建立網際網路系統程式之證據醫學關鍵評價共建共享系統：以針灸治療偏頭痛爲例

Establishing an Web-Based Collaboration System for the Critical Appraisal of Evidence-Based Medicine : Acupuncture on Migraine

中文摘要

英國臨床流行病學家 Archie Cochrane 於 1972 年出版 Effectiveness and Efficiency：Random Reflections on Health Services 一書，大力提倡 randomized controlled trials (RCTs)的重要性，1979 年，更進階的提出匯集並不斷更新各醫學專科領域中的 RCTs 結果，進行系統評論 (Systematic Review) ，可以即時爲臨床實踐提供可靠的醫學證據。同時指出醫療資源應當運用於經嚴謹研究證實有效的治療方向，才能提供合理的醫療服務。

由於醫師在成長的階段大部分臨床經驗來自前輩的指導及教科書的記載，這兩者皆無法保證與最新的醫學證據相符。即使回顧醫學文獻，如果不知如何判讀取捨研究報告，或引用與自己患者相同性質的研究對象，亦無法獲得正確的資訊。爲了提高醫療品質，近幾年全世界興起研究證據醫學 (Evidence Based Medicine — EBM) 的潮流，實證醫學的理念簡而言之，是引用設計嚴謹、能直接解答臨床問題的文獻結果於實際患者的治療，並評估其療效，以改進醫療品質及資源運用。1993 年，由 Chalmers 爵士領導的 60 名研究人員，在牛津召開了第一屆 Cochrane 年會, 正式成立 Cochrane Center，該合作網對ＥＢＭ最大的貢獻在生產高質量的系統評論 (systematic review) ，至 2002 年五月止，已產生出 2432 篇系統評論，爲證據醫學立下了具體的知識總集。台灣自 1999 年起，彰化基督教醫院、萬芳醫院、長庚醫院、台大醫院，相繼開始實證醫學的研究與實施，重點在於各專科領域中的醫學證據內容與應用，現因缺乏一組織及系統，將各成果記錄與傳遞，實爲此三年證據醫學在台灣發展之憾事。爲解決此問題，可有兩方面來解決，一是參與 Cochrane 組織，善用該組織之資源與工具; 二是在台灣自行成立台灣的證據醫學中心。三年來，經過多方的努力，迫於國際政治現實，一直無法如願成立 Cochrane Taiwan Center。因此，爲展現台灣醫界之優勢，成立台灣證據醫學中心的組織已爲必然之趨勢。故本論文是站在醫資的領域，研究提供一實施證據醫學的系統，在缺乏人力與合作組織的台灣醫界，能夠有效及快速的具體產生證據醫學的成果 — 系統評論 (Systematic Review)。在研究全世界已實踐證據醫學的 Cochrane Center 的組織、目標、作業方式及規範的同時，可運用最新的科技，改善 Cochrane 目前仍以 Off-Line 進行實證醫學步驟的方式，建立台灣自己的證據醫學系統評論系統。期待，當系統的內容有一定的數量與品質時，讓 Cochrane Center 基於專業考量，與台灣展開國際合作。

爲建立一證據醫學組織的系統評論系統，必須遵循證據醫學的五步驟，並藉由醫

資領域的專家，協助建立五大步驟中第二及第三步驟的資料庫及應用系統。在本研究中，將以“針灸治療偏頭痛”爲主題，順著五步驟，建立以三套網際網路的系統程式，來架構輔助證據醫學中的系統評論的關鍵評鑑步驟。此三套網際網路程式爲：

1.主題文獻資源系統：Acupuncture and Migraine DB

2.主題臨床隨機對照試驗文獻及關鍵評價系統：RCT of Acupuncture and Migraine DB and RCT Critical Appraisal System

3.系統評論共建共享系統：Systematic Review of Acupuncture and Migraine DB

本論文研究的結論是透過此三個系統，以針灸治療偏頭痛爲例，嘗試運用證據醫學的觀點，系統性的回顧採用隨機控制試驗方式中文文獻及英文文獻中，進行針刺治療偏頭痛病患的效力。藉由檢視這些實驗的方法品質，來綜合分析、評估針刺治療偏頭痛的效益及效力。進而評估隨機臨床試驗文獻的方法品質以及具體的評價，得出確切結論，以指導臨床決策之參考。

英文摘要

British epidemiologist Archie Cochrane published Effectiveness and Efficiency: Random Reflections on Health Services in 1972, appealing for the importance of randomized controlled trials (RCTs) with all exertion.

In 1979, he further proposed aggregating and constantly updating RCTs result in each field of medical expertise for systematic review to provide reliable medical evidence for clinical implementation. Meanwhile, he pointed out the fact that medical resources should be applied to the treatment authenticated by discreet researches, so as to provide reasonable medical service.

Most of the clinical experience of a doctor comes from the senior’s instructions and the records in textbooks, that both fail to guarantee the conformation to the latest medical evidence. Without knowing how to determine and judge the research report or quote the research objects with similar characteristics to one’s own patients, the doctor will fail to obtain correct information, even it he/she checks through medical records. For the past few years, Evidence Based Medicine (EBM) emerged universally on purpose of enhancing the quality of medical treatment. Briefly speaking, the belief of EBM is applying the results of the carefully-designed records able to solve clinical problems directly to the realistic treatment for the patients while evaluate its treatment efficiency for the sake of improving the quality of the medical treatment and the application of the resources.

In 1993, 60 researchers led by Sir. Chalmers summoned the 1st Cochrane Annual Meeting in Oxford, establishing Cohrane Center officially. The most noticeable contribution of the cooperation network to EBM was the production of high-quality systematic review, with 2432 systematic review in total by May 2002, becoming the

physical knowledge collection in EBM. Since 1999, ChangHua Christian Hospital, WanFang Hospital, Chang-Gung Memorial Hospital and Taiwan University Hospital in Taiwan have successively opened classes in the research and implementation of EBM, focusing on the content and application of medical evidence in each expertise. However, the lack of an organization and system to record and pass around the results has been a pity in Taiwan's Evidence Medicine. To address such a problem, two aspects are available: partaking in the organization of Cochrane, making use of the resources and tools in the organization and establishing Taiwan's EBM center alone. Even though much effort has been devoted for the past three years, the Cochrane Taiwan Center still remains as an unreachable dream because of the reality of International politics. As a result, establishing EBM Taiwan Center has become an inevitable tendency in order to unroll the advantages of Taiwan's medical field. This thesis, from the aspect of medical resources, researched on the EBM system that provide EBM results—systematic review—efficiently and rapidly in Taiwan's medical field that lacks manpower and cooperative organizations. In the meantime of researching the organization, goals, operation and regulations of Cochrane Center that has put EBM into practice, new technologies were applied to the improvement over the EBM Off-Line in Cochrane to self-develop Taiwan's EBM systematic review system. Hopefully, by the time of certain quantity and quality of the collected data are achieved, Cochrane Center will cooperate with Taiwan with its professional considerations.

Five steps of EBM must be abided by to create the systematic review system for the EBM organization, in which medical resources experts are required to assist in the practice of step 2 and step 3 in the five-step process to generate database and application system. This research aimed at treating migraine with acupuncture in accordance with the five steps. By establishing three Web-based systems to construct key review steps that assist the systematic review of EBM. The three Web-Based system applications are:

1.Topic Related Medical Literature Database : Acupuncture on Migrane Database.

2.RCT Critical Appriasal System

3.Systematics Review System of EBM

The research of this thesis, through the three systems, focused on the treatment of migraine with acupuncture, attempted to review the migraine treatment efficiency with acupuncture in the randomized controlled trials in Chinese and English documents systematically from the aspect of EBM. By reviewing the quality of the experimental approaches, this research synthetically analyzed and evaluated the benefits and efficiency of the migraine treatment with migraine, which in turn to evaluate the quality and physical appraisal of the approach in randomized Controlled

Trials documents and use the accurate conclusions as the reference for the instruction on clinical decisions.