Development of DRG logic for Multiple Significant Trauma patients in cooperation with Nordic countries

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Introduction

Many countries have struggled with and faced the difficulties with grouping logic for Multiple Significant Trauma (MST) patients. The main reason for this is that MST patients are a very heterogeneous group, both medically and economically. Their treatment is a major challenge for both the medical care and the appropriate financial reimbursement.

Finnish National DRG-center initiated the revision of MST patients' grouping logic within NordDRG system in 2012 and ended up with introduction of new logic in 2015 in its national version. Nevertheless, the change of logic has not been introduced in other Nordic countries so far because the new model needs to be carefully tested first in order to make the users convinced that it works properly.

Methods

After ca two years of cooperation between Finnish university hospitals, Nordic Casemix Center (NCC) and Finnish National DRG-center, finally in 2015 the new MST grouping logic was introduced in Finnish NordDRG version. Data analysis showed that even though the number of MST cases decreased due to the more "strict" rules of how the MST patient is defined and also due to the fact the conservative cases were not considered as MST cases anymore, the homogeneity in MST DRGs has still been slightly increased.

As the new logic is used only in Finnish version, the topic is still under discussion within NCC expertnetwork (consists of the experts from countries using NordDRG system) and was discussed in spring meeting 2015 where Norway came up with some suggestion for further revision of the MST patients' grouping logic. For more detailed analysis and discussion the working group was created in order to find the best possible way for grouping the MST patients.

The grouping logic was revised and the test-grouper was created according to Norwegian proposal, cost-analysis was carried out and the impact of changes from cost homogeneity point of view was evaluated. For analyses the data (2013) of five Finnish university hospital were used (ca 4,3 mio cases). The data was grouped with two different groupers: test-grouper (which included the proposed changes) and Finnish 2015 grouper. The results of two grouper were compared.

Results

The cost analyses showed that the V% of cases grouped with test-grouper (based on Norwegian proposal) would have increased in two out of four DRGs, in one DRG V% would have been decreased and in one DRG it would have remained the same. In total V% would have increased though which from homogeneity point of view was not the desired change.

The analysis also showed that even though the # of MST cases in test-grouper would have been increased and the cases which would have defined as MST cases and added would have been clinically complex, the cost of those cases would not have been significantly increased. Thus, based on the proposal clinical meaningfulness of MST patients would have been increased but the cost data would not have supported it.

Conclusions

It is important to understand that the quality of the DRG system is measured by the ability to obtain adequate case allocations for highly complex and heterogeneous cases. Specific modifications of the DRG structures could increase the appropriateness of case allocation of MST patients. Same time, the clinical complexity of MST patients not always reveals high cost and therefore the homogeneity does not necessarily increase.

In collaboration with NordDRG users the work on testing and developing the MST patients' groping logic will go on until the most optimal logic suitable for all countries will be developed.

The cooperation between countries and data-based analysis is an essential prerequisite for a constructive development of the any DRG system. It is also of high importance actively engage of medical societies in
this process.

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