

骨科決策支援平台:以臨床與學術需求為基礎建立資料倉儲系統的方法

Data warehouse approach to build a decision-support platform for orthopedics based on clinical and academic requirements

中文摘要

持續性品質改善已經是現今醫療趨勢，可以藉由建立專科資料庫來達成部分功能。持續性品質改善又包含學術與臨床上的決策支援，傳統資料庫在決策支援的功能有較多的限制，比較符合決策支援的系統為資料倉儲系統。但資料倉儲系統龐大且昂貴，其建置過程較繁瑣若是將傳統資料庫轉為資料倉儲，將是一項困難的工程。

我們以既有之骨科專科資料庫所收集自 2002 年迄今之骨科病患資料為骨架、專科座談與評鑑指標所產生之知識架構為分支，附加上資料倉儲的線上查詢功能，建構成一個新的骨科系統。其功能可因應臨床與學術上的需求，進一步達成決策支援的功能。

此系統的查詢速度與使用者親和度，皆比傳統資料庫更理想。其知識架構為匯集專家意見所產生，可顯現單位之特色。因應評鑑所需產生的報表可節省人工記數的時間與人力，並可週期性追蹤成效作為調整的依據。個人網際網路使用介面經問卷調查評估後，在使用者滿意度上與決策支援的注意上有達到預期的成效。資料倉儲的功能多樣化，是獨立科部可望而不可及的。很難有獨立科部自己建立一套完整的資料倉儲系統，但是大多數已經有簡單或複雜的專科資料庫。此系統的建置可以做為這些專科資料庫附加資料倉儲功能的一種選項，並可達到整體品質的提升。

英文摘要

The continuous quality improvement has become a trend in the contemporary medical society, and that can be achieved by the specialty database implement. Decision-support system in the academic and clinical aspects are included in the process such continuous quality improvement. The database has its limitation in the decision-support due to deficiency of on-line analytic function. The data warehouse offers the sophisticated function for decision-support processes. However, the implement of data warehouse may face a lot of obstacles, included expensive cost and large personnel.

We had previously established a database of orthopedics, which collected the patients' data since 2002. The new system was constructed based on this specialty database, the knowledge architectures was build up via specialists committee and

accreditation indicators. The major function was to generate sufficient information for decision-support process in the academic and clinical aspects.

The execution efficiency of this system is more effective than database. The unique knowledge architecture can form a distinguishing feature of the department. The cost that saved from personnel and time reduced from reports generation for accreditation is remarkable. The stratification of web-based interface application can be assessed through questionnaires; the outcome is satisfactory as what we previously expected.

The sophisticate function of the data warehouse is hard to express in a solitary department of the hospital, especially when they had already owned traditional database. The experience of this system construction can be useful as one option for upgrade of specialty database and a step forward to the goal of the continuous quality improvemen