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Management of eHR Data with Standards

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Introduction

It is challenging to manage a territory based Electronic Health Record (eHR). Healthcare providers (HCPs) adopt information technology in healthcare at different paces. These affect interoperability of the HCP data and accessibility of the shared data.

Governance

Various level of governance structure on eHR information standards provides guidance on standards management. The Working Group set direction on standards management. Various Domain Groups develop standards on data sharing for specific domains, and recommend on issues relating to standards implementation. The Coordinating Group initiates and coordinates various Domain Groups on standards development.

The Standards

Supporting various standards governance bodies, the eHR Information Standards Office (eHRISO) develops various information standards to facilitate data sharing with reference to the international and local standards,



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including index management, terminology, sharable scope, and messaging standards.

Index management helps to ensure data from various HCPs can be correctly linked under the same patient at the eHR Sharing System (eHRSS). It also protects the privacy of the shared data as only healthcare staff who has a valid professional registration can access eHR under patient consent.

Leveraging on the experience of the Hospital Authority, and with input from the Department of Health and various Domain Groups, a Hong Kong Clinical Terminology Table is built. Each term in the HKCTT is mapped to appropriate concept(s) of the most widely accepted international terminology(ies). This helps the HCPs to collect, interpret, and analyse clinical data, and to incorporate decision support rules in their own system.

A multi-level data sharing strategy is adopted so that HCPs at different computerization stage can contribute to the data sharing. HCPs can share data as a document, structured data, or computable structured data. Based on the defined sharable scope, message standards have been defined so that HCPs can share data as individual record or as bulk loading.

Implementation

Workshops and seminars on eHR standards were organized to healthcare and information technology sectors. Related guidelines under individual standard areas can be accessed at http://www.ehealth.gov.hk/en/information_standards/ehr_information_standards_document/index.html. A Data Standards Compliance Framework has been developed to prepare the HCPs to share data to the platform. Upon data sharing, reports on quality of the uploaded data are sent to both the HCPs and eHRISO. The eHRISO will contact the respective HCPs to discuss improvement measures to facilitate data upload.

APeHRC 2016



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Conclusion

The eHR Information standards provide a foundation for reusing the shared clinical data. It improves the usability of the eHR and facilitates clinicians to search the required information. Continuous improvement of the eHR data will be dependent on the consolidated effort of the HCPs, various standards governance bodies, and the eHRISO.