Service Priorities and Programmes

Electronic Presentations

Convention ID: 320
Submitting author: Miss Karissa HUNG
Post title: Health Informatics Analyst, IT, HO

Reducing Risk of Overlooking Reported Diagnoses - a Study on Diagnosis Data and Clinical Alert

Hung K (1), Tam E (1), Lau M (1), Fung V (1)
(1) Standards & Policy, Health Informatics Division, Hospital Authority Head office

Keywords:
Hepatitis B virus carrier
Decision support
Standardisation
Master Diagnosis List
Clinical alert
Automated linking

Introduction

Standardization and automated synchronisation of diagnosis reporting and clinical alert might help to enhance patient safety by reducing the risk of overlooking important information. In Hospital Authority (HA), clinicians input patient diagnosis in Clinical Management System (CMS). They may also set clinical alert on the patient to remind other colleagues of the clinically important information. However, the two pieces of information are not synchronised and are put under different modules in different formats. The relationship between diagnosis data and alerts in CMS was studied. The study scope was focused on “hepatitis B virus (HBV) carrier”.

Objectives

1. To enhance patient safety by applying decision support elements to alert clinical users of potential risks 2. To explore possible automation of linking diagnosis reporting and alerts in CMS prompting doctors to consider important information about patient’s condition

Methodology

Patient records having the diagnosis "HBV carrier" during the study year (July 2016 – June 2017) were collected from Master Diagnosis List (MDL), the module capturing all diagnoses of the patient. Alert records of the same patients were analyzed. Since there were structured alerts and free-text alerts, records with structured alert “HBV Carrier” or with free-text alert having wordings indicative of HBV carrier were retrieved and compared with the diagnosis records.

Result

There were 4689 patients with the “HBV carrier" diagnosis reported during the study year. Within which, 653 (14%) had the "HBV carrier" alert entered, 4036 (86%) had not. Within the 653 alert records, 484 (74%) were structured alerts and 169 (26%) were free-text alerts. Majority of the patients with "HBV carrier” diagnosis reported

might not have the relevant clinical alert being entered. Even with alert records reported, a quarter was captured in free-text instead of structured data. These information are entered in MDL and Alert separately in different formats. Results reveal that they might not be synchronised such that the reported diagnosis without prominent reminder might be overlooked. Automated linking of the two systems MDL Diagnosis and CMS Alerts might help to reduce the risk. Standardisation facilitates automation by allowing a well-defined scope of “action-able” diagnoses and actions to be triggered. Standardising diagnosis and alert data such as making use of HKCTT is the pre-requisite. In addition, conversion of free-text to structured data would be necessary. In summary, not only double data entry effort could be avoided and clinical workflow could be streamlined, but also patient safety and outcome would be improved.