# DISCONNECTING HOSPITALIZED CASES IN THE EMERGENCY WARDS THROUGH A DRG SYSTEM

**Carp Gheorghe*, Daina Lucia*, Armean Petru****

*University of Oradea, Faculty of Medicine and Pharmacy, Oradea, 1 December Street, nr.10, Romania, e-mail: carp_gheorghe@yahoo.com
**University of Medicine and Pharmacy "Carol Davila", Dionisie Lupu Street, nr.37, Bucharest, Romania

**Abstract**

*The hospital introduces DRG classification in order to have a better perspective of its results and to compare its results with the results of other hospitals. The global evaluation of hospital activity from a geographic area or a certain domain is useful for people who pay for their healthcare services when they decide on a certain service or in order to establish certain health policies with an impact on the hospital sector. We consider that the bed occupation index of 290 for wards with at least 65% of cases being emergencies should be between 305 and 310, allowing wards to schedule cases which could necessitate admittance to hospital but are not emergencies (mainly surgery wards).The discounting of cases should first cover emergencies and transfers from other medical facilities for all wards within the hospital. Also, the complexity of cases cannot be forseen, and abiding by the contracted sum leaves an important number of physical cases undiscounted. These expenses relating to undiscounted cases remain an open problem. It would be preferred that Emergency County Hospitals benefit from the required sum of money, not the minimal one (MS, 2011, 2013).*

**Key words**: DRG classification, emergengy, costs

## INTRODUCTION

The hospital introduces DRG classification in order to have a better perspective of its results and to compare its results with the results of other hospitals. The global evaluation of hospital activity from a geographic area or a certain domain is useful for people who pay for their healthcare services when they decide on a certain service or in order to establish certain health policies with an impact on the hospital sector.

The system of classification in diagnostic groups (Diagnosis Related Groups – DRG), represents a classifying scheme for patients based on their diagnosis. Through DRG, patients can be simultaneously classified both by pathology as well as the cost of the services, which offers the possibility to associate types of patients with hospital payments incurred. For each patient which was discharged and integrated within a diagnostic group there has been a special tariff developed, which will be paid to the hospital irregardless of the number of resources consumed by that certain patient (National Health Insurance Office Order).

Through financing in a DRG system, the hospitals which will incur higher costs for one DRG than the established tariff will lose the resources for that category of patients while those hospitals which will incur lower costs for a DRG than the established tariff will gain resources

for that patient category. Overall, the hospitals are stimulated to keep costs at an inferior level from the cost of maintaining each patient group in order to save financial resources and use them to develop the quality of services.

**MATERIAL AND METHOD**

We have analyzed the Neurology clinical ward within the Clinical Emergency County Hospital in Oradea in the first semester of the year 2013. For the calculations of contractual sums we have used the formulas within Order 123/191 from the 29th of March 2013 and formulas stipulated in paragraph (1) of Art. 3 from the annex to Order 862/547/2011 (drg.ro).

**RESULTS AND DISCUSSIONS**

The Neurology clinical ward within the aforementioned hospital has 27 beds in its structure and the pathology is mostly cerebral vascular accidents (CVA's) being situated at 76,5% of total cases, with a 98,6% emergency rate (fig.1).

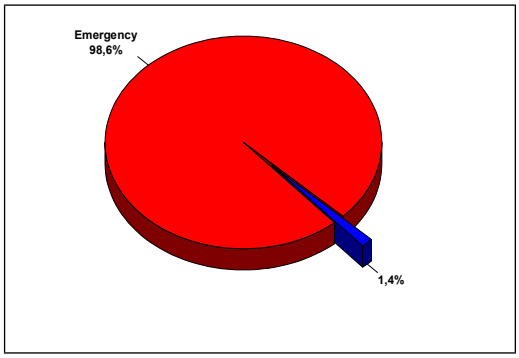


Fig. 1 – Proportion of emergencies from the total number of cases

According to the norms (2, 3, 4), the cases contracted within the analyzed period were as high as 580, with the contracted sum being situated around 943.522 RON lei (DMS=6,20, ICM=1,1476, TCP=1.600 RON, bed occupation index 290). The number of released patients was 634, 625 of which were emergencies (98,6%) totalling 5272 days of hospitalizing; on average, that value ammounts to 8,32 days of hospitalizing per patient. The vast majority of patients were aged 65 or over (60,3%) while the presence of co-morbidity was 99,7% and complications and severe co-morbidities were found in 75,4% of patients.

There have been 134 reported fatalities, amounting to 21,1%, 17 of these cases being declared within 24 hours from hospitalizing (2,7%). According to order 123/191 from the 29th of March 2013, at the point of

trimestrial regularization for deduction, the number of validated and discharged cases is taken under consideration in chronological order based on the date of discharge, while the value of medical services calculated on the basis of said indicators has to fit within the sum awarded for continuous hospitalizing and acute afflictions. Table 1 below shows a comparison between contracted-realized-deducted cases.

*Table 1*

Comparison between contracted-realized-deducted cases

| | No.of cases | Weighting of Cases | k | Sum (lei) |
|---|---|---|---|---|
| Contracted | 580 | 619,9280 | 1,0000 | 943.522 |
| Realized | 634 | 1113,8572 | 0,9908 | 1.668.283 |
| Discounted | 467 | 830,1572 | 0,9864 | 1.224.402 |

In the contract with the County Health Insurance Office the weighted cases were calculated differentially between January and April (ICM=1,0334) and May-June (ICM=1,1476) while the TCP was 1444 RON between January and March and 1600 RON between April and June. Regarding the number of contracted cases (580), there were 54 extra cases realized (9,3%) and 467 of the contracted total were discounted, meaning 113 cases less (19,5%). In regards to the 634 realized cases, 167 of these were not discounted, 164 of which were emergencies (fig.2).

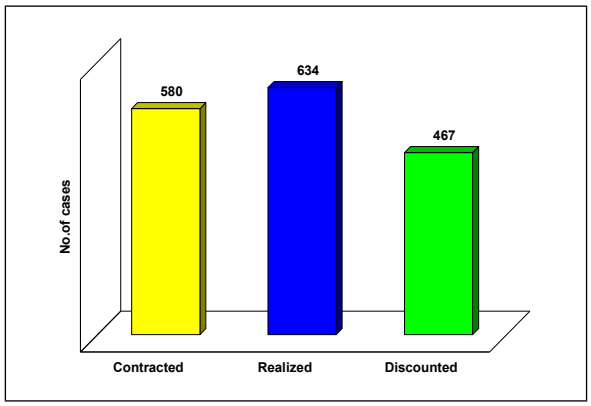


Fig. 2 – Number of cases contracted, realized and deducted.

Even if the number of discounted physical cases was smaller than the number of contracted ones, the discounted weighted cases were larger than the contracted ones (830,1572 versus 619,9280) because of the fact that the ICM was larger than the contracted one (1,7569 versus 1,0688 – six month average). We must underline the fact that in the past three years, the Neurology ward has had very small variations of the ICM, with values ranging between 1-2%. The realized weighted cases were almost

double than the contracted ones (1113,8572 versus 619,9280) while the discounted ones were 25,5% smaller (830,1572 versus 1113,8572).

At contracting the K value (value of extreme cases) is 1 while the realized K value is 0,9908. Even still, the discounting is made at the hospital-level K value of 0,9864. The coefficient K<1 indicates the fact that there are rare instances of extreme cases, so realized DMS is under the minimum limit DMS in those respective diagnostic groups. We must also underline the fact that the hospitalization DMS of the Clinical Emergency County Hospital Oradea is under the nationwide DMS limit.

The realized sum is 724761 RON larger than the contracted sum and 443881 RON larger than the discounted sum. The discounted sum is 280880 RON larger than the contracted sum due to trimestrial regularizations and also due to the fact that discounting is done chronologically, in the detriment of other wards. The Clinical Emergency County Hospital in Oradea cannot refuse emergency admittance to hospital or accepting cases referred from other medical facilities due to the fact that there are specialties which are unique in the county. The Neurology ward, being a mostly emergency-based ward (98,6%) has an almost non-existent patient admittance schedule and thus voids the hospital admittance tax income.

**CONCLUSIONS**

We consider that the bed occupation index of 290 for wards with at least 65% of cases being emergencies should be between 305 and 310, allowing wards to schedule cases which could necessitate admittance to hospital but are not emergencies (mainly surgery wards).

The discounting of cases should first cover emergencies and transfers from other medical facilities for all wards within the hospital.

Also, the complexity of cases cannot be forseen, and abiding by the contracted sum leaves an important number of physical cases undiscounted. These expenses relating to undiscounted cases remain an open problem.

It would be preferred that Emergency County Hospitals benefit from the required sum of money, not the minimal one.

**REFERENCES**


1. www.drg.ro
2. Ministry of Health, National Health Insurance Office Order 423/191/19.03.2013 for the approval of methodological norms applied in 2013 of the contract regarding medical assistance within the social health insurance system for 2013-2014
3. Ministry of Health Order 862/31.05.2011 regarding the establishment of minimum contracted sums by hospitals with County Health Insurance Offices for continuous hospitalization services for acute patients based on hospital classification by components
4. National Health Insurance Office Order 229/30.04.2013 regarding the modification and completion of order 423/191/2013