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Poster Abstract

How to measure variation in health care costs between care groups for diabetes patients? The necessity of multilevel modeling techniques.

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Abstract:

Objectives: With the introduction of bundled payment in 2007 in The Netherlands, care groups were introduced. Care groups are increasingly used for identifying practice variation, which has been considered as a useful indicator for unnecessary -or poor quality of care. This study aimed to investigate if care groups for diabetes patients differ with regard to curative care costs and diabetes specific hospital-based specialist care costs by using two methods.

Methods: We analyzed claim data from 24 insurers obtained from Vektis. In total, 104,561 diabetes patients, clustered in 52 care groups were analyzed by two methods. First, uncorrected mean costs and standard deviations (SDs) per care group were calculated. Second, multilevel analysis (correcting for case-mix and clustering of data) were performed.

Results: Even uncorrected means of curative health care costs differed by almost €2400 between care groups, both methods showed no significant variation. Interestingly, by plotting the residuals for diabetes hospital-based specialist care costs, differences between care groups were observed.

Conclusion: Depending on the applied method and included costs, care groups differ. This study shows that careful consideration is necessary on which method and indicator are relevant for measuring variation between care groups.

Keywords

care groups, practice variation, the Netherlands, multilevel analysis, residuals, diabetes, health care costs

Presentation available at <http://www.integratedcarefoundation.org/content/guided-poster-walks-2>