

MEETING ABSTRACT

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# Error DRGs—what are they for?

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## Introduction

The DRG system is based on the list of MDCs (Main Diagnosis Categories) defined on the basis of the principal diagnosis. At the same time, the surgical procedure is typically accepted in one or more MDCs. Thus, the cases with the same procedure code can be assigned to different DRGs depending on the principal diagnoses.

In the NordDRG system, some DRGs (error DRGs) are reserved for cases where none of the operating room procedures performed during a hospital stay is related to the principal diagnosis. The groupings to these DRGs are placed after the regular MDC definitions. There are seven PostMDC rules in the NordDRG system which result within the normal MDC groups.

The error DRGs are intended to capture atypical cases, or those not occurring with sufficient frequency to represent a distinct, recognizable clinical group. However, very often the reason for assignment to these groups is an error in the use of the basic classifications.

In the study, the cases assigned to DRG 468 (the name in the NordDRG Estonian 2003 version is 'Extensive O. R. procedure unrelated to principal diagnosis', which was changed in 2004 to 'Rare or incorrect combination of diagnosis and extensive procedure') were investigated.

Since the implementation of the NordDRG system in Estonia (in 2004 for reimbursement), every year 260 to 370 cases are assigned to DRG 468 amounting to 1-3% of the all inpatient and day-surgery cases assigned to the ca 500 DRGs listed in the NordDRG Estonian 2003 version.

The division of DRG 468 cases by medical specialties shows that more than 50% of the DRG 468 discharges are in oncology, general surgery and urology. As for the setting of the care, the vast majority (94-95%) of the DRG 468 cases are treated in hospital settings. The rest are day-surgery cases.

The aims of the study were as follows:

1. To detect the assignment errors – How many cases should have been assigned to another DRG due to inappropriate coding?

2. To determine the direction of errors – Did the cases incorrectly assigned to DRG 468 result in over or under payments to hospitals?

3. To determine the source of coding errors – Was the incorrect assignment to DRG 468 related to inappropriate use of diagnoses or procedure codes?

## Methods

The study examined DRG 468 discharges. In order to verify whether the reimbursement claims reflected the correct coding standard, a randomized control was conducted. The sample (#213) was randomly derived from the database of the Estonian Health Insurance Fund (EHIF) and amounted to 60% of all DRG 468 cases in year 2008. In the sample, the cases of four different hospitals were presented.

The randomized controls of medical records were conducted by teams of controllers of EHIF with the aim of validating whether the discharge information (e.g., diagnostic and procedural information) of the patient coded and reported by the hospital on the reimbursement claim matched the information contained in the patient's medical record. In the process of randomized control, the controllers were either sent to the hospitals to check the medical records, or the medical records were brought to the EHIF office upon the request.

In order to determine the correct DRG in case of erroneous coding, VisualDRG Professional was used. VisualDRG Professional is an application produced by Datawell OY, and targeted at DRG controllers. It allows grouping of single-patient cases, browsing of definition logic, importing of the data file, batch grouping it, and exporting the results.

## Results

1. The assignment errors – Controllers determined that 79% of cases (#169) initially assigned to DRG 468 should have been reassigned to another DRG.

2. The direction of errors – 63% (#107) of the cases incorrectly assigned to DRG 468 resulted in overpayment to the hospitals, i.e., hospitals should have coded and billed these cases to DRGs with lower relative weights than DRG 468.

3. The source of coding errors – In 46% (#77) of the cases which were incorrectly paid as DRG 468, the reason was inappropriate use of principal diagnosis (miscoding or resequencing). In 53% of the cases, the reason was related to inappropriate coding of procedure code(s). In 1% of the cases, the source of coding errors was caused simultaneously by incorrect use of principal diagnosis and procedure code.

## Conclusions

This study showed that even though DRG-grouping logic allows the assigning of cases with operating-room procedures that have no relation to the principal diagnosis to a specific DRG in order separate atypical cases, or those not occurring with sufficient frequency to represent a distinct clinical group, the main reason why the cases are assigned to error DRGs is poor coding quality, which lags behind the appropriate coding standard.

Therefore, further attention needs to be paid to coding quality. A review and analysis of the coding quality of coders (mainly medical doctors) will help to identify opportunities for improvement both in educating coders and in documentation improvement.

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