

# To evaluate the vaccination effect of varicella and the prevalence of herpes zoster based on the National Health Insurance database

## Abstract:

The purpose of this study is to evaluate the vaccination effect of varicella and the prevalence of herpes zoster based on the National health Insurance database. Furthermore, to determine the direct medical utilization and costs associated with complications. The scrambled ID claimed data of National Health Insurance (NHI) from January 2001 to December 2005 were used to identify varicella or herpes cases from primary and secondary diagnostic codes and determined the complication and direct medical resources consumption patterns. More than 100 thousands persons with varicella were identified from claimed data in each year. Children with 1 to 5 years old, was the only child in the family, with higher educated parents, will more likely to vaccinate. The incidence rate of varicella from implement free vaccination policy city/county (Taipei city, Taichung city and Taichung county) were much lower than other city/county. Nationwide varicella vaccination policy was implemented in 2004, the number of persons with varicella decrease 15% during 2003 to 2005. Hospitalization rate was 1.6 cases per 100 population and the average inpatient expenditures was 25,514NTD per varicella case, outpatient visit rate was 98.4 cases per 100 population and the average outpatient expenditures was 540NTD per varicella case in 2005. The most common complication was secondary infection(6%). The number of persons with herpes zoster increase 15% during 2003 to 2005, hospitalization rate was 3.5 cases per 100 population and outpatient visit rate was 96.5 cases per 100 population.

Varicella vaccination policy can effectively reduce the incidence of varicella and its medical cost. Government should continue to implement this policy.

Key words: varicella (chickenpox), vaccination, complication, medical utilization, herpes zoster