Data quality management at Hong Kong public hospitals

The data collection mechanism has been enhanced with the development of the Clinical Data Framework (CDF) - an axilised framework to support users in capturing non-ICD data which is essential for clinical care. It also incorporates the required coding rules. Through CDF and HAMDCT, data are collected at the point of care and support direct clinical care. Information is generated as a by-product.

Data reporting rules

Modified from the original ICD 9-CM coding rules, a set of simplified reporting rules has been developed to govern the quality of the collected clinical data. This set of rules was summarised into a two-page version for distribution to the clinical staff who are responsible for entering data.

Training

To ensure the quality of the clinical data, the Health Information & Record Managers (HIRMs) provide training to all new clinical staff. The training program focuses on:

- data reporting rules
- features of the HAMDCT
- use of HAMDCT & CDF
- maintenance of the HAMDCT
- support for using HAMDCT
- auditing of clinical data.

Monitoring

The head office of the health authority sets standards of data quality in the annual planning exercise, with regular reports being sent to the hospitals. At hospital level, regular audits are being conducted to identify areas for improvement. Deficient areas are brought to the attention of the relevant clinical departments and reported to the hospital’s Health Information and Records Management Committee. The audit results are reported to senior management regularly.

Data analysis

During the initial period after HA’s establishment, the collected data (mainly diagnoses, procedures, and some administrative data) could only be analysed at limited workstations at the major hospitals. It is the aim of the HA to encourage users to use the information. The more data are used, the better the quality of the data will be. From April 2002, users are able to analyse clinical data they entered at the CMS workstations. Apart from diagnoses, procedures, and administrative data, the data warehouse also stores the medication ordered and other clinical data, for example laboratory data and CDF data. Further development to support users to perform more sophisticated analysis, such as cohort analysis, is underway.
Role of health information and records managers
The HIRMS have been migrated from a coding base to:
- development of the HAMDCT and the CDF
- continuous maintenance of the HAMDCT and the CDF
- education of the clinical staff on data collection principles
- auditing the quality of the collected data
- providing a consultative service to clinical staff in using the HAMDCT and CDF, and statistical analysis.

Conclusion
Within a decade, Hong Kong public hospitals have migrated from a primitive International Classification of Diseases, 9th Revision (ICD 9) 3-digit single code (WHO, 1978), to a manual 5-digit ICD 9-CM multiple code collection, to computerised automated code generation.

Such ‘evolution’ highlights the impact of modern technology data collection. It transforms information management to another level that involves an integration of information technology with clinical workflow and information generated as a by-product of clinical care. To achieve this, a broad and in-depth understanding of disease processes is essential in the application of a controlled vocabulary for standardised data collection. These challenges demand that HIRMs maintain continuing professional education in information management to ensure the quality of the clinical data.

References

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