SARS 疫情對重大傷病患者之醫療利用影響評估

The Impact of SARS Epidemic on the Utilization of Medical Services：A Study of Patient with Major Illness

中文摘要

依中央健康保險局 2002 年統計，我國投保人口中約有 2.6%領有重大傷病卡，一年約 679 億的醫療費用，佔健保醫療支出的 22.6%，由此可見重大傷病患者之高醫療依賴與利用的特性。然我國於 2003 年 3 月起爆發爲期 3~4 個月的 SARS 疫情，由於台北縣市發生之 SARS 個案數最多，疫情所導致的醫療供需衝擊更爲顯著，例如和平、台大、陽明等醫療院所，爲配合感染管控與防疫措施，採取縮減醫療服務提供的因應方式，直接造成市場供需失衡，在此之下，此高度依賴醫療的重大傷病患者，更是首當其衝，直接影響其醫療利用狀況。

本研究爲了解 SARS 疫情對台北分局轄區重大傷病患者醫療利用之影響，因此以所有重大傷病個案爲對象，並以洗腎個案爲參考族群，探討其門診及住院利用次數及醫療費用影響狀況。分析方式（1）以 2002 年爲基期年，比較 SARS 同期或基期年平均之成長率，（2）採用時間序列分析方式，預測門、住診醫療利用次數與費用之時間序列趨勢，並比較在 SARS 各時期實際值與預測值差異。經過研究發現：

（1）由醫療利用趨勢來看，SARS 對重大傷病與非重大傷病之門診利用人次與費用消長型態相似，尖峰期利用減少、後 SARS 期反彈回升且逐漸超過 SARS 前水準，洗腎門診利用狀況則較不受 SARS 影響，呈穩定成長；且 SARS 對重大傷病患者之醫療利用影響幅度較非重大傷病患者小。

（2）由醫療利用趨勢來看，SARS 對非重大傷病與洗腎及整體重大傷病患者之住院利用人次及費用消長型態相似，尖峰期利用減少、後 SARS 期逐漸回升，此外重大傷病與洗腎患者住院醫療利用趨勢振幅走向一致；惟相較於重大傷病或洗腎患者，非重大傷病之醫療利用受 SARS 影響幅度較大。

（3）SARS 初期，重大傷病與洗腎之門診與住院醫療利用皆高於基期年，惟洗腎門診與住院之平均人次費用較基期年平均爲低。

（4）5 月尖峰期，重大傷病門診與住院利用人次減少，平均人次費用成長；洗腎門診人次與費用皆成長，而住院則利用人次與費用皆減少，推測可能因病患移轉情形（住院轉門診）。

（5）6 月尖峰期，除門診洗腎人次與費用維持成長外，其餘之重大傷病門診、住院或洗腎住院之醫療利用，都是各 SARS 期別中最低的，而人次平均費用卻異常增加，可能與給藥日數增加及減少輕病住院人次有關。

（6）後 SARS 期，不論洗腎或重大傷病之醫療利用人次與費用，都出呈現成長趨勢，尤其以後 SARS 第二季（2003 年 10-12 月）或第三季（2004 年 1-3 月）

較高。
（7）ARIMA 預測結果驗證了 SARS 會影響醫療利用狀況，尖峰期受影響效果最明顯，且對人次影響大於醫療費用影響。
綜合以上研究結果，可發現 SARS 尖峰期確實會造成重大傷病醫療利用的減少，而後 SARS 期，則醫療利用次數與費用率都逐漸反彈回升。基於研究結果，做以下建議（1）未來研究者可擴大研究範圍及資料區間，持續研究 SARS 後續影響效應與造成人次及費用成長原因，（2）對病患就醫型態進行探討，了解有無地域或層級移轉情形，提供衛生當局施政參考，（3）分類探討重大傷病受 SARS 影響情形，以作爲衛生當局輔導就醫之參考。

英文摘要

Abstract
According to the National Health Insurance statistics of 2002, 2.6% of the insured population has major illness/injury and accounted for approximately 22.6% of the 67.9 billion medical expenses. It indicates that the population with major illness/injury is highly medically dependent. Outbreak in March 2003, Taiwan was the infected region by SARS for a period of 3 to 4 months. Because the number of SARS cases in Taipei is among the highest in Taiwan and the situation there was more serious than other regions, many hospitals in Taipei, such as National Taiwan University Hospital, Taipei Municipal Hoping Hospital, and Taipei Municipal Yang Ming Hospital had to close their impatient and outpatient services to control the SARS spread. The reduction of medical services and the fear of SARS had affected the balance of the supply and demand of the medical services, which in turn directly affected the highly-medical-dependent major illness/injury patients.
In order to find out the impact of SARS on the use of medical resources for the major illness/injury patients, this research targeted at all the major illness/injury patients, especially the hemodialytic patients, to study the usage of medical resources.
Methods of analysis: (1) take 2002 as the base year, comparing with SARS period and the average growth rate of the base year; (2) adopt the time series analysis method to forecast the trend of the number of uses of ambulatory and impatient services and expenses, and compare the difference of actual and predicted figures in SARS' various stages.
The research indicates that: (1) comparing the pre SARS period with the average of the base year, in the initial SARS period, more medical resources had been used, except the number of the hospital visiting/expenses, by major illness/injury patients; （2）during the peak period in May, there is a reduction on the number of major illness and hemodialytic patients hospitalization, but the expenses and the number of outpatient hemodialysis are increased. The outpatient visits of the major illness/injury

patients are decreased, but the expenses are increased; the average expense per patient is higher than that during other months and is the highest among the various SARS stages. （3）in peak time of June, the number of visiting patients and the total medical expense for ambulatory and inpatients with major illness/injury are the lowest among the different stages of SARS. The average expense per person, however, was increased exceptionally for major illness/injury outpatients;（4）during the post-SARS period, there is a growth in the number of hemodialysis and major illness/injury patient visits and expenses, especially in the 2nd quarter (Oct-Dec, 2003) or 3rd quarter (Jan.-Mar, 2004) of SARS period; (5) Comparison with the ARIMA forecast: comparing with the forecast, the number of hospital visits and expense are obviously decreased in SARS peak period.

From the result of the study, the SARS peak period indeed has impact on the reduction of major illness/injury. In the late SARS period, the medical resources usage rate is increased gradually for ambulatory and inpatient services.

We therefore suggest that the researchers in the future might: (1) expand the research scope and the information sector and continue the study of affects caused by SARS and the reason for the growth of the visiting patients and expenses; (2) carry out the research on the types of patients visiting different sectors and find out whether or not there is a regional or level transfer so as to provide administrative reference to the health authorities.