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Improving Data Validity of In-Hospital Patients with Central Catheterization by Using Nursing Records

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Abstract

Data on the number of in-hospital patient with central catheterization, which is defined using P4P (Pay for Performance) and HACMI (Hospital Accreditation Continuous Monitoring Indicator System), were extracted from the nursing records of E-Da Hospital for the period from January 2015 to the present. The main study purposes were to construct a data mining model, ensure the accuracy and stability of data sources, and implement improving human factors affecting indicator monitoring in the interest of consolidating the functions of indicator management to maintain healthcare quality and patient safety. Therefore, we uses five steps to increase the accuracy of the data collected on in-hospital patients with central catheterization. The five steps were as follows: 1. Confirm the definitions and standards applied to the indicators; 2. standardize the data collection method for the studied patients; 3. apply a foolproof mechanism to avoid repeating calculations; 4. provide subquery reports of central catheters to each station; and 5. perform real-time automatic data collection and validation. Mining data directly from nursing records is time efficient, allows for real-time physical evaluations, and simplifies the sampling process; furthermore, the use of IT-based indicators reduces the amount of missing data and the use of paper documents, thereby reducing emissions and creating more space. Through this study, we discovered that we should promote our automation system to all units and utilize graphic tools so it can be used to perform daily monitoring at all units and intelligently improve healthcare quality.

Keywords: central line, quality indicator management, data mining model

運用護囑系統提升中心導管住院人日數收集之正確度

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摘要

自2015年1月起，本院依據P4P（Pay for Performance，醫院品質績效量測指標系統與落實品質改善計畫）及HACMI（Hospital Accreditation Continuous Monitoring Indicator System，醫院評鑑持續性監測指標系統），將中心導管人日數分母由人工收集方式改由護囑系統自動化收集，目的在於建立結構化的資料探勘模式，智慧解決指標數據來源的正確性及穩定度，並落實改善影響指標監測的人為因素，以確保指標管理可維護醫療品質與病人安全之功能。經由1.確認指標收案定義及標準、2.整合中心導管注射管路撈取系統、3.運用防呆設計以避免重複計算、4.提供各單位中心導管查詢報表及5.每月自動拋轉數據及專人稽核驗證等方法介入，達成中心導管住院人日數收集正確性。透過指標資訊化，可達節時優化、身體評估零時差及避免管路登錄遺漏，且能減碳及優化空間。未來可將此系統推廣至各單位、導入圖形化管理，以利臨床單位監測運用，成為智慧改善品質的重要執行依據。

關鍵詞：中心導管、品質指標管理、數據探勘模式