

醫療救治品質存在週末效應？*

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醫院的醫療照護人力在一週之中的每一天並非均等分配，週末假期常有醫護人力短缺、緊急或重症醫療救治支援不足的問題，因而文獻上指出週末假期就醫者有較差的醫療結果或所謂的“週末效應”，但是以往探討週末效應的實證研究並未控制個別醫院醫療救治能力的差別，也沒有追蹤病患求診醫療利用的效益。藉由 1998-2007 年全民健康保險資料庫中急性心肌梗塞、出血性中風與阻塞性中風等急重症病患的資料，本研究控制醫院的固定效果、病患特性、季節性與時間趨勢等因素，並區分醫學中心與非醫學中心醫院，實證分析台灣的醫院是否存在週末效應，亦即在週末或農曆春節求診的病患是否有較高的死亡率，以及存活病患是否有較差的醫療利用效率。我們的實證結果發現病患在週末及農曆春節求診者，均相對於平日求診者有較高 7 天、30 天與 180 天的死亡率，而且此負面醫療結果的週末效應，主要出現於非醫學中心醫院，醫學中心的週末效應並不明顯。另一方面，在存活的病人中，週末及農曆春節求診者，依疾病類別的差異，或多或少出現較長的當次住院日數、較少的當次醫療花費（經住院日數校正）與較高的出院後 30 天再住院率，而且醫學中心或非醫學中心醫院皆有此種週末求診低醫療效率的現象。雖然醫學中心在週末仍保有與平日相同的緊急救治能力，但是週末就診之病患的醫療利用效率仍較平日就診者差，隱含這些人力與設備最齊全的醫院在週末的醫療照護仍未達平日應有的成本效益水準；非醫學中心的週末效應非常明顯，並且該週末效應主要來自區域醫院—而非地區醫院—週末救治的負面結果，病患就診的安全性與救治效率值得相關單位的重視。本文的研究結果可提供衛生署擬定醫療照護品質規範時的參考。

關鍵字：週末效應、死亡率、醫療利用、再住院率、急性心肌梗塞、阻塞性中風、出血性中風

Do Hospitals Provide Lower Quality Care on Weekends?

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ABSTRACT

This paper aims to investigate whether a weekend effect is present among Taiwan's hospitals. Previous literature has shown that admission to the hospital during the weekend is associated with a higher mortality rate or worse clinical outcomes than those admitted on weekdays. This is the so-called "weekend effect", which arises because of a lower staffing level and the absence of ancillary medical support during weekends. Past studies of the weekend effect, however, did not account for the heterogeneity in hospitals' abilities in treating patients with severe conditions, or examine patients' medical utilization when hospitalized. Using the patient-level data extracted from the 1998-2007 National Health Insurance Database, we empirically investigate whether there is a weekend effect for patients with acute myocardial infarction (AMI), ischemic stroke and hemorrhagic stroke. The treatment outcomes are measured by 7-day, 30-day and 180-day mortality since admission. In addition, patients' length of stay, medical expenditures, and readmission within 30 days after dis-

charge represent patients' medical care utilization when hospitalized. We further distinguish hospitals by their accreditation level. After controlling for hospital heterogeneity via fixed effects, we found that weekend admissions are associated with higher mortality rates, especially for patients admitted to non-medical centers. Moreover, among those surviving patients, longer length of stay, lower medical expenditures and a higher readmission rate within 30 days after discharge are found for patients admitted on the weekend. The weekend effect that we found among non-medical centers arise mainly from regional hospital patients' unfavorable outcomes.

Key Words: weekend effect, mortality, medical care utilization, readmission, AMI, ischemic stroke and hemorrhagic stroke