

ICD implementation in a web based Patient Survey in Korea

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Abstract For improving the health information quality and statistical continuity, Korea Ministry for Health, Welfare and Family Affairs is trying to develop a strong information and communication technology component. A web based Patient Survey System (www.mw.go.kr) has been developed for on line data entry at all kinds of health facility level in 2009. Implementation of KCD-5(ICD-10) morbidity and mortality codes at the newly developed web based Patient Survey system is used to highlight factors. Effective co-ordination, user training by e-learning method, and new morbidity and mortality guidelines to suit various requirements and conditions, are the key factors identified.

Introduction

The Patient Survey is designed to acquire basic statistics necessary for the national medical health policy, the analysis of diseases, the evaluation of national health condition and status of using medical services. It had been accomplished 18 times from 1953 till 2007 by every 2 or 3 years. The irregular period between patient survey and the method of data collection were main issues to be solved, and the quality and contents of coded information not available to catch up the real aspect of healthcare services.

Health administrators, health care managers and other users of health information face similar paradoxes to those faced elsewhere in healthcare services:

- too much data, and not enough information to support decision making at various levels
- poor quality of data;
- conflicting legislative, professional and ethical requirements governing the exchange and secondary use of patient data;
- insufficient understanding of and support for the need to code patient data, and the resources required to ensure effective coding of patient data;
- limited resources to support the effective implementation of coding systems such as diseases and procedures classification

ICD-10 has been the Republic of Korea national standard for diagnosis classification since July 1995. Implementation of morbidity codes throughout the public and private healthcare sector has been a legal requirement for National Health Insurance Reimbursement. KCD-5 (Korean version of ICD-10) codes are required on all claims to private healthcare funders. In time, ambulatory and discharge diagnosis for all patients of public and private health facilities are coded using KCD-5.

But Korea has been no national standard procedure classification for health service statistics except EDI code for medical insurance claims. ICD-9-CM PCS has been used for procedures classification and statistics in tertiary and secondary hospitals by cooperation of KMRA's members.

Methods & Materials

For improving the health information quality and statistical continuity of national patient survey, Korea Ministry for Health, Welfare and Family Affairs has decided to develop a web based data collection, information management and education of patient survey in 2007. The Patient Survey Research Team has been composed with health professionals, implementation of ICD is one of essential parts for morbidity and mortality statistics in the national health information system. Korean Medical Record Association participates as a professional group for ICD implementation.

The establishment of an Patient Survey Research Team, which has credibility among key stakeholders, to oversee all aspects of the national patient survey has proven to be very effective.

Korea National Statistics Organ has supported translation of ICD-10 into Korean language named KCD-5 (Korean Standard Classification of Diseases, version 5)

Ministry for Health, Welfare and Family Affairs has been strongly supported the integration of KCD-5 and ICD-9-CM PCS Korean version implementation in a web based patient survey system.

The ICD implementation professional group which supported by Korean Medical Record Association has translated ICD-9-CM PCS into Korean language for procedures(operation) classification. And they have been developing e-learning program for coders and patient surveyors.

Implementation of ICD in a web based patient survey system which supported by Korean Medical Record Association, includes the following:

- Revision of coding guideline for diseases and procedures (operation) for using in web site,
- Development of e-learning program as a training tool for patient surveyors and coders.
- Construction of automated coding system of underlying cause of death for mortality data collection

KCD-5 (ICD-10) mortality coding is used at national level but national death registration data are not available for use at the exact cause of death.

The need for effective cause of death (COD) coding by coding clerks with limited clinical knowledge, and based on information recorded on death certificates, resulted in the development of an automated COD program to support correct COD information.

The codes take account of limitations in the COD recording on death certificates, and the need to code commonly-occurring combinations of COD. The implementation of automated coding and selection of underlying COD using ACME software is currently being constructed.

Results

The following lessons learned from the Republic of Korea implementation of the classification of diseases and procedures could be useful :

Legislation and reimbursement are among key drivers for the widespread implementation of ICD codes.

A coordinated implementation process is required, supported by a credible, competent coding organization. Training and education related to codes and coding are essential, and using of Information Technology would save time of implementation and training.

For improving the accuracy of health information, career paths must be established for coders and coding trainers.

There is a need to link multiple coding initiatives and networking between private and public sectors involved in ICD implementation has been of major benefit.

Morbidity of Discharged Patients		2002	2003
1	Certain infectious and parasitic diseases	4.7	4.0
2	Neoplasms	8.1	9.2
3	Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism	0.3	0.3
4	Endocrine, nutritional and metabolic diseases	2.0	1.9
5	Mental and behavioural disorders	3.1	3.1
6	Diseases of the nervous system	2.0	1.7
7	Diseases of the eye and ear	2.0	2.8
8	Diseases of the respiratory system	0.8	0.9
9	Diseases of the circulatory system	8.2	8.9
10	Diseases of the digestive system	7.9	7.3
11	Diseases of the musculoskeletal system and connective tissue	9.4	9.1
12	Diseases of the skin and subcutaneous tissue	0.9	1.0
13	Diseases of the genitourinary system and congenital anomalies	5.7	6.6
14	Diseases of the musculoskeletal system	4.0	4.1
15	Pregnancy, childbirth and the puerperium	10.5	7.3
16	Certain conditions classified in the maternal period	1.2	0.9
17	Causes of maternal death, determination and classification	0.6	0.6
18	Swamp, stone and abnormal clinical and laboratory findings, NEC	1.6	1.5
19	Injury, poisoning and certain other consequences of external causes	23.9	26.5
20	External causes of mortality	0.1	0.1
21	Factors influencing health status and contact with health services	2.9	2.4

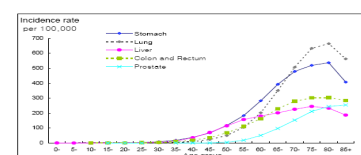


Fig. 1. Age-specific incidence rates of the five major cancers in males

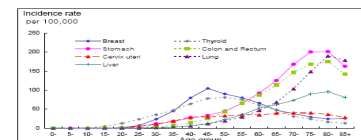
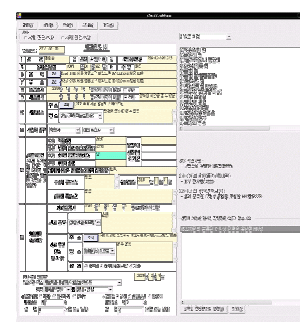


Fig. 2. Age-specific incidence rates of the seven major cancers in females



Conclusions

For improving the quality of information implementation KCD-5 (ICD-10) from a web based patient survey, Korean Medical Record Association professional group is expected to play a key role in

- co-ordination and networking
 - education and training
 - the adaptation of morbidity, mortality and procedure codes system to meet national needs
 - development of morbidity, mortality and procedural guidelines to suit various requirements and conditions.
- The web based Patient Survey System would be advanced by adopting of Korean Automated Cause of Death program and e-learning program in 2010.