

摘要

由於近年日益升高的腦中風危害，本研究依據全民健保資料庫，估計國人腦中風發生機率與相關醫療成本，設計腦中風保單，並進行保費精算。研究追蹤全民健保資料庫 1996 年至 2012 年，共 99,165 位 40 歲以上投保人之資料，以 Panel Logit Model 推估腦中風機率，以 Panel Negative Binomial Model 推估因腦中風就醫/住院次數。研究發現年齡、性別、月薪資、居住地區、職業別與疾病史，對腦中風機率和就醫/住院次數有顯著的影響。進一步依此機率和次數估算腦中風保險保費，為台灣保險公司與民眾設計一張商業保單，提高國人因腦中風而遭受危害的保障。



關鍵字: 腦中風保單，縱橫資料，羅吉斯迴歸，負二項迴歸，全民健保資料庫

Abstract

Given the increasing incidence of stroke, we design and price a commercial stroke insurance using National Health Insurance Research Database (NHIRD) for insurance companies and customers in Taiwan. We collect 99,165 people over 40 years old during the period from 1996 to 2012 to perform the empirical study. In the study, the Panel Logit Model and Panel Negative Binomial Model are employed to estimate the probability of stroke and the frequency of outpatient visits or inpatient days due to stroke respectively. We find that age, gender, monthly income, place of residence, occupation, and disease history have significant effects on the probability of stroke and the frequency of outpatient visits or inpatient days due to stroke.



Keywords: Stroke Insurance, Panel Data, Logit Model, Negative Binomial Model