

The Effect of Code Subdivision on the Coding Time

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Abstract KOSTAT began a project to subdivide the KCD codes in 2006. In 2007 the draft for the subdivisions of the top 300 most frequent KCD codes was developed. Subdivision of codes is good in giving more information, but makes it hard to use codes. So concerns were raised about the burden of hospitals using subdivided codes. To assess the burden of hospitals, we measured the coding times before and after code subdivision in 5 large hospitals. On average it took 30% more time to use subdivided codes. Based on this study, training of coders on subdivided codes is necessary to implement the new system.

Introduction

Korean Classification of Diseases(KCD) 5th edition, the Korean version of ICD-10 2nd edition is used for encoding morbidity and mortality data in Korea. Recently, however medical doctors and coders want to give separate codes to the diseases that are common in Korea.

In response to this need, KOSTAT began a project to subdivide the KCD codes in 2006. After 2 years' study, the draft for the subdivisions of the top 300 most frequent KCD codes was developed. KOSTAT intends to implement the subdivided KCD codes in 2011.

However concerns were raised about the burden of hospitals using subdivided codes. Subdivision of codes is good in giving more information, but makes it hard to use codes. To assess the burden of hospitals, we measured the coding times before and after code subdivision .

Methods & Materials

We measured the coding times in 5 large hospitals. All hospitals have separate medical record department. In each hospital 2 coders participated in this study. They all have at least 3 years coding experience.

After reviewing the disease codes of inpatients in 5 hospitals, we selected 200 patient charts which had subdivided code in primary diagnosis. In principle one chart was selected for each subdivided code. If subdivided codes appearing in a hospital were less than 200, two charts were selected for the codes of high frequency.

One coder first coded the selected charts using current KCD codes. After 2 weeks she coded the same charts using subdivided KCD codes. On the contrary another coder first coded the same charts using subdivided codes.

After that she coded the same charts using current KCD codes (Figure 1).

Coding times were measured only for primary diagnosis. Coding for secondary diagnoses was not done. Time was measured in second for each chart.

In all hospitals coding times increased when coder used subdivided KCD codes. Overall, coding time per chart increased from 75.5 seconds to 98.2 seconds. On average it took 30% more time to use subdivided codes(Table 1).

Results

The coding times varied widely among hospitals. The average coding time per chart ranged from 37.4 seconds to 116.7 seconds. This difference was due to the difference of codes that each hospital coded. Partly coders' skill difference might play a role in this difference.

Conclusions

Code subdivision increases coding time. So, the burden of hospitals is expected to increase if subdivided KCD codes are implemented. In order to reduce the burden of hospitals, training of coders on subdivided codes is necessary before implementing the new system.

Figure 1. Diagram illustrating how to measure coding times

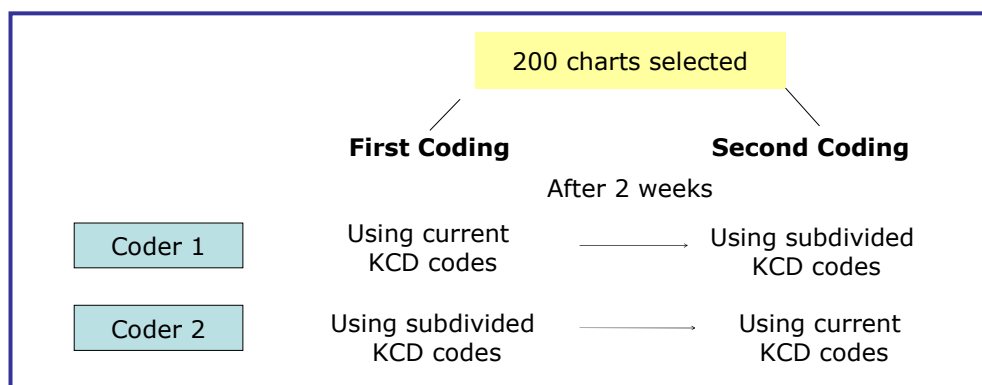


Table 1. The change of the average coding time per chart by hospital
(unit : second)

Hospital	Using current KCD codes(A)	Using subdivided KCD codes(B)	Difference (B-A)
A	75.5	83.4	7.9
B	37.4	67.8	30.5
C	50.7	71.9	21.2
D	97.4	118.7	21.2
E	116.7	149.2	32.5
Total	75.5	98.2	22.7