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Using short-stay trim points to identify potential CMG design improvements

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Introduction

Within diagnosis related group (DRG) systems, long-stay trim points are commonly used to identify patient episodes with extraordinarily long lengths-of-stay, and exclude them from the calculation of the standard (or typical) cost weights.

Long-stay cases would potentially distort the typical cost weights if they were included in their calculation. In addition, long-stay cases often receive special treatment in the cost weights assigned to them. However, identification and exclusion of short-stay, outlier cases in the calculation of typical cost weights is not as common.

This article explores the impact of short-stay outliers on the calculation of cost weights, and the potential use of short-stay trim points in the Case Mix Groups (CMG+) system - Canada's national, acute-care inpatient grouping methodology. Analysis of length-of-stay patterns, and cost profiles of short-stay cases, will identify whether select CMGs (analogous to DRGs) are candidates for redesign.

Methods

This article explores the setting of short-stay trim points. Setting of these trim points is done based on empirical distribution using the interquartile range of the length-of-stay distribution of each CMG.

The cost distribution of short-stay cases, and the extent to which this cost distribution differs from that of typical cases, will be reviewed. The clinical and demographic profiles of cases identified as short stay will, as well, be appraised. Correlation of short-stay cases with specific clinical attributes may indicate that the CMG is a candidate for redesign (e.g., a split or redefinition). The incidence of short-stay cases by hospital, and stratum of

hospitals, will be assessed to determine whether short-stay cases affect some hospitals differently. A correlation of short-stay cases with certain hospitals may suggest variations in practice patterns.

The overall impact of short-stay cases will ultimately be assessed by a recalculation of the typical cost weights - with the short-stay cases removed.

Results

CMGs for which the profiling of the short-stay cases suggests potential for redesign will be presented in detail. The effect of the removal of short-stay cases on typical costweight estimates will be provided.

Conclusion

Discussion will include an examination of the value of short-stay trim points in the evaluation and refinement of CMGs, and consideration of whether or not short-stay cases should be excluded from the estimation of typical cost weights.