

Malaria Deaths Following Inappropriate Chemoprophylaxis United States, 2001

During January-March 2001, two U.S. citizens died from malaria after taking chloroquine alone or with proguanil for malaria chemoprophylaxis in countries with known chloroquine-resistant *Plasmodium falciparum* malaria. Since 1992, five other malaria related deaths among U.S. citizens who traveled abroad following inappropriate chemoprophylaxis, were reported to the Centers for Disease Control and Prevention (CDC).

The geographic spread of *P. falciparum* resistant to chloroquine is increasing. Chloroquine resistance exists throughout sub-Saharan Africa, Southeast Asia, the Indian subcontinent, and over large portions of South America, including the Amazon basin.¹ Among 4685 cases of imported malaria in U.S. civilian travelers during 1992-2001, 893 (19%) took an inappropriate chemoprophylaxis regimen and 2616 (56%) took no chemoprophylaxis. Among 505 persons who took an inappropriate chemoprophylaxis regimen during 1995-2001, 351 (70%) took chloroquine for travel to an area with known chloroquine resistance.

Since 1990, CDC has recommended mefloquine as antimalarial prophylaxis in regions with chloroquine-resistant malaria; doxycycline has been the recommended alternative.² Chloroquine, ideally taken with daily proguanil (an antimalarial not marketed in the U.S. except in co-formulation with atovaquone), had been recommended only for persons unable to take mefloquine or doxycycline. In July 2000, Malorone*, a combination of atovaquone and proguanil, was approved for use in the United States. Since November 2000, CDC has recommended Malarone, mefloquine, or doxycycline as options for malaria chemoprophylaxis in areas with chloroquine-resistant malaria and no longer recommends chloroquine combined with proguanil.³

Travelers and health-care workers who provide medical advice to travelers should be aware that chloroquine is effective for malaria prophylaxis only in a few areas of the world. Recommending and prescribing inappropriate chemoprophylaxis can result in travelers becoming ill or dying from malaria. Information on malaria prevention and

chemoprophylaxis is available in *Health Information for International Travel*, CDC's handbook for travelers, which is published biannually and is available and updated online at <http://www.cdc.gov/travel>. Information also is available by telephoning (877) FYI-TRIP (877) 394-8747.

The information provided above is from the July 20, 2001 issue of the CDC publication, *Morbidity and Mortality Weekly Report* (Vol.50, No.28). Please refer to this publication for case reports on the two malaria related deaths that occurred in 2001.

*Use of trade names is for identification only and does not imply endorsement by the Public Health Service or by the U.S. Department of Health and Human Services or CCHD.

This newsletter and other health and bioterrorism-related information are posted on the Web at http://www.cchd.org/physician/physician_only.htm

References:

1. CDC. Health information for international travel 1989. Atlanta, Georgia: US Department of Health and Human Services, Public Health Service, 1989.
2. CDC. Information for health care providers: Malarone for malaria treatment and prophylaxis, October 2000.
<http://www.cdc.gov/travel/diseases/malaria/malarone.htm>
3. CDC. Health information for international travel 2001-2002. Atlanta, Georgia: US Department of Health and Human Services, Public Health Service, 2001.

**When You See Unusual
Think
Outbreak!**

COMMUNICABLE DISEASE STATISTICS*



December 2001

The Nevada Administrative Code Chapter 441A requires reports of specified diseases, foodborne illness outbreaks and extraordinary occurrences of illness be made to the local Health Authority. The purpose of disease reporting is to recognize trends in diseases of public health importance and to intervene in outbreak or epidemic situations. The system is founded upon the clinical recognition or suspicion of these diseases by physicians, nurses, and other health professionals. Physicians, veterinarians, dentists, chiropractors, registered nurses, directors of medical facilities, medical laboratories and blood banks are required to report. The following individuals should also report: school authorities, college administrators, directors of child care facilities, nursing homes and correctional institutions. In addition, anyone having knowledge of a case(s) of a communicable disease is required to report. Failure to report is a misdemeanor and may be subject to an administrative fine of \$1,000 for each violation.

DISEASE	CASES REPORTED		YEAR TO DATE	
	Dec. 2000	Dec. 2001	2000	2001
VACCINE PREVENTABLE DISEASES				
HAEMOPHILUS INFLUENZA (invasive)	0	1	3	4
HEPATITIS A	10	4	71	48
HEPATITIS B	4	8	41	40
INFLUENZA	3	1	18	29
MEASLES	0	0	5	1
MUMPS	0	0	2	3
PERTUSSIS	0	2	12	6
ENTERICS				
AMEBIASIS	1	0	3	4
CAMPYLOBACTERIOSIS	8	9	108	135
CRYPTOSPORIDIOSIS	0	0	3	4
E.COLI O157:H7	0	2	9	8
GIARDIASIS	7	19	147	141
ROTAVIRUS	173	84	529	567
SALMONELLOSIS	11	21	145	149
SHIGELLOSIS	2	0	104	54
ANTHRAX	0	0	0	0
COCCIDIOIDOMYCOSIS	4	7	23	37
LEGIONELLOSIS	0	0	1	4
LEPROSY (HANSEN'S DISEASE)	0	0	0	1
LISTERIOSIS	0	0	5	5
LYME DISEASE	0	1	3	3
MALARIA	0	0	2	3
MENINGITIS, ASEPTIC/VIRAL	5	10	66	87
MENINGITIS, BACTERIAL	3	1	46	19
MENINGOCOCCAL DISEASE	0	1	2	8
RSV (RESPIRATORY SYNCYTIAL VIRUS)	242	138	1310	1555
ROCKY MOUNTAIN SPOTTED FEVER	0	0	2	1
TUBERCULOSIS	4	5	82	71

* Includes selected notifiable diseases. Numbers include confirmed and probable cases.

There were no reports of cases on the following diseases:

Brucellosis	Diphtheria	Plague	Rabies (Animal)
Botulism-Intoxification	Granuloma inguinale	Poliomyelitis	Tetanus
Chancroid	Hantavirus	Q Fever	Typhoid Fever
Cholera	Hemolytic Uremis Syndrome (HUS)	Leptospirosis	
Dengue	Lymphogranuloma venereum	Rabies (Human)	