

## **Abstract**

**Japanese encephalitis (JE) is an endemic disease in Taiwan. A decreasing trend in incidence rate in Taiwan since the mass vaccination program started in 1968. In this study, we are going to assess the cost-effectiveness of inactivated JE vaccine given to infants and children in Taiwan.**

**A decision-analytical model was constructed in order to compare the vaccination program and non-vaccination program of JE for a birth cohort in Taiwan. Cumulative costs and effectiveness of JE from birth to 66 years old were estimated in this study. The economic consequences were measured as cost per case, per death, and per quality-adjusted life year (QALY) averted for two programs.**

**The results show that, 53.07 JE cases, 10.35 death cases were saved, and 0.00307 QALY/person gained in vaccination program. For medical cost, the vaccination program gained NTD. 67031437, and for the productivity, the vaccination program gained NTD. 389131435. In payers' perspective, the cost-benefit ratio is -1.213, this means that to expend 1 dollar, and we can gain 1.213 dollars. In societal perspectives, the vaccination program will dominate non-vaccination program.**

**Keywords: Japanese encephalitis ; vaccination ; cost-effectiveness analysis**