

Evaluating Impact: Turning Promises into Evidence

Impact evaluation of the introduction of DRGs

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1. Background

- **WHAT?**

- Introduction of DRGs (Diagnostic Related Groups) payment system in hospitals

- **WHY?**

- Hospital inefficiency
- High bed occupancy
- Input based budgeting
- Long average length of stay

- **HOW?**

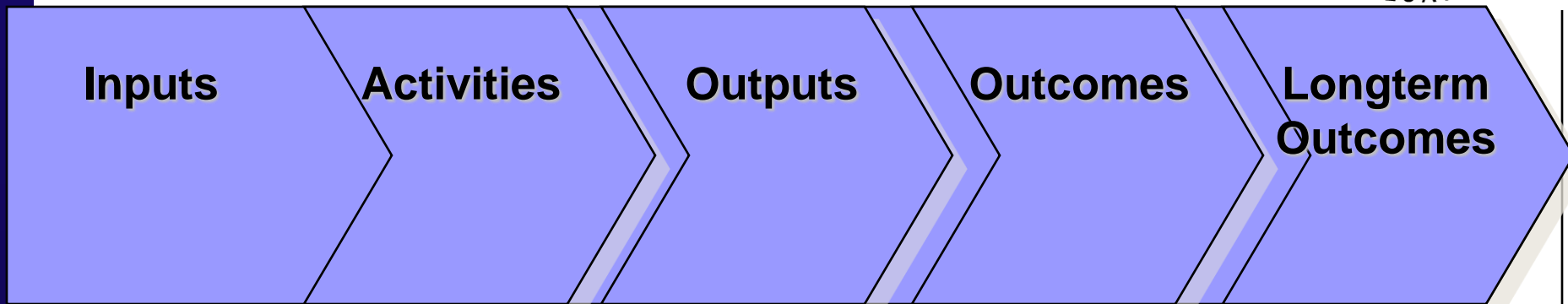
- By changing payment system from input based to output based

- **WHEN?**

Croatia- January 2008; Serbia - 2011



2. Results Chain



- Political decision to introduce Australian model of DRG
- Project team on the country level
- Budget
- Existing information system?

- Modification of ICD 10
- Introduction of new procedure code
- Development of DRG grouper
- Training on reporting
- Increase capacity at hospital and central level
- Upgrade of IS
- Change of legislation
- Training of hospital managers
- Development of new costing methodology

- ICD 10 modified
- New procedure code introduced
- DRG grouper developed
- Staff trained on reporting
- Increased capacity at hospital and central level
- IS upgraded
- Legislation changed
- Hospital managers trained
- New costing methodology in place

- Quality of reporting from hospitals
- Short-term average length of stay
- Cost treatment per patient reduced
- Increase in the number of patient treated
- Shortening waiting time

- Controlling expenditure of care
- Standardized quality of care



3. Primary Research Questions

- **Is the introduction of DRGs associated with increased hospital efficiency?**
- **Is the introduction of DRGs associated with standardized quality of care?**



4. Outcome Indicators

- % of correctly invoiced services
- Average length of stay
- Turn-over interval
- Bed occupancy
- % of readmissions
- Number of patients treated
- Length of waiting for interventions
- Inpatient mortality
- Number of hospitals implementing Clinical Pathways
- Number of cases per physician



5. Identification Strategy/Method

- **Before & After** with use of historic data to establish the trends, qualitative measures (interviews)



6. Sample and data

- **Sample**
 - Serbia - 76 hospitals (all hospitals)
 - Croatia - 36 hospitals
- **Data**
 - Hospital data
 - Discharge lists, medical records
 - Health Insurance Fund (HIF)



7. Time Frame/Work Plan

● Serbia

- Data collection from 2005
- 2008- Modification of ICD 10, training on reporting
- 2010- Introduction of new procedure code, development of DRG grouper, training of hospital managers, increase capacity at local and central level, upgrade of IS till 2012
- 2011-Increase capacity at local level (continuation), change of legislation, development of new costing methodology, introduction of DRGs in 76 hospitals
- From 2011- Continuous impact evaluation

● Croatia

- 1995- historic data
- 2008- introduction of DRGs in 36 hospitals



8. Sources of Financing

- **Government budget**
- **Health insurance Fund budget**
- **Hospitals own budget**

