Evaluating Impact: Turning Promises into Evidence

Impact evaluation of the introduction of DRGs

Sasa Rikanovic, Pedja Djukic, Tanja Bajic, Danijela Urosevic, Vlasta Dečković-Vukres and Luka Vonzina

Sarajevo, Bosnia and Herzegovina
September 2009
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

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

**Activities**
- 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

**Outputs**
- 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

**Outcomes**
- 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

**Longterm Outcomes**
- 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