ciprofloxacin, 500 mg orally twice daily for 60 days Alternate choice (if isolate is proved susceptible): Amoxicillin, ** 500 mg every 4 hours for 60 days	3-dose SC series; first dose administered as soon as possible, second and third doses administered 2 and 4 weeks after the first dose

Table 1 was adapted from CDC recommendations. Use of Anthrax Vaccine in the United States: Recommendations of the Advisory Committee on Immunization Practices (ACIP), 2009; *Morbidity and Mortality Weekly Report (MMWR)*, 59(RR6); July 23, 2010.

- * Antimicrobials should continue for 14 days after administration of the third dose of vaccine.
- † AVA used for PEP must be administered subcutaneously.
- ∞ Data on the safety of AVA are only available for persons aged 18-65 years; no information is available on the safety of this vaccine in children or older adults (>65 years).
- § Levofloxacin is a second-line antimicrobial agent for PEP for persons aged ≥6 months with medical issues (e.g. tolerance or resistance to ciprofloxacin) that indicate its use. *Children*: 16 mg/kg/day divided every 12 hours; each dose should not exceed 250 mg. *Adults*: 500 mg every 24 hours. Safety

data on extended use of levofloxacin in any population for >28 days are limited; therefore, levofloxacin PEP should only be used when the benefit outweighs the risk.

- ¶ The antimicrobial of choice for initial prophylactic therapy among pregnant women is ciprofloxacin. Doxycycline should be used with caution in asymptomatic pregnant women and only when other appropriate antimicrobial drugs are contraindicated. Although tetracyclines are not recommended during pregnancy, their use might be indicated for life-threatening illness.
- ** If susceptibility testing demonstrates an amoxicillin MIC ≤ 0.125 $\mu\text{g/mL}$, oral amoxicillin should be used to complete therapy.
- †† Use of tetracyclines and fluoroquinolones in children can have adverse effects. These effects must be weighed carefully against the risk for developing life-threatening disease. If exposure to *B. anthracis* is confirmed, children may be treated initially with ciprofloxacin or doxycycline as prophylaxis. However, amoxicillin is preferred for antimicrobial PEP in children when susceptibility testing indicates that the *B. anthracis* isolate is susceptible to penicillins.
- §§ Each ciprofloxacin dose should not exceed 500 mg, or 1 g/day.
- ¶¶ In 1991, the American Academy of Pediatrics (AAP) amended the recommendation to allow treatment of young children with tetracyclines for serious infections such as Rocky Mountain spotted fever for which doxycycline might be indicated. Doxycycline is preferred for its twice daily dosage and low incidence of gastrointestinal side effects.
- *** Because of the lack of data on amoxicillin dosages for treating anthrax (and the associated high mortality rate), AAP recommends a higher dosage of 80 mg/kg/day, divided into 3 daily doses; each dose should not exceed 500 mg. If this higher dosage of amoxicillin is used, recipients should be carefully monitored for side effects from long-term treatment.

Yersinia pestis Dispensing Orders

Prescribed Post-exposure Prophylaxis for Pneumonic Plague[¥]

Patient Category	Recommended Therapy
Adults	Preferred choices: Doxycycline, 100 mg orally twice daily for seven days IF adult is allergic to doxycycline, THEN Ciprofloxacin, 500 mg orally twice daily for seven days €
Children	Preferred choices: Doxycycline <ul style="list-style-type: none">• If child's weight is ≥45 kg, give adult dosage (100 mg orally twice daily) for seven days• If child's weight is <45 kg, give 2.2 mg/kg orally twice daily for seven days (maximum daily dose of 200 mg) If child is allergic to doxycycline, THEN Ciprofloxacin, 20 mg/kg twice daily for seven days €
Pregnant women and breastfeeding mothers	Preferred choices: Ciprofloxacin, 500 mg orally twice daily for seven days € If individual is allergic to Ciprofloxacin THEN, Doxycycline, 100 mg orally twice daily for seven days ‡

Table 2 adapted from: Inglesby TV, Dennis DT, Henderson DA, et al. Plague as a Biological Weapon: Medical and Public Health Management, *JAMA* 2000; 283:2281-90.

- ¥ Recommendations were reached by consensus of the Working Group on Civilian Biodefense and may not necessarily be approved by the FDA.
- ‡ Although fetal toxicity may occur with doxycycline use and toxic effects on the liver in pregnancy have been noted with the tetracycline class, the Working Group on Civilian Biodefense recommend doxycycline or ciprofloxacin for post-exposure prophylaxis of pregnant women.
- € Other fluoroquinolones may be substituted at doses appropriate for age. Ofloxacin (and possibly other quinolones) may be acceptable alternatives to ciprofloxacin or levofloxacin; however, they are not approved for use in children. Each ciprofloxacin dose should not exceed 500 mg and maximum daily dosage for ciprofloxacin should not exceed 1 g.

Francisella tularensis Dispensing Orders

Prescribed Post-exposure Prophylaxis for Tularemia

Patient Category	Recommended Therapy ‡
Adults (including pregnant women)	One of the following: Doxycycline, 100 mg orally twice daily for 14 days € or Ciprofloxacin, 500 mg orally twice daily for 14 days
Children	Preferred choices: Doxycycline <ul style="list-style-type: none">• If child's weight is ≥45 kg, give adult dosage (100 mg orally twice daily) for 14 days• If child's weight is <45 kg, give 2.2 mg/kg orally twice daily for 14 days (maximum daily dose of 200 mg) If child is allergic to doxycycline, THEN Ciprofloxacin, 20 mg/kg twice daily for 14 days §

Table 3 adapted from the following reference for the recommended therapy information for adults: Dennis DT, Inglesby TV, Henderson DA, et al. Tularemia as a Biological Weapon: medical and public health management. *JAMA* 2001; 285(21): 2763-2773. Table 3 adapted from the following reference for the recommended therapy information for children: A National Consensus Conference for "Pediatric Preparedness for Disasters and Terrorism", March 2007, convened by the Mailman School of Public Health at Columbia University: <http://www.ncdp.mailman.columbia.edu/files/peds2.pdf>.

‡ Recommendations were reached by consensus of the Working Group on Civilian Biodefense and may not necessarily be approved by the United States Food and Drug Administration.

€ Although fetal toxicity may occur with doxycycline use, the Working Group on Civilian Biodefense recommended doxycycline or ciprofloxacin for post-exposure prophylaxis of pregnant women.

§ Other fluoroquinolones may be substituted at doses appropriate for age. Ofloxacin (and possibly other quinolones) may be acceptable alternatives to ciprofloxacin or levofloxacin; however, they are not approved for use in children. Each ciprofloxacin dose should not exceed 500 mg and maximum daily dosage for ciprofloxacin should not exceed 1 g.

Contraindications and Precautions:

Please refer to medication and vaccine package inserts for information regarding contraindications and precautions.

Persons taking other medications, including those sold over-the-counter, should check with their healthcare provider or pharmacist regarding possible medication interactions and whether any of the medications need dosage adjustments.