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ANNOUNCEMENT

2015 and 1Q2016 Annual DRG Report CGH 8th of September has the best results



Diagnosis Related Groups (DRG) methodology, in addition to being a system for recording and billing of health services for acute hospital patients, is also a method for recording and funding the hospital healthcare. DRG contributes to standardization of the medical therapeutic procedures according to evidence-based medicine (protocols and clinical pathways), which are provided for each diagnosis by paying on average costs incurred for health services in any health facility. The DRG system is based on a central

database of all health services in R. of Macedonia for the hospital patients, and other important statistical data (gender, age, weight, etc.). **The access to these data, whether direct (unprocessed data) or via reports drafted by HIFM and other institutions provides comparability between hospitals in terms of efficiency, complexity of health services, range of health services at the PHI, capacity utilization and the like.**

In practice, the DRG system provides measurable parameters that can be used for inter-country comparison, and for comparing the results of our hospitals with hospitals in other countries.

In the 2015 DRG Annual Report we present the data on treatment of acutely ill patients, reported as per the DRG methodology in health facilities performing hospital healthcare in the Republic of Macedonia in the period January - December 2015. The DRG Annual Report can be found on the HIFM's website (www.fzo.org.mk)

The 2015 Annual Report includes a total of 61 health institutions, classified by type of institution, of which 56 are public health institutions (14 general hospitals, 27 clinics, 3 clinical hospitals, 9 specialized hospitals, 3 psychiatric hospitals) and 5 private health institution.

The 2015 DRG Annual Report which refers to the analysis of data for the measurable segments in the healthcare systems, as well as the comparable segments with other healthcare systems, 5 specific data for comparison within our system, and also with the European healthcare systems:

1. The total number of hospital treated persons in 2015 was 219 297 patients, and is 15 345 or 6,5% less compared to 2014. Because of this, the total number of realized hospital days decreased to 1 214 061, 6,3% or 82 127 fewer hospital days. In 2015, according to the case mix index, the treated patients are



more complex compared to 2014, notable by the increased casemix index from 1,10 to 1,14, which should be welcomed. **In practice this means that during the treatment more complex procedures were used and more complicated patients were treated. As an example, we may indicate that in the PHI City General Hospital 8th of September the complexity of interventions increased by 4,9% compared to last year.**

The largest percentage increase in the number of cases were registered in the new State University Clinic for Heart Surgery (6-fold compared to the previous year), then the UC for Thoracic and Vascular Surgery (15,7%), UC for Digestive Surgery (12,5%), and UC for Nephrology (10%).



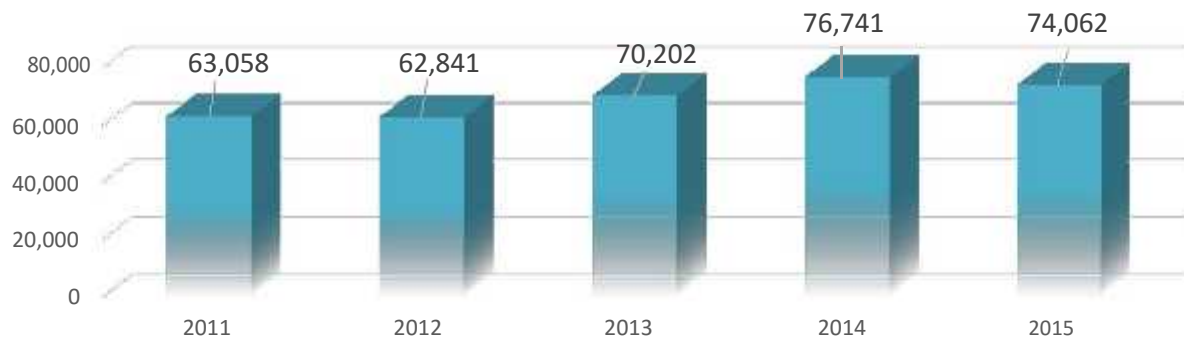
Regionally, we point out that the greatest number of hospital treated acute patients was in the region of Skopje, with 104 436 or 47,6% of the total recorded DRG cases in Macedonia (including private hospitals with contracts with HIFM).

2. Type of care. In the DRG system, the services are divided into surgical, medical (internal) and other DRGs, depending on whether during the course of treatment a procedure was conducted or not in the operating room.

We would like to mention three hospitals that had the highest share in the field of surgery in 2015: CGH 8th of September Skopje, where 49% of patients received surgery, GH Strumica 29,6% and GH Prilep 26,3%.



SURGICAL AREAS - NUMBER OF CASES BY YEAR

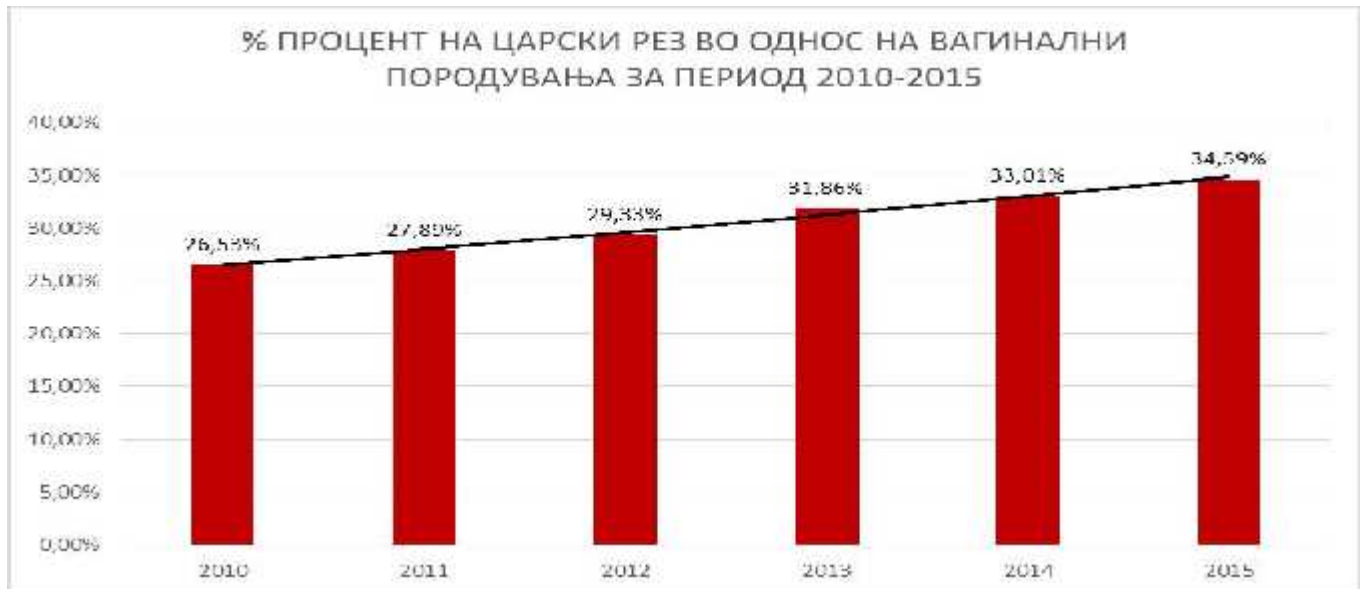


Regarding internal medicine healthcare services, we single out the following 3 PHIs with the highest share of internal medicine patients in 2015: Debar with 99%, then Kochani with 87%, and Veles and Kavadarci with 83%.

The hospital 8th of September has the highest share of the group other DRG health treatments that are specific diagnostic procedures, such as (gastroscopy, colonoscopy, angiography, kidney stone treatment), at 6.6% prevalence of said treatments.

If the count of surgical procedures performed at CGH 8th of September Skopje, Special Hospital for Gynecology and Obstetrics Chair Skopje, PrHI Philip 2, PrHI Clinical Hospital Sistina, PrHI Sistina Ophthalmology, PrHI European Eye Hospital and the University Clinics is summed up, 63,8% of all surgical procedures are performed on the territory of the City of Skopje. At the same, there is data confirming that in all clinical and general hospitals, with the exception of GH Kavadarci, there is a decrease in the count of cases with surgical DRG codes.

Delivery by Caesarean section was the most common surgical group in 2015, and the percentage of deliveries by Caesarean section compared to vaginal birth continued as an uphill trend in 2015, at 34,6%. GH Kavadarci has the lowest rate of Caesarean section deliveries (19%), whereas the GH Strumica and GH Gevgelija have the highest rates, 49,6% and 55,2% respectively. Most typical internal medicine group is newborn without any complications at 9,6%, followed by normal vaginal delivery at 6,2%, and respiratory infections without complications at 4,8%.



3. The most common health services (DRG services) - In 2015, and in 2014,

the most common health services are: care of the newborns without complications, normal delivery without complications, respiratory infections without complications and Caesarean section deliveries without complications.

4. The average length of stay of patients in the hospitals (ALOS) at national level is continuously decreasing from 6,2 days in 2009, 5,9 days in 2010, 5,8 days in 2011, 5,7 days in 2012, down to 5,5 days in 2013, 2014 and 2015.

By type of health institution, the average stay is as follows:

- 6,1 days in clinics
- 4,9 days in clinical hospitals
- 5,2 days in general hospitals
- 5,5 days in special hospitals
- 17,4 days in psychiatric hospitals
- 5,6 days in private hospitals

If these data are compared with data from the Republic Institute for Health Protection for 2004 (before introducing the DRG methodology), where the hospital day in university clinics was 8,8, and 6,8 in general hospitals, there is an evident decrease of the length of stay from 2,7 days in clinics down to 1,7 days in clinical and general hospitals, which is one of the main benefits of the introduction of DRG methodology, by increasing the efficiency and delivery of services to patients.

Same-day patients, according to the DRG methodology, are patients who are admitted, treated and released on the same day, and account for a small percentage share with 15.179 or 6,9% of all DRG cases (219.297).



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5. Complexity of cases or CASEMIX INDEX - This index is a key indicator that shows the complexity of the treated patients, the complexity of the procedures performed, and is 1,14 at national level, an increase compared to 2014 when it was 1,10. This means that in 2015 in Macedonia, more complex patients were treated, and more complex treatments were performed, a percentage share of 1,14.

The most complex level of healthcare was provided at the university clinics, where the incidence of complex treatments is highest, since they are highly specialised in the activities they are performing. When a comparison by complexity is performed with regards to other general hospitals and clinical hospitals, the following 5 PHI have the highest casemix index:

- **City General Hospital 8th of September 1,39**
- **Clinical Hospital Bitola 0,89**
- **Clinical Hospital Shtip 0,87**
- **General Hospital Prilep 0,79**
- **Clinical Hospital Tetovo 0,62**



As per the 2015 DRG Annual Report, PHI General Hospital 8th of September has shown best results in 3 of the 5 most important categories (number of cases, complexity of cases and highest percentage share of surgical DRG groups).

The detailed Report may be viewed and downloaded from HIFM's web-site www.fzo.org.mk in the section for reports, analyses and reviews.

The Health Insurance Fund, aside from conducting analysis and preparing the annual report on the operations of the PHIs as per the DRG method, also monitors and makes comparisons on a monthly and quarterly basis, with the same period of the previous year. We would like to highlight several specific parameters for the first quarter of 2016 compared to the first quarter of 2015.

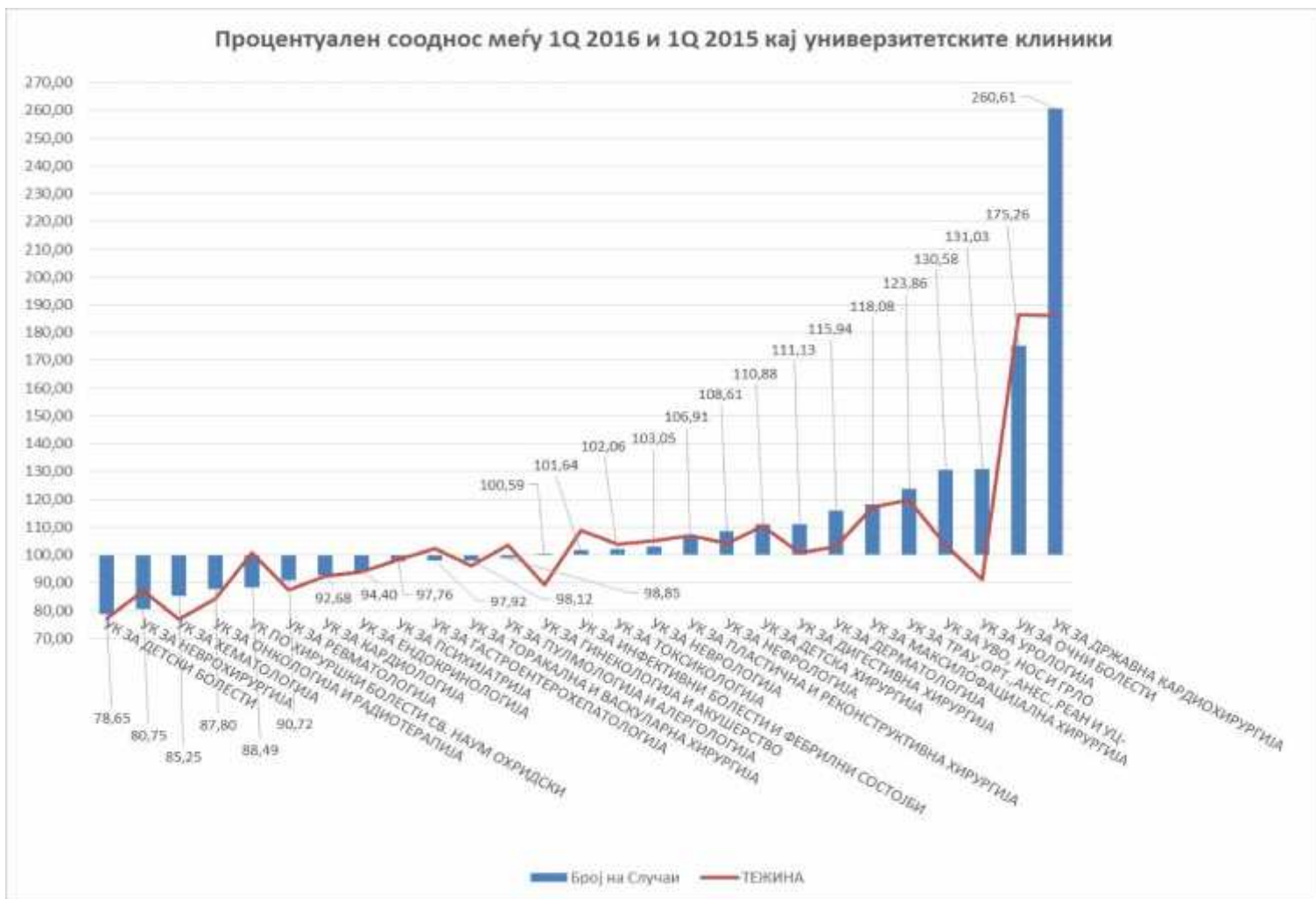
1. Of the total number of hospital treated patients in the 1st quarter of 2016, which is 58.891, it may be noted that in 15 of 27 university clinics, 4 of 17 clinical and general hospitals, and in 7 of 9 specialized hospitals, there is an increased number of cases, but the total number for all PHI is lower by 1,5% (59.782 in the 1st quarter of 2015).

The university clinics have the greatest increase in number of cases:

- **State UC for Heart Surgery (160%)**



- UC for Eye Diseases (75%)
- UC for Urology (31%)





or is the same in most of them, except for GH Kavadarci (an increase of 7,9%), GH Gostivar (9,4%), CGH 8th of September (at 16,8%), GH Ohrid (at 23,1%), and GH Struga (35,5%). For all clinical and general hospitals, the total number of patients with surgical DRG groups has increased by 2,3% in the first quarter of 2016, compared to the same period in 2015.

Процент на случаи со хируршки ДСГ групи во однос на вкупен број на случаи кај клиничките и општите болници

