TITLE: Perception and knowledge of Korean doctors on the New KDRG payment system

Introduction

Fee-For-Service (FFS) has been the main payment system for hospitals and clinics in Korea. The Korean Diagnosis Related Groups (KDRG) was introduced in 1997 as a pilot hospital payment system but failed. In 2009 the New KDRG for public hospitals was introduced, which is similar to the Japanese Diagnosis Procedure Combination (DPC) and doctors' procedures are paid to the hospitals separately. The previous government tried to expand the New KDRG to private hospitals to control uncovered items by the national health insurance. As of 2022, 98 hospitals among 1,775 acute hospitals are reimbursed by the New KDRG payment system.

More than 90% of hospitals are private in Korea. Doctors are employed by hospitals as salaried professionals in both public and private hospitals. Doctors' decisions in hospitals mainly determine the revenue of their hospitals and their specialist societies may influence on the way of DRG systems work (Busse, Geissler et al. 2013).

This study investigates doctors' perception and knowledge related to the New KDRG system.

Methods

The study participants are internal medicine doctors in 98 hospitals paid by the new KDRG system at least one year as of January 2022. A telephone survey was conducted to the participants. The survey questionnaire consisted of three items. The first items were the awareness and perception of the KDRG system using a 5-point scale. The second items were advantages and disadvantages of the system; two categories of 4 advantages and 4 disadvantages of KDRG system based on previous studies and policy intentions. Physicians were instructed to select no or one option for each category.

Student t-test for continuous variables and the Chi-square test for categorical variables were used with a significance level at 5% ($p<0.05$).

Results

A total of 312 physicians were participated in the telephone survey. The response rate was 35.3%. The awareness of the new KDRG system was 2.64±0.71. Physicians in private hospitals showed significantly superior awareness of the KDRG system in comparison to those in public hospitals (3.23±1.04 vs. 2.09±1.25, $p<0.001$). No significant variations were observed according to their length of service.

In terms of their perception of the KDRG system, overall respondents tended to converge toward neutrality (2.81±1.93). However, they showed a pronounced inclination towards a negative perception (1.63±1.31 vs. 3.17±2.09, $p<0.001$, Fig.1B). In physicians, negative perceptions of the KDRG system were significantly more predominant in private hospitals than in public hospitals (1.29±1.34 vs 2.10±1.11, $p<0.001$), this trend intensified with longer years of service (1.15±1.21 vs 2.29±1.16, $p<0.001$).

115 (35.6%) physicians listed advantages: the expansion of health insurance coverage (43/115, 37.4%), reduction of cost (38/115, 33.1%), shortening of length of stay (22/115, 19.1%), and efficiency in resource utilization (12/115, 10.4%). However, all 312 physicians chose disadvantages: inaccurate payment for severe or complex conditions (128/312, 41.0%), diagnostic coding errors or upcoding (75/312, 24.0%), restricted adoption of new technologies (63/312, 20.3%), increased re-admissions or splitting admissions (46/312, 14.7%).

Discussion

Doctors have primarily highlighted concerns about payment accuracy as a major drawback of the KDRG system. Recent studies on the New KDRG also pointed out the inaccuracy issue (Kim, Jung et al. 2020, Kim, Choi et al. 2021) and the government need to build reasonable payment model. The level of knowledge among doctors remained low and there were prevalent negative views on New KDRG. Currently the hospitals are allowed to opt out from the pilot payment. But, considering DRG is the main payment system for hospitals around the world, good knowledge of Korean doctors on the New KDRG will be beneficial to the hospital management.

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