Strategic Management Accounting
course 25/09/2015

MANAGING PERFORMANCE IN HEALTHCARE: THE BSC OF VERONA INTEGRATED UNIVERSITY HOSPITAL

Sara Moggi*, Armando Suppa, Chiara Leardini, Bettina Campedelli

Paper presented at Aidea conference 2013

WHY THIS RESEARCH

- This study is part of a wider research on the PMS in the integrated Hospitals. Verona is the starting point both for the accessibility of the data and for the desire of the Integrated Hospital of Verona to understand weakness and strength of the "new" BSC implementation

- Literature gap: there is a lack of studies on PMS in integrated hospitals (teaching + hospital)

The Public Management System in Healthcare (1)

- During the past two decades , the Italian National Health Service **has made a great effort** to conform to New Public Management principles (Mattei, 2006).
- In public sector several managerial concepts and tools were introduced with a **strong focus on cost reduction**.
- Healthcare organizations needed 'new accounting and measurement system' (Annessi-Pessina and Cantù, 2006) an so 'a series of significant changes' occurred to tighten 'the effectiveness of **an accounting system in monitoring and controlling costs**' (Marcon and Panozzo, 1998).
- Multidimensional measurement systems were implemented: measuring not only **output** but also **outcome** (also impact of the outcome) (Smith, 1995)

The Public Management System in Healthcare (2)

- The management control systems in the Italian National Health Service have changed to more effectively address the objectives of **cost reduction, efficiency seeking, quality, customer satisfaction, and effectiveness**.

- Therefore, in the early 1990s health organizations adopted the operating budget to **control costs**, reduce wastefulness and measure revenues. At the end of the 1990s, these organizations introduced the performance budget to link **inputs** (financial resources) to **outputs** (achievement of objectives). As such, the focus shifted from one solely based on financial

The Public Management System in Healthcare (3)

- As such, the focus shifted from one solely based on financial measures to one based on both financial and outcome. In this sense, outcome was considered the **'valuation placed by society on the activities of the public sector'** (Smith, 1995; p. 15).
- To achieve a holistic view of organizations' management, in the 2000s multidimensional measurement systems were developed and implemented, in which several dimensions were jointly considered, including internal processes, quality, financial aspects, and effectiveness, with particular **emphasis on customer perceptions**

PMS and BSC

- The **global economics crisis** has affected the budgets of most of the OECD countries, and therefore public organizations have struggled to improve their systems from performance measurement to performance management

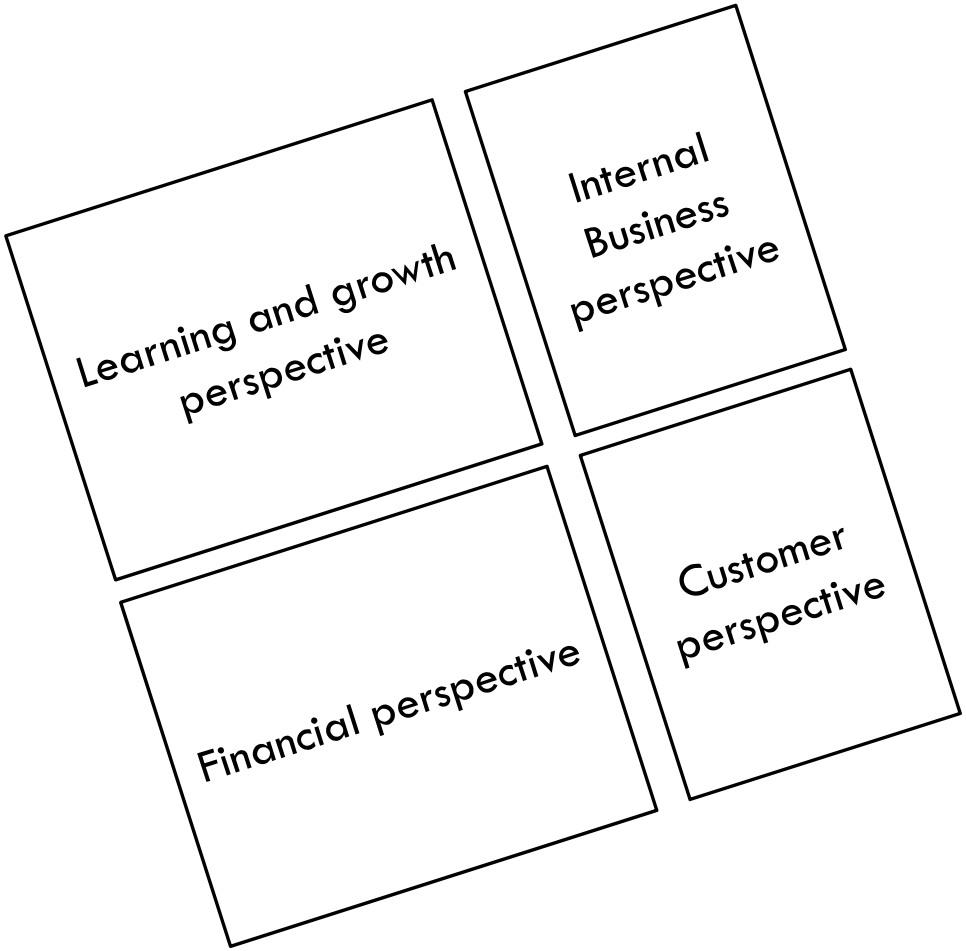
- **Increased external pressures** (to reduce financial recourses and increase heath demand) and the **internal need for balanced management** of the new integrated structure induced the VIUH to develop a new multidimensional performance management system (PMS), based on the balanced scorecard (BSC) (Kaplan, 2001).

BSC in healthcare

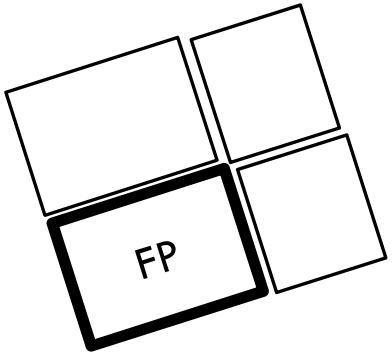
- The **BSC** is a **widely used tool in healthcare organizations** and, indeed, plays a central role in public service and healthcare management. 'When dramatic changes are inevitable, developing a strategic focus and examining the business and quality of the health care in a measurable and repeatable manner becomes each organisation's opportunity' (Meliones et al., 2001; p. 28).

- The constant environmental changes and increasing attention of **internal and external stakeholders** have prompted a need for more informative and flexible models that aid organizations in quickly modifying their performance targets

Standard BSC healthcare organizations (Gurd and Gao, 2008)

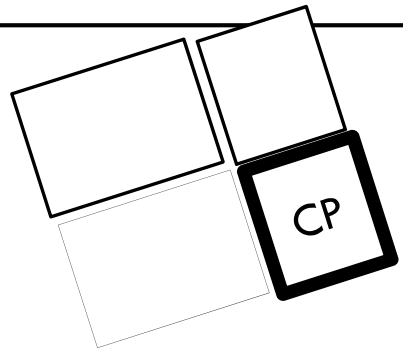


Standard BSC in healthcare
Financial perspectives



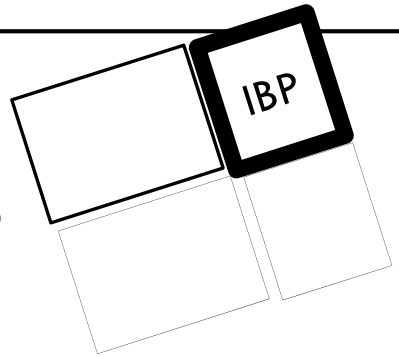
Revenue Growth indicators	Growth in net revenues, volume growth by key service line, amount/sources of funds raised, number of contracts received, increase in contracts, percentage of contracts relative to competition, dollars generated from new contracts, patient census, competitive position, market share, referrals and use, dollars raised from community (number and dollars of corporate gifts, level of fund-raising activity for the hospital, etc.), funds raised for facility improvements, payer mix (percent commercial), number of out-patient visits, research grants, cardiology cases per month, etc.
Productivity indicators	Profit, operating margin, depreciation, amortization and expense expressed as a percentage of net revenue, total assets by net revenue, current ratio, unit profitability (cost per case, cost per discharge), supply expense and pharmacy expense, personnel cost, reduced cash outlays, general drug prescribing, operations within budget (overtime, unit expenditures), length of stay, operating room supply expense per surgical case, etc.

Standard BSC in healthcare
Customer perspectives



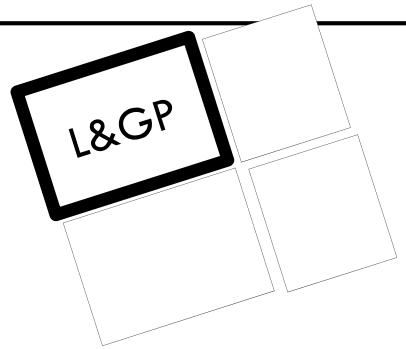
Patient retention	For example: patient retention, percent patient would recommend, number of contracts renewed, etc.
Patient acquisition	For example: number of new contracts per period, market share, etc.
Patient satisfaction	Patient satisfaction and interrelated factors: Patient referral rate reflects patient satisfaction Factors that influence patient satisfaction:, e.g. patient waiting time, access, accurate diagnosis rate, accurate test rate, incidents, hospital-acquired infections, discharge timeliness, unplanned readmissions, hospital food, number of best practice initiatives Payers' satisfaction: for example, Health Maintenance Organizations' satisfaction (number of contracts), stakeholder satisfaction with services (quality of services, complaints, public opinion) Staff satisfaction: staff satisfaction (employee satisfaction, physician satisfaction, retention rate, absentee rate, turnover rate) Image and reputation: reputation, number of referrals, community satisfaction, increased community support, increased donations, favourable press coverage featuring doctors/staff, advertising budget per bed, etc.

Standard BSC in healthcare
Internal business perspectives



Patient satisfaction	Length of stay, case cancellations, waiting time, discharge, readmission rate, mortality index, number of patient falls, call centre response time, claim processing accuracy, weekly patient complaints, % emergency patients triaged within 15 minutes of arrival; mortality index, billing and collections/posting time, etc.
Safety and health	Risk management, for example, infection rate, coding error rate (clinic and hospital), medication errors per dose, occupational injuries, restraint usage, serious incidents, perfect orders (reduce errors), etc.
Productivity	Cost per patient day; cost per diagnosis; cost per product; per case cost, daily staffing vs occupancy, resource utilisation ratio, percentage of occupied beds, hours per unit of activity, resource utilization ($ value of outputs/net operating costs), performance against contract ($ value of outputs/$ value of contract), etc.
Innovation	Product innovation, staff training, number of physicians using online hospital clinical information systems, employee turnover rate, etc

Standard BSC in healthcare Learning and growth perspectives



Human capital	Staff development, including training times, continuing education credits, publications, tuition reimbursement dollars spent per year, percentage of clinical staff who receive change management training, board leader/skills and knowledge
Information capital	Strategic database (availability, use), work design, computer networks and training, key infrastructure targets, etc.
Continuous innovation	Number and quality of new services offered in past five years, new research projects, number of institutions/agencies participating in joint activities, etc.
Organization capital	Staff satisfaction levels, employee survey rating, staff turnover, staff retention, sickness rate, absenteeism, leadership survey, leader approval rate, strategic alliances, culture of improvement, communication, enhance employee motivation and empowerment (decision-making participation, performance improved activities), etc.

?Research questions?

- **How** did the Verona integrated University Hospital introduce and use the BSC?

- How did **critical aspects** influence the implementation and actual use of the BSC?

Verona Integrated University Hospital

- It is a public organization situated in North-East Italy that, together with the hospital and the directly linked structures, hospitalizes 60.000 people every year and provides job for 5.000 people

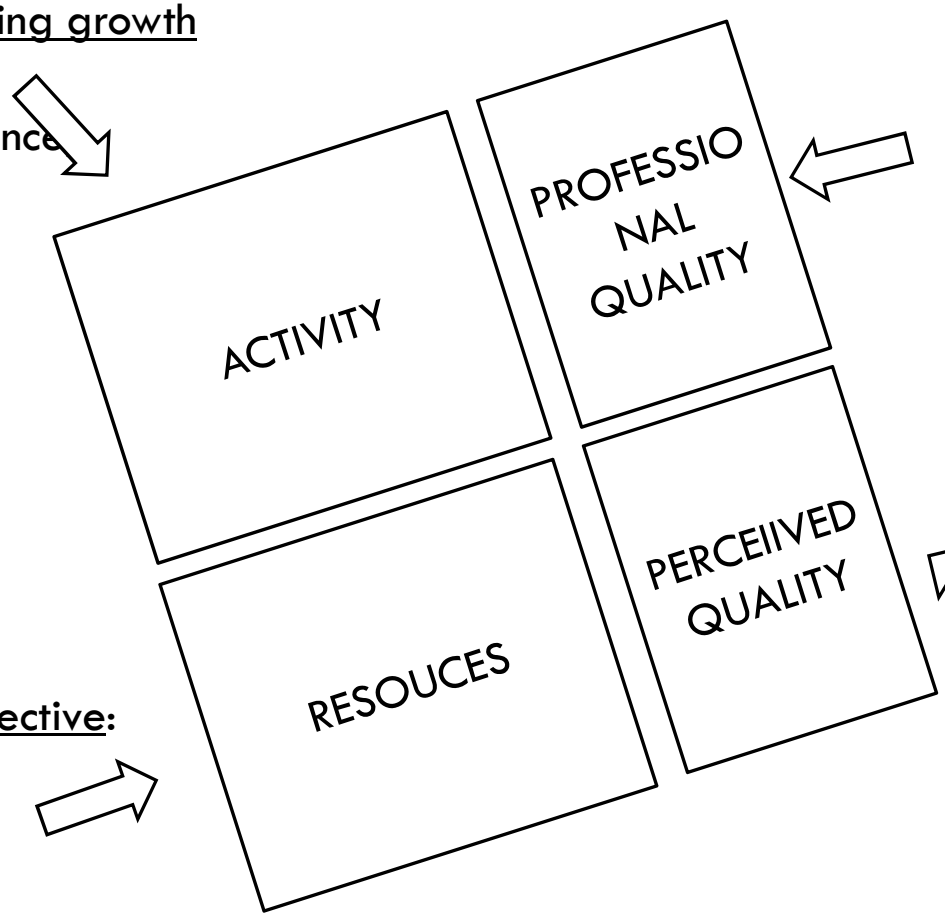
- **MERGER** between the teaching hospital and the independent hospital of Verona (2010)

- Since 2010 VIUH has developed a multidimensional **PMS**, based on the balance score card (Gurd and Gao, 2007; Fryer et al., 2009), partially due to the provisions of the legislative Decree n.150/2009 (also called Brunetta Reform)

BSC in Verona Integrated University Hospital

AZIENDA OSPEDALIERA UNIVERSITARIA INTEGRATA VERONA

Activity (<u>Learning growth perspective</u>)
- Health assistance
- Research
- Teaching



<u>Internal "business" perspective</u>
Capacity to manage the process regarding:
- Reengineering
- Medical results evaluation projects

<u>Financial perspective</u>:
- Costs
- Revenues
- Efficiency

<u>Customer perspective</u>
It monitors the (internal and external) customer satisfaction

Methodology

- Qualitative approach (Creswell, 2007) .
- The case study (Stake, 1978; Patton, 2002; Yin, 2009).
- Selection of cases (Eisendhardt, 1989) = Best practice in term of BSC application in Italian integrated hospitals (Patton, 2002).
- We conducted seven **interviews** from March 2013 to July 2013 with **KEY INFORMANTS** (managers, clinicians, and accounting staff) involved in the introduction and development of the PMS in their organizations + **INTERNAL DOCUMENT ANALYSIS**

Data collection

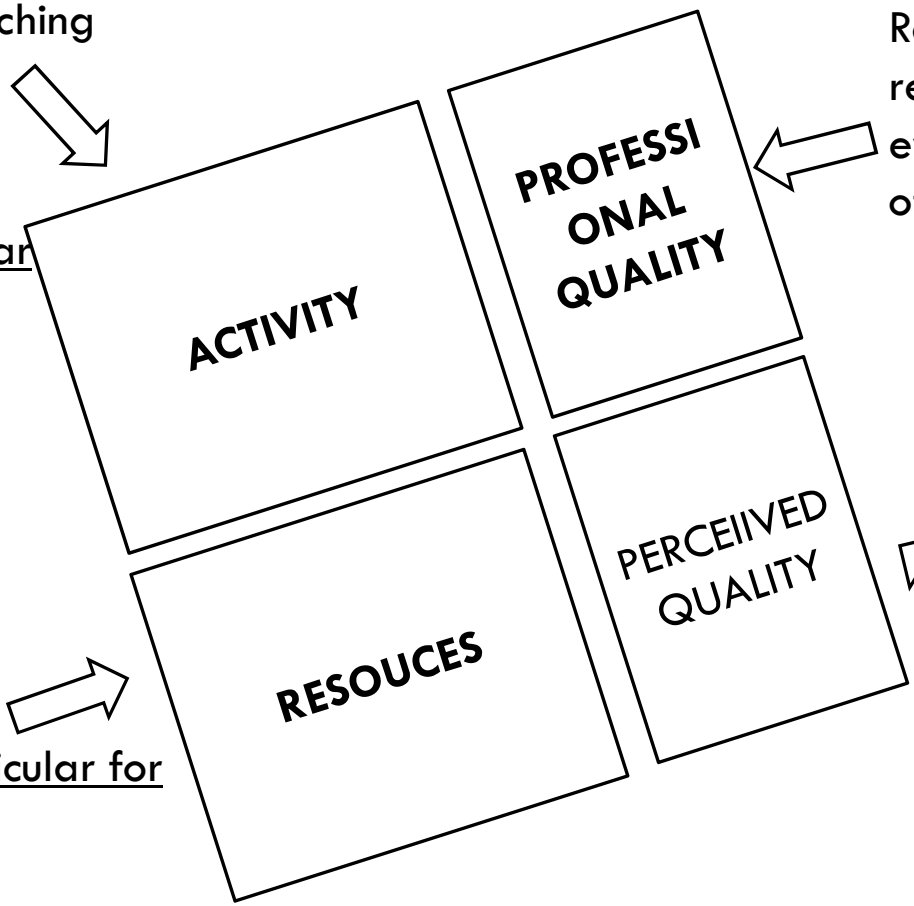
- We selected personnel and managers of the management control unit, the manager of the quality office and the clinical and pharmacy managers (both physicians) for their **knowledge and firsthand experience in the implementation and use of BSC** after a three-year adoption;
- Following Arksey and Knight's (1999) suggestions, two researchers conducted the interviews to provide **different perspectives** in the analysis of the answers;

Results (1)
BSC real implementation

AZIENDA OSPEDALIERA UNIVERSITARIA INTEGRATA VERONA

- Health assistance (partially developed);
- Research and teaching (underdeveloped)

Define the goals to achieve the next year



Respond to the clinicians' request in term of evaluation of the real quality of the jobs

Core section in particular for the costs monitoring

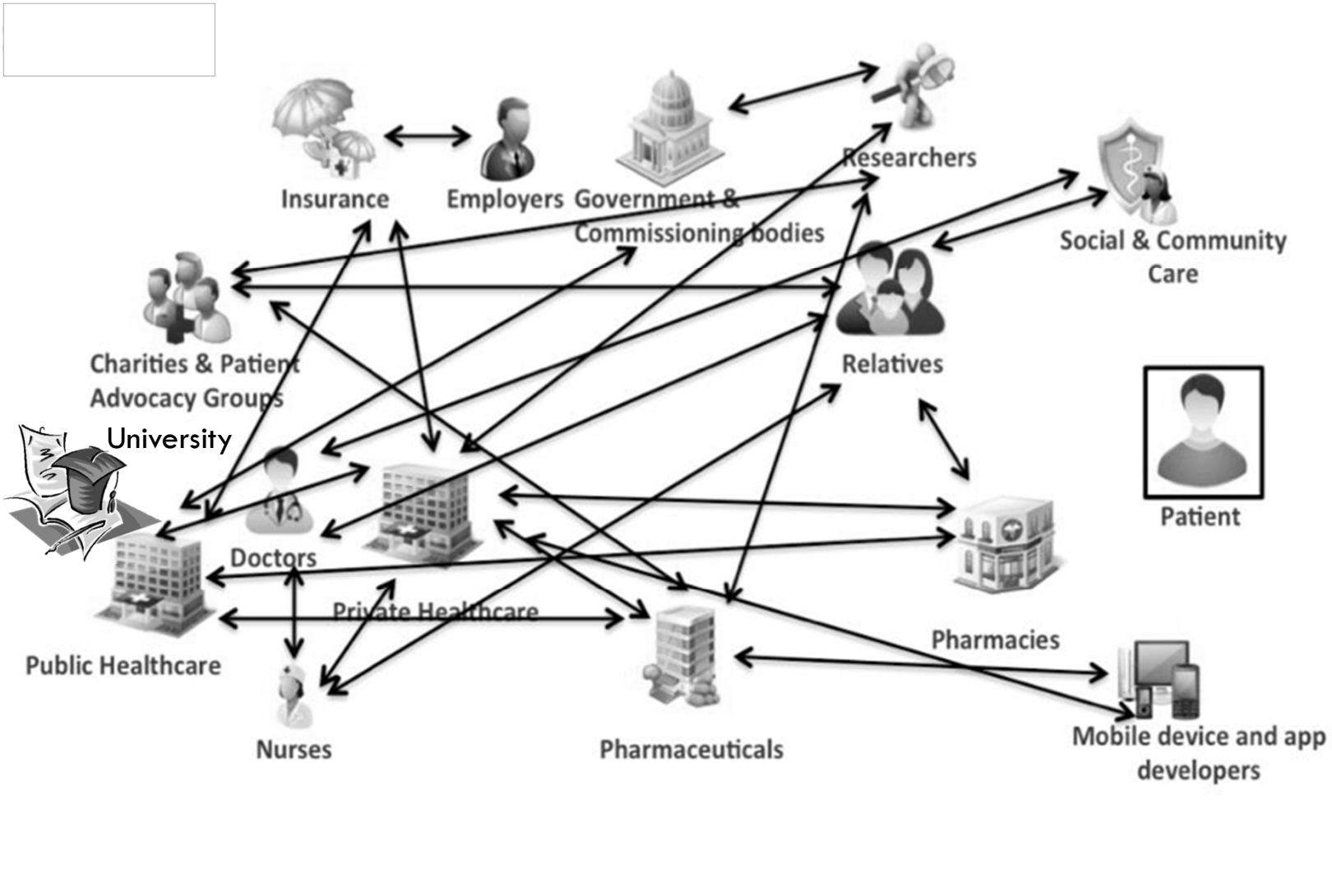
Different information systems

Results (2)

The PMS of the VIUH is inspired by the BSC system and includes four perspectives:

- **Activity**: measures the three main activities of VIUH: health assistance (main objective of an independent hospital), research and teaching (main functions of a teaching hospital).
- **Resources**: reflects the financial aspects, taking into account costs, revenues and efficiency
- **Professional quality**: captures the capacity of the VIUH to manage and perform health processes; this dimension involves process reengineering, medical results evaluation and projects.
- **Perceived quality**: monitors the customer satisfaction from both internal and external customers (BSC patient perspective) with an annual survey.

Stakeholders perspective



Results (3)

- Actually the new model centers on consumed control (**resources**), specifically that pertaining to costs and economical budget monitoring.
- The control of **health assistance** is only partially developed
- After two years of monitoring, measurement of **teaching and research** activities remains underdeveloped. The actual activities of these two areas are to define the goals to achieve for the next year. This section was improved after the merger, when the need to measure the university activities also was realized. The **information systems** were completely distinct, and as a consequence, the merged entities have continued to use different measurements for research and teaching. Both the university and the hospital want to maintain their original **autonomy**.
- The **professional quality perspective** monitors the quality of the clinical activities, in response to medical requests on the evaluation of the real quality of jobs that could not be measured only by quantifying the resources consumed.

Results (4)

- Key informants reported that the **'new' PMS** is nothing more than an evolution of the previous one: The apparent 'small' changes supports the mistaken belief that a **training** period is not necessary for users, causing a delay in system application.
- One risk is **exceeding the number of indicators**, hampering a simple understanding of the goals and causing negative reactions from the doctors in particular.
- **Goals** are defined every 3 years, but revisited each year.
- In the same organization there are different levels of PMS implementation depending of the people **resistance to the change**.
- Strong influence of the **Region** that fixed the level of performance to achieve.
- **Participative leadership** of the management based on minor red tape and budget negotiation

Conclusions

- Our analysis is consistent with previous researches, which highlight the many difficulties encountered during implementation of a PMS, in particular for organizations undergoing mergers;
- The introduction of the PMS has positively influenced the practices of the VIUH, though much work remains. The introduction of the PMS itself encouraged a higher quality of data collection (Longo et al., 2011). Furthermore, the resistance to change of the clinicians has led to the development of the qualities perspectives of the BSC.
- Successful (merger) integration will occur only if the new PMS model is treated as a tool for achieving business goals rather than solely one to control costs (regional goals).

Future research & limitations

- Limitation: little number of key informants interviewed

- The initial step of analysis has identified both the critical aspects of and the key informants involved in performance measurement and the management process, particularly those in middle management. To further understand **the application of and engagement with other hierarchic levels** of the organization, our next set of interviews will be with the department directors and other key stakeholders involved in the PMS implementation.

Thank you for your attention!

Questions?

sara.moggi@univr.it