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**Intangibles and the Performance Measurement Systems
of Healthcare Organizations: an empirical research
study in Tuscany (Italy)**

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1. Introduction

Italian healthcare organisations are undergoing a period of profound innovations from different points of view: the institutional framework, the financial performances, the stakeholder relationships, the internal organization and the service quality are all under pressure for a change. This has a strong influence on the definition of the variables that healthcare organisations have to monitor. From the nineties there has been in Italy a growing awareness of the unsustainability of the institutional model that was adopted, due to the bad economic and financial performances (both at local and central level) and to the dissatisfaction of the patients and, more in general, of the stakeholders for the quality of the services rendered. Hence, the decrees no. 502/'92 and 517/'93 have introduced a change in the Italian institutional framework for healthcare organisations (followed by the decree no. 229/'99), and in the principles according to which healthcare organisations are to operate. This has generated a strong increase in the attention to economic factors and to the understanding of organisation performance. As a consequence, there has been a large introduction of managerial tools based on accrual accounting and management control systems.

Nevertheless, this paper argues that the implementation of management systems which are focused on economic factors could only be partially useful. Indeed, concentrating exclusively on the accounting-based financial information could determine the development of healthcare activities with a short term view and without enough focusing on the intangible resources.

In this respect, it could be observed that much attention is being devoted to the role and value of intangibles in companies, but, interestingly, not enough attention has been given to the role and value of intangibles in public sector organizations. In particular, it is rather evident that intangibles have a fundamental role especially in healthcare organizations.

In this paper, the categorization of the intangible resources in human capital, organisational (structural, internal) capital and relational (external) capital will be followed. In order to better represent the characteristics of healthcare organizations, relational capital will be further divided into three categories: the customer and quality of services, the quality of the relationship with the stakeholders, and the quality of the relationship with the Regional Authority owing to the Italian institutional framework. Indeed, in the Italian case, the Regional authority has a fundamental role in addressing and controlling the activities of healthcare organizations. In its theoretical section, the

paper aims to shed light on the need for the consideration of the intangible resources in healthcare organisations. In particular, it is here suggested an enlargement of the performance measurement systems in order to support the focalization on intangible resources. In this sense, it is argued that the measurement of indicators related to intangible resources does not make intangible assets tangible, but it makes them more controllable. In fact, in this case the attention of the managers is directed not only on indicators tied to intangible assets but also in indicators tied to intangible assets. In its empirical section, the paper aims to investigate the degree of focalization on intangible assets of in healthcare organisations operating in a relevant area of Tuscany.

2. The change factors in Italian healthcare organisations: an overview

Italian healthcare organisations are in a period of great change in the principles on the basis of which they are operating. That is tied both to institutional and economics aspects. It has to be put in light that in the Italian case the reform of healthcare sector is going on. In particular, the first application, on a global scale, of economics principle (effectiveness and efficiency) in the institutional framework have been stated with decrees n. 502/'92 and 517/'93. The economic aspect are tied to the public finance crisis and to the dissatisfaction of the citizens for the quality of healthcare services.

In particular, this change grows out from three factors, strongly interrelated with each others:

- the first factor is the reduction of the level of public funds transfer, tied to the state budget deficit. The need for a balancing of the public accounts has meant a reduced availability of public resources for healthcare organisations. It grows out that public hospitals and healthcare units need to pursue an economic and financial balancing with greater intensity. On the one hand such organisations should monitor their costs in order to improve their efficiency; on the other hand such organisations should look for peculiar opportunities in order to increase their own resources.
- the second factor is the growing attention on healthcare organisations' activity by stakeholders and specific interest groups. In fact, along the time there has been a strong increase of the request of data and information by stakeholders and interest groups upon the activities and the services carried out and their degree of quality. Then, the internal information system should be able to satisfy the external requests, in order to meet the public duties of accountability.

- the third factor is the increasing importance of the quality of services and the development of a real customer perspective. It means that healthcare hospitals and local health units must define their services from the dynamic and changeable needs of citizens, and, most of all, they must monitor the degree of satisfaction of the patient at least under the following profiles: "technical" effectiveness of the operations, waiting times, staff behaviour and hygienic and comfort conditions.

Such process of modification of the principles on which public hospitals and health care organisations are to operate has been a driving force to the gradual development of the presence of private organisations in Italian health care sector. The actual trend seems to be the development of a "third way" between command and control systems of government on the one hand, and fully deregulated free markets on the other.

3. Management techniques used to assess Italian healthcare organisations' performance

In the Italian health care system, beginning from the reform decrees n. 502/1992 and 517/1993, a new approach to the managing of hospitals and health care units has been implemented, where managerial principles are strongly considered in order to improve the effectiveness and efficiency of their activity. For this reason, the development and implementation of management tools has been supported by the mandatory introduction of accrual based accounting, management accounting, management control, and cost analysis.

Another important factor that shows the importance of an economic perspective is related to the introduction of a compensation system based on DRGs. This way the financing system is strongly related to organisations' performance and it allows to stimulate the competition among health care organisations (both public and private).

The need for a deeper control on economic factors grows out also from the decree when it is stated that, in presence of a situation of large economic deficit, the Regional Authority can dismiss the top manager (general director). In fact, the new framework is characterised by the introduction of the concept of economic responsibility at professional, middle management and top management level. Hence, health care organisations need management systems that allow on the one hand to control the

exploitation of their own resources, and, on the other hand, to monitor their competitiveness with public and private competitors¹.

In order to achieve this goal, the reform decrees have stated the mandatory implementation of accrual accounting and management control systems based on management accounting². As for the introduction of accrual accounting, it has to be stressed that the previous system (based on financial information) was more effective for the control of financial flows than for the comprehension of the outcomes of the period³. As for the introduction of a budgetary system based on management accounting⁴ it has to be noticed that it is linked to the need of understanding the effectiveness and efficiency of the exploitation of financial, material and human resources⁵.

Nethertheless, in health care organisations the process of implementation of "new" accounting⁶ and management control tools has been slow and has faced several resistances. In fact the "financial mind-set" has been very deep in such organisations for a long time and the implementation of "new" management tools means a modification in the cultural approach to the management control of the resources. In most cases, the stronger resistance to the introduction of accrual accounting has been carried out by the administrative personnel who had peculiar competences on financial accounting. The resistances to the implementation of a budgetary system are often tied to the fears of professionals that the introduction of management control systems could influence which drivers are chosen to evaluate their activity.

Hence, health care organisations have been facing resistance both in information systems and in organisations' cultures⁷.

The information system should not only be consistent with the management systems and with the need of controlling the integrated activities, but it should also be

¹ See L. Anselmi, *L'equilibrio economico nelle aziende sanitarie*, Milano, Il Sole 24 Ore, 1996.

² See L. Anselmi L. Del Bene, F. Donato, L. Giovanelli, L. Marinò, M. Zuccardi Merli, *Il controllo di gestione nelle amministrazioni pubbliche*, Rimini, Maggioli, 1997.

³ See G. Farneti, *Introduzione all'economia dell'azienda pubblica*, Torino, Giappichelli, 1996.

⁴ See H.T. Johnson, R.S. Kaplan, *Relevance lost. The rise and fall of management accounting*, Boston, Harvard Business School Press, 1987.

⁵ See E. Borgonovi, *Principi e sistemi aziendali per le amministrazioni pubbliche*, Milano, Egea, 1996.

⁶ As for an analysis of accounting systems in an international perspective, see S. Zambon, *Profili di ragioneria internazionale e comparata: un approccio per aree tematiche*, Padova, Cedam, 1996. n. n. n.

⁷ See L. Anselmi, *Il processo di trasformazione della pubblica amministrazione. Il percorso aziendale*, Torino, Giappichelli, 1995.

very flexible⁸. The flexibility of the information system could allow collection and elaboration of data and information in order to develop different kind of analysis as well as to support the decisions by considering different perspectives.

A further factor that healthcare organisations must envisage in the implementation of the information system is the growing request of data and information by stakeholders and interest groups. It means that the information system should be able to satisfy both internal needs and external ones⁹. That is a particularly critical aspect for public organisations that have specific duties of accountability.

Focusing our attention on internal needs, a large number of Italian public organisations has not implemented an overall management control system yet. As a matter of fact, most of organisations have just implemented the accrual based accounting and the more significative delay is related to the definition and implementation of the budgetary control system. As stated above this is a fundamental requisite in order to motivate the management towards effectiveness and efficiency principles in a business economics view¹⁰. Furthermore, that is essential in order to support a real partnership between public and private organisations, since it allows to make similar analysis and to carry out comparative approaches.

Nevertheless, it is argued that the implementation of management systems focused only on economic factors could be just partially useful. In fact, as stated above, the development of the accrual based accounting is (or has been) the first step to carry out (together with the development of management accounting systems). Again, that is necessary but not sufficient. Focusing only on the economic information based on the accounting system could determine the development of healthcare activities with a short term view and without enough focusing the intangible resources¹¹, that are crucial for the improvement of future performances¹². The interactions between healthcare activities, economic and financial outcomes, quality level obtained and perceived, internal processes, learning and growth, quality of the relationship with stakeholders

⁸ As for cost analysis based on activity based costing see J. Innes, F. Mitchell, *Activity based costing – A review with case studies*, London, Cima, 1990.

⁹ As for the relationship with stakeholder linked to the overall system of companies' operations and policies, see U. Bertini, *Il sistema d'azienda*, Torino, Giappichelli, 1990.

¹⁰ See J.K. Shank, V. Govindarajan, *Strategic cost management and the value chain*, in "Journal of cost management", winter 1992.

¹¹ See B. Lev, *Intangibles: Management, Measurement and Reporting*, Washington, Brookings Institution, 2001.

¹² See P. Senge, *The fifth discipline: the art and practice of the learning organization*, New York, Double-Day, 1990.

(and particularly with the Regional Authority) are very strong, and they must be considered in a systemic way¹³.

4. The empirical research: the methodology

For the empirical research, it has been followed an inductive approach, based on a theoretical framework. The steps are:

1. Identification of the object of the analysis
2. Identification of the geographical area where to carry out the empirical research
3. Definition of the research-path

4.1. Identification of the object of the analysis

The object of the paper is the analysis of the degree of consideration of intangible resources¹⁴ in healthcare organizations. In this sense, it has been investigated the performance measurement systems of selected healthcare organizations in order to focus if the performance measurement systems encompass intangible assets. Such an object has been focused by a process of specification of research objects. In fact the first step has concerned the identification of the effects, in managerial terms, of the reform in Italian health care sector. Hence, it has been put in light the need for an advanced system of management control able to focus not only the financial parameters. The following step has concerned the degree of measurement of the intangible resources. The analysis has suggested the consideration of a performance measurement system based on variables that are both financial ones and non-financial ones. The following step is related to the identification of such variables. So, the final step has concerned the identification of the indicators that are adopted in order to monitor the trend of the variables.

¹³ See R.S. Kaplan, D.P. Norton, *The balanced scorecard - measures that drive performance*, in "Harvard Business Review", jan-feb 1992; R.S. Kaplan, D.P. Norton, *Putting the balanced scorecard to work*, in "Harvard Business Review", sep-oct 1993; R.S. Kaplan, D.P. Norton, *Using the balanced scorecard as a strategic management system*, in "Harvard Business Review", jan-feb 1996, R.S. Kaplan, D.P. Norton, *The balanced scorecard*, Harvard Business School Press, Boston, Massachusetts, 1996

¹⁴ See L. Edvinsson, 2000, "Some Perspectives on Intangibles and Intellectual Capital", *Journal of Intellectual Capital*, Vol. 1, No. 1, pp. 12-16

4.2. Identification of the geographical area where to carry out the empirical research

After the identification of the object of the analysis, the decision has concerned the delimitation of the geographical area where to carry out the empirical research. For this reason it has been studied the institutional framework of the healthcare sector in the region of Tuscany (Tuscany is one of the Italian regions where the implementation of the healthcare sector reform has been faster). In Tuscany the healthcare organizations have been gathered in specific geographical areas, called “area vasta” (large area). In “area vasta” are present: one highly-specialized hospital and several local health units. The purpose is to delimitate a geographical area where the inhabitants have a healthcare organization for highly-specialized operations and local organizations for less specialized operations. For the research, it has been analysed the case of the “area vasta tirrenica” referred to the hospital of Pisa. In such an area are present: the hospital organization of Pisa, the local health organization of Pisa, the local health organization of Lucca, the local health organization of Massa-Carrara, the local health organization of Livorno, the local health organization of the area of Versilia. The total number of inhabitants that are in the area is approximately 1 million people and the total amount of the expenses afforded by the hospital organization and local health organizations is approximately 1.100.000.000 euro and it represents the 35% of the regional total amount.

4.3. Definition of the research-path

The research path has been structured in four steps. The first step has concerned the identification of the scientific basis that represent the foundation of the research. Hence, the analysis has concerned the studies focused on intangible resources¹⁵, the studies focused on performance measurement systems and the studies focused on the management of healthcare organizations. The second step has regarded the getting in touch with the references of the organizations in order to understand the global framework and the peculiarities of the single organizations. For this purpose, the main contact we have chosen have been the responsible of the office “management control system”, but in some cases also the responsible of other offices of the administrative area

¹⁵ See Lev B., *Intangibles: Management, Measurement and Reporting*, Washington, Brookings Institution 2001; Edvinsson L., “Some Perspectives on Intangibles and Intellectual Capital”, *Journal of Intellectual Capital*, Vol. 1, No. 1, 2000, pp. 12-16; Guthrie J., “The Management, Measurement and the Reporting of Intellectual Capital”, *Journal of Intellectual Capital*, Vol. 2, No. 1, 2001, pp. 27-41; Zambon S., Cordazzo M., “The Long Way From Ingredients to Cake. Reporting on Intellectual Capital in Italy: Some Preliminary Evidences” in *OECD Measuring and reporting intellectual capital experience, issues and prospects*, Amsterdam, 1999.

as well staff of the Health director have been contacted. The third step has been related to the understanding of the variables that are considered most significant by the different organizations. For this purpose, it has been interviewed the references of the organizations. The interview has been carried out by a semi-structured questionnaire where it was put in light the main points to follow. However, the conversation has aimed to be carried out not in a formal way. In this case, the objective has been the individuation of the variables that are considered the most significant. In particular, our aim has been the comprehension of the perceived relevance of the intangible resources. The last step has analysed which indicators are in effect implemented in the management control systems and if such indicators are representative of the variables mentioned above, and particularly of the intangible resources.

5. Evidence from the empirical research: some emerging issues

From the interviews carried out it does emerge that in all the organizations there is an understanding that financial indicators alone are necessary but not sufficient. During the interviews the need to balance the information coming from the financial indicators with other kind of data and information has generally been pointed out. These data and information refers in most cases to intangible resources. Nevertheless, it has been affirmed that this is, at the same time, a particularly difficult objective to be achieved. It has been evidenced that difficulties rely on two sides. On the one side, the implementation process of management control systems is still in progress and needs to be continuously improved and re-considered. This means that a large part of the efforts is focused on the implementation of management control systems in a traditional way. It has to be outlined that these traditional management control systems (which are focused mainly on financial information and budgeting processes) are only the starting point for the development of a balanced performance measurement device able to consider also the intangible resources. On the other side, in many cases it has been pointed out that the implementation of an advanced system of indicators, being able to monitor also the intangible resources, needs methodological competencies that are not always present inside the concerned organizations. Nevertheless, there is a generalised agreement in stating that the realization of such a balanced performance measurement system is the way to follow.

The framework that has been followed has considered the financial indicators as “traditional” parameters for the tangible assets; while for the intangible assets, the indicators have been gathered into three areas:

- for the **human capital**, it has been highlighted the degree of implementation of indicators related to the variable “learning and growth”;
- for the **organisational (structural, internal) capital**, it has been highlighted the degree of implementation of indicators related to the variable “internal process”;
- for the **relational (external) capital** it has been highlighted the degree of implementation of indicators related to the variable “quality of services”. Furthermore, in order to better envisage the characteristics of healthcare organizations, it has also been particularly analysed the quality of the relationship with the stakeholders, and, due to the Italian institutional framework, the quality of the relationship with the Regional Authority.

From the analysis carried out it emerges that:

- financial parameters are the first to be analysed;
- then, quality services indicators are considered particularly important;
- the other areas that are considered to be monitored are related to the internal processes perspective (particularly in the direction of developing activity-based management systems), as well as to the learning and growth perspective and to the stakeholder and regional authority perspective.

However, when it has been analysed if such variables are actually monitored by ad hoc indicators a difference between the “ideal” system and the one currently in operation have been evidenced. These types of indicators are considered relevant for the evolution of the management control systems, but, in the majority of the cases analysed, have not been implemented as yet. Even if there are some differences between the organizations analysed it can be stated that, in a global perspective, the degree of implementation of the indicators is as follows:

- The financial indicators are implemented in all the organizations concerned. They are considered both at the center of responsibility level and at the organization level.
- The internal process indicators have been implemented into the management control system of some organizations. In these cases the main indicators are tied

to the staying time. Indeed, the trend of the staying times can help understand if the relationship between the individual units of the organization are efficient.

- The learning and growth indicators are not, in the majority of the cases, fully implemented in the management control systems. Anyway, this does not imply that they are not considered at all. In many instances, such variables are analysed, also by means of indicators, from offices other than that devoted to management control system. There is a large consensus on the importance of intangible variables, such as the degree of innovation (both at a technological and an organizational level) or the personnel training.
- As for the indicators of the quality of services, it has grown out that organizations are carrying out several initiatives and that for any initiative some parameters have been selected in order to assess the outcomes. However, these measurements are only tied to individual initiatives and are not widespread into the organizations. This means that there is only a partial judgment on the quality of the service that is realized. Sometimes the measurement refers to single factors of the service quality; in other cases, more frequently, it is related to a particular office or unit of the organization. Also the Charter of the services of the healthcare organisation is not always mentioned, and this finding could mean that the standard of the service quality is in many cases considered only at a general level and in a generic way.
- The stakeholder perspective and the regional authority perspective are visualized by the way of indicators only in a few cases. This is tied both to the difficulty of measuring the quality of the relationship with these two categories of subjects, and to the sensibility of the individual managers, and particularly of the top management. This also means that such variables are generally monitored but not in a formal way. From this observation two types of problems could derive. The inability of understanding the trend of the quality of the two above mentioned relationships, and the potential “personalization” of the information. In the latter respect, if there is, for instance, a turnover in the top management, most of the information of the previous years risks to be lost for the organisation.

6. Conclusions

From the empirical research carried out it grows out that healthcare organisations operating in the “area vasta tirrenica” appear to tentatively consider in their performance measurement systems not only the economic-financial perspective, but also other perspectives related to the intangible resources. In particular, a growing attention to the parameters tied to the quality of services (belonging to the relational capital) has been found. The other perspectives are often considered, but not in a systematic way. However, there seems to be a large awareness of the importance of such variables. Furthermore, the research has evidenced that the management control systems of the healthcare organizations investigated are going to be improved (even if at a different pace) towards a comprehensive performance measurement system able to embrace also the intangible resources. This paper suggests that this research area dealing with the degree of implementation of performance measurement systems able to encompass intangible resources is promising for future scholarly enquiry. In particular, a comparative approach within an international view could allow to better analyse and understand the degree of implementation of indicators related to intangibles in healthcare organizations operating in distinct institutional frameworks. Furthermore such a comparative approach could also pave the way to analysis of the relationship between the characteristics of the performance measurement system implemented (considering intangibles or not) and the actual performances of the healthcare organizations.

Appendix: Evidence from the empirical research: the analysis of the individual organizations

The analysis has been realized by an interview, followed by the submission of a questionnaire and, in some cases, by a further interview. The indicators that are in effect implemented are very numerous in some area, while in other area there is the monitoring of the variables but it is not formally carried out by means of an indicator. For the perspectives where are used many indicators, the questionnaire asked to put in light only the most significant ones.

Local health organization of Lucca

Economic and Financial indicators:	<p>Number of patients (and related DRGs) residents in the territory of Lucca that have been treated by other organizations. Such indicator is realized both at center of responsibility level and at organizational level.</p> <p>Number of patients (and related DRGs) residents in other territories that have been treated by the local health organizations of Lucca. Such indicator is realized both at center of responsibility level and at organizational level.</p> <p>Consuming of direct factors (drugs, technical materials, personnel). Such indicator is realized both at center of responsibility level and at organizational level.</p>
Quality of services indicators	<p>Waiting times. Such indicator is realized both at center of responsibility level and at organizational level.</p> <p>Repeated admissions to hospital. Such indicator is realized both at center of responsibility level and at organizational level.</p> <p>Prevalent range for any DRG. Such indicator is realized both at center of responsibility level and at organizational level.</p>
Internal process indicators	<p>Staying time. Such indicator is realized only at center of responsibility level.</p>
Learning and growth indicators	<p>No indicators.</p>
Stakeholder indicators	<p>Number of complaints at a toll free number of telephone. Such indicator is realized only at organizational level</p>
Regional authority indicators.	<p>Punctuality in sending data and information requested</p>

Local health organization of Versilia

<p>Economic and Financial indicators:</p>	<p>Value of the production/direct cost for any centre of responsibility Admissions of non-residents patients (indicator measured at a centre of responsibility level) Degree of utilization of special rooms (to be assigned after the payment of an amount) - (indicator measured at a centre of responsibility level) Incidence of the cost of the drugs delivered in day hospital regime or directed to discharged patients (indicator measured at a centre of responsibility level)</p>
<p>Quality of services indicators</p>	<p>Perceived quality of the service (a questionnaire is submitted to any patient discharged) - (indicator measured at organizational level) Perceived quality of the territorial services (by interviews realized in the local area) (indicator measured at organizational level) Rightness in compilation of nosological card Case-mix admissions (indicator measured at a centre of responsibility level) Waiting list (indicator measured at a centre of responsibility level)</p>
<p>Internal process indicators</p>	<p>Punctuality in compilation of nosological card (indicator measured at a centre of responsibility level) Staying time (indicator measured at a centre of responsibility level) Degree of operations for patients: number of patients discharged after an operation/total number of patients discharged (indicator measured at a centre of responsibility level) Punctuality in realization of controls and emission of certificate for industrial activities (indicator measured at a centre of responsibility level)</p>
<p>Learning and growth indicators</p>	<p>Training for front-line personnel: number of front line personnel trained/total number of front-line personnel (indicator measured at a centre of responsibility level) Training for the prevention of incidents during the working time (indicator measured at a centre of responsibility level)</p>
<p>Stakeholder indicators</p>	<p>Number of complaints at the public relations office. Such indicator is realized at organizational level Degree of personnel satisfaction (by blind interviews realized in the local health organization) - (indicator measured at organizational level)</p>
<p>Regional authority indicators.</p>	<p>Punctuality in sending data and information requested (indicator measured at organizational level)</p>

Local health organization of Livorno

<p>Economic and Financial indicators:</p>	<p>Cost per admission (indicator measured at centre of responsibility level)</p> <p>Cost per one day of admission (indicator measured at centre of responsibility level)</p> <p>Cost per bed of the hospital (indicator measured at centre of responsibility level)</p> <p>Cost per inhabitant for any geographical sub-area - (indicator measured at organizational level)</p> <p>Cost per inhabitant for any kind of assistance - (indicator measured at organizational level)</p> <p>Admissions of non-residents patients (indicator measured both at organizational and at centre of responsibility level)</p> <p>Number of patients (and related DRGs) residents in the territory of Livorno that have been treated by other organizations (indicator measured both at organizational and at centre of responsibility level)</p>
<p>quality of services indicators</p>	<p>Waiting list</p> <p>Definition of quality standard in the Charter of services</p> <p>Analysis of the information put from the patients and their familiars into the suggestions box</p>
<p>internal process indicators</p>	<p>No indicators. However, a project for the analysis of the quality in a transfunctional view is going on</p>
<p>learning and growth indicators</p>	<p>No specific indicators. However, the cost and the outcome of the training and of the technological investment are analysed at a top management level</p>
<p>stakeholder indicators</p>	<p>No indicators</p>
<p>regional authority indicators.</p>	<p>Punctuality in sending data and information requested</p>

Local health organization of Pisa

<p>economic and financial indicators:</p>	<p>Value of the production and consuming of direct factors (drugs, technical materials, personnel). Such indicator is realized both at center of responsibility level and at organizational level. Expenses per degree of assistance Admissions of non-residents patients (indicator measured both at organizational and at centre of responsibility level) Number of patients (and related DRGs) residents in the territory of Pisa that have been treated by other organizations (indicator measured both at organizational and at centre of responsibility level)</p>
<p>quality of services indicators</p>	<p>Waiting times: comparison between the quality standard of the charter of the services and the real data. Such indicator in realized for any kind of intervention and it is analysed at top management level Rightness of staying time: the comparison is carried out with international protocol standards (the indicator is realized to any Diagnosis Related Group) Degree of quality of accomodation services</p>
<p>internal process indicators</p>	<p>Staying times</p>
<p>learning and growth indicators</p>	<p>Degree of training and innovation for period: the initiatives in such fields are analysed form an internal/external committee for the evaluation of the managers' action</p>
<p>stakeholder indicators</p>	<p>Number of complaints at the public relations office. Such indicator is realized at organizational level Relationship and contacts with associations for the rights of patients</p>
<p>regional authority indicators.</p>	<p>Punctuality in sending data and information requested</p>

Local health organization of Massa Carrara

<p>economic and financial indicators:</p>	<p>Admissions of non-residents patients (indicator measured both at organizational and at centre of responsibility level) Number of patients (and related DRGs) residents in other territories that have been treated by the local health organizations of Massa Carrara. Such indicator is realized both at center of responsibility level and at organizational level. Cost per case Tableau de bord for the hospital activities Tableau de bord for the ambulatory activities Consuming of direct factors (drugs, technical materials, personnel). Such indicator is realized both at center of responsibility level and at organizational level.</p>
<p>quality of services indicators</p>	<p>A project for the definition of quality standards is going on. The areas that are considered are: waiting times Rightness in compilation of nosological card Number of cases of infections during the staying time</p>
<p>internal process indicators</p>	<p>Specific projects are going on related to a transfunctional way of management of activities. The projects are evaluated for single phases and periods.</p>
<p>learning and growth indicators</p>	<p>There are no specific indicators. However, the cost and the outcome of the training and of the technological investment are analysed at a top management level</p>
<p>stakeholder indicators</p>	<p>Number of complaints at the public relations office. Such indicator is realized at organizational level Relationship and contacts with associations for the rights of patients</p>
<p>regional authority indicators.</p>	<p>No specific indicators. However, it is analysed the punctuality in sending data and information requested</p>

Hospital organization of Pisa

economic and financial indicators:	Balance sheet indicators Value of the production and consuming of direct factors (drugs, technical materials, personnel). Such indicator is realized both at center of responsibility level and at organizational level. Analysis of the incidence of direct cost
quality of services indicators	Waiting times Rightness of staying time
internal process indicators	A project for the analysis of the quality in a transfunctional view is going on
learning and growth indicators	The cost and the outcome of the training are analysed both at the "office for training" level and at a top management level The cost and the outcome of the technological investments are analysed at a top management level
stakeholder indicators	Number of complaints at the public relations office. Such indicator is realized at organizational level Relationship and contacts with associations for the rights of patients
regional authority indicators.	Punctuality in sending data and information requested

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