How to drive performance in the health care sector: the Tuscany experience

Prof. S.Nuti, Laboratory of Management and Healthcare, Institute of Management, Scuola Superiore Sant’Anna, Pisa (Italy)

30th September 2013
It’s a Beveridge-like model: Universal, Comprehensive (almost), Free, Financed by general taxation.

It is organized in three levels:

- The national level is responsible for national health planning, including general aims and annual financial resources and for ensuring a uniform level of services, care and assistance (LEA).

- The regional level has the responsibility for planning, organizing and managing its health care system through LHA’s activities in order to meet the needs of their population.

- The local level (Local Health Authorities): provides care through public and/or private hospitals, primary care and prevention services.
About Tuscany

Tuscany is the 10th Italian Region by population, and the 8th by GDP per capita

Key Facts

- 3,700,000 inhabitants, Public Healthcare System Beveridge Model Universal coverage, 51,000 employees, 6,400 ml of euros.
- 12 Local Health Authorities (ASL) in Tuscany; **ASL** generally act at a “province level”, with an average population between 300,000 and 400,000 inhabitants.
- 3 university teaching hospitals in Pisa, Florence and Siena and two focused Hospitals.
- ASL include:
  - Department of public health
  - Districts and Primary care
  - Hospital Facilities
- The private providers are in Tuscany a very small number and are under contract with the Region (Hospital beds are 95% public).

Sources: Istat, Ircet, Regione Toscana, A.T. Kearney Analysis, Ministero dell’Economia e delle Finanze
Regional Planning and Control system
Tuscany

Set standards and goals

Region

LHA 1  LHA 2  LHA 3  ...LHA N

Managers  Managers

Professionals  Professionals  Professionals

Negotiation top down and bottom up

How to drive performance in the health care sector: the Tuscany experience
The regional Performance Evaluation System

250 indicators in total
130 evaluation indicators
50 index indicators
6 areas

Scores and colors:

- 4 - 5 GREEN: Excellent Performance (Strength)
- 3 - 4 LIGHT GREEN: Good Performance
- 2 - 3 YELLOW: Average Performance
- 1 - 2 ORANGE: Poor Performance
- 0 - 1 RED: Very poor Performance (Weakness)

Clinical performance
Capacity to pursue regional strategies
Efficiency and financial performance

Patients Satisfaction
Employees Satisfaction
Population health status

How to drive performance in the health care sector: the Tuscany experience
Percentage of femur fractures operated within 2 days from admission – year 2011
% of femoral fracture operated within 2 days from admission - 2012
Regional tools to measure and manage performance

Ranking in benchmarking

LHA’s performance

LHA’s capacity to improve on the basis of the starting point

How to drive performance in the health care sector: the Tuscany experience
How to drive performance in the health care sector: the Tuscany experience
How to drive performance in the health care sector: the Tuscany experience
How to drive performance in the health care sector: the Tuscany experience
How to drive performance in the health care sector: the Tuscany experience
How to drive performance in the health care sector: the Tuscany experience
How to drive performance in the health care sector: the Tuscany experience
Hospital strategic map

On the right way
Keep an eye on

Excellent!
Warning
bad
good

How to drive performance in the health care sector: the Tuscany experience
Which effects does the application of performance evaluation system had on the Tuscan Healthcare System?

Which results have been achieved?

Some evidences from the Performance Evaluation System (PES) adopted in the Tuscan health care system


How to drive performance in the health care sector: the Tuscany experience
Since 2006 every year more than 60% of performance indicators have improved.

The region holds on financial sustainability even in 2012 when resources were reduced

Outcome results improved

Some examples of outcome

Source: Tuscan Performance evaluation system several years
Since 2006 more than 60% of performance indicators have improved.
The region holds on financial sustainability even though resources were reduced

Outcome improved

Some examples of performance indicators

Source: Tuscan Performance evaluation system several years
Strategies and results...

Table 4  Adjusted proportion of hospitalisations for hip fractures in patients aged ≥65 years in whom surgery was performed within 48 h of admission, 2006–2007 vs 2008–2009

<table>
<thead>
<tr>
<th>Region</th>
<th>2006–2007</th>
<th>2008–2009</th>
<th>RR</th>
<th>p</th>
<th>Absolute difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Adjusted proportion</td>
<td>N</td>
<td>Adjusted proportion</td>
<td>RR</td>
</tr>
<tr>
<td>Lazio</td>
<td>12 585</td>
<td>11.8</td>
<td>12 469</td>
<td>16.7</td>
<td>1.42</td>
</tr>
<tr>
<td>Tuscany</td>
<td>11 486</td>
<td>30.2</td>
<td>11 122</td>
<td>45.2</td>
<td>1.49</td>
</tr>
<tr>
<td>Other Italian regions</td>
<td>113 436</td>
<td>29.5</td>
<td>112 222</td>
<td>28.6</td>
<td>0.97</td>
</tr>
</tbody>
</table>

Table 5  Proportion of hip operations performed within 48 h of admission in 2008–2009 compared with 2006–2007: changes in Lazio and Tuscany hospitals

| Increased | No change | Reduced |

<table>
<thead>
<tr>
<th>N (%)</th>
<th>Median change (IQR)</th>
<th>N (%)</th>
<th>Median change (IQR)</th>
<th>N (%)</th>
<th>Median change (IQR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lazio hospitals</td>
<td>11 (26.2)</td>
<td>+10.6 (4.8)</td>
<td>30 (71.4)</td>
<td>+0.2 (2.8)</td>
<td>1 (2.3)</td>
</tr>
<tr>
<td>Tuscany hospitals</td>
<td>17 (65.4)</td>
<td>+23.3 (14.3)</td>
<td>8 (30.8)</td>
<td>+0.4 (6.3)</td>
<td>1 (3.8)</td>
</tr>
<tr>
<td>Other Italian hospitals</td>
<td>43 (11.7)</td>
<td>+12.2 (12.9)</td>
<td>260 (70.6)</td>
<td>–0.3 (5.4)</td>
<td>65 (17.7)</td>
</tr>
</tbody>
</table>

NE, not evaluable.

**Reward system in the Tuscany Region**

**INTRINSIC**

**HEALTH PROFESSIONALS**

- Professional reputation
- Public disclosure of results
- Enabling peer review mechanism

**EXTRINSIC**

**CEO (managers)**

- Financial incentives that can achieve the 20% of the salary

CEO’s rewarding system added emphasis on the Tuscan PES: **incentivized indicators improve 2.7 times** than other PES indicators. Moreover, the results of a second model on 2008-2010 data show that incentivized indicators that keep into account the **baseline performance improve more than the others** (OR 1.5).

Due to this empirical evidence, in 2011 every Health Authority receives personalized target for each indicator of the Tuscan PES in order to gather the financial reward related to the overall indicator.

Plot per capita cost vs % overall performances 2007, confirmed in all the following years

![Plot per capita cost and % overall performances](image)

The reference lines correspond to regional average.


Significance level $p<0.05$

Now management and professionals are aware that high costs do not mean high quality
The Performance evaluation system is able to drive improvement... But is it also able to achieve equity?

Horizontal: citizens with same needs require same level of answer

Variation management within the regions should be included in the governance system to cope more with austerity.

Is there more room to reduce waste, and have more savings and value for money?
Performance in Tuscany Region
Trend and variability – 2011 VS 2012

Gli indicatori per i quali è possibile calcolare il trend 2011 vs 2012 sono 108
Value for money is a moving target. Increasing value requires experimentation and conscientious performance measurement using actionable and specific indicators. Benchmarking within and across countries, and sharing information can help. Mutual observation is key to uncovering effective practices and the circumstance in which they work. Further work at the international level will, by bringing experience, evidence and new ideas together, help policy makers meet the challenges they face.
The analysis based on **benchmarking** the performance of the LHAs allows the identification of the "**possible**" spaces of action with different degrees of complexity.

**Objectives**

**Estimation of the resources that** can be re-allocated to other services in the medium-long term

**Priority of intervention in** each LHA
Working on the management of variability, reducing the inappropriate services, offering better quality services in Tuscany 7% of the budget could be re-allocated in the medium term.
The Performance evaluation system is able to drive improvement... But is it also able to achieve equity?

**Horizontal**: citizens with same needs require same level of answer

**Vertical**: “not equal parts among unequals” (don Lorenzo Milani)

**Intergenerational**: young people should have the right to the same life and health opportunity of the old persons
Strategies of Priority setting: margins of maneuver, ie where to intervene to re-allocate the resources available...

For who and for what we are spending … few examples
Equity and hospitalization access for chronic diseases: heart failure

B9.5.1 - Rapporto tra tassi di ospedalizzazione per scompenso per titolo di studio

Year 2010
Margins of Maneuver avoidable hospitalization drg MEDICI

Valore a Drg dei ricoveri evitabili rispetto alla Mediana

DRG value of avoidable hospitalizations calculated on std rate
TO std per 1000 inhabitans, over 85 who have been in intensive care
Tuscany Region 2011
% deceased patients over 80 from ER with medical or ICU admission

Tuscany Region
The cost of one hospital day in ICU varies from 1200 euros to 1800 euros. In Tuscany for over 85-year-olds we use 20,724 days in hospital for a total cost of about 25 million euros. In average in Toscany 33% of these patients die during hospitalization.
In conclusion, to improve governance systems in regional health systems the following phases are essential:

- **Governance systems to improve performance**
- **Transparency of objectives and results**
- **Integration within system levels**
- **Increased involvement and accountability of clinicians with an interdisciplinarity approach** to manage variability, guarantee more equity and value for money.

It is difficult to get more resources for healthcare but there is room for achieving more and better results.

Courage is fundamental in the process of resource re-allocation. Resources must be re-allocated towards those services ensuring higher “value” and effectiveness to citizens.

“How to drive performance in the health care sector: the Tuscany experience”
• The Performance Evaluation System of Health Care in Tuscany - Report 2010

• Nuti S., Seghieri C. (2013, online first), *Is variation management included in regional healthcare governance systems? Some proposals from Italy*, Health Policy.


Thank you!

Contact information:

s.nuti@sssup.it

+39 050 883996

http://www.meslab.sssup.it/en/