CHIKUNGUNYA FEVER AMONG U.S. PEACE CORPS VOLUNTEERS -
REPUBLIC OF THE PHILIPPINES

C.G. Hayes, T. O'Rourke and A. Sarr.
Chikungunya fever among U.S. Peace Corps Volunteers - Republic of the Philippines

Three cases of chikungunya fever were diagnosed recently among U.S. Peace Corps Volunteers stationed in the Republic of the Philippines. These are the first cases reported from the Philippines since 1968. All three cases were diagnosed using an antibody-capture enzyme-linked immunosorbent assay (ELISA).

The cases were diagnosed as part of a collaborative long-term infectious disease study by the U.S. Naval Medical Research Unit No. 2 and the U.S. Peace Corps in the Philippines.
ADMINISTRATIVE INFORMATION

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International Notes

Chikungunya Fever among U.S. Peace Corps Volunteers — Republic of the Philippines

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The first patient, a 27-year-old male, was stationed in Mindanao, one of the southernmost islands of the Philippine archipelago. His illness occurred in June 1985 but was not diagnosed until October 1985. The second case occurred mid-November 1985 in a 31-year-old female stationed on Cebu, one of the islands that forms the central portion of the archipelago. The third case occurred in January 1986 in a 23-year-old female stationed on the island of Masbate, also in the central part of the country but north of Cebu.
Chikungunya Fever – Continued

All three cases were diagnosed using an IgM antibody-capture enzyme-linked immunosor- 
bent assay (ELISA). Chikungunya virus was isolated from a blood sample obtained from one 
of the patients 3 days after onset of fever. The clinical presentations were typical of chikun-
gunya fever and included acute onset of high fever, severe joint pain, and skin rash. The ill-
nesses persisted 3-7 days, and all patients recovered uneventfully.

Chikungunya virus may have been introduced into the southern Philippines from Indonesia. 
The first case detected in the Philippines occurred in an area of Mindanao, Davao del Sur, 
which is approximately 200 km north of central Indonesia; the area is reportedly frequently 
visited by Indonesian traders and fishermen.

The full extent of epidemic activity in the Philippines is not known. One of the Peace Corps 
volunteer patients reported many cases of a chikungunya-like illness (locally termed “Chinese 
fever” or “Asian flu”) in the Filipino population of the village where she lived. The potential for 
widespread activity is present because of the large population of susceptibles and the abun-
dance of the vector, Aedes aegypti, particularly in large urban areas like Manila.

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Editorial Note: The word “chikungunya” is Swahili for “that which bends up,” in reference to 
the stooped posture of patients afflicted with the severe joint pain associated with this dis-
ease. The disease was first recognized in epidemic form in East Africa in 1952-1953 (1). The 
etiologic agent, chikungunya virus, is arthropod-borne and has been placed in the family 
Togaviridae, genus Alphavirus (2). Human infections are acquired by the bite of infected 
A. aegypti mosquitoes, and epidemics are sustained by human-mosquito-human transmis-
sion. The epidemic cycle is thus similar to those of dengue and urban yellow fever.

Since 1954, the virus has been implicated as the cause of epidemics in Asian countries 
including the Philippines, Thailand, Cambodia, Vietnam, India, Burma, and Sri Lanka. Epidem-
ics of chikungunya were documented in the Philippines in 1954, 1956, and 1968 (3-4). 
Serosurveys suggest that virus activity occurred in the central and southern part of the archi-
pelago (5). Chikungunya virus has been isolated from humans and mosquitoes in eastern, 
southern, western, and central Africa and in southeastern Asia, where it has been responsible 
for illnesses in hundreds to thousands of individuals.

Chikungunya fever is characterized by sudden onset, chills and fever, headache, nausea, 
vomiting, arthralgia, and rash. In contrast to dengue, chikungunya is characterized by a briefer 
febrile episode, by persistent arthralgia in some cases, and by the absence of fatalities. How-
ever, similarities between clinical appearances of the two diseases probably account for mis-
classification and some underreporting of chikungunya fever in areas with endemic dengue; 
therefore, laboratory confirmation of reported cases is important. The IgM-capture ELISA 
used for diagnosis of these patients is especially useful in this regard (6).

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