



# UNIVERSITÀ DI PARMA

## ARCHIVIO DELLA RICERCA

University of Parma Research Repository

Management Tools for Quality Performance Improvement in Italian Hospitals

This is a pre print version of the following article:

*Original*

Management Tools for Quality Performance Improvement in Italian Hospitals / Fanelli, Simone; Lanza, Gianluca; Zangrandi, Antonello. - In: INTERNATIONAL JOURNAL OF PUBLIC ADMINISTRATION. - ISSN 0190-0692. - 40:10(2017), pp. 808-819. [10.1080/01900692.2017.1280821]

*Availability:*

This version is available at: 11381/2822103 since: 2021-11-17T10:55:48Z

*Publisher:*

Taylor and Francis Inc.

*Published*

DOI:10.1080/01900692.2017.1280821

*Terms of use:*

Anyone can freely access the full text of works made available as "Open Access". Works made available

*Publisher copyright*

note finali coverpage

(Article begins on next page)

# MANAGEMENT TOOLS FOR QUALITY PERFORMANCE IMPROVEMENT IN ITALIAN HOSPITALS

## **Abstract**

Leadership plays a decisive role in improving quality performance in healthcare organizations. Research examines how Italian hospitals generate conditions to support leadership, at both top management and department/unit level, in improving quality. It focuses on the role of management in processes for the delegation of responsibilities, and tools implemented to facilitate clinical leadership. Data show that: mandate is linked to full accountability; top management supports leadership for reinforcing outputs; evaluation processes are systematically implemented. Furthermore, data show that leaders require performance systems to enhance clinical professionalism and to commit to improving performance.

**Keywords:** hospitals, leadership, management tools, quality performance

# **MANAGEMENT TOOLS FOR QUALITY PERFORMANCE IMPROVEMENT IN ITALIAN HOSPITALS**

## **INTRODUCTION**

Hospitals all over the world face strong pressure from a multiplicity of stakeholders to improve their performance. However, hospital performance is not a simple and one-dimensional concept; numerous elements must be taken in account. First, different stakeholder groups perceive it differently. Tangsoc and Bautista (2016) identify three such groups, each having a different perspective on main performance dimensions. The first is patients, the main service recipients, who seek service satisfaction through effective and quality healthcare services leading to better health outcomes (Martinez & Martinez, 2010). Patients emphasize courtesy, communication and responsiveness. The second stakeholder group is healthcare professionals, who are the direct service providers. They emphasize technical attributes including staff competences and patient outcomes. The third group is hospital management, who are the indirect service providers. Management focus on transversal competences, understanding customers and collaboration.

The second aspect of hospital performance is that it concerns different areas, including clinical quality, enhancement of services, expansion of access and cost reduction (Curtright, Stolp-Smith, & Edell, 2000). In general, in industrialized countries, there is demand for more and higher standard health services, along with the need to monitor and limit costs, so that management is obliged to pay increasing attention to the ratio between resources used and healthcare quality (Langlois et al., 2015). Performance evaluation has thus become a key aspect of running a healthcare organization. Feedback on processes and results is the key to identifying critical areas and implementing improvement procedures (Morse, Koven, Mundt, & Gohmann, 2008; van Schoten, de Blok, Spreeuwenberg, Groenewegen, & Wagner, 2016; Torok et al.,

2016). The literature widely recognizes the value of using performance indicators to measure performance and create benchmarks for performance improvement (Berwick, James, & Coye, 2003; de Korne et al., 2012; van Veen-Berkx et al., 2016).

In fact, over time there has been a proliferation of management tools for improving performance, monitoring and evaluating results and reporting them to various stakeholder groups. These tools have become increasingly sophisticated and precise to take account of the multidimensional nature of performance and different types of requirement for information.

Many researchers have thus identified and developed complex approaches to evaluating performance of healthcare organizations, and these are now outlined.

Quinn and Rohrbaugh (1981) define a Competing Values Framework of four quadrants formed by the intersection of two dimensions. The horizontal dimension represents the internal / external dimension of the organization and the vertical dimension represents the dimension of control / flexibility of the organization. Each quadrant thus measures a dominant conceptual model of organizational performance: rational goal (goal achievement), human relations (participation and involvement of staff), open systems (adaptation to economic, social, and political environments), and internal process (reliability, stability and continuity). Keegan et al. (1989) present a balanced performance measurement matrix, and distinguish performance indicators into financial vs. non-financial and internal vs. external. An important aspect of the model is the use of the key metric approach and the “Determine and Decompose” method. This involves decomposing departments into functional equivalents and assessing how the departments support the business. Azzone et al. (1991) propose a detailed and specific performance measurement framework based on time. These measures consider internal configuration and external configuration as dimensions of performance that reflect the efficiency and effectiveness of the organization. This framework has the advantage of taking into account different ways the organization can make use of time to gain competitive

advantage and the main activities critical for this outcome. Lynch and Cross (1991) define the performance pyramid system, an approach that links strategic view of performance with operational processes. It shows how the top management informs the organization of targets and the performance measures to be used at each level, and monitors performance at different levels of organization. Kaplan and Norton (1992) present a balanced scorecard framework for measuring performance of an organization, whereby management monitors performance in four key dimensions: financial perspective, internal perspective, customer perspective and learning and growth perspective. Brown (1996) splits the process of performance creation into four steps: input, processes, output, and outcome. Each stage is the driver of performance for the next, and the approach develops the concept of linking measures through cause and effect relationships. Finally, Neely et al. (2001) describe the performance prism. This consists of five integrated parts that identify areas for organizations to address: stakeholder satisfaction, strategies, processes, capabilities and stakeholder contribution. The critical and unique aspect of the performance prism is the reorganization of the reciprocal relationship between the stakeholder and the organization.

The various approaches outlined above have in common that they take into account the multidimensional nature of performance. For hospitals, dimensions of performance are clinical effectiveness, safety, patient centeredness, responsive governance, staff orientation and efficiency (Veillard et al., 2005). These dimensions are of course considered interdependent and need to be assessed simultaneously, so the main domains of performance measurement are quality of care, cost and efficiency, patient satisfaction (Nerenz & Neil, 2001). All these domains are important, but in healthcare the quality of care is particularly so (Nwabueze & Mileski, 2008; Burstin, Leatherman, & Goldmann, 2016). This domain focuses on the clinical content of care provided for defined groups of patients. It can however be considered as a heterogeneous measurement domain because there are countless quality of care measures

available. For this reason, structures have to be imposed in order to design a rational system. Donabedian (1988) subdivides quality measures and concepts into “*structure*”, “*process*” and “*outcome*”. This approach has formed the conceptual foundation for quality measurement in this field. *Outcome*, or the effect on the health of the patient, is most heavily emphasized in health organizations, but tends to be difficult to measure and is also difficult to link directly to specific intervention carried out by the hospital. So *process* measures are typically selected because scientific research has shown a particular practice to be associated with favorable patient outcomes. Joint Commission International (JCI), for example, uses *process* measures as proxies of outcome to assess quality of care in hospitals; the quality of care processes in fact determines final outcomes (Beattie & Mackway-Jones, 2004). Finally, *structure* is a key element in care quality: hospitals need to have good facilities, qualified staff in appropriate ratio and a sound organizational structure that encourages good governance and performance. Most measures in the Joint Commission accreditation system and in the National Committee on Quality Assurance (NCQA) accreditation system are structural measures.

This paper focuses on the quality of care as a key dimension in hospital performance and particularly on *structure* and *processes* as key components in service quality improvement. The research was conducted in hospitals following performance improvement strategies towards high standards of care quality and which are members of an international network. The aim was to describe how these hospitals use assessment tools to support quality improvement at both top management and department/unit level. It examines to what extent top management and department/unit chiefs evaluate management tools able to influence professional behaviors. The results of the study provide useful indications for policy-makers and management aiming to develop systems for the improvement of quality performance.

## **THE IMPACT OF LEADERSHIP ON QUALITY PERFORMANCE**

In hospitals, personnel plays a key role at the level of both *structure* and *processes* in generating qualitative services and better outcomes. A hospital with a valid structure relies on a group of professionals with clearly delegated roles and responsibilities. Leadership style is particularly important in creating favorable conditions and leading personnel towards desired outcome (Khaliq, Walston, & Thompson, 2007). Among organizations, in fact, healthcare organizations are the most complex to run (Drucker, 2012) and increasing problems facing hospitals have led to the development of the management culture (Griffith, 2007). Leadership, or “the ability to inspire individual and organizational excellence, to create and attain a shared vision, and to successfully manage change to attain the organization’s strategic ends and successful performance” (Stefl, 2008, p. 368) is becoming an important skill and is increasingly the focus of academic enquiry (Uhl-Bien & Marion, 2009; Martin & Learmonth, 2012; Lega, Prenestini, & Spurgeon, 2013). Although the terms are often used interchangeably, management and leadership are in reality two different concepts. Management is “how”, while leadership defines “what” and “why” a task is accomplished. Management tends focus on the *status quo* of the organization, its systems, supervision and process procedures, while leadership is dynamic and is continuously searching for new processes to ensure the future of the organization (Lorden, Lin, & Cote, 2015). Management therefore needs to have leadership capacity in order to run the organization, and a member of the organization can be a leader even if he or she does not formally fill a management role (Grady & Dickson, 2016).

The recent shift in attention away from management towards leadership reflects the current evolution in healthcare organizations aiming for higher levels of performance. Traditionally, heavy bureaucracy has characterized healthcare organizations, and upper levels of hierarchy have been more interested in planning and budgeting inputs than checking results (Kubica, 2007). This traditional approach however has often led to higher spending rather than improved

outcomes, so many health systems around the world have implemented “managerialization” by measuring outputs and shifting attention to achieved results (Kaplan & Porter, 2011). This has taken place in Italy as in other countries, and from the early 1990s with Law D. Lgs. No. 502 of 1992 managerial tools such as budgeting systems, accrual accounting, cost accounting and performance indicators have been introduced for planning development and better performance (Borgonovi, 2004; Adinolfi, 2014).

Although managerial practices, which include planning, budgeting, organizing, staffing and controlling (Kotter, 1996), are important for good clinical performance (Bloom, Propper, Seiler, & Van Reenen, 2009), good leadership is essential for them to be perceived as truly helpful in guiding personnel in day to day work, in creating consensus and commitment, and therefore for the success of the organization (VanVactor, 2012). Leadership is the critical success factor in building and developing *processes* leading to qualitative performance, and management tools are supporting elements for leading organizations (Bierman & Clark, 2007). For this purpose, leadership needs to be present in all those involved in the health creation process, from strategic management, to middle management and healthcare professionals. It is equally important for management tools to be present and implemented in operational processes supporting clinical functions. The role of the healthcare professional has also evolved. In the past, professional and cultural autonomy did not allow management interventions (Davies & Harrison, 2003). Today, clinical/critical pathway tools, process re-engineering approaches, performance assessment tools and lean management techniques are part of health professionals’ working lives, and they themselves are required to develop managerial and leadership skills along with medical ones (Lin et al., 2011).

It is clear that leadership plays a decisive role in creating good quality performance. Hospitals therefore need to generate conditions to develop and put in place leadership, with particular

reference to four main areas: management support tools, definition of targets and processes, sharing and participation, and identification of critical aspects.

As regards management support tools, leaders require tools to coordinate the work of personnel, and align behavior towards results, and monitor and evaluate performance. They need to enable better collaboration between professionals and supply background to practices in service delivery and feedback on the quality and appropriateness of clinical processes (De Jong & Den Hartog, 2007). Managers and professionals who base their decisions on information from measurement tools are able to develop a continuous improvement process. In fact, there is evidence that the use of management support tools for leaders is correlated with better results in terms of efficiency, efficacy and quality (Bloom et al., 2009; Mazzocato, Savage, Brommels, Aronsson, & Thor, 2010).

The second area of management where leadership is required, development and implementation of targets and processes, entails starting with targets and laying down clear and shared procedures. It is an extremely complex matter to reach high performance levels and great attention needs to be paid to targets and assigning responsibilities. In complex organizations like hospitals, it is crucial for goals to be shared by different management levels if positive outcomes are to be reached (Anantatmula, 2008). Leaders need to define priorities clearly, make everyone aware of them, and ensure that the efforts of everyone are aimed at reaching them (Manion, 2005; Duarte, Goodson, & Arnold, 2013).

In the third area, conditions need to be favorable because the effectiveness of managerial tools is closely linked to their acceptance as crucial factors for governance rather than simply bureaucratic procedures (Byrkjeflot & Kragh Jespersen, 2014; Veillard et al., 2005). It is not sufficient for management tools to be present; good performance requires them to be recognized, shared and to be part of professional day-by-day activities. Clinical skills are the added value in health organizations for obtaining good results, but better outcomes and

developing management culture in health professionals imply that professionals need to be aware of the value of management support tools (Emanuel & Pearson, 2012).

The last area, identifying critical areas, highlights the need to verify possible difficulties in the management process of improving performance. This is closely linked to the other areas previously investigated. There can in fact be various causes for improvement being slowed or hindered, including the unsuitable nature of management tools, inconsistency between targets, tools and results and an excessive management emphasis on bureaucracy. The hospital needs to identify these critical elements and put in place correction measures.

## **METHOD**

Research followed a structured methodology; the aim was to build a useful tool for studying the implication of leadership for quality improvement processes. The research was carried out in the Joint Commission Italian Network. This is made up by more than 30 Italian Healthcare Organizations, both hospitals and other organizations, and comprises all Italian JCI accredited organizations and other important Italian organizations interested in JCI methodology.

JCI methodology focuses on defining processes and behaviors to improve outcomes; working on processes to impact on outcome is a strong link to research question and is related to quality performance improvement of healthcare organizations. The JCI approach to quality performance improvement starts from the idea that integration of all quality management and improvement activities throughout the organization results in improved patient outcome (JCI, 2014).

JCI uses the concept of the standard; standards set uniform and high expectations for the safety and quality of patient care, and country-specific considerations related to compliance with those expectations are part of the accreditation process. All standards contain statements of intent for each standard and measurable elements for assessing compliance with it.

A survey questionnaire was built to study leadership impact on quality improvement processes. It defines four macro-areas of investigation (Table 1).

[Table 1 here]

The first macro-area covers response to questions about “How hospitals measure quality performance” and focuses on methods of measuring. It identifies the aspects measured and the type of measurement tools used. Research focuses on certain types of tool, such as protocols and indicators, which are indicated by the JCI and other international guidelines as being key elements.

The second macro-area, “How hospitals define goals and processes” covers the ways in which hospitals define their objectives, how these are assigned to professionals with relation to their position in the hierarchy, how hospitals ensure that hospital policy is implemented and methods of reporting.

The third macro-area, “Manager and professional satisfaction with quality performance system implemented in their organizations” features professionals’ and managers’ perception of the tools in use. They are asked for their opinion on performance assessment tools and tools for measuring compliance with guidelines, and the reasons underpinning these perceptions are described.

The final macro-area, “Difficulties in the performance quality improvement process”, features critical aspects of the performance assessment system and investigates the level of difficulty inherent in each phase of quality improvement.

Two questionnaires were drawn up, one for hospital management and one for hospital professionals. The questionnaire for hospital management (Chief Executive Officer, Chief Administrative Officer and Medical Director), henceforth “managers” is made up of twenty questions; the questionnaire for hospital professionals (Chief of Department, Chief of Medical

Unit, and Nursing Manager at Department and Unit level), henceforth “professionals” is made up of nineteen questions.

Questionnaires were inclusive and sent to all professionals with any management responsibility working in hospitals. They investigated which tools they use and their perception of leadership impact on organization.

Each of the four areas identified were investigated with more than one question. All questions were identified in relation to the Fifth Edition of Joint Commission International Manual for Hospitals (JCI, 2014); all of them are in fact related to a particular area of the manual, the “Governance, Leadership and Direction” (GLD). The JCI approach to leadership in this particular area comes from the idea that leadership comes from many sources in a health care organization, including governing leaders (governance), leaders, and others who hold positions of leadership, responsibility, and trust.

Once all questions were defined, they were validated by sending it to all quality officers of JCI Accredited Hospitals to check the content and the form of the questions. Feedback received was used in the evaluation of each question and to draw up possible further questions to include on the questionnaire. All feedback was analyzed and all suggestions were evaluated and implemented; from this process the final version of the questionnaires was defined.

The questionnaire thus comprises two sections. The first shows the background, age band and hospital the respondent works for, although first names and surnames are not shown so that it is anonymous. The second section contains the questions.

Thirty organizations were invited to take part in the survey: 21 accepted. Each hospital identified contacts; the management and about ten professionals among nursing staff and doctors as well as other health professionals. Overall the questionnaire was sent to 359 professionals and 69 managers of the hospitals selected.

Responses were collected over a four-month period (July 2015 - October 2015). Data was analyzed using a statistics software and relationships between variables (correlations and associations) were studied using suitable indicators and tests (Pearson's index; Phi index; Test-F; Anova) according to the type of variable and using a significance level of 5%.

At the end of the period for questionnaire response, all data were collected.

### **Description of the sample**

Analysis covered only hospitals with at least 6 respondents, at least 2 managers and at last 4 health professionals. Of the 21 hospitals which agreed to take part in the survey, 18 met these criteria. The sample is thus representative and comprises 60% of hospitals in Italy which are members of the JCI Italian Network. Of the 18 hospitals, 10 are in the public and 8 in the private sector. Thirteen are JCI accredited and 5 are not.

A total of 147 responses were received; 43 from management and 104 from professionals. Breaking up the replies by type of hospital, 94 were from public sector hospitals (25 managers and 69 professionals) and 53 from private sector hospitals (18 managers and 35 professionals). In terms of accreditation, 99 responses were from JCI accredited hospitals (32 managers and 67 professionals) and 48 from non-JCI accredited hospitals (11 managers and 37 professionals). See Table 2.

[Table 2 here]

## **RESULTS**

Now results are presented in the four areas of investigation.

### **How hospitals measure performance quality**

Performance quality evaluation is important for the hospitals in the sample; all of them measure quality in various aspects. These include the standardization of services, risk processes, timing

and quality of treatments. Data show that tools for measuring these aspects are present within the organizations. Reports are most frequently made about risk; over 50% of respondents state that they make or receive reports on it. Forty per cent of respondents use reports on matters relating to speed, efficacy and efficiency of treatment. A more detailed cluster analysis shows that in private hospitals reports are made more frequently (45%) than in public hospitals (34%) and management appear more favorable (41%) to reports than professionals (37%). A preliminary finding is thus that quality performance evaluation is the focus of management systems that use reports as a monitoring tool.

Several tools for evaluating results are used, particularly:

- Descriptive reports on attainment of policy goals (departments, units and staff assessments);
- Formal audits of behaviors actually put into practice;
- Various methods of reporting behavior inconsistent with policy, for example through Public Relations Offices, customer satisfaction surveys, etc.);
- Identification and systematic collection of indicators showing the degree to which targets are reached.

Most organizations use indicators as evaluation tools; almost 75% of respondents, 81% of managers and 71% professionals, state that they are used in their organization. It is interesting that mainly managers in the public sector (76%) use written reports. Managers in the private sector on the other hand prefer audits (66%). Especially in the private sector, professionals appear to use unofficial tip-offs or reports (82%) when identifying behavior inconsistent with expectations. This is in line with the fact that professionals are more familiar with operational tools in their day-to-day professional lives.

In general, there is a strong tendency to measure results using the complete range of different tools. This is very positive as it reveals the ongoing effort being made to generate behavior

aligned with expectations, and results consistent with planned targets. About 80% of respondents stated they used concretely at least two tools, which shows that there is a widespread desire to emphasize consistency between results and policies pursued.

There is a level of criticality regarding reports on behavior compliance with guidelines and protocols. Only slightly more than 35% consider reporting adequate. Closer examination shows that it can be difficult to make use of guidelines and protocols in practice, probably because the professional culture is based on clinical processes and professional skills and teamwork. Here again there is however a significant difference between the public and private sectors; 49% of respondents from the private sector state that there is adequate presence of reports on measuring compliance against only 29% from public sector.

In general, hospitals are strongly oriented towards performance measurements and both professionals and management use these. Indicators are tools used to measure a wide range of targets and results, but the evaluation of consistency of applications of guidelines is not as frequent as it might be.

### **How hospitals define goals and processes**

Measurement processes of results are based on policies pursued and targets identified. The method of identification of targets and processes makes it possible to evaluate the management process and the level of collaboration in performance evaluation. Looking at this issue more closely, it is useful to describe how hospital management assigns targets to chief medical departments or units and subsequently to individual staff members.

Looking at management behavior, a first observation is that goals are usually formalized (93%) and are made clear and explicit. This shows that management supervision is well rooted in the sample. A second observation is that goals are extremely various and include the following: process standardization; risk reduction in critical management processes; clinical services

delivered speedily and efficaciously, with efficient use of resources; delivery of high quality services using evidence-based practice.

The high number of different goals is an indicator that management is aware of the need to take into account multiple aspects of quality. This awareness has however a weakness; goals do not always correspond to systematic assessment systems. Reports in fact are not used in 60% of cases overall. They are used in 25% of cases for standardization targets; 72% of cases for risk reduction targets; 44% of cases for efficacious care; and 23% of cases for high quality treatment targets.

This fact highlights an area of potential improvement; setting up a reporting system consistent with the system of defining targets. In reality, there appears to be a system in place where targets generate behavior expectations, which cannot be concretely evaluated because there are no robust reporting systems. This happens for example for targets linked to the standardization of processes, which are considered to be extremely important but where reporting systems are weak. This means that on one hand organizations aim to modify behaviors, but then they are unable to measure behaviors systematically. Moreover, defining targets that are not systematically measured leads to tension in efforts to reach performance targets.

Turning to how leaders assign targets within units or departments, 75% identify targets formally. This is significant and shows that organization as well as clinical tools are taken seriously. It is however true that 17% assign targets informally, so a culture of informality persists to some extent in some cases. As for targets, 45% of respondents use targets referring to more than one aspect (target care levels and clinical risk); this confirms that formalizing targets is now part of healthcare organizations.

As noted above, the use of reporting is still unsatisfactory, although regular reports are widespread in monitoring systems. About 70% of the sample receive only one report and the most frequent type of content (about 50% of the sample) is risk. The remaining 30% state that

they receive more than one periodical report. Only one respondent states that no report at all is received. The emphasis on risk at the expense of other aspects of quality is a weakness. Only 23% of professionals interviewed state that they receive care quality reports, which are evidence-based.

Focusing on how targets are defined, it is necessary to clarify two distinct phenomena, especially for professionals. There is widespread dissatisfaction with guideline compliance and secondly there is dissatisfaction about reporting. About 50% are satisfied with the guidelines themselves, but only 33% consider the reporting system to be adequate. The situation among management is similar; just over 60% believe protocols and guidelines are adequate but only just over 40% believe consider the reporting system to be adequate.

This may reflect the different roles of managers and professionals. Management tend to find the presence of protocols and guidelines to be adequate, although note that about 30% of managers believe that there are too many of these tools in use. On the other hand, 30% of professionals state that tools such as protocols and guidelines require improvement in their hospital.

The key to establishing whether performance systems are firmly rooted in an organization is to evaluate how they encourage using protocols, guidelines and tools to monitor organizational behaviors.

Three clear points emerge. In the first place, it is clear that targets are not supported by incentives and overall are given little support by management; 14% of managers interviewed state that incentives are used for developing guidelines and monitoring related behavior, but this percentage is only 2% among professionals. In the second place, few of respondents state that there are rules for encouraging the development of guidelines and monitoring behavior (25% of managers and 31% of professionals). Lastly, there is a strong emphasis on direct contacts (60% managers and 67% professionals).

There are also several critical issues for management in the assignment of quality goals. Targets on process standardization are used by 80% of managers. However, 60% state that they do not receive regular reports on attainment of targets. Fourteen per cent of the sample state that they have defined no targets. Therefore, as shown in Table 3, only a quarter of managers interviewed use targets and reporting coherently.

[Table 3 here]

To sum up, evaluation of quality performance in this context shows: a good level of formalization of targets, especially for quality of care and for clinical risk; reporting systems not always robust enough for performance evaluation systems; partial attention to protocols and guidelines; widespread use of informal mechanisms supporting the use of protocols.

### **Managers and professionals belief in performance quality systems implemented in their organizations**

In this area, one of the first aspects analyzed is level of satisfaction with measurement systems of performance quality. Only 40% of respondents state they are satisfied with them, while about 60% say they are dissatisfied. These percentages are similar between clusters and there are no substantial differences between professionals and managers, or between the public and private sectors.

Research then looked for correlations between this level of satisfaction and three other variables: target definition, perceived difficulties in measuring, and adequate reporting systems. The correlations however did not prove significant except for actions for evaluating professionals (Pearson's index 0.570; p-value 0.000). It appears that satisfaction in performance evaluation depends on specific aspects of local situations and is closely correlated to evaluation of professionals. In other words, where there is satisfaction with evaluation of

professionals there is also satisfaction with performance evaluation. This confirms the correlation of the role of professionals with performance quality; it depends not so much on tools, but rather on professionals' capacity to integrate their actions and enhance their skills. This is an extremely important point for performance evaluation strategy. The capacity to evaluate quality of services is found to be directly correlated with the capacity to integrate professionals into the system and enhance their input. A strong correlation is always present (0.570; 0.000), and is higher among professionals (0.593; 0.000).

It is of course necessary to identify the causes of poor capacity in monitoring performance. Data shows that every situation has particular weaknesses and problems. There are no correlations between different aspects of dissatisfaction; statistical distribution does not point to any specific or generalized reason. Analysis of the hospital as an overall organization, focusing on weaknesses in different tools (measurement tools, evaluation systems, coordination criteria and protocols and guideline development tools), reveals that who is dissatisfied of evaluation system of his organization, identifies more negative aspects than positive ones. This implies that there will be a specific set of problems in each case.

This study thus highlights that there are specific rather than generalized causes of dissatisfaction affecting all hospitals. There appear to be three overall categories of problem. The first category has to do with tools, and is essentially the absence of reports, indicators and informational support in general. The second category of problem concerns behaviors, specifically the low levels of collaboration typical between different units of organization and / or colleagues. The third category of problem are organization processes, such as the absence of incentive schemes and target fixing.

The study thus highlights that the difference between dissatisfaction and satisfaction is the absence of tools, and the presence of unsound behavior models and organization processes. This is particularly important for management in deciding where to concentrate investments

and make intervention for improvement. The data shows clearly a correlation between respondent dissatisfaction and the lack of tools and / or dissatisfaction with particular behaviors and policies. Respondents are divided in to two groups according to their satisfaction on how their organization monitors quality performance: satisfied and dissatisfied, and searched for a relationship between their satisfaction/dissatisfaction and presence of organization of technical tools, behaviors and organizational processes (see above). Table 4 shows the percentage of absence of each category in the different clusters.

[Table 4 here]

In this context, collaboration is also an important issue. It was investigated in two aspects: collaboration between organizational units and collaboration among healthcare professionals. A good level of collaboration was found between organizational units (average 3.75 on a scale from 1 – minimum to 6 – maximum collaboration). There is also similarity between points of view of different organizational professionals (managers 3.93; professionals 3.67) and two types of hospital (public sector hospitals 3.60; private sector hospitals 4.02). It is undoubtedly very positive that the different clusters show no marked differences, especially in view of the fact that collaboration is an important component of good performance.

Overall evaluation of collaboration between professionals is even more positive (average 4.18), although there are marked differences between clusters. Evaluation by professionals is very positive (4.40) but manager responses show some criticality (3.63) (p-value t-test 0.000). In other words, professionals represent themselves as a team where collaboration has a significant value. This culture is present in all hospitals (public sector hospitals 4.01; private sector hospitals 4.47) and clearly expresses a view very closely linked to specific professional characteristics.

There is also a very positive opinion on quality testing methods (average 3.86). Most responses

express higher levels of satisfaction among professionals (4.05) than for managers (3.42) (p-value t-test 0.003). Moreover, on issue of collaboration, managers appear to show significantly less satisfaction.

Lastly, it is interesting that there is no correlation between satisfaction and time dedicated to quality. It is not therefore the “time” resource that explains high satisfaction. It is in fact more closely linked to the significant component of collaboration (Pearson’s index 0.421; p-value: 0.000).

Therefore, the situation shows good collaboration between organizational units and among professionals, and satisfactory levels of collaboration in quality evaluation.

### **Difficulties in the process of quality performance improvement**

The final part of the study looks at difficulty in the processes of evaluation and development of quality performance.

Respondent perception is that translating policy into behaviors is not a critical factor. On a scale of 1 to 6, where 1 is highest complexity of translating policy into action, the average response was 3.84. However, although the average is very positive, distribution varies over the different clusters. Managers perceive that is simpler to translate policy into behaviors than professionals do; manager average is 4.28 compared to professionals 3.65 (p-value t-test 0.005). There is a similar divergence in views between staff of private and public sector hospitals; the averages are 4.17 compared to 3.65 (p-value t-test 0.014).

The study also investigated the issue of professional skills and possible difficulties in evaluation processes and skills development.

The evaluation and development of professional skills gives a more complex picture. Data shows that only 20% respondents find no difficulty in translating policy into behaviors. Figures are similar for professionals and managers, but there is a higher percentage of private sector

staff who find no difficulty (28%) than public sector staff (13%).

Four types of problem are identified in implementing policies: technical difficulties in measuring, inadequate tools available, professional resistance to change and differences between groups of staff in the hospital. Technical problems were found in 35% of the sample, and more managers than professionals find this problem (46% vs. 30%), with no significant difference between public and private sector staff. Inadequate tools are a problem for 28% interviewees and again this is more of a problem for managers than professionals (32% vs. 26%) and for public rather than private sector staff (33% vs. 19%). Resistance to evaluation is a problem for 40% of interviewees, with no difference between managers and professionals, but public sector staff finds it more of a problem than private sector staff (43% vs. 32%). Differences between particular groups in hospitals is a problem for 30% of interviewees, slightly more for professionals than for managers (32% vs. 26%) and slightly more for public than private sector staff (32% vs. 26%). In addition, almost half of respondents (44%) identify more than one of the issues listed above; more managers than professionals (56% vs. 40%) and more public sector than private sector staff (47% vs. 40%) state they encounter more than one of the problems.

## **CONCLUSION**

This research reveals clearly that performance quality evaluation is a key element in health organizations. Explicit performance evaluation policies enable hospital managers to develop and implement performance evaluation tools in order to make quality policies robust across the hospital.

Management and healthcare professionals agree that the assessment of professional skills is important for a hospital. This is a key fact and implies that the two groups need to be on the same side. The capacity to check performance quality is directly related to the capacity to

integrate the two sides and enhance their different contributions.

The second important result confirms previous findings from the literature, that hospitals require complex control systems which can measure numerous aspects of performance. These are what can supply positive results over time, especially for hospitals in the public sector.

The third finding has implications for the management role in hospital administration on one hand and professionals on the other. Involving both sides and their differing skills and responsibilities, direct intervention and controls on the ground are key elements of management style. Direct relationships and interaction need to be nurtured.

Performance quality assessment is a constructive experience for hospitals: reports and tools such as indicators are set up and used for monitoring purposes. They require a high level of management awareness and a sound structure.

As expected, managers and professionals have a similar view of performance evaluation, and professionals particularly believe that collaboration is a key factor in achieving results. Managers who make most use of formal evaluation tools however believe that it is necessary to invest in direct relationships, while professionals who have fewer formal tools at their disposal are more favorable towards standardization.

Hospital management and professionals manage their organizations with a high level of awareness, and show a high level of skill in pursuing day to day objectives. They are not easily distracted by single issues and have great capacity in defining priorities. This is particularly significant for managers, who are found to evaluate their own skills positively; they evaluate themselves as aware and able to pursue strategic aims steadily.

The ability to translate policy into day to day behavior is a key aspect of quality performance, as well as other types of performance. Management particularly consider themselves as able to follow strategic goals. Data shows that close collaboration between different parts of an

organization makes it more feasible to pursue them in day to day activity. They also show that collaboration impacts positively on achieving good quality performance.

Another key question is the evaluation and enhancement of professional skills. As expected, this is clearly a determinant in itself, but what is particularly important is the link with the performance system evaluation. Those who have a good opinion of the hospital performance system tend to have a good opinion of actions taken to enhance professional clinical skills. Like collaboration between departments, this is clearly a factor enabling a positive working environment, which is in itself determinant of achieving goals. This view is widely shared by management and it therefore appears to be advisable to accompany performance evaluation of professionals with professional enhancement policies.

The use of formal tools needs to be developed, particularly through the wider use of more detailed reporting. This should improve response as well as raise levels of collaboration between units of an organization.

Secondly, the level of satisfaction of management and professionals with the evaluation system is directly linked to particular aspects of the organization. Hospital characteristics such as public or private sector, small or large size, a teaching hospital or not, give rise to varying requirements as well as problem areas. So factors determining whether the evaluation system is adequate or inadequate reflect specific conditions in the organization and specific problems. Management and leading professionals are affected by the characteristics of the organization where they work, so that evaluation systems are to an extent “personalized”. This research makes an important contribution to the field by identifying the conditions widely agreed among management and healthcare professionals to be necessary for success. These include collaboration between departments, hospital policy to valorize professional skills and formal reporting systems, as well as informal interaction between the two sides.

To summarize, the impact of the evaluation system on professional behaviors is determined by the use of formal tools accompanied by the capacity to generate collaboration and enhancement of professional skills. These two closely linked aspects, professional enhancement along with emphasis on quality processes, are the key variables for management to take into account in improving hospital management.

## **ACKNOWLEDGMENTS**

The research was carried out without funding. The results were presented at the *International Journal of Public Administration* Symposium held on May 25-27, 2016 in Palermo, Italy. We would like to thank the participants in the panel, as well as the anonymous reviewers, for their useful and important feedback.

## REFERENCES

- Adinolfi, P. (2014). Barriers to reforming healthcare: The Italian case. *Health Care Analysis*, 22(1), 36–58.
- Anantatmula, V. S. (2008). Leadership role in making effective use of KM. *VINE*, 38(4), 445–460.
- Azzone, G., Masella, C., & Bertelè, U. (1991). Design of performance measures for time-based companies. *International Journal of Operations & Production Management*, 11(3), 77–85.
- Beattie, E., & Mackway-Jones, K. (2004). A Delphi study to identify performance indicators for emergency medicine. *Emergency Medicine Journal*, 21(1), 47–50.
- Berwick, D. M., James, B., & Coye, M. J. (2003). Connections between quality measurement and improvement. *Medical Care*, 41(1 Suppl), I30–I38.
- Bierman, A. S., & Clark, J. P. (2007). Performance measurement and equity. *BMJ: British Medical Journal*, 334(7608), 1333–1334.
- Bloom, N., Propper, C., Seiler, S., & Van Reenen, J. (2009). *Management practices in hospitals*. New York, NY: Health, Econometrics and Data Group.
- Borgonovi, E. (2004). Aziendalizzazione e governo clinico [Managerialization and clinical governance]. *Mecosan*, 49, 5–8.
- Brown, M. G. (1996). *Keeping score: Using the right metrics to drive world-class performance*. New York, NY: Quality Resources.
- Burstin, H., Leatherman, S., & Goldmann, D. (2016). The evolution of healthcare quality measurement in the United States. *Journal of Internal Medicine*, 279(2), 154–159.
- Byrkjeflot, H., & Kragh Jespersen, P. (2014). Three conceptualizations of hybrid management in hospitals. *International Journal of Public Sector Management*, 27(5), 441–458.
- Curtright, J. W., Stolp-Smith, S. C., & Edell, E. S. (2000). Strategic performance management: Development of a performance measurement system at the Mayo clinic. *Journal of Healthcare Management*, 45(1), 58–68.
- Davies, H. T. O., & Harrison, S. (2003). Trends in doctor-management relationships. *British Medical Journal*, 326(7390), 646–649.
- De Jong, J. P. J., & Den Hartog, D. N. (2007). How leaders influence employees' innovative behaviour. *European Journal of Innovation Management*, 10(1), 41–64.
- de Korne, D. F., van Wijngaarden, J. D. H., Sol, K. J. C. A., Betz, R., Thomas, R. C., Schein, O. D., & Klazinga, N. S. (2012). Hospital benchmarking: Are US eye hospitals ready? *Health Care Management Review*, 37(2), 187–198.
- Donabedian, A. (1988). The quality of care: how can it be assessed? *Jama*, 260(12), 1743–1748.
- Drucker, P. (2012). *Managing in the next society*. New York, NY: Truman Talley Books.
- Duarte, N. T., Goodson, J. R., & Arnold, E. W. (2013). Performance Management Excellence among the Malcolm Baldrige National Quality Award winners in health care. *The Health Care Manager*, 32(4), 346–358.

- Emanuel, E. J., & Pearson, S. D. (2012). Physician autonomy and health care reform. *JAMA*, 307(4), 367–368.
- Grady, C. M., & Dickson, G. (2016). Can complexity science inform physician leadership development? *Leadership in Health Services*, 29(3), 251–263.
- Griffith, J. R. (2007). Improving preparation for senior management in healthcare. *Journal of Health Administration Education*, 24(1), 11–32.
- JCI, Joint Commission International (2014). Joint Commission International accreditation standards for hospitals (5th Ed.). Chicago, ILL: Joint Commission.
- Kaplan, R. S., & Norton, D. P. (1992). The balanced scorecard--measures that drive performance. *Harvard Business Review*, 70(1), 71–79.
- Kaplan, R. S., & Porter, M. E. (2011). How to solve the cost crisis in health care. *Harv Bus Rev*, 89(9), 46–52.
- Keegan, D.P, Eiler, R.G., & Jones, C.R. (1989). Are your performance measures obsolete? *Management Accounting*, 70(12), 45–50.
- Khaliq, A. A., Walston, S. L., & Thompson, D. M. (2007). Is chief executive officer turnover good for the hospital? *The Health Care Manager*, 26(4), 341–346.
- Kotter, J. P. (1996). *Leading change*. Boston, MA: Harvard Business Press.
- Kubica, A. J. (2007). Transitioning middle managers. How executives can ensure their success. *Healthcare Executive*, 23(2), 58–60.
- Langlois, E. V, Ranson, M. K., Bärnighausen, T., Bosch-Capblanch, X., Daniels, K., El-Jardali, F., ... Røttingen, J.-A. (2015). Advancing the field of health systems research synthesis. *Systematic Reviews*, 4(1), 1–7.
- Lega, F., Prenestini, A., & Spurgeon, P. (2013). Is management essential to improving the performance and sustainability of health care systems and organizations? A systematic review and a roadmap for future studies. *Value in Health*, 16(1), S46–S51.
- Lin, B. Y.-J., Hsu, C.-P. C., Juan, C.-W., Lin, C.-C., Lin, H.-J., & Chen, J.-C. (2011). The role of leader behaviors in hospital-based emergency departments' unit performance and employee work satisfaction. *Social Science & Medicine*, 72(2), 238–246.
- Lorden, A. L., Lin, S.-H., & Cote, M. J. (2015). Measures of success: The role of human factors in lean implementation in healthcare. *Quality Control and Applied Statistics*, 60(1), 127–130.
- Lynch, R. L., & Cross, K. F. (1991). *Measure up!: Yardsticks for continuous improvement*. Cambridge, MA: Basil Blackweel Inc.
- Manion, J. (2005). *From management to leadership: Practical strategies for health care leaders* (2nd Ed.). San Francisco, CA: Jossey.
- Martin, G. P., & Learmonth, M. (2012). A critical account of the rise and spread of “leadership”: the case of UK healthcare. *Social Science & Medicine*, 74(3), 281–288.
- Martinez, J. A., & Martinez, L. (2010). Some insights on conceptualizing and measuring service quality. *Journal of Retailing and Consumer Services*, 17(1), 29–42.
- Mazzocato, P., Savage, C., Brommels, M., Aronsson, H., & Thor, J. (2010). Lean thinking in healthcare: a realist review of the literature. *Quality and Safety in Health Care*, 19(5), 376–382.

- Morse, J. H., Koven, S. G., Mundt, C. J., & Gohmann, S. F. (2008). The Kentucky initiative in health services contracting: The search for contracting of outcomes measures. *International Journal of Public Administration*, 31(6), 639–653.
- Neely, A., Adams, C., & Crowe, P. (2001). The performance prism in practice. *Measuring Business Excellence*, 5(2), 6–13.
- Nerenz, D., & Neil, N. (2001). Performance measures for health care systems. *Center for Health Management Research*.
- Nwabueze, U., & Mileski, J. (2008). The three dimensions of quality service: The case of service quality gaps in the U.K. national health service? *International Journal of Public Administration*, 31(10-11), 1328–1353.
- Quinn, R. E., & Rohrbaugh, J. (1981). A competing values approach to organizational effectiveness. *Public Productivity Review*, 5(2), 122–140.
- Stefl, M. E. (2008). Common competencies for all healthcare managers: The healthcare leadership alliance model. *Journal of Healthcare Management*, 53(6), 360–374.
- Tangsoc, J. C., & Bautista, J. M. S. (2016). Hospital Service Quality Assessment and Analysis: A Multi-Perspective Approach. *DLSU Business & Economics Review*, 26(1), 30–49.
- Torok, H., Kotwal, S., Landis, R., Ozumba, U., Howell, E., & Wright, S. (2016). Providing feedback on clinical performance to hospitalists: Experience using a new metric tool to assess inpatient satisfaction with care from hospitalists. *Journal of Continuing Education in the Health Professions*, 36(1), 61–68.
- Uhl-Bien, M., & Marion, R. (2009). Complexity leadership in bureaucratic forms of organizing: A meso model. *The Leadership Quarterly*, 20(4), 631–650.
- van Schoten, S., de Blok, C., Spreeuwenberg, P., Groenewegen, P., & Wagner, C. (2016). The EFQM Model as a framework for total quality management in healthcare: Results of a longitudinal quantitative study. *International Journal of Operations & Production Management*, 36(8), 901–922.
- van Veen-Berkx, E., de Korne, D. F., Olivier, O. S., Bal, R. A., Kazemier, G., & Gunasekaran, A. (2016). Benchmarking operating room departments in the Netherlands: evaluation of a benchmarking collaborative between eight university medical centres. *Benchmarking: An International Journal*, 23(5), 1171–1192.
- VanVactor, J. D. (2012). Collaborative leadership model in the management of health care. *Journal of Business Research*, 65(4), 555–561.
- Veillard, J., Champagne, F., Klazinga, N., Kazandjian, V., Arah, O. A., & Guisset, A.-L. (2005). A performance assessment framework for hospitals: the WHO regional office for Europe PATH project. *International Journal for Quality in Health Care*, 17(6), 487–496.

**TABLES** (Source: elaborations by the authors)

**Table 1. Macro-Area of investigation**

<b>Macro-Area</b>	<b>Target</b>
<b>How hospitals measure quality performance</b>	Which aspects of performance are usually measured, and which tools hospitals use to measure their performance quality, with a particular focus on guidelines and indicators.
<b>How hospitals define goals and processes</b>	How hospitals set their goals, how they assign them to the professionals, how they ensure that policies are implemented and the type of reporting used.
<b>Manager and professional satisfaction with quality performance system implemented in their organization</b>	Satisfaction of professionals and managers with tools used in their organization to measure performance and processes, and the reasons for this perception.
<b>Difficulties in the performance quality improvement process</b>	Difficulties in identifying elements as parts of quality improvement process.

**Table 2. Composition of the sample**

	<b>Hospitals</b>	<b>Population</b>	<b>Managers</b>	<b>Professionals</b>
Public	10	94	25	69
Private	8	53	18	35
JCI accredited	13	99	32	67
Not JCI accredited	5	48	11	37
<b>Total</b>	<b>18</b>	<b>147</b>	<b>43</b>	<b>104</b>

**Table 3. Targets and reports on process standardization**

		<b>Have you defined a formal target for process standardization for your staff?</b>	
		Yes	No
<b>Do you receive regular reports on standardized processes?</b>	Yes	23.26%	2.33%
	No	60.47%	13.95%

**Table 4. Relationship between level of satisfaction expressed by respondents and inadequacy of tools / behaviors**

	<b>Satisfied</b>			<b>Dissatisfied</b>		
	Managers	Professionals	Total	Manager	Professionals	Total
Tools	50.46%	53.15%	52.09%	63.16%	61.69%	62.02%
Behaviors	50.76%	49.39%	49.93%	59.33%	64.86%	63.64%
Organization	63.10%	58.69%	60.42%	65.41%	64.18%	64.45%
<b>Total</b>	<b>55.09%</b>	<b>53.45%</b>	<b>54.10%</b>	<b>65.11%</b>	<b>65.17%</b>	<b>65.16%</b>