

# DRG implementation in Croatia

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# Institutional responsibilities

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## **Ministry of Health**

- develop and implement reform policies to support the introduction of the new performance based hospital payment model;
- support the rationalisation of the hospital network to improve system efficiency; and
- support the introduction of care pathways to promote quality and system efficiency;

## **Health Insurance Fund**

- acting as purchasers of inpatient care from hospitals;
- technical ownership of the DRG system;
- undertake costing studies and the refinement of DRG cost-weights;
- development and phasing-in of the hospital outputs based payment system;
- support revision to the hospital financial reporting and accounting system to facilitate the costing of outputs; and
- measuring hospital performance and managing risk.

# History of the hospital payment reforms in Croatia

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1996

- Global budget

1998

- Capped FFS

2002

- Capped FFS + PPTP

2007

- AR-DRG pilot

2008

- AR-DRG implementation

2009

- AR-DRG based payment

# AR-DRG pilot

## Training in DRG coding

2005

Technical  
preparation

2006-2007

4 Pilot  
hospitals

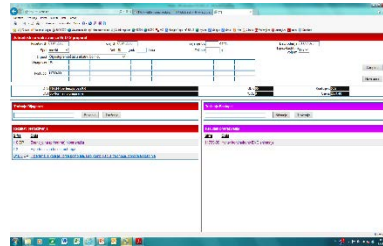
2008

All acute  
care  
hospitals

January 1, 2009

DRG  
payment

- Translation of the AR-DRG;
- Development of the DRG grouper software;
- Development of the training materials; and
- Development of the DRG data dictionary.



All hospitals continued to account for their budgets according to the old two-tiered FFS and PPTP schedule, but were also obliged to keep track of cases according to the new DRG schedule.



# Additional DRGs

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DRG code	DRG Description	Relative Weight
A11Z	Multiorgan explantation with tissue explantation	4,60
A12Z	Multiorgan explantation	4,36
A13Z	Single organ explantation	4,48
A14Z	Cornea/eye explantation	0,23

# DRG costing

## Sample DRG Relative Weights

DRG Description	Relative Weight	
	Australia	Croatia
HYPERTENSION W/O CC	0,62	0,44
HEART FAILURE W CC	1,10	1,09
HEART FAILURE W/O CC	0,82	0,77
VAGINAL DELIVERY W CC	0,55	0,87
VAGINAL DELIVERY W/O CC	0,50	0,48
LIVER TRANSPLANT W MCC	24,89	30,75

**O60C Vaginal delivery without OR procedures, without CC**

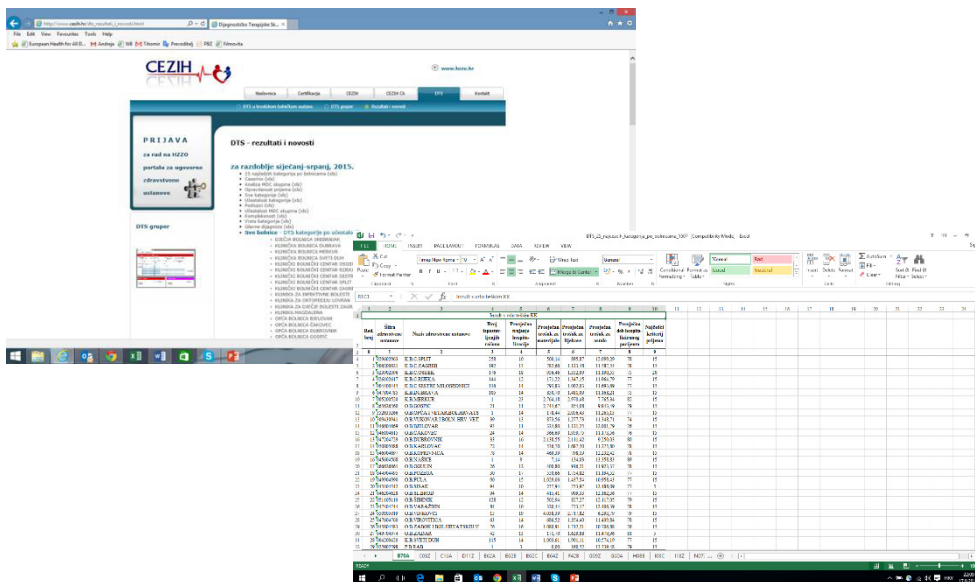
Hospital	Discharges	ALOS	Average cost
A	506	4,89	5.780,65
B	1259	4,00	4.559,10
C	639	4,07	3.562,74

**DTS:**

**4.595,86 kn**

# Additional activities

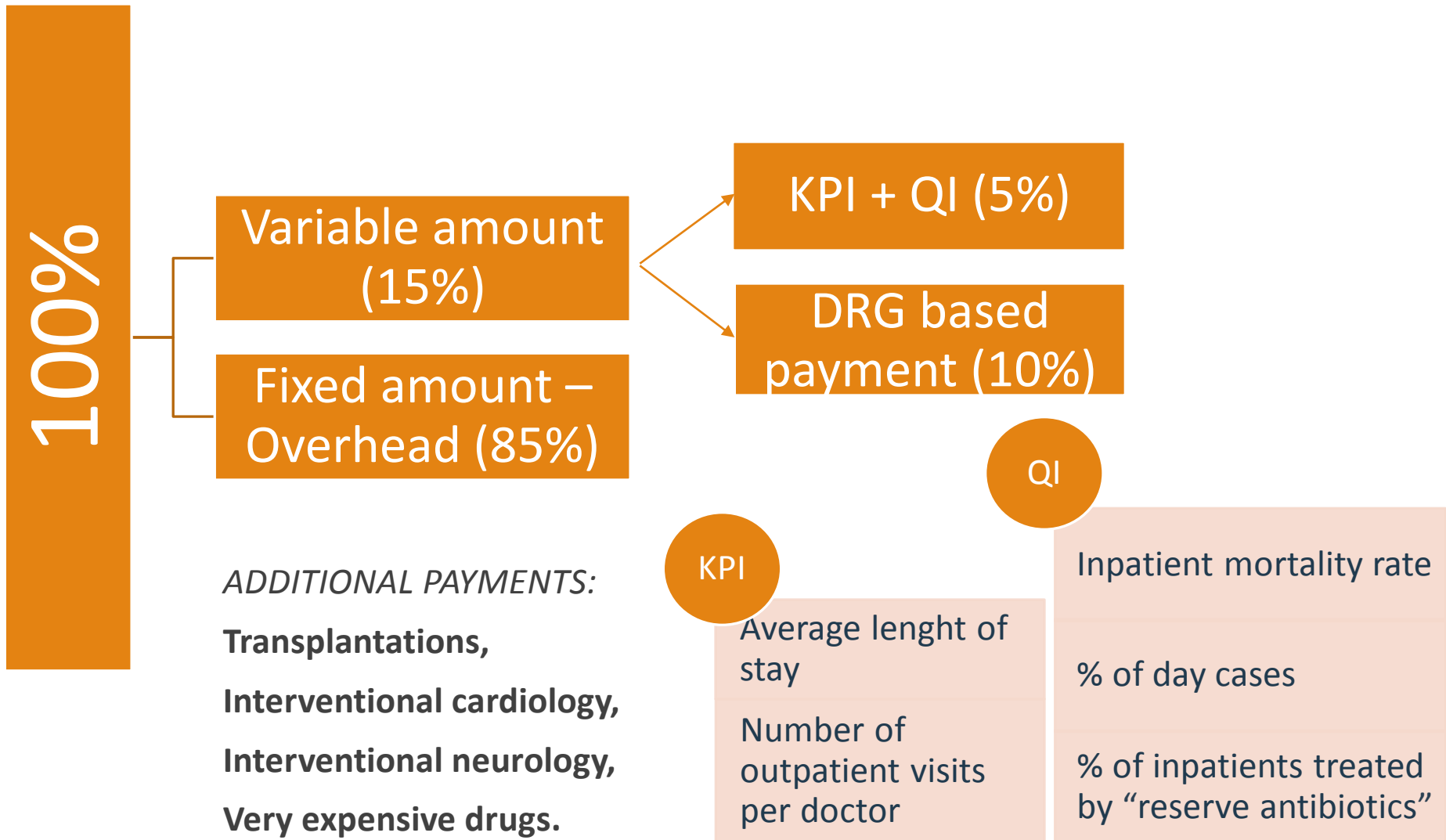
- ✓ Controlling hospital admissions by Appropriateness Evaluation Protocol (AEP);
- ✓ Controlling intensive care complexity by
- ✓ Simplified Acute Physiology Score (SAPS II);
- ✓ Feedback to the providers.



Type of admission 0	Chronic diseases 0	Glasgow Coma Scale 0
Age 0	Syst. Blood Pressure 0	Heart rate 0
Temperature 0	If MV or CPAP PaO2/FIO2(mmHg) 0	Urine output 0
Serum Urea or BUN 0	WBC 0	Potassium 0
Sodium 0	HCO <sub>3</sub> <sup>-</sup> 0	Bilirubin 0

< 15 mEq/l  
15 - 19 mEq/l  
>= 20mEq/l

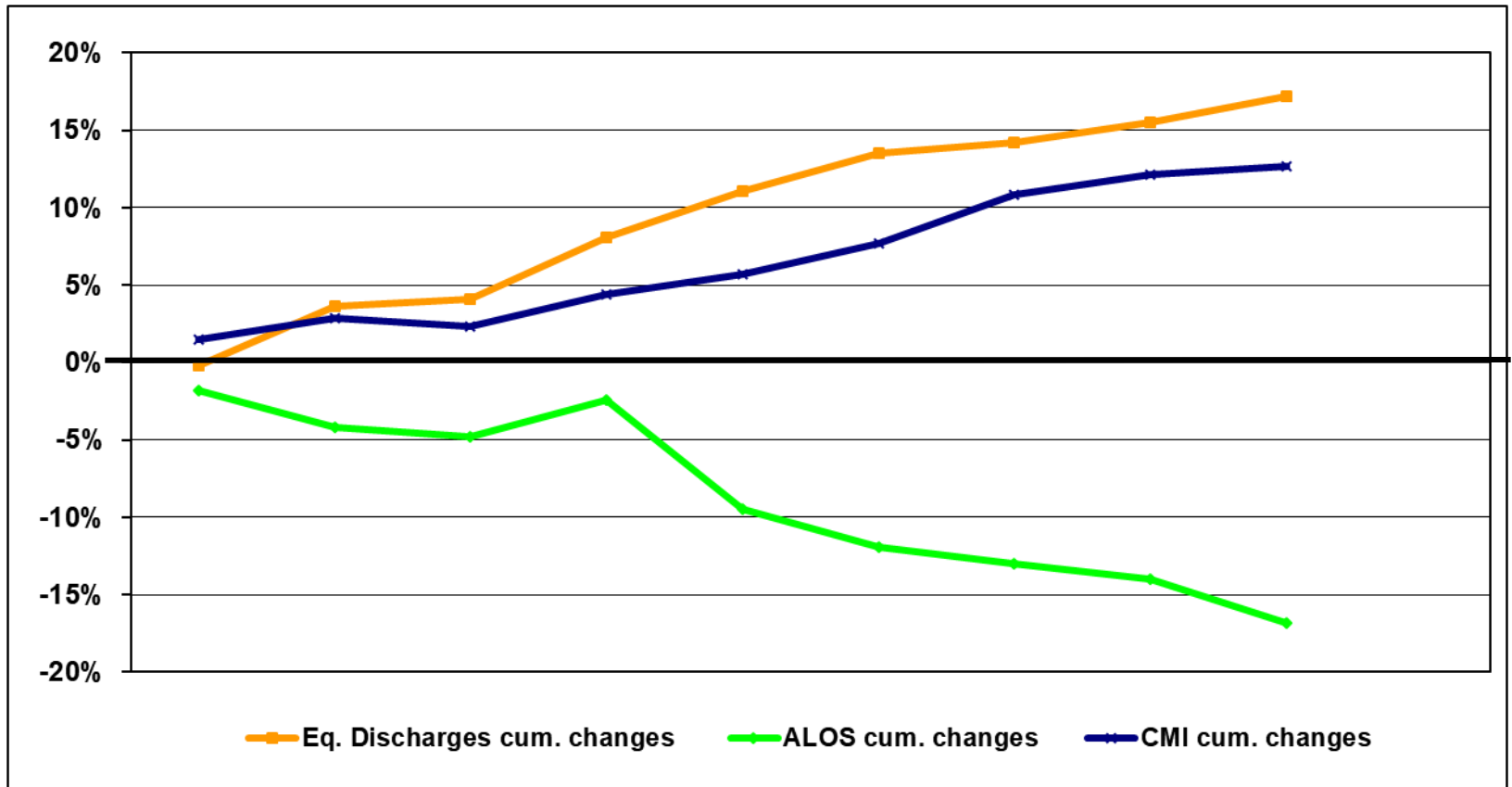
# Current hospital payment model





# Results

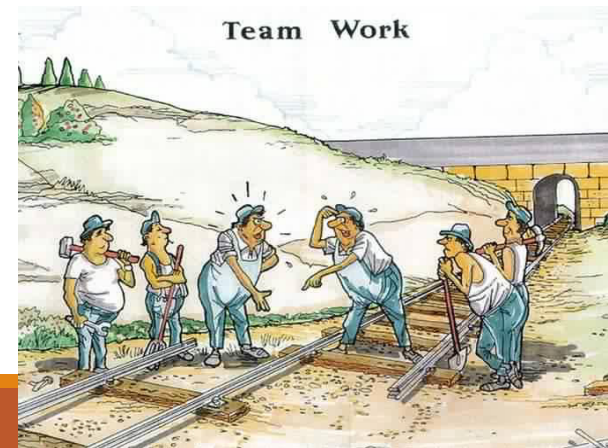
## Croatia 2002 – 2016.



# Lessons Learned

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- ✓ Be clear about what case-mix can and cannot do;
- ✓ To address potential unintended consequences implement DRG systems in a step-wise manner;
- ✓ Stakeholder involvement, specifically with respect to policy/decision-making and ongoing work;
- ✓ Select pilot hospitals with specific attention on their ability to comply with project requirements, timelines, etc;
- ✓ Have meaningful and ongoing collaboration with hospitals;
- ✓ Implementing a monitoring/audit mechanism right away is important;
- ✓ Knowledge transfer is critical for sustainability;
- ✓ Accurate coding and costing is critical; and
- ✓ Coordinate, communicate, and educate.



# THE **FUTURE** DEPENDS UPON THE DECISIONS MADE **TODAY**

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“Will we look into the eyes  
of our children and confess  
that we had the opportunity,  
but lacked the courage?”



*Thank you!*

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