

Thesis title                    The Hepatitis A Antigen Prevalent in  
   Drinking Water, Using Water and Risk  
   Behaviors of Bangplad Chaophraya River  
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#### ABSTRACT

Hepatitis A infection has been one important of public health problems in many parts of the world. The economic loss through this disease is enormous. Transmission of HAV is associated primarity with close personal contact and fecal contamination of food or water. Endemic areas or risk areas are usually overcrowded with poor hygiene and sanitation. The situation of HAV antigen and risk factors in Thailand need to be evaluated. This study was designed to determine the HAV antigen prevalence rate in drinking water and using water related for risk factors contamination of water by HAV antigen. The studied area was Charanvithi 74 community located on the bank of the Chaophraya river. During June to November 1992, 75 housewives of the

households were interviewed about studied variables including factors associated with the HAV contamination in the water. Specimens of drinking water and using water were collected for hepatitis A antigen detection by Enzyme Immuno Assay (EIA). The results showed that HAV contamination was 14.7% in drinking water. The highest contamination rate was found in rain water (33.3%) followed by tap water (17.0%) and filtered water (8.0%). For the using water, the HAV contamination rate was 10.6% (8/75 samples). The tap water in containers was the highest contamination rate (19.4%) and the running water was the least contamination rate (3.0%). The water directly taken from the Chaophraya river was 9.1%. Most of studied households were insanitary environmental sanitation and poor health behaviors.

From the laboratory results, they were divided the studied households into 2 groups: households with HAV contamination in water and households without HAV contamination. The studied variables of 2 groups were analysed by Odds ratio and  $X^2$ -test for searching some factors associated with HAV contamination in waters. It was found that the factors affecting the contamination of HAV antigen were : method of storing of already cooked food (OR = 6.25, P=0.01), and washing of hands after defecation (OR = 7.00, P=0.002). Based on these findings, it was concluded that hepatitis A infection can be reduced by improving personal hygiene, sanitation of environments. Health education program for housewives is essential for the success.