以人工智慧置入護理資訊系統協助護理診斷產生之成效初探
Preliminary Study of the Effect from Implementation of Artificial Intelligence into Nursing Information System to Help Creating Nursing Diagnosis

廖珮宏 [a,b], 王文琳 [b],曾尹俊 [b],朱唯勤 [b*]

[a] *經國管理暨健康學院護理系講師*

[b] *國立陽明大學醫學工程研究所*

[b*] *國立陽明大學醫學工程研究所教授*

通訊作者：廖珮宏，peihung@ems.cku.edu.wt

摘要

根據 2006 年 8 月中華民國護理師公會與醫改會發表等文獻指出，目前台灣的護理人員照顧病人數是國外先進國家的一到六倍，此易影響醫療品質與病人照顧，造成病人住院時間延長，併發症、死亡率及可預防之意外事件增加。在照護病患過程中，護理人員須由本身的專業知識與客觀評估方式去收集資料、確立護理診斷、擬定護理計劃、執行護理措施。在整個護理過程中，最困難的就是:如何分析資料進而產生護理診斷，因此護理過程的資訊系統應視為最迫切的發展。

對於護理診斷的確立，是由護理人員個別的知識、臨床經驗或直覺所產生，缺乏共通的完整思考，易影響診斷的完整性與正確性，進而影響提供的護理措施及護理品質，也易延遲護理紀錄的時間；本研究以人工智慧置入護理資訊系統協助護理診斷產生，其運用採循醫學診斷產生過程的模式，在入院評估時，透過通用的 Gorden11 項健康功能評估得到的基本資料後，以定義性特徵、相關導因計算出可能產出的護理診斷之機率；期望能藉助資訊科技的進步，提供護理人員在護理過程所遭遇的問題輔助，及時給予提示並應用。

本計畫的實施與導入後，希望可降低護理人員工作負荷，增加護理人員直接照護病人時間，協助提升照護品質，保障就醫安全，且對於日後院內進行品質控管分析應有幫助。

關鍵字：護理過程、護理資訊、護理評估

Abstract

According to documents released by the National Union of Nurses Associations R.O.C. and the Taiwan Healthcare Reform Foundation in August 2006, currently the number of patients that are cared by health care providers in Taiwan is one to six times as much as the number in overseas advanced countries, a fact that could adversely affect the quality of medical treatment and health care and could even lead to prolonged hospitalization and occurrence of complication, death, and preventable accident. When taking care of patients, nursing staff would have to collect data, determine nursing diagnosis, making nursing plan, and execute nursing practice based on their own expertise and objective evaluation. During the entire process, the most difficult part is to analyze data so as to generate nursing diagnosis. Thus, information system for the nursing process would be given priority for development.

The nursing diagnosis is established via personal knowledge, clinic experience, or instinct from health care providers. As it lacks of comprehensive thinking, its integrity and accuracy could be jeopardized. Thus, the quality of nursing practice would be adversely impacted while the time to record nursing process could be prolonged. Adopting the model of creating medical diagnosis, the study incorporates artificial intelligence into nursing information system to help generating nursing diagnosis. When patients are hospitalized, we use Gorden's 11 functional health patterns to obtain basic information and then calculate the probability of creating nursing diagnosis based on characteristics of definition and related attributes. We hope to help nursing staff to address the problems they encountered during their nursing process and provide them with instructions on a timely basis through advanced information technology.

After implementing and introducing this plan, we hope to lessen the workload of health care providers, increase the time that health care providers would spend on patients directly, improve the quality of health care, and assure patient's safety in medical treatment. We believe it would be conducive to the analysis of in-house quality control in future.

***Keywords**: nursing process, nursing information, nursing assessment*