

AN OUTBREAK OF LEPTOSPIROSIS, THAILAND-THE IMPORTANCE OF THE LABORATORY

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ABSTRACT

The reported incidence of leptospirosis increased 30-fold in Thailand between 1995 and 2000. Despite many hypotheses to explain the increase, the true etiology remains unknown. We conducted a review of the national surveillance system for leptospirosis, examining the reporting practices, system attributes, and utilization of laboratory confirmation in two northeastern provinces. Using standard guidelines for evaluation of public health surveillance systems, we assessed the timeliness, completeness, and accuracy of data; the sensitivity and specificity of case ascertainment; and the overall usefulness of the Thai leptospirosis surveillance system. Physicians were interviewed to assess compliance and understanding of the case definition. Capacity for confirmation of leptospirosis by a Thai latex agglutination test was assessed. Completeness for variables critical for linking epidemiologic and laboratory data for leptospirosis was 69%. Twenty-eight percent of 208 provincial surveillance reports were considered timely. Interviewed physicians indicated that national case definition was difficult to understand and apply, and that laboratory confirmation was infrequently used. Compared to a standardized microscopic agglutination test (MAT) panel, the Thai test was specific, but relatively insensitive. We found that a lack of a standardized case definition for leptospirosis, the infrequent use of confirmation laboratory testing, and the inability to link critical, epidemiologic, and laboratory data hindered system utility. This surveillance system for leptospirosis highlights difficulties with surveillance of febrile illness in general, and the importance of laboratory confirmation for infections that are difficult to diagnose clinically.

Southeast Asian J Trop Med Public Health 2005; 32(2): 1-7