

Yellow fever and public health in Brazil

Yellow fever is likely to disappear from the news in Brazil, either because the dreaded epidemic has not materialized or because other news has gained greater visibility. The treatment given to the issue by the mass media has often been confusing and superficial, thereby helping feed the public's feeling of insecurity by featuring partial and incomplete or out-of-context data, besides commentary by health professionals lacking specific experience with the theme. Distorted analyses of yellow fever's "resurgence" have displayed lack of information on its status as a disease subject to international health regulation with required vaccination for travelers. Curiously, the mainstream press has accompanied the reports of suspected cases and laboratory confirmations of yellow fever on a case-by-case basis, as if to document an epidemic that the authorities are purportedly attempting to hide. However, the same media scrutiny was not observed for accidental tetanus (166 deaths in 2006), *Haemophilus influenzae* meningitis (19 deaths in 2005), or human rabies (44 deaths in 2005), to cite just a few examples of serious diseases with structured control programs and effective vaccines available in the public health services network. As with yellow fever, each case of those diseases represents a sentinel event indicating failure in control measures and the need for adjustments and corrections, regardless of the incidence rates.

Unlike the epidemic yellow fever outbreaks that occurred in the State of Minas Gerais in 2001 and 2003, the dispersion of confirmed cases in January 2008 did not constitute an epidemic. But in the presence of yellow fever, endemic levels and the maximum expected limit lose their relevance for decisions on intervention, because the fluctuation in a small number of cases scattered over a large territory hinders the characterization of an epidemic. In addition, considering the disease's public health relevance, even just one case could be approached as a potential or initial epidemic, leading to the intensification of pertinent control measures. The cases that occurred in the Central-West of Brazil in January 2008 revealed an active surveillance system with timely notification and investigation of cases and heightened alert in areas of the country from which come the majority of susceptible individuals that are infected in endemic regions. In the future, panic situations could be avoided with strategies to ensure compliance with the recommendation to vaccinate travelers to endemic areas.

Still, the innovation in yellow fever surveillance has been the detection of epizootics in primates that constitute known hosts of wild yellow fever. Surveillance of epizootics allowed anticipating vaccination of populations in areas before human cases occurred. It is possible that the expansion of epizootic surveillance will continue to enlarge the area in which yellow fever vaccination is part of the basic immunization calendar. Circulation of the yellow fever virus in small primates in urban areas has still not appeared with the potential for re-urbanization of the disease, as compared to *Aedes aegypti* infestation levels in many Brazilian cities. Nevertheless, expansion of the risk area, including heavily populated States like Minas Gerais and approaching other areas with high demographic density, in addition to the frequent movement of susceptible individuals from yellow fever-free to endemic areas, could justify including the yellow fever vaccine in the basic immunization calendar throughout the country, as already occurs in a major portion of the Brazilian territory. The gradual extension of high vaccine coverage to the entire Brazilian population would reduce the need for mass vaccination campaigns. It appears timely to review the current control measures, considering that yellow fever cannot be eradicated, and that the risk of re-urbanization, although considered very small, is not negligible.

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