HL7 訊息編碼電腦輔助系統

A Computer Assistant for Coding HL7 Messages

中文摘要

本研究目的是建置一套 HL7 Standard V2.4 電腦輔助編碼系統可作爲初學者進入 HL7 醫療資訊交換標準領域學習之輔助工具，當未來在 HL7 應用更爲廣泛時提供一個可依據輸入資料值產生 HL7 編碼格式，讓初學者能容易利用的工具，達到良好的學習效果。由於 HL7 訊息的編碼時需要時常翻閱手冊查詢 Tables，既費時又繁瑣，醫療体系之學生若非有程式設計之基礎實在難於入門，因此設計此套簡易的轉換系統，經由一般原始表格的塡入，一步步編碼成爲一行行的 HL7 訊息，如此不但簡單易懂，也可用於 HL7 電腦輔助學習。

本研究報告主要針對電子病歷之 HL7/XML 轉診、轉檢(代檢)標準白皮書之規範所製作的轉診單訊息編碼電腦輔助查詢系統，學習將一個個欄位編碼組織成一行行的 HL7 訊息。將來也可納入其他表單如健保事前審查訊息規範、預防接種申報等，或學習更新版本之 HL7 語法。初步學習評量顯示使用傳統書本查表比較電腦輔助查詢，在答題時間以及編碼錯誤的比率上有顯著差異。此外本教案是採用 Access VBA 爲工具所製作的關聯式資料庫及階層式資料庫，適用於一般學科教材的編輯具有多媒體教學、查資料、方便設計(可模組化程式)等功效。

英文摘要

The purpose of this research is to design a program which can assist for coding HL7 Standard V2.4 Messages. Because HL7 coding rules involve a series of tagging and labeling, it is difficult and time consuming for students to learn the codes by looking them up table by table. This program written by Access VBA allows the student to find the messages coding rules and tables step-by-step through hierarchical selection, in the end producing an HL7 message that can be easily and directly understood.

We use the patient referral protocol which was approved by HL7 Taiwan association as a standard, for learning HL7 messages example. This coding system allows the student to find the messages coding rules and tables easily, in the end producing referral message in lines. It can also be used in learning vaccine administration reporting information form messages ..etc. and new version of HL7 messages. A test evaluation of this coding system showed a marked reduction in errors over traditional book-aided reference among a group of students. Moreover, this Access VBA toolkit can also be applied to other computer-aided instruction (CAI) subjects.