Title: Integration of epidemiology and outcome research for health policy

Supervisor: Jung-Der Wang

Keywords: Health technology assessment; comparison of cost-effectiveness in healthcare services, including preventive, diagnostic & therapeutic, and rehabilitative medicine

Field: Clinical Project with lab work (mainly statistical data analysis)

Duration: 4-6 weeks

Project Description:
All the countries with a health insurance system of universal coverage have encountered financial difficulty. Similarly, as the financial burden of our National Health Insurance (NHI) has grown up to 600 billion New Taiwan dollars (equivalent to $20 billion USD), we must improve the cost-effectiveness of preventive, diagnostic & therapeutic, and rehabilitative medicines for the sustainability of NHI and improving population health. My team have developed a general equation and a statistical package (http://www.stat.sinica.edu.tw/jshwang/web/isqol/) for integration of survival and quality of life (QOL) to quantify the outcomes of all different healthcare services. When the QOL function is replaced by cost function/proportion of functional disability, we can estimate lifetime costs/duration of long-term care. These impacts of consequences of different diseases can be multiplied with incidence rates measured by epidemiology to estimate overall impact of prevention under the QALY (quality-adjusted life year) unit and compared with clinical services.

Requirements: basic knowledge about epidemiology & biostatistics and if possible clinical medicine