

Thesis Title Birth cohort analysis of Dengue hemorrhagic fever reported cases in Thailand, 1968-1988.

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Degree Master of Primary Health Care Management

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Date of Graduation 28 May B.E. 2533 (1990)

ABSTRACT

A retrospective cohort of Dengue hemorrhagic fever (DHF) reported cases in Thailand whose birth years were between 1968-1988 were studied to determine the population at risk by age group, sex and region specific. The secondary data of 674,841 already analysed DHF surveillance was used as a study population. It was obtained from the Division of Epidemiology, Ministry of Public Health. The population denominator based on the 1970 census year was obtained from the Working Group on Population Projections and Division of Civil Registration, Ministry of Interior. The results were grouped related to disease pattern as follows;

1. The cohort of which incidence was low in ages 0-4 years old followed by a very high peak in ages 5-9 years old. The incidence would be less related with older age.

2. The cohort of which incidence was low in ages 0-4 and 5-9 years old, these children would be at risk in ages 10-14 years old.

3. The cohort of which incidence was very high in ages 0-4 years old. The risk children would be less related with the older age.

4. The cohort of which incidence was high in ages 0-4 years old followed by dropping rate in ages 5-9 years old, these children would be at risk in ages 10-14 years old.

5. The cohort of which incidence was high from ages 0-4 through 15-24 years old. There was no more risk in this cohort related to age.

6. The cohort of which incidence was high in ages 0-4 and 5-9 years old without progressive increase, would be at risk at ages 10-14 years old.

There was no difference of incidence pattern between male and female, except in the central and the south regions. Young adult ages 15-24 and over 25 years old in every region, except the northeast region, was affected by epidemics in 1984 and 1987. Only 2 cohorts of 1981 and 1985 in the south region had the highest incidence rate in ages 10-14 years old when compared with the other regions having 4 cohorts, however, there were correspondent birth years among them. Epidemic occurrence in the south region was inconsistent with the others. The progressive increase of incidence rate appeared to have the close relationship with the epidemic in the following year(s) of birth. The circulation of dengue viruses, herd immunity and antibody to previously infected dengue virus seemed to be correlated with these findings. However, we are able to predict the population at risk year by year in each region by utilizing supported data of entomological, serological surveillance and particularly DHF surveillance report.