1. INTRODUCTION

1.1 BACKGROUND

Yellow fever is a zoonosis indigenous to some tropical regions of South America and Africa which has caused numerous epidemics with high mortality rates throughout history. Its etiologic agent is the yellow fever virus, an arbovirus of the genus Flavivirus (family Flaviviridae).

1.2 STATUS OF YELLOW FEVER IN THE AMERICAS

The area in which cases of jungle yellow fever are observed is confined to northern South America, including Bolivia, the east-central region of Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, and Venezuela, and Trinidad and Tobago in the Caribbean. From 1985 to September 2004, 3,559 cases of jungle yellow fever, resulting in 2,068 deaths, were reported to PAHO.

Peru had the most cases during the period (1,939), followed by Bolivia (684), Brazil (539), Colombia (246), Ecuador (93), Venezuela (57), and French Guiana (1). The disease has cyclical characteristics, and there have been three major epidemic spikes in the past 10 years (Figure 1). The highest number of cases was recorded in 1995, resulting from a major outbreak in the western Andean region of Peru. In 1998, the number of cases again rose, this time as a result of outbreaks in Peru, Bolivia, and Brazil. From 1999 to 2002, the number of cases of jungle yellow fever fell sharply, with only isolated cases and limited outbreaks observed. This can be explained in part by the intensification of yellow fever vaccination in enzootic areas in Brazil and Bolivia. In 2003 a rise in the incidence of this disease was observed, owing to outbreaks in Brazil and Peru and an extensive outbreak along the border between Colombia and Venezuela.

2. EPIDEMIOLOGY

There are two yellow fever transmission cycles: the jungle cycle and the urban cycle.

In the jungle cycle, the virus circulates among nonhuman primates and perhaps among susceptible marsupials. Transmission occurs through the bite of certain jungle species of mosquitoes. In the Americas, the primary vectors are mosquitoes of...