Diagnosis-Related-Group financing in Italy

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Italian Ministry of Health
General Direction for Health Planning
Italy has 59,000,000 inhabitants

It is subdivided into 21 Regions

Italy has a National Health System which provides comprehensive and universal health care coverage for medical and hospital care with no usage limitations
Major Reforms of the Italian National Health Care Service (SSN)

- National Health Service (Servizio Sanitario Nazionale - SSN)
- Central Government level, Regional level, Local level (LHAs)
- 1992: First SSN Reform
- Increased responsibility and autonomy of regional and local authorities
- 1999: Second Reform
- Growing autonomy, responsibility and planning of the Regions on the objectives of prevention, treatment and rehabilitation
Major Reforms of the Italian National Health Care Service (SSN)

- 2000: Constitutional Reform and Fiscal Federalism
- General legislative and administrative authority in several sectors of society, including health care, attributed to the Regions
- National Parliament and central Government: definition and monitoring of the “Essential levels of care” (Health Basket)
- New health care financing system
- Central level monitoring and assessment of the delivery of health across Regions
Essential levels of health care – LEA (DPCM 29 November 2001)

- All citizens are entitled to receive health care services included in the essential level at no cost at the point of access or upon payment of a small share for services that are not fully covered by the National Health System.

  - Collective health care
  - District health care
  - Hospital care

  necessary
  appropriate
  homogeneus

- Agreement between the Central and Regional Governments of 8 August 2001

- Resources for financing essential levels of health care were established and further responsibilities were given to the Region with regard to the organization of health services and to control health expenditures.
Hospital Care

- First-aid & emergency response
- Ordinary hospitalization
- Day hospital and day surgery
- Long term hospital stays
- Rehabilitation hospital
- Home based services provided by hospital staff
- Blood and transfusion services
- Tissue for grafts and transplants
Paying for hospital services

- Before 1992: mixed system (historical expenditures and per diem rates)
- In 1992: introduction of some quasi-market aspects into the system (switch to PPS)
- In 1999: formalization of the “program model” option
Paying for hospital services

Before 1992:

- Public hospitals placed under the direct control of Local Health Authorities (LHAs): financed through the budget given to the LHA by the regions

- All hospitals independent of the LHAs but with public status financed on a fixed budget basis (determined by historical expenditure)

- Private hospitals contracted with LHAs financed on a per diem rate, negotiated between the central government and the associations of private/ecclesiastical providers

Third Party Payer = SSN
Paying for hospital services

1992 Reform changes to the structure of hospital care delivery

- Public university hospitals, major and highly specialized hospitals: new independent status (Aziende Ospedaliere, AO) and full responsibility for their budgets, financing, management and technical functioning
- Public hospitals without AO status: remain under the direct control of LHAs, but with some economic and financial autonomy and a separate accounting system
- Private teaching hospitals, private clinics and religious hospitals, contracted with LHAs, maintain previous status
- Introduction of some quasi-market
- Aspects into the system
Paying for hospital services

- 1992 Reform Switch to Prospective Payment Systems (PPS) (as from January 1995)
  - Acute Inpatient and day care: national and regional tariffs by DRG (US HCFA 10th rev.)
  - Ambulatory diagnostic services and specialist treatments: national and regional fees for services (ICD-9-CM based codes)
  - Post Acute, Rehabilitation care: MDC based bed-day rates
  - Post Acute, Long-term care: per diem rates
Reasons behind the switch to PPS (1)

- The deep crisis in early 1990s: a “window of opportunity“
- SSN Reform: regionalisation and “internal markets”
- Switch to PPS: contribution to decentralisation of responsibilities
- Aims: financial risk transfer
- Several models of PPS use allowed by national framework: from “program model” to “liberistic model”
- Opportunistic and virtuous providers behaviours: control systems, internal and external
Reasons behind the switch to PPS (2)

- Declared Expected Effects
- DRG introduction was a case of “policy transfer”, learning from few others experience
- Efficiency, allocative equity, appropriateness of care
Characteristics of early PPS (1) (Min. decree April 15th 1994)

- Regionalization:
- Initial version (regional fares, from 1995)
- Following corrections (max national fares, from 1996)
- And integrations (interregional conventional fare, TUC, from 2003)

- Flexibility:
- Purchaser-Provider “Negotiations”
- Fares levels by Class of Providers
- Fares decrease mechanisms
Characteristics of early PPS (2)
(Min. decree April 15th 1994)

- Standard cost
- Direct Costs: % add-on of indirect and overhead costs
- Capital costs: only technology included
- Uniform definition of health care services
- Only services included in health basket granted by the SSN (Lea)
- Uniform classification systems
- External controls
- Activity and Cost Information Systems at regional and national level
- High Regional Variability
Paying for hospital services

- 1999 Reform:
- Predefined overall budget composed of two elements:
  - National / Regional DRG Fares
    - ✓ Acute Inpatient and Outpatient
    - ✓ Post Acute Inpatient and Outpatient
    - ✓ Ambulatory
  - Standard costs
    - ✓ “Special Care Functions” (e.g. emergencies; transplants)
- Formalization of the “program model” option
An insight into the DRG system

- Which DRG system?
- Uses of DRGs
- Impact of DRGs
- Limitations of DRGs
- The Italian DRG localization project
Which DRG system?

- **1992-1994**: Feasibility study

- **1995 - 2005**
  - US Medicare DRG 10th rev.
  - ICD-9-CM Italian version 1991

- **2006 - 2008**
  - US Medicare DRG 19th rev.
  - ICD-9-CM Italian version 2002

- **As from January 2009**
  - US Medicare DRG 24th rev.
  - ICD-9-CM Italian version 2007
Main differences among US-PPS (Medicare) and Italian payment system

<table>
<thead>
<tr>
<th>SSN</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexible prices</td>
<td>Fixed prices</td>
</tr>
<tr>
<td>Single payer</td>
<td>Multiple payers</td>
</tr>
<tr>
<td>Physicians employees</td>
<td>Physicians not employees</td>
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</table>
Uses of DRGs

- Payment of hospitals
- Setting of accounts across geographic boundaries
- Internal management of hospitals
# Payment of hospitals

<table>
<thead>
<tr>
<th>Level</th>
<th>Unit of Payment</th>
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<tbody>
<tr>
<td>Acute Care</td>
<td>DRG</td>
</tr>
<tr>
<td>Long-term Care</td>
<td>Number of days (not differentiated)</td>
</tr>
<tr>
<td>Rehabilitation</td>
<td>Number of days (by MDC)</td>
</tr>
</tbody>
</table>
Overview of the cost finding model

Yale

Phase 1: mapping

- Hospital Overheads
- Non Inpatient Services
- Direct Inpatient Care Services
- Ancillary Services

Phase 2: allocation statistics

- Non Inpatient Services (direct and allocated)
- Direct Inpatient Services (direct and allocated costs)
- Ancillary Services (direct and allocated costs)

Phase 3: Inpatient fraction statistics

Determination of Inpatient costs for Direct Inpatient and Ancillary Services

Phase 4: allocation statistics

- Average Cost DRG 1
- Average Cost DRG 2
- Average Cost DRG n

Overview of the cost finding model

Yale
# Internal management of hospitals

## Cost Centers

| Cost Centers       | Operating Room | Treatment Therapies | Nursing | Routine Daily | Physicians | Maintain/Deprec | Utility | Administrative | Other Costs | Rad. diagnostic | Rad. therapeutic | Nuclear Medicine | Radiology | Imaging | Cardiac Catheteriz. | Immunol./Blood | Laboratory | Microb./Biochem. | Pathology/Istology | Intensive Care | Coronary Care | Emergency Room | Services |
|--------------------|----------------|--------------------|---------|---------------|-------------|---------------|-------------|--------------|-------------|----------------|----------------|-----------------|-----------------|-----------|---------|-------------------|----------------|------------|-----------------|-----------------|----------------|-------------|---------------|----------|
| DRG 1              |                |                    |         |               |             |               |             |              |             |                |                 |                 |                 |           |         |                   |                |            |                 |                  |                |             |               |          |
| DRG 2              |                |                    |         |               |             |               |             |              |             |                |                 |                 |                 |           |         |                   |                |            |                 |                  |                |             |               |          |
Relative weights estimation process

- Relative weights by DRG by category
- Cost profile by DRG by category
- Cost profile by patient by category
- Service use profile by patient by category
- Type and quantity of services by patient by cost category/resource area
- PRICE OF RESOURCES
- MARKET SITUATION
- PRODUCTION FUNCTION
- TECHNOLOGY
- CLINICAL PRACTICE
- HUMAN RESOURCES
Cost finding: objectives

- Prices
- Planning
- Internal benchmark
- Internal/external benchmarks
- Budgeting

- External benchmark
Limitations:

- Data quality
- Not for outpatient, home care, rehabilitation, and long term care
- Limited severity adjustment
Data Quality

- Medicare reports that in 76.7% of inpatient cases a complication/comorbidity is reported (Fiscal Year 2007). The CC list has lost its capacity to discriminate expected resource consumption (CMS 2007).
“As we have stated frequently, our primary focus in maintaining the CMS DRGs is to serve the Medicare population. We do not have the data or the expertise to maintain the DRGs in clinical areas that are not relevant to the Medicare population. We continue to encourage users of the CMS DRGs (or MS-DRGs if adopted) to make relevant adaptations if they are being used for a non-Medicare patient population” (CMS 2007, page 91).
The Italian DRG localization project

- Main Objectives:
  - Localize coding and classification systems
  - Enlarge the scope of the PPP system to other levels/providers of care
  - Refine cost finding methodology
Italian DRG Project Tools

- Diagnosis: ICD-10-IT
- Procedures: ICD-9-CM Plus
- DRG: IT-DRGs
IT-DRG Project Organization

- Technical Advisory Group
- Strategic Committee
- Scientific Committee

Timing:
- Feasibility project (2010)
- Pilot study (2011 – 2013)
- Systematic use (as from 2013)
The impact of the reforms: some statistics
Acute hospital beds per 1000 population, 1995 and 2007
Occupancy rates of acute hospital beds, 1995 and 2007
Average length of stay for acute care, 1995 and 2007
Annual average change in the number of cases. Inpatient care, Italy, 1998-2008
Annual average change in the average length of stay.
Inpatient care, Italy, 1998-2008
Annual average change in the number of cases
Rehab & long term care, Italy, 1998-2008

<table>
<thead>
<tr>
<th></th>
<th>REH - PUB</th>
<th>REH - PRIV</th>
<th>REH - TOT</th>
<th>LONG - PUB</th>
<th>LONG - PRIV</th>
<th>LONG - TOT</th>
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</thead>
<tbody>
<tr>
<td>Change (annual)</td>
<td>3.2</td>
<td>4.8</td>
<td>3.9</td>
<td>6.4</td>
<td>6.2</td>
<td>6.3</td>
</tr>
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Annual average change in the average length of stay
Rehab & long term care, Italy, 1998-2008
Standardized Hospitalization Rate (per 1.000) 
Italy 1998 - 2008

Year

Standardized Hospitalization Rate (per 1,000)

Italy, by Region, 2008
Average length of stay and average weight
Acute inpatient cases, Italy, 1997-2008
Average length of stay and average weight
Acute inpatient cases, Public hospitals
Italy, 1997-2008

![Graph showing trends in average weight and average length of stay (Alos) for public hospitals in Italy from 2001 to 2008. The graph indicates a steady increase in both metrics over the years.]
Average length of stay and average weight
Acute inpatient cases, Private hospitals
Italy, 1997-2008
<table>
<thead>
<tr>
<th>REGION (sample)</th>
<th>Total discharges</th>
<th>% From Other Regions</th>
<th>% In Other Regions</th>
<th>Total discharges</th>
<th>% From Other Regions</th>
<th>% In Other Regions</th>
</tr>
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<tbody>
<tr>
<td>PIEMONTE</td>
<td>462.784</td>
<td>6,2</td>
<td>7,9</td>
<td>632.813</td>
<td>5,2%</td>
<td>7,3</td>
</tr>
<tr>
<td>LOMBARDIA</td>
<td>1.227.557</td>
<td>8,7</td>
<td>3,9</td>
<td>1.524.827</td>
<td>7,3%</td>
<td>4,0</td>
</tr>
<tr>
<td>VENETO</td>
<td>528.979</td>
<td>8,1</td>
<td>5,7</td>
<td>752.765</td>
<td>7,5%</td>
<td>3,9</td>
</tr>
<tr>
<td>LIGURIA</td>
<td>204.045</td>
<td>11,0</td>
<td>12,1</td>
<td>283.537</td>
<td>11,8%</td>
<td>8,5</td>
</tr>
<tr>
<td>E. ROMAGNA</td>
<td>539.835</td>
<td>13,8</td>
<td>6,0</td>
<td>674.068</td>
<td>11,1%</td>
<td>5,1</td>
</tr>
<tr>
<td>TOSCANA</td>
<td>395.949</td>
<td>10,1</td>
<td>6,6</td>
<td>540.797</td>
<td>8,3%</td>
<td>5,0</td>
</tr>
<tr>
<td>LAZIO</td>
<td>714.215</td>
<td>8,9</td>
<td>6,6</td>
<td>820.302</td>
<td>7,2%</td>
<td>5,8</td>
</tr>
<tr>
<td>CAMPANIA</td>
<td>817.695</td>
<td>2,2</td>
<td>7,4</td>
<td>977.622</td>
<td>2,0%</td>
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<tr>
<td>CALABRIA</td>
<td>278.473</td>
<td>3,2</td>
<td>16,1</td>
<td>408.442</td>
<td>3,4%</td>
<td>11,4</td>
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<tr>
<td>SICILIA</td>
<td>661.426</td>
<td>1,8</td>
<td>6,3</td>
<td>669.997</td>
<td>1,1%</td>
<td>8,3</td>
</tr>
<tr>
<td><strong>ITALY - TOTAL</strong></td>
<td><strong>7.580.029</strong></td>
<td><strong>7,4</strong></td>
<td><strong>7,4</strong></td>
<td><strong>9.633.666</strong></td>
<td><strong>6,5%</strong></td>
<td><strong>6,5%</strong></td>
</tr>
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Setting of accounts among geographic boundaries. South of Italy Regions 1998 - 2008
Average number of diagnoses and procedures per discharge abstract
Italy, 1998-2008
Percentage share of DRG with complication in adjacent DRGs. Italy, 1997-2008

<table>
<thead>
<tr>
<th>Region</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piemonte</td>
<td>36.26</td>
</tr>
<tr>
<td>Valle d'Aosta</td>
<td>41.56</td>
</tr>
<tr>
<td>Lombardia</td>
<td>27.01</td>
</tr>
<tr>
<td>P.A. Bolzano</td>
<td>27.63</td>
</tr>
<tr>
<td>P.A. Trento</td>
<td>33.36</td>
</tr>
<tr>
<td>Veneto</td>
<td>25.53</td>
</tr>
<tr>
<td>Friuli V.G.</td>
<td>32.92</td>
</tr>
<tr>
<td>Liguria</td>
<td>38.53</td>
</tr>
<tr>
<td>Emilia Romagna</td>
<td>33.69</td>
</tr>
<tr>
<td>Toscana</td>
<td>34.48</td>
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<tr>
<td>Umbria</td>
<td>32.46</td>
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<tr>
<td>Marche</td>
<td>30.81</td>
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<tr>
<td>Lazio</td>
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<tr>
<td>Abruzzo</td>
<td>30.54</td>
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<td>Molise</td>
<td>35.64</td>
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<td>Campania</td>
<td>23.43</td>
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<tr>
<td>Puglia</td>
<td>30.26</td>
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<tr>
<td>Basilicata</td>
<td>35.86</td>
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<td>Calabria</td>
<td>29.47</td>
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<td>Sicilia</td>
<td>30.76</td>
</tr>
<tr>
<td>Sardegna</td>
<td>28.97</td>
</tr>
<tr>
<td>ITALIA</td>
<td>29.57</td>
</tr>
</tbody>
</table>
Shift of “high risk” DRGs from inpatient to outpatient. Italy, 2002-2008
Thank you for your attention!