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Project Title: Analysis of the actuality resources and cost effectiveness of notifiable disease prevention in Taiwan

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Executing Institute:

Principal Investigator(P.I.):

P.I. Position Title:

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Abstract:

Disease control means to prevent infectious disease occurrence, transmission, and outbreak. Taiwan locate in subtropics, with the traffic more convenient today, we should pay more attention with effectiveness of disease control, to prevent threat from newly risen and reemergence disease. This study used disease burden analysis and cost effectiveness evaluation to analyse the actuality resources of the notifiable disease prevention in Taiwan.

We used health status measurement index method- Disability Adjusted Life Year (DALY) (developed by Harvard university and World Health Organisation), combine fatal and non-fatal health status to evaluate the disease burden of tuberculosis,, japanese encephalitis, and shigellosis. Data collected from fatal statistic data base (Department of health), notifiable disease data base (Centers for disease control), life expectancy (Ministry of interior). We used Microsoft Excel 2003 and SAS9.1 as statistic analysis software.

We also collect 10 years health prevention accounts, human resources, and disease prevention knowledge questionnaire from public health bureau of each city, to measure disease prevention ability of health officer in Taiwan. Study results show that the disease burden of tuberculosis higher than other diseases. The mean of DALY 1996 to 2006 ten years of tuberculosis was 138070.89, and 624.30 per million population. After combine with health prevention accounts and human resources data, we build a disease prevention cost-effectiveness analysis formula:

$\hat{y} = C - 5.073x_1 + 0.000002x_3$, shows that with time goes up, the disease burden goes down.

Though Japanese encephalitis and shigellosis didn't play the major rule of DALY like tuberculosis and HIV/AIDS, but this result reflect our past health policy worked, which reduce these diseases incidence rate effectively. For example, if shigellosis or Japanese encephalitis disease outbreak didn't control well, the outbreak of social economical burden would not less than tuberculosis or dengue fever. We suggest government should increase prevention budget, continue emphasize public health work, and prevent extensive outbreak, that could hold disease burden not happen sudden rise up.