

DRG-BASED DIFFUSION OF DAY SURGERY IN HUNGARY: CASE-GROUP AND PROVIDER VARIATION

Pónusz R^{1,2}, Pónusz-Kovács D^{1,2}, Köncezi C³, Mangel K⁴, Vas-Tifán A³, Kovács B³, Boncz I^{1,2}

1. Institute for Health Insurance, Faculty of Health Sciences, University of Pécs, Pécs, Hungary
2. National Laboratory for Human Reproduction, University of Pécs, Hungary
3. Doctoral School of Health Sciences, University of Pécs
4. National Directorate General for Hospitals

OBJECTIVES

One-day surgery becomes an ever-reliable alternative of the expensive inpatient care in many developed countries worldwide. The aim of the study is to quantify the national diffusion of day-surgery in the publicly funded Hungarian healthcare system and the associated shift from inpatient to day-case care.

METHODS

The study database was derived from the National Directorate General for Hospitals and contained all the cases and DRG cost-weights which were eligible to be treated in day surgery. The study database was for 2014-2025 (October). The analysis covered all the number of cases and DRG cost-weights by the DRG main groups (18 different groups) and 8 type of hospital categories. For each, the calculation of day-surgery penetration (day cases/total), mean DRG cost-weight per case, and concentration of day-surgery volume (Herfindahl–Hirschman Index [HHI], 3-group concentration ratio [CR3], Gini) was delivered. Differences in inpatient versus day-surgery distributions were tested with chi-square (Cramer's V).

RESULTS

Day-surgery penetration varied markedly by DRG main groups from 0.35% (04P; 38/10,971) to 89.54% (02P; 1,216,450/1,358,604); DRG cost-weight penetration ranged from 0.28% (04P; 44.62/15,775.21) to 89.26% (02P; 785,927.12/880,537.89). Day-surgery case volume was concentrated: the top three DRG main group [02P (ophtalmology), 13P (gynecology), 14P (obstetrics)] comprised 59.73% of day-surgery cases (CR3), with HHI=0.183 and Gini=0.671. Inpatient versus day-surgery case-group distributions differed substantially ($\chi^2=2,206,315$; $df=17$; $p<0.001$; $V=0.568$). By provider type, penetration ranged from 30.73% in national institutes (163,713/532,690 cases) to 99.65% in dedicated day-surgery centres (314,983/316,085 one-day surgery centers), yet these centres delivered only 9.20% of national day-surgery cases. Provider-type differences were significant ($\chi^2=424,984$; $df=7$; $p<0.001$; $V=0.249$).

CONCLUSIONS

Day-surgery diffusion is advanced nationally but highly uneven: a small set of case groups drives most number of cases, and adoption varies widely by provider type. Targeted benchmarking and payment/clinical pathways focused on low-penetration groups could accelerate appropriate substitution while preserving case-mix complexity management.

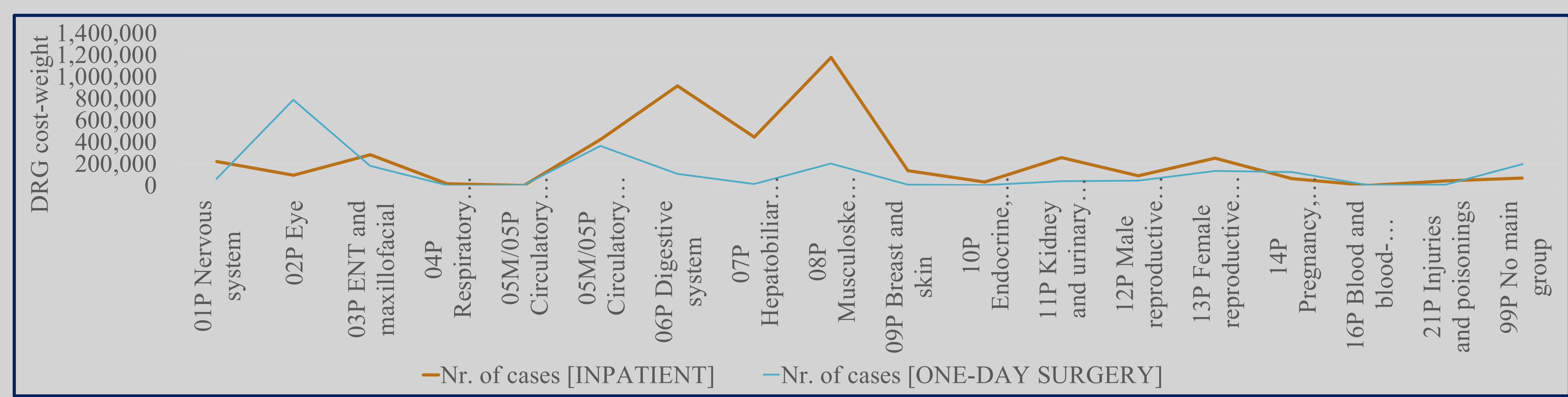


Figure 1. Difference of cases in type of the treatment and DRG main groups (2014-2025)

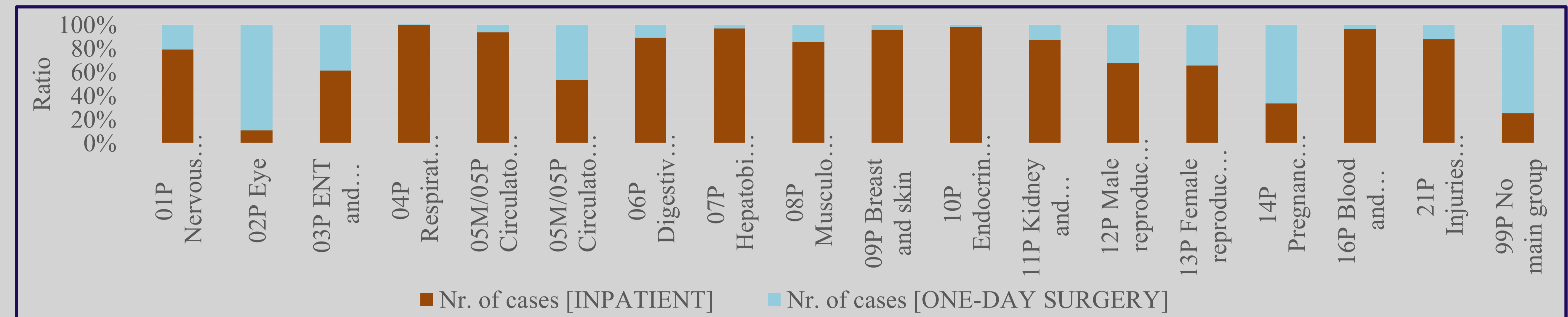


Figure 2. Distribution of cases in type of the treatment and DRG main groups (2014-2025)

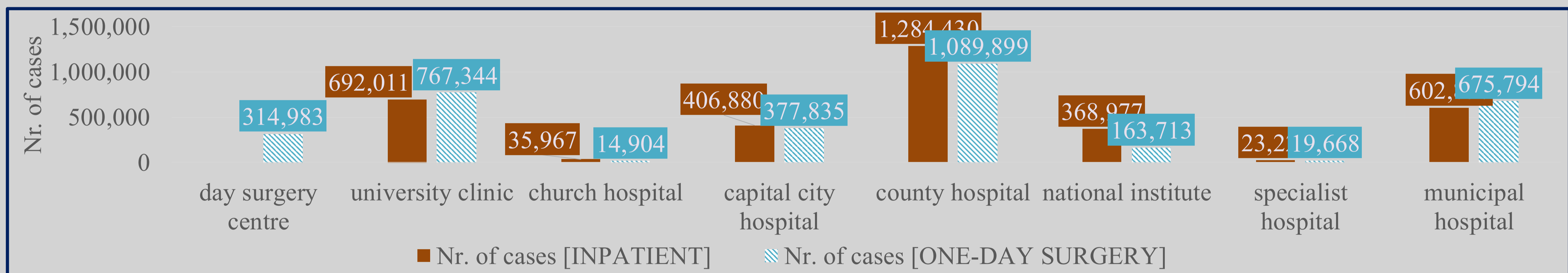


Figure 3. DRG cost-weights according to hospital and treatment type (2014-2025)

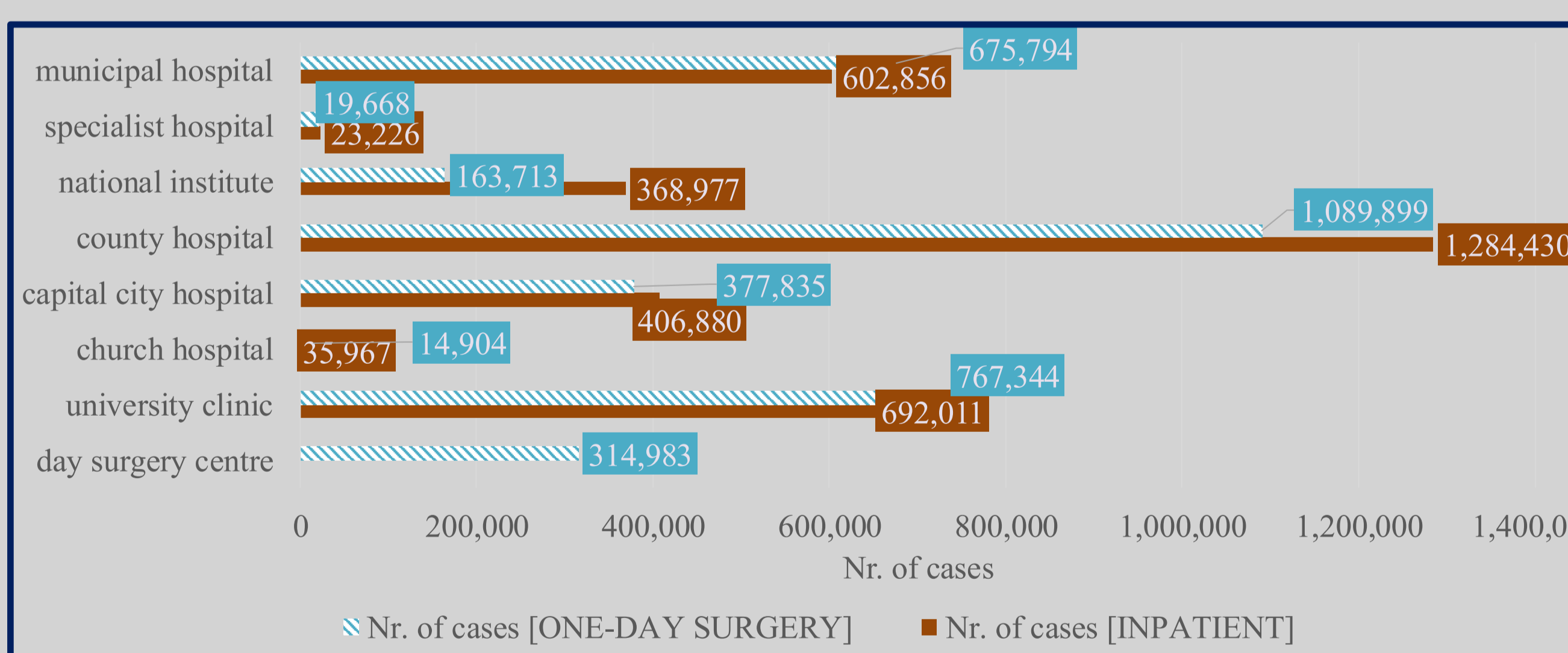


Figure 4. Cases according to hospital and treatment type

Analysis	Low/test-statistics	High/ effect size
DRG penetration range (cases)	04P=0,35%	02P=89,54
DRG penetration range (DRG-cost weights)	04P=0,28%	02P=89,26%
DRG concentration	TOP 3 groups=59,73%	HHI=0,183; GINI=0,671
Inpatient vs. one-day surgery by DRG	$\chi^2=424,984$; $df=17$; $p<0,001$	Cramer's V=0,249
Provider penetration range	National institutes=30,73%	Dedicated one-day surgery centers=99,65%

Table 1. Main findings of the research

ISPOR 2026
May 17-20, 2026 | Philadelphia, PA | USA

University of Pécs
1367

Funding:
The research was financed by the Thematic Excellence Program 2021 Health Sub-programme of the Ministry for Innovation and Technology in Hungary, within the framework of the EGA-10 project of the University of Pécs.

Corresponding author:
Dr. Róbert Pónusz MSc, PhD
University of Pécs, Faculty of Health Sciences, Hungary
Institute for Health Insurance
E-mail: ponusz.robert@pte.hu

HPR 121

SZÉCHENYI 2020

HUNGARIAN GOVERNMENT

European Union European Social Fund

INVESTING IN YOUR FUTURE