

行動科技對醫療行為本質面的影響——以行動式十二導程心電圖資訊系統為例

The Impacts of Mobile Technology on Healthcare Behavior Essence: The Clinical Applications of Mobilized 12-lead ECG System

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摘要

以往在分析資訊系統導入帶來的影響時，大多在強調行政管理資訊系統以及其帶來的外部效益，包括效率、效能的改善。本研究的主要目的是分析元智大學資管系醫療資訊實驗室開發的行動式十二導程心電圖資訊系統在桃園國軍總醫院進行導入後所帶來的內部影響，例如：醫護人員行為模式的改變。評估的時間點在系統導入約半年後，針對醫院中所有的系統關係者進行半結構式的訪談，其架構主要是根據科技接受度模式及 Beauchamp 及 Childress 提出的 4 點醫療準則。其結果顯示在：(1) 自主性：病患無法選擇想要的醫療方式。(2) 有利性：院外的心臟專科醫師可即時對病患做出診斷及進行預先處置。(3) 無傷害性：預先處置可儘早排除可能的傷害。(4) 公正性：醫師的選擇回院與否的權利，可能會造成醫療品質下降從而違反公正性，但這項權利卻也有助於醫療資源的分配，有正向的影響。根據上述的結果，我們發現醫療行為的本質的確因系統導入而改變。因此，本研究認為：科技使用行為會影響醫療行為的本質，從而改變醫師的醫療行為。最後，則針對其中負面的結果提出了一些解決方法，像是從：(1) 醫療的養成教育面 (2) 系統設計面 (3) 醫院的行政制度上等方向著手，以因應行動科技對醫師醫療行為的衝擊。

關鍵字：醫療行為、行動科技、資訊系統、醫療準則

Abstract

Most of studies of information system import were focused on the evaluation of the external performances of the system, such as effectiveness and efficiency of the system conduction. The major goal of this study was to explore the healthcare behavior at cardiovascular department of Taoyuan Armed Forces General Hospital after the conduction of mobilized 12-lead electrocardiograph (M-ECG), which was developed by the lab of medical informatics, Yuan Ze University. Based on the model of technology acceptance and the four factors, which were proposed by Beauchamp and Childress, semi-structured interview was adopted and applied on the members, who used the M-ECG. The results indicated that (1) Autonomy: the patient could not choose the treatment he wants; (2) Beneficence: the out-physicians can effectively improve the time-efficiency on emergent ECG diagnoses by telemedicine. (3) Non-Malificence: the medical errors can be reduced because of the help of real-time ECG diagnoses; (4) Justice: the medical service quality could be degenerated, because the rate of out-physician's return by emergency call was decreased. However, the decreased rate of out-physician's return would help the maintenance of medical resources distribution. Based on the results, we could notice that the essence of healthcare will be changed by the system import. In conclusion, the thinking of healthcare behavior can be affected by use of information technology, and then the physician's healthcare behavior was changed. In addition, we proposed the following domains to respond the negative impacts of mobile technology on medicine. (1) The healthcare education; (2) The system design; (3) The hospital's administration institution.

Keyword: Healthcare Behavior, Mobile Technology, Information System