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MANAGEMENT MATTERS: THREE EASSAYS ON HOW HEALTH SYSTEMS AND ORGANIZATIONS CAN IMPROVE THEIR ORGANIZATIONAL PERFORMANCE.

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To my family, that has always been there to support me.

To my tutors, that provided me guidance throughout the whole path.

To my friends, that were there even when they weren't there.

To everyone who shared a little portion of this adventure with me.

TABLE OF CONTENTS

ABSTRACT	5
INTRODUCTION	7
CHAPTER ONE — NOT JUST AN INCREASE IN FUNDING: HOW CAN HEALTH CARE ORGANIZATIONS IMPROVE THEIR PERFORMANCE?	13
1.1. <i>NHS sustainability as sustainability of single organizations.</i>	14
1.2. <i>Research method: interviews and coding.</i>	18
1.3. <i>Coding results.</i>	20
1.4. <i>Discussion of results. Implications for research and policymakers.</i>	25
1.5. <i>Conclusions of the essay.</i>	28
CHAPTER TWO – MANAGING HEALTH CARE SERVICES: ARE CLINICIANS READY TO PLAY THE ROLE OF MANAGERS?	31
2.1. <i>Health professionals and managerial competencies: the current state of art</i>	32
2.2. <i>Clinicians as managers. Literature review.</i>	33
2.3. <i>What clinicians need to be good managers?</i>	34
2.4. <i>Research method: questionnaire and sampling.</i>	39
2.5. <i>Analysis of questionnaire responses: results of the essay.</i>	40
2.6. <i>Discussion of results. Implications for research and policymakers.</i>	48
2.7. <i>Conclusions of the essay.</i>	51
CHAPTER THREE – LIGHTS AND SHADOWS OF PUBLIC PRIVATE PARTNERSHIPS (PPP) IN HEALTH CARE. AN INTERNATIONAL COMPARATIVE CASE STUDY.	53
3.1. <i>PPP: what, why and how.</i>	54

3.2.	<i>Problems with PPP: how to cope with complexity.</i>	55
3.3.	<i>Method of the essay: comparative case studies.</i>	58
3.4.	<i>Finding and discussion of results.</i>	63
3.5.	<i>Conclusions of the essay</i>	73
CHAPTER FOUR – CONCLUSIONS AND FUTURE RESEARCH.		77
REFERENCES		79

Management matters: three essays on how health systems and organizations can improve their organizational performance.

Abstract

The Italian National Health Service is considered one of the few worldwide that provide universal coverage and has been classified among the best in the world in past years. Yet in the wake of 2008 and 2011 financial crisis, with subsequent restrictive changes made by Italian governments during the 2010s, the quality of care provided raised concerns among researchers, and the Covid-19 pandemic revealed several weaknesses of the system, providing a vision of the potential emerging issues of the next decade.

Funding has been cut as a consequence of the responses to the crises mentioned above, but the need of an increasingly expensive technological innovation, the issue of an aging population and the society's rising expectations on quality did not stop.

Despite the fact that the national expenditure on health care in the country increased by 5% in 2020 due to the necessity of increasing funding to face the Covid-19 pandemic, this increase of funds was not made permanent and was specifically targeted to face an immediate threat

The purpose of this work is thus to identify and isolate several tools that can be used as possible instruments to improve the organizational performance of public health organizations, highlighting possible advantages and disadvantages, in order to improve the general function of the I-NHS.

This work thus will develop three essays, each one debating a current crucial organizational issue for the I-NHS.

Chapter One will focus on the opinion of public hospitals CEOs, to which was demanded through structured interview, what organizational tools would they propose to improve the efficacy and sustainability of the I-NHS. Responses, *inter alia*, focus specifically on two issues: (1) need of improving managerial competencies of health professionals and (2) increasing the role of external coordination.

Therefore, Chapter Two investigates aims to assess how health professionals feel competent in the field of management or, in other words, do they feel ready to play the role of manager?

Chapter Three, sketches the potential advantages and threats of a specific form of external coordination: Public private partnerships in hospitals.

Conclusions of this work may be useful to identify new research topic that need to be investigated as well as define several suggestions for policy makers.

Keywords

National Health Service; organizational performance; health organizations; health services management; hospitals; Italy

INTRODUCTION

The Italian National Health Service (I-NHS) is more than 40 years old, having been founded in 1978, and it is considered one of the few worldwide that provide universal coverage (Signorelli *et al.*, 2020). The I-NHS was built on the guiding principles of “universality” and “solidarity”, following the Beveridge model (Beveridge, 1942; Fanelli *et al.*, 2020a), and all Italian citizens are entitled to care with no discrimination on the basis of income, gender or any other determinant, according to what is expressed in the national Constitution. The service is funded through national taxation, supplemented partially by co-payments for pharmaceuticals and outpatient care (Signorelli *et al.*, 2020). The I-NHS is mainly financed by public finance (74%) with a marginal role for private insurance (3%) and the rest covered by out-of-pocket spending (23%) (Pratici and Singer, 2021; Fanelli *et al.*, 2020b). The national health care expenditure in Italy is currently 8.6% of the national gross domestic product (GDP), which is below the mean of EU states as a whole (8.8%) and far below some other G7 economies, such as France (11.2%), Germany (11.2%), the United Kingdom (UK) (9.6%) and the United States (17.8%) (WHO, 2019). Despite this, the I-NHS is ranked by the WHO (2020) as among the best in the world, and was ranked second in the world in 2000, demonstrating the efficient and effective management of the I-NHS as a whole.

Yet in the wake of 2008 financial crisis, 2011 sovereign debt crisis and subsequent restrictive changes made by Italian governments during the 2010s (Pratici and Singer, 2021), the quality of care provided raised concerns among researchers (Falco, 2019), and the Covid-19 pandemic revealed several weaknesses of the system (Pratici and Singer, 2021), providing a vision of the potential emerging issues of the next decade (Fanelli *et al.*, 2020a).

Funding has been cut as a consequence of the responses to the crises mentioned above, at the precise time that the I-NHS was required to cope with new issues such as increasingly expensive technological innovation, the aging population and society’s rising expectations on quality.

Despite the fact that the national expenditure on health care in the country increased by 5% in 2020 due to the necessity of increasing funding to face the Covid-19 pandemic (Wang et al., 2021), this increase of funds was not made permanent and was specifically targeted to face an immediate threat (Berardi et al., 2021).

Due to this, the system as a whole faces a general scarcity of resources. However, thanks to the Next Generation-EU¹, additional funds are expected to flow into the system (Filippini and Vinceti, 2021). According to many observers, the main issue will then become how to create the best conditions to employ those funds and improve the national system by making it more sustainable (De la Porte and Jensen, 2021; Pessina et al., 2021; Fabbri, 2022). Sustainability, in the sense of the capacity of responding to today's needs without compromising needs of tomorrow (De Preux and Rizmie, 2018), is a crucial concept to consider, and therefore it is important to pursue the objective of making the whole system more sustainable.

To address the issue of making the I-NHS more sustainable, there are different paths to follow. One can consider it as a sort of holding company, controlling different types of trusts in its territory (Pratici, 2021). Therefore, to improve the general efficacy of the parts, it is crucial to start from the foundations. In other words, to improve the general function of the I-NHS, it is necessary to improve the performance of each of the health organizations composing the I-NHS (Lega et al., 2013). But how?

The empowerment of citizens who are demanding a higher quality of health services made even more necessary having a more sustainable I-NHS (Salvatore et al., 2021). It is thus more important than ever to enable the I-NHS to manage the funds that will be received thoughtfully and to allocate resources rationally in order to not fall into another situation where the lack of funds generates a general decrease of the quality of service (Pessina et al., 2021).

¹ The European Commission has approved Italy's recovery and resilience plan (PNRR). This step allows Italy to access EU funding, which will be disbursing €68.9 billion in grants and €122.6 billion in loans under the Recovery and Resilience Facility (RRF). This financing will support the implementation of the crucial investment and reforms in all sectors. As for health care, over 15 billion will be invested in structural changes.

The main objectives of the forthcoming years therefore must be: keep following the principle of universality enshrined in the Italian Constitution and, at the same time, meeting the demand for higher quality of care (Roschnik et al., 2017), and employing the funds that will be received efficiently (Pessina et al., 2021).

In light of this, the key issue becomes “*how to create the right conditions to pursue these ambitious objectives?*”

There is a widespread consensus in the literature (e.g. Pettigrew et al., 1988; Øvretveit et al., 2011; Lega et al., 2013) which affirms that variables other than financial leverage should be taken into consideration. Adding funds to health organizations cannot be a panacea for all problems. Therefore, scholars are called upon today to identify such variables, and to outline what can be done to improve the sustainability of the I-NHS starting from its foundations: single health care organizations, by which we mean public hospitals, public nursing homes, public health institutions and, more generally, any type of public health care organization. In other words, how to make the whole system more sustainable through best practices adopted by the organizations composing the system.

Several authors (e.g. Rosset, 1991; Dillard et al., 2008) argue that the basis for sustainability is adoption at the organizational level, so pursuing sustainability needs to start with every organization making its own contribution to improve the function of the NHS. Public health organizations, which are required to improve the quality of care in line with demand, need to take this into account (Ramirez et al., 2013).

Many factors affecting sustainability (e.g. rising costs, population aging, demographic curve and of course, the effects of the pandemic) are exogenous to healthcare organizations and cannot be directly controlled (Pettigrew et al., 1988). Funding levels are decided from the top-down by policymakers, and managing available resources is often considered as the most effective way of achieving sustainability (Lega et al., 2013). Scarcity of resources is an escapable fact for most NHSs worldwide, but there are many other factors which have a strong impact on the efficacy and efficiency of healthcare organizations (Higuchi et al., 2013) and which the NHS can influence (Davies et al., 2010; Lega et al.,

2013). For instance, the ability to adapt to changes and make continuous improvement is one of the most important issues for a public organization. Maintaining a positive attitude and adaptability to change are required to pursue sustainable strategies (Benn et al., 1996; Ford et al., 2011; Kiesnere & Baumgartner 2019). It is however the case that in public organizations, where the bureaucratic model tends to prevail (Mintzberg & Van der Heyden, 1999; Mintzberg, 1978; Martela, 2019), change is often perceived as negative and hard to accomplish (Himberg et al., 2019). Each organization needs to implement good management so that each single component of the NHS can work sustainably, efficiently and efficaciously in order to make the whole system efficient and effective. In short, *management matters* (Lega et al., 2008).

The purpose of this work is to identify and isolate several tools that can be used as possible instruments to improve the organizational performance of public health organizations, highlighting possible advantages and disadvantages, in order to improve the general function of the I-NHS.

This content is structured as follows: Chapter One addresses the general issue of how to improve the NHS through individual organizations or, in other words, how effective management can contribute to the improvement of organizational performance of each component of the NHS and, cumulatively, to the whole NHS.

To address this issue, a literature review was performed, which made it possible to identify recurrent issues that health organizations need to deal with on a daily basis. The purpose of this initial literature screening is to identify several items that should be considered as crucial to consider in a policy-making process.

The essay then attempts to identify what can be done about the issues identified in the literature review, in order to improve organizational performance and, as a consequence, improve the whole system. Ten Italian hospital CEOs have been interviewed, who are privileged observers of the whole system, and questions were asked with the purpose of ascertaining their opinion on what policy makers should consider when dealing with health care.

The results of this essay suggest that among all of the aspects to be investigated, professional and managerial competencies as well as an efficient external coordination represent two of the most important tools to invest in. As such, Chapter Two and Chapter Three are dedicated to these issues.

More specifically, Chapter Two investigates the self-perception of health professionals concerning their own managerial competencies, while Chapter Three analyzes a possible tool of coordination between health organizations within the NHS and private subjects that are outside the system: Public-Private Partnerships (PPPs).

Chapter Two consists of an essay based on the analysis of a survey questionnaire administered to health professionals in order to assess their level of management competencies and their expectations from the public organization they work for. This essay is developed with a case study methodology, as questionnaires have been administered to professionals of two different Italian regions, Lombardy and Emilia-Romagna regions. The Emilia Romagna and Lombardy regions are contiguous and are both considered among the most adept in Italy in terms of performance, but they have very different organizational and managerial models (Ministero della Salute, 2017), and as such they may be considered as representative of the two main health care models implemented in Italy.

Chapter Three, instead, investigates Public-Private Partnership as a form of external coordination. It provides insights on how this type of partnership can be useful to improve the organizational performance as well as detailing the risks associated with them.

Chapter Four discusses the conclusions of this analysis and provides several ideas for possible future research. The conclusion attempts to address how policy-makers may be able to assist health organizations to achieve better organizational performance, contributing to the improvement of the I-NHS overall.

CHAPTER ONE

NOT JUST AN INCREASE IN FUNDING: HOW CAN HEALTH CARE ORGANIZATIONS IMPROVE THEIR ORGANIZATIONAL PERFORMANCE?

Whenever a community develops economically and socially, there is a demand for a better quality of life (Andaleeb et al., 2007), and the level of healthcare in the community, whether in a country or a region, determines the community's development in terms of citizens' quality of life (Goh & Marimuthy, 2016). In these conditions, individuals realize the importance of health in their quality of life and the importance of healthcare services provided by healthcare organizations (Addington-Hall & Kalra, 2001). In fact, the demand for higher quality healthcare services among people in "developed countries" has risen significantly, and there has been a steady rise of the cost of care (Campbell et al., 2000). Healthcare organizations often struggle to provide adequate assistance because of the scarcity of resources affecting National Health Systems (NHS) worldwide. NHSs thus increasingly face a continuing challenge of how to improve and maintain high quality standards across public healthcare organizations with limited resources.

There are several solutions, and for many researchers the answer entails sustainability (e.g. Bunchan et al., 2006; Lega et al., 2013; Jameton & McGuire, 2000). All healthcare systems worldwide, whether financed by taxation, the market or social insurance-based, struggle with sustainability (Lega et al., 2013) and reaching a sustainable equilibrium between funding and outcome (Greener, 2020). Sustainability is a word used in many contexts to mean a variety of things, and therefore its significance is not always clear. It tends to be associated with environmental practices, but this paper focuses in its core principle as defined in the managerial literature: *"the ability to meet current needs without compromising the ability to meet future needs"* (De Preux & Rizmie, 2018).

Superficially, this seems simple enough, but it is not always clear how to put the principle into practice (Lega et al., 2013).

There are several other aspects of the concept of sustainability, as well as its managerial significance. The European Observatory on Health Systems and Policies (2009) defines it as maintaining quality and service coverage at an affordable cost.

These definitions underline the financial aspect, which is always a major source of concern for any healthcare organization (Naylor & Appleby, 2013). But for public services, which often suffer from a lack of funding, it has a wider scope and includes other factors. In managerial literature, in fact, various researchers find that sustainability is more than a financial matter (Davies et al., 2010; Higuci et al., 2013; Maher et al., 2013).

Furthermore, an NHS is a complex system, made up of individual organizations, each one with its own issues and difficulties. For an entire system to work efficiently and effectively, it is necessary for each and every component to have the correct tools to work efficiently and effectively. In countries with an NHS that aims to be sustainable, every constituent organization needs to achieve a sustainable growth.

The aim of this paper is thus to identify the tools to be managed in each component of the NHS in order to make each part of the whole more efficient and effective.

1.1. NHS sustainability as the sustainability of single organizations.

Several authors (e.g. Rosset, 1991; Dillard et al., 2008) argue that the basis for sustainability is the organizational level, so pursuing sustainability needs to start with every organization making its own contribution. Public health organizations, which are required to improve the quality of care in line with demand, need to take this into account (Ramirez et al., 2013).

Many factors affecting sustainability (e.g. rising costs, population aging, demographic curve and of course, the effects of the pandemic) are exogenous to healthcare organizations and cannot be directly controlled (Pettigrew et al.,

1988). Funding levels are decided top-down by policymakers, and managing available resources is often considered as the most effective way of achieving sustainability (Lega et al., 2013). Scarcity of resources is an escapable fact for most NHSs worldwide, but there are many other factors which strongly impact the efficacy and efficiency of healthcare organizations (Higuchi et al., 2013) and which an NHS can manage (Davies et al., 2010; Lega et al., 2013). For instance, the ability to adapt to change and make continuous improvement is one of the most important issues for a public organization. Maintaining a positive attitude and adaptability to change are required to pursue sustainable strategies (Benn et al., 1996; Ford et al., 2011; Kiesnere & Baumgartner 2019). It is however the case that in public organizations, where the bureaucratic model tends to prevail (Mintzberg & Van der Heyden, 1999; Mintzberg, 1978; Martela, 2019), change is often perceived as negative and hard to accomplish (Himberg et al., 2019). Each organization needs to implement good management so that each single component of the NHS can work sustainably, efficiently and efficaciously in order to make the whole system efficient and effective. In short, *management matters*.

The research question addressed by this paper is thus: “What factors can be managed at the level of a single organization in order to maximize the positive results of the organization itself and contribute to improving NHS sustainability overall?”

Analyzing the literature, five main factors recur: (1) motivation of healthcare professionals, (2) coordination of co-workers covering different positions, (3) continuous improvement of health professionals’ competencies, (4) strengthening managerial roles, and (5) health professionals’ commitment to the organization they work for.

Motivation

Health professionals’ motivation to do their job well in the organization they work for is nowadays a crucial issue across the healthcare sector (Altindis, 2011; Berberoglu, 2018). The importance of motivation is underlined by several studies (Lambrou et al., 2010; Kjellstrom et al., 2017), which find that organizations with motivated health professionals produce better outcomes and deliver a higher

quality of care (Dueleman et al., 2003). In order to improve efficacy and efficiency, an organization should thus promote the motivation of its personnel (Zaccaro et al., 1995).

It is not easy to identify factors which motivate health professionals. Financial reward would appear to be a possibility, but it is not always achievable within an organization, and is not in any case proven to be the most important variable (Gracia-Goni et al., 2007; Marques et al., 2019). Other factors include rewards in terms of job recognition, assignment of responsibilities, and recognition of the value of their work (Peters et al., 2010). Numerous variables can in fact be considered.

Coordination

Three different forms of coordination can be found in the literature (Waddman et al., 2019; Tello-Leal et al., 2012; Borys & Jemison, 1989). The most frequent is operational coordination, which refers to all the organizational processes (Waddman et al., 2019). Organizing and planning should involve determining what work is needed to reach an objective and assigning tasks to individuals correctly and effectively, and arranging these individuals in a decision-making framework. In healthcare organizations this is often hard because of the heterogeneity of professionals involved, and it can be difficult for management to identify the right person for the right role (Runciman & Walton, 2007).

Operational coordination alone is not however sufficient; a second level of organizational coordination is also required (Stephenson, 2015). Organizational coordination in public entities, such as NHS organizations, has to be carried out by other entities which identify the mission, in other words, by upper management (Embertson, 2006).

The third type of coordination is professional coordination. Healthcare organizations are mixed organizations: they usually have a variety of objectives as well as differentiated forms of coordination (Borys & Jemison, 1989). Professionals are very much differentiated in terms of skills and competencies (Jennings et al., 2007). Evidence suggests that closer coordination leads to a general increase in effectiveness and also helps to improve the quality of care

(Øvretveit, 2011; Von Loenen et al., 2016). It is not always easy to coordinate different professional roles, and too often NHS do not help in this direction (Webb, 1991).

Competencies

Promoting the development of new professional competencies is one of the main objectives of every NHS (Bittel-Kirk, 2009). In many countries, policies and incentives to promote and enhance them are the responsibility of the NHS, which are thus required to reward professionals willing to learn and develop new skills (Mensah et al., 2005) which aid sustainability across the organizations. The NHS may act as a central policy maker, but individual healthcare organizations need to promote the willingness to update and develop new competencies among healthcare professionals (Wilson & Carrier, 2008).

Individual healthcare organizations thus need to adopt a model of value creation where competitive advantage is based on professional competencies (Fanelli et al., 2018; Bunchan et al., 2006). This helps to define a path for any organization in improving its quality-of-care standards (Øvretveit, 2003; Edvardsonn et al., 1994) as well as improving clinical governance (Fanelli et al., 2018; Freeman & Walshe, 2004).

Managerial roles

In many countries, healthcare organizations have progressively abandoned the traditional organizational model based on having a professional bureaucracy, where professionals are considered outside the administrative hierarchy. It has been replaced it with a model in which clinicians are required to use managerial skills (Mintzberg & Van Der Heyden, 1999; Correira & Denis, 2016).

The literature finds that skills in professional activities need to be combined with managerial skills in order to improve performance and make an organization more sustainable (Aini et al., 2019).

NHS sustainability depends on its ability to optimize the use of resources. There is thus the need for policy makers and health organizations to make health professionals more aware and better informed about their function as managers.

Commitment

In the last decade, there has been widespread debate in the literature on organizational commitment (Altindis, 2011; Ahluwalia & Preet, 2017; Pool & Pool, 2007). It is clear that commitment to an organization is an essential tool for encouraging professionals to work more effectively (Tella et al., 2007). Professionals need to feel the organization mission as their own, and work to achieve shared objectives (Ahluwalia & Preet, 2017). But it is far from clear how an organization can leverage professionals' commitment, and the debate is ongoing.

Some researchers find that emotional commitment needs to be in line with organizational objectives and to be continuous (Mowday, 1979). Others note that it is necessary to understand how organizations can develop and maintain this organizational commitment (Ramdhani et al., 2017). Others find that the main basis for commitment to an organization is actually job commitment (Millward & Hopkins, 1998). Organizations thus need to empower and reward professionals in their roles as much as they can (Marques et al., 2019).

1.2. Research method: interviews and coding.

The research question implies a qualitative approach. Data for the study pertaining to the main elements identified in the literature were collected throughout the year 2019, and a selected sample of hospital CEOs were interviewed. The methodology thus relies on privileged observers (Della Porta, 2014), selecting respondents particularly versed in the topic of managerial training. Respondents were also identified through being directly involved in the process of management training as indicated by being formally involved in at least one Steering Committee of an Italian university providing managerial education to clinicians. Respondents were also required to meet the following criteria: (1) being the director of a public health organization, and (2) having been

in the same position for at least two years (3) of which at least one year at the same site (Price et al. 2020). Seventeen interviews were carried out, but only 10 respondents met all the necessary criteria (58.82% of the sample).

The low number of interviewees in the sample meant that it was not possible to use complete structured interviews, and a semi-structured qualitative interview survey was used instead. In fact, according to Kvale (1994), the privileged observer methodology is appropriate for non-extensive samples, and usually implies the presence of a small universe.

The interviews consisted of five questions, one question for each factor identified in the previous section. Questions were as follows:

- Q1** What are controllable factors which can contribute to motivating health professionals? (*motivation*)
- Q2** How can coordination between different health professionals be enhanced and encouraged? (*coordination*)
- Q3** What leverage can be used by health organizations to develop professionals' competencies and sustain improvement over time? (*competencies*)
- Q4** What managerial roles should be strengthened in health organizations? (*managerial role strengthening*)
- Q5** How can professionals' commitment to their organization be increased? (*commitment*)

Interviews were transcribed and analyzed using a qualitative data management software application (Dedoose®). A process of pattern recognition is used where emerging themes become categories for the analysis (Della Porta, 2014; Price et al., 2020; Aberbach, 2002). The coding framework was developed by the author of this present work in collaboration with three other peers, with a joint process of blind coding (Price et al., 2020). The framework made it possible to identify the flows of information, characterizing key elements highlighted by the interviewees, in both positive and negative meanings.

As a further step, interpretations were often discussed with experts in the field, asking them to read transcribed data and commenting its relevance, using

an interactive and reflexive approach (Millward & Hopkins, 1998; Della Porta, 2014).

In sum, the study was conducted in three stages as follows: (1) An analysis of the theoretical framework based on the research question: how to increase NHS performances through its composing organizations, leaving aside the financial components. Five main areas to investigate were identified (motivation, coordination, competencies, managerial roles and commitment to the organization); (2) A coding process identified four recurrent items in the interviews related to healthcare sustainability (responsibility, integration, professionalism and training); (3) Analysis of respondents' answers, interpreting their views on the four items identified, and possible contributions to the five areas of investigation.

1.3. Coding results.

Opinions of respondents are summarized in Table 1.1. The double entry table shows the areas identified by the literature review horizontally, and the items identified in the coding process vertically. Numbers in the table reflect the frequency of citations for each question during the interview.

In other words, Table 1.1. represents the coded most recurring tools from the analysis of interviews, classifying the four most frequently used by interviewees. Therefore, the table shall be read as: what tools (see first column) shall be leveraged to improve each area identified as crucial in the literature (first row).

Table 1.1. Frequencies of recurrent items in the coding process, for each question (Q1 to Q5).

CODING / ITEM GROUP	Motivation Q1	Coordination Q2	Competencies Q3	Management Q4	Commitment Q5	TOTAL
Responsibility	9	3	4	7	6	29
Integration	4	7	2	5	3	21
Professionalism	4	6	2	2	5	19
Training	5	0	7	1	0	13
Other	2	1	2	2	3	10
TOTAL	15	14	13	10	11	

Table 1.1. shows that almost 30% of the items come under the topic of responsibility, which is mentioned in the answers to all questions.

The topic of organization in its wider meaning covers the items responsibility and integration, and shows more importance than professionalism and training. However, when respondents mention how to increase responsibility on health professionals, competencies and training are almost always the dominant answer.

Results for Q1 – Q5 are reported as follows.

Q1 Motivation

The coding process identified several items. Among the most frequent, interviewees found responsibility of professionals in their daily professional lives to be crucial. A typical observation was *“It is necessary to invest in health professionals across all dimensions, and especially in the technical and administrative department, increase responsibilities of employees, investing in their competencies”* in order to stimulate the interactions between health professionals and promote integration. Integration was the second element which the interviews defined as a tool for efficiency. It is also closely related to the level of communication between different health professionals as well as *“the*

managerial competencies of professionals". Performed interviews confirmed findings in the literature (Dieleman et al., 2003; Zaccaro et al., 1995; Delevidove et al., 2019), that the higher the level of internal communication, the better the performance. However, they also underlined the importance of external coordination which is considered as *"a crucial element to make the organization develop"*.

Teamwork is another crucial factor in Italian NHS health organizations: *"It is important to motivate workers through the widespread use of teamwork, otherwise there is the risk of generating difficulties in communication between colleagues, which would impact on the efficacy of the treatment pathways and on management efficiency"*.

Finally, innovation is also found to be a factor to be promoted in health organizations. Three out of ten interviewees defined it as *"the key element to invest in. It is necessary to invest in and manage innovation, from both a medical and organizational point of view. Innovation has two different dimensions: professional and organizational, and both are a key element for general efficacy and quality improvement in service. Health professionals feel more motivated to work in a system which invests in innovation and gives them the opportunity to learn"*: once again to improve their competencies.

Other elements were found to be counterproductive. Remuneration is widely used by health organizations nowadays as the main leverage to motivate health professionals, despite the general lack of funds. Respondents observed that it *"cannot be always considered as a positive element (...). However, two further substantial aspects need to be taken into consideration: persuading professionals to share the same objectives as the institution [goal sharing], and rewarding through the accountability of professionals. (...) Each individual needs to share the same mission as the institution and needs to be rewarded with responsibilities in order to be able to make his or her contribution to reaching shared goals"*.

Q2 Coordination

Opinions on coordination were less similar between the different organizations. There is no one particular point of view on this topic, but each interviewee highlighted several key elements.

The creation of networks between professionals has been found to be one of the most successful ways of improving coordination between health professionals. The strengthening of procedures may also help, in the sense that roles and duties are clarified. However, several interviewees emphasized that procedures need to be well understood by all staff. Otherwise they can become counterproductive and make professional input less efficient, and also raise levels of bureaucratic pressure in the organization. Some interviewees believe that multi-disciplinary approaches would increase integration between health professionals, but no suggestions on how to pursue this objective are made.

There are different views on hierarchy. Some think that it impedes a general dispersion of the shared goals, given that *“the current system based on departments is based on a vertical hierarchy, which may not be as functional in terms of performance”* as other types of hierarchical models. However, other interviewees think that a defined hierarchy with defined job descriptions is the key to a higher degree of coordination: everyone knows what to do and when to do it.

Interviewees thus identify diverse factors, but there is agreement that: *“assisting one other is not just a question of different parties, but needs to be the lever which enables health professionals to develop new competencies in order to achieve better performance”*.

Q3 Competencies

“Training and competencies” is the item that appears to be linked to all the other items cited by interviewees. On this issue there is a general widespread agreement that there is a strong need everywhere to increase the attention paid in this area, requiring massive investment. Given that every clinician also acts as a manager, professional training should include managerial skills. Universities should work closely with health organizations in order to define a training path for

each professional category, and, in all cases, need to improve their level of managerial training.

Closely related to this, the assessment process of *“job profiles and tasks to be carried out”* is another important factor needing improvement. Assessment processes can in fact lead to *“a better definition of goals in terms of performance”*.

Technology is again found to be a tool requiring input, and overall a simple relation between the level of technology and the willingness of health professionals to increase their competencies is found to be necessary. Health organizations should acknowledge this and invest in technology to promote the development of competencies in their professional skills. Today, says one interviewee, *“this is still poor across Italian organizations”*.

Q4 Strengthening the managerial role

Overall, interviewees believe that managerial competencies are poor among health professionals. Health organizations should thus strengthen the managerial role of health professionals other than clinicians, and confer a higher level of responsibility on those professionals. Furthermore, *“clinicians should learn to be managers as well. It is important to overturn the view that the best professional is necessarily the best manager”*. It is also important to *“promote the brand reputation associated with the organizations in all fields”*. Professionals should share the vision of the organization, and promote it through their professional behavior.

Finally, *“a matrix organization should be implemented in order to manage the different units which compose the organizations”* promoting *“integration between one another”*.

Q5 Commitment to organizations

Several interviewees remark that *“Health professions are more like arts”*. And, like artists, some therefore feel that it impossible for them to feel part of the organization, but that they need to be committed to a wider context and proud of working for the NHS. In this way they feel useful to society and that their job is valued. The great majority of interviewees thus focus on the topic of goal sharing:

“It is important for everyone to feel involved in the decision-making process. This does not mean that everyone can make the decisions, but everyone needs to feel that their opinion is taken into account and to feel part of the decision-making process in some way”. The sense of commitment to the organization can be compromised in various ways. Changes in the organization can severely affect the participation of professionals towards the common goal, and to avoid such problems, each organization needs to value its own history and historical mission.

Another potential problem is the distance between workers and management. To reduce this type of tension, *“Managers should go around and be seen by other workers in order to reduce the distance and increase the sense of commitment to the organization”*. Finally, *“it is important to transform the common strategy into the shared ambition of professionals”*, so they are more committed to achieve the organization’s goals.

1.4. Discussion of results. Implications for research and policy makers.

Analysis of interviews revealed several indications of what may be key elements and recurring factors for the general improvement of NHS, increasing its sustainability, using the single organization as a starting point. This will help in setting up policy indications either for institutions or hospitals’ top management. These indications are summarized in four main points, as follows.

- There is a widespread need to improve the organizational aspect of professionals’ responsibilities, as confirmed by a wide area of literature (Shouksmith, 1994; Ginter et al., 2018). Although legislation and contracts specify clear organizational responsibility for highly specialized health professionals in public hospitals, this aspect of Italian public hospitals is not as clear as it should be (Lega & Sartirana, 2016; Numerato et al., 2012) and there is a great deal of confusion about the responsibility of health professionals (Daidone & D’Amico, 2009). Several interviewees in fact highlighted that the responsibility for the quantity and quality of resources used is not generally the responsibility of the head of the unit, but is often a general benchmark for multiple roles. It is often necessary to define a specific responsibility for professional development, performance

assessment as well as the use of resources. This leads the CEO interviewees to demand a more specific definition of responsibilities for professionals employed. The issue of “*who should inform whom*” becomes the key point and highlights a clear need for “*strong chains of command able to generate internal policies and allow a continuous flow of information to hospital CEOs on any possible problem or issue occurring*”.

Another issue that emerges clearly from interviews is the role of managerial competencies in defining and better shaping responsibilities over health professionals. Since health professionals are hybrid figures (Evers, 2005), they need to possess a high grade of managerial expertise to better achieve the objective of managing responsibilities. As such, as reported by one of the CEOs interviewed, “*training on managerial skills should start early in their professional career*”

- Coordination appears to be one of the main issues that hospitals are facing. CEOs consider coordination as a way of generating positive outcomes and, therefore, wish to incentivize the use of any tool which promotes it. Specific clinical paths appear to be an effective tool if they are well understood and shared by all the staff involved. In Italy, hospital organizations are characterized by a high level of specialization (Daidone & D’Amico, 2009), and are, in a way, “*organizational silos*”, as described by an interviewee citing Mintzberg and Van Der Heyden (Mintzberg & Van Der Heyden, 1999). The high degree of orientation to professional specialization limits integration between highly specialized professionals to some extent (Zoffmann & Kirkevold, 2005). Coordination is thus a particularly difficult aspect. Once again training and developing coordination competencies is seen as the most important way to reach the expected outcome.
- A third element is represented by in-service training. Generally speaking, training not only increases professionals’ technical knowledge, but also develops an organizational culture

oriented to coordination between different professionals, as highlighted before. It is necessary to “directly intervene on the ability of health professionals to operate with synergy” in order to improve outcomes.

- The last element identified from the interviews is “professionalism”. Interviewees highlight the importance of professionalism and commitment to the job. But rather than a critical element, it is considered to be a positive element to retain, and thus bears less weight. There were several ways identified to improve commitment to the organization. They include: investing in new technologies, generating high coordination within heterogeneous teams and invest in improving professionals’ competencies to increase their commitment to the organization

Clearly, the topic of commitment to the organization, or “*feeling part of a professional group*”, mentioned by every interviewee, is one of the most important elements in improving the sustainability of the NHS.

Commitment appears to be closely related to motivation, as commitment generates motivation among health professionals. And, *vice versa*, the more motivated health professionals are, the more committed they feel to their organization. However, this virtuous relationship can easily become a vicious circle; the weaker the motivation, the lower the commitment. So it is important and necessary to implement policies to increase health professionals’ motivation, as this will affect also their commitment to the organization itself.

Several CEOs highlight the need for the physical presence of management, or “*management by walking around*” (Mohan et al., 2013; Serrat, 2017; Tucker & Singer, 2015), which implies the participation of all health professionals in defining strategic goals. It is therefore necessary to work to align the personal ambitions of professionals with the aims of their organization.

In short, the interviews identify three different managerial styles which can improve health professionals’ involvement in organization policies: (1) based on organizational responsibility, with a strong and rigid definition of organizational

roles. (2) Based on coordination and close interaction between different types of professionals. This type of management focuses on strong synergy between different professionals from different backgrounds. (3) Based on specific elements, such as responsibility, coordination, professional training and professionalism. This implies a weaker characterization of the managerial style, and is modeled on professionals' profiles.

For all three, an always present element that helps in achieving the defined objective of training on competencies, whether meant as organizational or professional competencies.

1.5. Conclusions of the essay.

It appears that any general increase in financial resources would not be sufficient to support the Italian NHS. Hospitals and other healthcare organizations require more than additional financial resources, and effective and efficient results can only be achieved by taking organizational conditions into account. Hospital CEOs interviewed indicated several possible causes of a number of current NHS problems:

- a. The bureaucratic structure of public health care, and the resulting strict regulations governing operating conditions. This is widely considered the cause of stagnation in the process of change. Regulations are issued by higher levels of government, from local and regional authorities up to the central government, and this generally perpetuates a formal and impersonal managerial approach.
- b. Processes of change in public organizations are likely slower than in other organizations. This reflects the heavily bureaucratic approach, which prevents review of the operational mode, even when it is clearly obsolete and outdated, and also slows down change itself. This can lead to a general resistance to change, which is related to a lack of clear responsibilities and sometimes laziness. It prevents any type of innovation.
- c. Reward systems are weak and organizational responsibilities are not sufficiently considered or rewarded. This is also an effect of heavy

bureaucracy, which allows management little discretion in rewarding responsibility.

- d. Reward systems are managed by CEOs, but they never involve direct financial reward.

In order to promote the sustainability of public health organizations, many hospital CEOs have thus embarked on the path of strengthening management competencies as the most important lever affecting performance. Conducted interviews identified several key elements which may contribute to the ambitious objective of improving NHS sustainability from an organizational point of view. The first is reform of the bureaucracy and long-term modification of the entire system of regulation. The second is the formal recognition of professional and management competencies within the current rules. Strong emphasis should be put on commitment to the organization, and new reward systems giving recognition to those who follow the organization's lines of strategic development.

Lastly, the interviews show that organizational innovation should be promoted for continuous improvement of the quality of care, making services more organizationally effective. Examples of such innovation are the reorganization of care services, and a clearer description of coordination responsibilities.

All this implies that hospital CEOs should be the biggest promoters of change, in the context of a transformation from a bureaucratic to a modern stream-lined organization, strongly goal-oriented and pursuing a continuous path to improvement. Evidence also suggests that hospital CEOs are well aware of this issue and in many cases are already taking steps to pursue this objective.

CHAPTER TWO

MANAGING HEALTH ORGANIZATIONS: ARE CLINICIANS READY TO PLAY THE ROLE OF MANAGERS?²

The first chapter highlighted, among other factors, the importance given to professional competencies. As such, formal recognition of professional competencies within the current rules, becomes a key element to achieve a better organizational performance and contributing to improve the whole system. However, what type of skills should a health professional possess? To address this issue, there is the need to first answer to another question: what a professional?

Evetts and Burchner-Jeziorska (1997) define a “professional” as an individual “who possess knowledge and skills designated by professional body, usually in conjunction with academia and/or professional bodies, as well as the government, that control entry into a profession. These characteristics allow professionals a higher grade of autonomy in making decisions in the workplace and an exclusive identity that establishes boundaries between themselves and others.

When it comes to health professionals, however, the issue becomes even more complicated as they are required to have both clinical and managerial competencies. As mentioned in Chapter One, health professionals’ motivation and coordination, which appear as two of the most important tools to improve organizational performance, is directly related to their competencies. Gaining new competencies as well as developing skills is considered a reward that is, in fact, able to motivate professionals.

² A consistent part of this essay has been published in a peer reviewed journal. The reference to the published article is: Fanelli, S., Pratici, L., & Zangrandi, A. (2021). Managing healthcare services: Are professionals ready to play the role of manager?. *Health Services Management Research*, 09514848211010264.

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Since health care organizations are characterized by a high grade of complexity, the need for a hybrid professional figure, with both clinical and managerial competencies, becomes a crucial issue. Furthermore, studies show how possessing managerial competencies and “being in the management” of such organizations improves the quality of the care provided by professionals and their continuing motivation. Therefore, it is important that their self-assessment of their managerial competencies is accurate and that they think the organization they work for is promoting the development of managerial competencies.

The purpose of this chapter is then to investigate how healthcare professionals perceive their level of preparation in managerial skills, addressing the following issue: “Do health professionals feel ready to play the role of managers?”

2.1. Health professionals and managerial competencies: the current state of the art.

Health management and managerial skills are constantly evolving in response to the challenges of today and tomorrow. These challenges include cutbacks in resources, technological innovation requiring increasingly costly investment, rising demand for quality healthcare; and lastly, reforms enacted in many OECD countries which have altered the administration and financing of healthcare systems (Kaissi, 2012).

These factors are forcing healthcare organizations to search for increasingly efficient and efficacious management. They have widely abandoned the traditional organizational model based on professional bureaucracy (Mintzberg, 1983), where professionals are outside the administrative hierarchy, replacing it with a model in which clinicians possess and put into practice different managerial skills (Correia and Denis, 2016). Thus, in addition to the skills necessary to carry out their professional activities, clinicians today have to develop skills to manage resources and achieve better organizational performance (Kumpusalo et al., 2003; Karuppan et al. 2016; Aini, 2018).

The new role of the clinician-manager has therefore become rapidly more important in all the major industrialized countries (Kippist and Fitzgerald, 2010). For example, in 1983, the Griffiths Report supported the fact that hospital doctors in United Kingdom should take responsibility for management together with clinical tasks (Day and Klein, 1983). In 1984, a Danish White Paper suggested a new organizational model based on the clinician-manager for improving hospital performance (Kirkpatrick et al., 2009). France has made several attempts to strengthen the management of hospitals. The first was as far back as 1983, and subsequent reforms in 2002 and 2007, led to the adoption of a system similar to the one implemented in the UK (Flynn, 2004). In Australian and New Zealand hospitals, clinicians are required to manage their colleagues and organizational processes (Kippist and Fitzgerald, 2009). In Germany too, physicians have always had great power in managing healthcare organizations, with leadership responsibility including for strategic issues (Bode et al., 2014). In the United States, the Joint Commission requires specific managerial certification of healthcare suppliers for the accreditation of an institution (Kak et al., 2001). The turning point for Italy was 1992, when a reform laid down that health organizations were legally independent entities, which led to increasing attention to costing, management and efficiency. Currently the Italian Chief of Unit is responsible for operations and organization of the structure, human resource management, clinical outcomes, planning and scheduling projects, and financial, technical and administrative goals.

However, combining clinical and managerial skills is not a simple matter (Kippist and Fitzgerald, 2009; MacIntosh et al., 2012); and various studies have found that clinicians do not believe they have adequate preparation to fill the role of manager (Berkenbosch, 2013).

2.2. Clinicians as managers: literature review

Historically, hospital governance was characterized by a dual organizational structure, where managerial and professional structures coexisted side by side (Mintzberg, 1983). Clinicians and managers however follow different paths of reasoning. Clinicians, being professionals, organize their activities and

practices according to the rationale of their profession. Hospital managers, on the other hand follow the logic of management science or bureaucracy (Freidson, 2001). There is often conflict between the two types of thinking, which can generate tensions between clinicians and managers. Involving clinicians in the management of the hospital could ease this tension, and bring general improvement for the hospital (Plochg and Klazinga, 2005). In addition, there is a widespread view that if hospitals are managed by those who are also providers of clinical care, the quality of care improves thanks to their professional expertise and deep knowledge of processes (Groene et al., 2013). In this view, there are two main reasons for the involvement of clinicians in organization management. First, it is believed that hospitals can improve performance by involving participants in the treatment process. Second, there is a desire to lower tensions in governance arising from the fact that the old professional bureaucratic model comprised a decision making structure set apart from the professional structure (Rotar et al., 2016).

The main feature of the shift from old to new model is found in the coordination of organizational structures. In the bureaucratic model, coordination for clinicians was carried out by their own professionalism, and for top management, by conventional top-down decision making. In the new structure, coordination is carried out by way of managerial tools partly used by the clinicians themselves. The line between clinicians and top management is thus blurred. Clinicians themselves become facilitators of organizational change, in that managerial skills by their nature need to be present vertically and horizontally throughout the whole organization. So from clinicians' point of view, the main aspect of the shift has been their involvement in strategic planning and the use of management tools (Fanelli et al., 2017a).

In many countries the dualism between clinician and manager is no longer clear, and the managerial merges with the professional role, creating new professional figures requiring different skills (Kuhlmann et al., 2013). Healthcare organizations need to promote a managerial culture among healthcare professionals, so that they can be ready to make decisions in both clinical and managerial fields (Noordegraaf, 2011).

2.3. What do clinicians need to be good managers?

At this point, it is necessary to clarify what managerial skills a clinician should possess. There is a great deal of literature on the clinician-manager, but no shared opinion on what the skills should be (Ileri et al., 2017). However, analysing published research, recurring areas or domains of skills can be identified. The ten most frequently identified domains are briefly described below. The domains were used to construct a questionnaire for this research.

1) Human Resource (HR) management

Managing personnel is one of the most critical activities for all organizations, and is even more important in healthcare organizations, where the quality of the service provided depends heavily on the contribution of employees (Liu et al., 2015). HR management practices which pay more attention to the needs of individuals are in fact found to generate better results for the whole organizations (Brunetto et al., 2018). This domain includes all skills aimed at recruiting and retaining the best workforce. A good manager should be able to recruit and select his or her collaborators appropriately, develop their knowledge and competences, and evaluate and reward good performance (Bailey et al., 2018).

2) Leadership and internal communication

In healthcare organizations, teamwork and coordination of people on the basis of mutual adjustment are the most widely used forms of organizational integration (Mintzberg, 1993). In comparison with industrial companies, where standardization of work processes prevails, the healthcare manager plays a crucial role of coordination and leadership. Management needs to communicate clearly and concisely with collaborators in order to establish positive relationships and facilitate constructive interactions with individuals and groups (Stefl, 2008). Effective internal communication makes it possible to disseminate relevant information, motivate people, and mobilise the capacities of others in order to

inspire individual and organizational excellence. Leadership also entails the ability to align personal conduct with organization's goals.

3) External communication

Managerial activity is not limited to the organization of internal services but goes beyond the organization boundaries. According to Longest and Rohrer (2005), effective communication between healthcare organizations and their external stakeholder is important for at least two reasons. First, these communications help healthcare organizations in obtaining the necessary resources to sustain themselves. Second, effective communication with external stakeholders is a key aspect of their core mission of protecting and enhancing public health.

4) Organizational design

Taking on a managerial role means having a certain hierarchical power and therefore responsibility for part of the organization. Managing a business unit or department, the clinician-manager fixes objectives at an organizational and individual level (Karuppan et al., 2016). Responsibilities also include defining the organizational structure, allocating resources consistently with objectives, assigning tasks and responsibilities to collaborators, and negotiating resources and objectives with top management (Lane and Ross, 1998).

5) Quality improvement

The concept of quality can be very broad, but generally it is consumers who define what a quality product means for them. In the health sector, although there are different consumers, the ultimate one is the patient (Karuppan et al., 2016). The World Health Organization (WHO, 2006, p.9) defines quality care for the patient as follows: "Care that is effective, efficient, accessible acceptable/patient-centered, equitable and safe". The clinician-manager needs to translate these principles into objectives. Skill in "quality improvement" entails identifying errors and hazards, measuring quality, and designing and testing

procedures of care to improve them (Long, 2003). This domain covers methodologies, tools, and techniques central to quality improvement.

6) Operation and project management

Operations in general are the core activity of an organization, and concern the transformation of inputs into outputs. Karuppan et al. (2016, p.21) define operation management as “the practice of designing, running, and controlling the most effective and efficient systems for the production of products or provision of services”. The operations manager thus understands and applies the knowledge and techniques of operations management to transform inputs into outputs efficiently. To guarantee that the transformation process yields the desired outputs, data needs to be collected at different stages of the healthcare delivery process (Bradley et al., 2015). Among the various operations of an organization, project development stands out. But as any project can fail if not properly managed, the operations manager must also possess specific skills for successfully carrying them out. These include clarifying goals, meeting deadlines, not wasting resources, and solving problems.

7) Problem solving

Problem solving and decision making are outcomes of strategic thinking (Lyles and Joiner, 1986). Problem solving aims to identify root problems, and uses time and energy to identify decisions that need to be made to solve the problem (Toygar and Akbulut, 2013). Lyles and Joiner (1986, p. 117), define problems as “obstacles, conditions, or phenomena that either stand in the way of achieving objectives or cause a deviation from the desired status”. A decision can be defined as a choice made between alternatives. Obviously, making a decision entails more than choosing what is to be done. It presupposes the ability to analyse the problem through an appropriate evaluation of the strengths and weaknesses of alternative solutions. Health management is required to make decisions and solve problems on the three levels of organizational planning: strategic, administrative and operational level (Sperry, 2003).

8) Outcome assessment

Monitoring the quality of service outcomes is a crucial issue for triggering a process of continuous improvement (Fitzgerald and Sturt, 1992). However, measuring outputs and outcomes has historically been a challenge for public organizations, including health organizations, because of their focus on bureaucratic aspects. The New Public Management paradigm has sought to shift attention towards results by promoting a managerial culture typical of private firms (Osborne, 2007). The clinician who is a manager is therefore the promoter of this change. Over the years, several tools have been developed to help managers to evaluate performance. The balanced scorecard, the performance measurement matrix, and the performance prism are just a few examples.

9) Financial management

Rising pressures to contain costs in hospitals have led to an increased emphasis on financial management (Lane and Ross, 1998; Inamdar et al., 2002). To avoid waste of resources as well as inefficiencies in production processes, it is important for clinicians involved in management to develop skills in the financial area. For example, a clinician-manager should apply appropriate financial and business management techniques to assure efficient delivery of cost-effective health services (Lane, 1998). He or she should be also able to draw up a business plan that includes basic accounting principles (e.g., analysis of balance sheet, income statements, statement of cash flow) and know economic techniques such as cost accounting, pricing of services, analysis of return on investment, and economic valuation of service, in order to assess current or proposed healthcare products or services (Frank and Langer, 2003).

10) Planning

Sperry (2003) categorises planning in healthcare organizations into three levels: strategic, administrative, and operational. Operational planning is the most relevant to the clinical manager and concerns daily activities, that is, those at the lowest level of the organization. The daily activities of a hospital are diverse and complex, depending on the size and type of organization. Bradley et al. (2015)

state that they include (but are not limited to) registration and patient flow, patient master index and medical records, environmental services, supply chain, pharmacy and laboratory, diagnostics, patient referral and discharge processes, payment processes and cash flow tracking, and information technology. The manager needs to plan all these activities and supervise those who carry them out.

2.4. Research method: questionnaire and sampling.

To answer the research question, a survey analysis was conducted among professionals from health organizations in two regions of Italy: Emilia-Romagna and Lombardy. In Italy, although there is a NHS, responsibility for hospitals and other health services is held by Regional Authorities (Fanelli et al., 2017b). As a result, Regions can implement organizational and managerial models that best suit their needs. The Lombardy and Emilia-Romagna regions have adopted very different models, but both achieve excellent performance in terms of clinical outcomes and quality of care (Salvatore et al., 2018).

The study covered a time period of one year (July-2018 to July-2019). A questionnaire was administered over several major Italian health organizations of Emilia-Romagna and Lombardy region, in order to test how health professionals self-assess their managerial skills and identify areas they would like the organizations to improve in. The validity and effectiveness of the questionnaire were tested on over 50 healthcare professionals, and feedback from this piloting was used to improve its internal consistency. The questionnaire was then sent online to 793 healthcare professionals (doctors, nurses and other health professionals).

The questionnaire is made up of two parts. The first part identifies the general characteristics of the respondent: the role (doctor, nurse or other health professionals), whether respondents cover a managerial position, and the region where he/she is currently employed. The second part consists of two questions on each of the ten different managerial skills identified from the literature survey

above. (Q1) “How do you self-evaluate your managerial skills?”; (Q2) “How do you think your organization should improve these skills?”.

For each of the ten skills, respondents were asked to give a score ranging from 1 (very low) to 10 (very high). This semantic-dimensional scale was used in order to measure each skill with statistical significance (Tracey et al., 1997). This type of scale also has algebraic characteristics so that algebraic calculations are possible. It also made it possible to order the different answers and to quantify the distance between each answer. Analysis was performed using STATA® software version 15.

The variables tested in the questionnaires were identified from the literature on managerial skills for clinicians, as described in the previous section. The Cronbach’s Alpha coefficient was calculated for each one. The value ranges from 0 to 1, and a high score of the coefficient (above 0.7) implies a greater reliability (consistency) of the variable tested.

Variables identified and their Cronbach’s Alpha are: 1) HR management (Cronbach’s alpha on Q1 0.9285; Q2 0.9491); 2) Leadership and internal communication (0.9304; 0.9482); 3) External communication (0.9311; 0.9507); 4) Organizational design (0.9276; 0.9464); 5) Quality improvement (0.9265; 0.9466); 6) Process and project management (0.9260; 0.9459); 7) Problem solving (0.9272; 0.9457); 8) Outcome assessment (0.9329; 0.9456); 9) Financial management (0.9265; 0.9539); 10) Planning (0.5836; 0.9453). All variables tested in every dimension satisfy the hypothesis of Cronbach’s test, and all scored above 0.9 and show high levels of consistency, with the sole exception of Variable 10 “Planning” for Q1, which showed a score of 0.5836.

Results are described below. First, scores for the whole sample are reported, and each item is ranked.

Independent t-tests and a one-way analysis of variance were then performed in order to compare the self-assessment competency levels in selected subgroups of participants. Subgroups comprised professionals covering a managerial position vs. not covering a managerial position; and professionals working in Emilia-Romagna vs. professionals working in Lombardy.

Because medians did not correspond to the means, the asymmetry index was calculated in order to test the hypothesis of normality. All analysis yielded were carried for alpha $\leq 10\%$.

2.5. Analysis of questionnaire responses.

Of the 793 questionnaires administered to healthcare professionals, 366 were returned (54.98%). 166 respondents are doctors (45.36%), 131 nurses (35.79%) and 69 other health professionals (18.85%); 157 subjects stated they held a managerial position (42.90%), while 209 did not (57.10%). Professionals employed in Lombardy returned 108 (29.51%) whilst professionals in Emilia-Romagna returned 258 (70.49%).

The following tables reports descriptive statistics about how health professionals self-assess their managerial skills (Table 2.1.) and areas which they would like their organizations to improve (Table 2.2.).

Table 2.1. Self-assessment of managerial skills

Rankin g	Managerial skill	Mean	Std. Dev.
1	Problem solving	7.27	1.48
2	Planning	7.27	1.61
3	Operation and project management	7.12	1.49
4	Leadership and internal communication	7.10	1.52
5	Quality improvement	7.09	1.60
6	Outcome assessment	6.89	1.62
7	External communication	6.85	1.68
8	HR Management	6.82	1.66
9	Organizational design	6.49	1.77
10	Financial management	6.18	2.20

Table 2.2. Managerial skills to improve in professionals' healthcare organization

Rankin g	Managerial skill	Mean	Std. Dev.
1	Organizational design	8.34	1.77
2	Quality improvement	8.31	1.90
3	HR Management	8.29	1.96
4	Leadership and internal communication	8.28	1.94
5	Outcome assessment	8.26	1.96
6	Problem solving	8.26	1.95
7	Planning	8.23	1.97
8	Operation and project management	8.19	1.99
9	External communication	8.18	1.96
10	Financial management	7.95	2.15

Results show that scores for Q2, about the areas of training required, are always higher than scores for Q1, on professionals' self-assessment.

As reported in the tables, all variables show a generally high score, all >6 for Q1 and all >8 for Q2, with the exception of variable "Financial management" for Q2.

There is also a simple relation between variables: the top three skills in which professionals assess themselves as skilled are not skills which they would like their organization to provide training for and are ranked low in responses to Q2. On the other hand, skills in which health professionals feel themselves weaker are ranked higher in the responses to Q2, except for "Financial management", which is ranked bottom in answer to Questions 1 and 2.

The biggest disparity in responses to the two questions occurs for the variable "Organizational design" (9th position for Q1 vs. 1st position for Q2), which shows that professionals do not feel themselves competent but believe their organizations should improve training and guidance in this area. The variable "Leadership and internal communication" is classified 4th in both rankings while other variables generally show similar disparity to "Organizational design", although weaker.

Differences between groups

A t-test was conducted on two different clusters of sub-groups: (a) manager vs. non-manager; (b) Emilia-Romagna vs Lombardy.

Managers vs. Non-managers

Table 2.3. Self-assessment of managerial skills by managers and non-managers.

Managerial skill	Mean \pm Std. Deviation		RANK (managers /non- managers)	T	P	Differenc e between means
	Manager	Non-manager				
HR Management	7.22 \pm 1.36	6.54 \pm 1.79	6/8	3.54	0.00	0.68
Leadership and internal communication	7.28 \pm 1.27	6.97 \pm 1.66	5/4	1.98	0.02	0.31
External communication	7.04 \pm 1.39	6.72 \pm 1.85	7/7	1.77	0.03	0.32
Organizational design	7.32 \pm 1.18	7.00 \pm 1.65	4/3	2.02	0.02	0.32
Quality improvement	7.38 \pm 1.36	6.90 \pm 1.72	3/5	2.84	0.00	0.48
Operations and project management	7.04 \pm 1.44	6.11 \pm 1.88	7/9	5.17	0.00	0.93
Problem solving	7.47 \pm 1.34	7.13 \pm 1.56	2/1	2.14	0.01	0.34
Outcome assessment	7.11 \pm 1.43	6.74 \pm 1.72	9/6	2.17	0.01	0.37
Financial management	6.75 \pm 1.94	5.78 \pm 2.29	10/10	4.30	0.00	0.97
Planning	7.66 \pm 1.24	7.01 \pm 1.77	1/2	3.91	0.00	0.65

Table 2.3. reports single scores in self-assessing managerial skills (Q1) over two sub-groups, managers and non-managers. The t-test showed deviations in variables between subgroups statistically different from zero (alpha <0.1). Analysing these scores, it appears that managers feel more confidence in their own competences than non-managers.

The biggest deviations in variables between the two sub-groups occur in “Financial management” (0.97 points) and “Organizational design” (0.93 points), and the smallest in “Leadership and internal communication” (0.31 points), “External communication” (0.32 points) and “Operation and project management” (0.32 points).

Differences between scores are significant, but differences between ranking positions are not as clear. Skills sometimes differ by one or two positions, but not more than this, except for “Outcome assessment”.

Table 2.4. Managerial skills to improve in professionals' healthcare organization by managers vs. non-managers.

Managerial skill	Mean \pm Std. Deviation		RANK (managers/ non- managers)	T	P	Difference between means
	Manager	Non-manager				
HR Management	8.08 \pm 1.99	8.43 \pm 1.93	2/5	-1.75	0.08	0.35
Leadership and internal communication	7.99 \pm 1.96	8.48 \pm 1.90	6/1	-2.38	0.01	0.49
External communication	7.91 \pm 1.98	8.38 \pm 1.93	9/8	-2.96	0.02	0.47
Organizational design	8.00 \pm 2.08	8.33 \pm 1.93	5/9	-1.56	0.11	0.33
Quality improvement	8.07 \pm 2.03	8.47 \pm 1.79	3/2	-1.98	0.04	0.40
Operations and project management	8.19 \pm 1.86	8.44 \pm 1.70	1/3	-1.36	0.17	0.25
Problem solving	7.99 \pm 2.08	8.44 \pm 1.87	6/3	-2.20	0.02	0.45
Outcome assessment	8.01 \pm 2.08	8.43 \pm 1.86	4/5	-1.98	0.04	0.42
Financial management	7.59 \pm 2.37	8.20 \pm 1.95	10/10	-2.75	0.00	0.61
Planning	7.96 \pm 2.10	8.42 \pm 1.86	8/7	-2.23	0.02	0.46

A t-test was conducted in the analysis of responses to Q2 (Table 2.4.). All variables except for "Organizational design" and "Operation and project management" appear significant, with an $\alpha < 0.1$.

Scores for managers are overall lower rather than for non-managers, with the biggest differences occurring for variables "Financial management", "Leadership and internal communication" and "External communication". Smaller

differences in scores occur for variables “Operations and project managements, “Organizational design” and “HR management”. However, only “HR Management” shows a significant score with $\alpha < 0.1$.

For Q2, unlike for Q1, differences between rankings show consistent disparity.

Emilia-Romagna employees vs. Lombardy employees

Table 2.5. Self-assessment of managerial skills by Emilia-Romagna vs. Lombardy

Managerial skill	Mean \pm Std. Deviation		RANK (Emilia-Romagna/ Lombardy)	T	P	Difference between means
	Emilia-Romagna	Lombardy				
HR Management	6.83 \pm 1.57	6.78 \pm 1.77	8/7	0.26	0.39	0.05
Leadership and internal communication	7.16 \pm 1.39	7.03 \pm 1.67	3/4	0.75	0.22	0.13
External communication	6.91 \pm 1.61	6.61 \pm 1.82	6/8	1.54	0.06	0.30
Organizational design	7.13 \pm 1.39	7.07 \pm 1.17	4/3	0.80	0.38	0.06
Quality improvement	7.11 \pm 1.51	6.96 \pm 1.71	5/5	-0.43	0.20	0.15
Operations and project management	6.53 \pm 1.65	6.36 \pm 2.01	9/9	-0.12	0.21	0.17
Problem solving	7.23 \pm 1.42	7.30 \pm 1.59	1/1	1.57	0.66	-0.07
Outcome assessment	6.85 \pm 1.54	6.87 \pm 1.71	7/6	-0.00	0.54	-0.02
Financial management	6.24 \pm 2.08	5.83 \pm 2.29	10/10	0.54	0.05	0.41
Planning	7.23 \pm 1.57	7.22 \pm 1.66	1/2	0.83	0.50	0.01

Table 2.5. reports scores in self-assessing managerial skills (Q1) differentiating professionals from Emilia-Romagna from professionals from Lombardy. The t-test found that only 2 variables showed statistical significance with $\alpha < 0.1$: “External communication” and “Financial management”, so little comparison can be made.

The biggest difference between means of significant variables occurs for “Financial management” (0.41 points). Except for the “Financial management” and “External communication” variables, data show insignificant differences (< 0.2 points) which are attributable to the random effect on responses. It can thus be concluded that there are no significant differences between professionals in the two regions.

As for the results for Q2, only the variables “Operations and project management” (Emilia-Romagna 8.43 vs Lombardy 8.07) and “Financial management” (Emilia-Romagna 8.07 vs Lombardy 7.69) show statistical significance with $\alpha < 0.1$. No conclusive statements can be made, but the data suggests that there is very little difference between the two regions.

2.6. Discussion of results: implications for research and policy makers.

This study aimed to evaluate how health professionals perceive their level of preparation on managerial issues. Health professionals are in fact increasingly required to combine managerial activities with their clinical activities. This phenomenon affects most of the health systems of industrialized countries around the world, and although the various health systems differ in their structures and available resources, it is widely recognized that nowadays health professionals need to pay attention to both the clinical and managerial aspects of their work to improve the performance of these systems (Baker and Denis, 2011).

The results of our research show that healthcare professionals feel themselves to be sufficiently prepared in all managerial areas identified, as all averages are above a sufficient level (6.0). These findings appear to conflict with earlier research which found a low level of preparation among clinicians in their

role as clinician-manager. Just twenty years ago, Ashmos et al. (2000) found that clinician-managers did not have the right preparation or background for this role, and this affected organization performance. The problem was mainly due to poor managerial training, which generated further problems in terms of professional identity and lack of awareness of the role. However, the high average scores identified by our study show that the scenario is changing. Policies and initiatives launched to increase clinicians' managerial skills are bearing fruit (Denis and Van Gestel, 2016). At the same time, however, the findings from Q2 raise further considerations. For all managerial variables, scores associated with the organization's need to improve these skills (Q2) are higher than the professionals' self-assessment (Q1). On one hand this highlights the attention that clinicians pay to managerial skills in carrying out their activities, but on the other hand it suggests that health organizations need to invest more in these areas and do more to promote managerial culture internally. Medical schools have largely failed to offer sufficient managerial training (Irer et al., 2017), so that today each healthcare organization is responsible for programs to provide clinicians with management skills, in the form of in-service courses and involving certification by external bodies (Hewison and Griffiths, 2004). This has important implications for healthcare organizations.

It is also interesting to note how managerial skills are ranked (Table 2.1.). Professionals feel better prepared in transversal managerial skills which can be applied in different contexts (Wawrzenczyk-Kulik, 2015), than in specific managerial skills applied to limited sectors (Last three ranked skills). This may be because transversal skills can be learned and developed in different contexts and during different work activities, and not necessarily exclusively on ad hoc training courses. This confirms what we have been said before: organizations should promote ad hoc managerial training programs. In fact, the greatest need to increase managerial skills (Q2 - Q1) is found precisely in the last three ranked managerial skills: HR Management (+1.37), Organizational Design (+1.69), and Financial management (+1.77).

Focusing on managers vs. non-manager self-assessment of their managerial skills, the clear general trend is that managers feel more confidence

in their own competences than non-managers. This is in line with several studies in different strands of literature (especially Hudak et al., 1993; Jones and Dewing, 1997; Lorber and Savic, 2011) which find that those who already hold a position of responsibility tend to evaluate their own management skills more highly on the basis of their perception of having experience. In healthcare management literature, the need to distinguish between the perceptions of managers and those of non-managers of managerial skills has previously been noted (Aini et al., 2018; Demou et al., 2018). The comparison of responses from managers vs. non-managers aims to verify whether and how managerial experience affects the self-assessment of skills. Our results confirm the hypothesis that the point of view of the respondent is linked to the position held. As for specific skills, managers feel prepared in “Planning” and non-managers in “Problem solving”, while “Financial management” ranks last for both. The fact that “Financial management” ranks bottom for both Q1 and Q2 indicates that health professionals (managers and non-managers) feel less confident in this field. However, it also indicates that they do not think the hospital should invest in this, and that the economic aspect of management is considered to lie outside their scope.

The analysis of the sub-groups employed in Emilia-Romagna vs. those employed in Lombardy shows less clear results. The Emilia Romagna and Lombardy regions are contiguous and are both considered among the highest performing in Italy, but they adopt very different organizational and managerial models (Ministero della Salute, 2017). Emilia-Romagna is characterized by a structure which links hospitals to local services (e.g. local clinics, primary care, prevention services, etc.). In Lombardy, on the other hand, the focus is on hospitals and the Agenzia della Salute [Agency of Health]. Thus, Lombardy orients its services to the area, while Emilia-Romagna seeks closer integration between local health authorities. Furthermore, Emilia-Romagna is characterized by a central governance system, while in Lombardy the model is based on competition between different entities, reflecting the higher number of private health organizations.

It is important to note that these two models of interpretation of NHS directives are the focus of heated debate in the literature. In Italy the NHS is run

by regional authorities, and Legislative Decree 502/1992 assigned the task of developing clinicians' managerial skills to Regional Authorities. The big differences between models led us to expect big differences between the development of managerial skills of health professionals in the two regions, and the fact that no such difference was found can probably be explained in two ways: (1) The complex national system proves to have greater influence than regulations introduced by individual Italian Regions, and (2) Health professionals themselves, in both Emilia-Romagna and Lombardy, know what competences are required to obtain a higher level of organizational efficacy.

2.7. Conclusions of the essay.

Since the early 1980s, all western countries have given priority to reforming health service management. Such reforms have led to the co-optation of health professionals into the management of services, transforming doctors and nurses into managers (Fitzgerald and Sturt, 1992). However, a general perception of inadequacy by healthcare professionals in their managerial skills prevailed for many years (Ashmos et al., 2000; Berkenbosch, 2013; Correia and Denis, 2016).

Our study highlighted that healthcare professionals in Italy today feel more ready to play their role as managers, but at the same time require greater effort to be made in developing these skills on the part of their employing organizations.

The analysis highlights that organizational models do not directly influence the self-perception of managerial competences by health professionals. This conclusion is useful for Italian Regional Authorities in identifying where professionals feel a lack of preparation, and promoting training programs and policies. Our findings therefore provide important indications to healthcare organizations of areas where it is necessary to invest more in the future to meet the needs of professionals.

Many studies find that the general management of resources in complex organizations is often the responsibility of health professionals (Berwick et al. 2008; Phillips, 2008; Kaplan, 2014). Financial management however remains the managerial skill where professionals self-assess their weakest competencies.

Our suggestion to regional policy-makers and health organizations is to try to make health professionals more aware and better informed about their function as managers of economic resources, as the sustainability of the national service depends on their ability to optimize the use of resources and save costs.

The study is not without limitations. First, although the sample is large, it is taken from only two regions of Italy. Future research could investigate whether and how the results vary when the investigation is extended to other Italian regions or to other countries. The second limitation is that gender, age, study path, and years of service are all elements that can influence a professional's response but which have not been taken into consideration. In this case too, an in-depth study would be useful to investigate further elements impacting on responses to the questionnaire in addition to those used in the present study.

CHAPTER THREE

LIGHTS AND SHADOWS OF PPPs IN HEALTH CARE. AN INTERNATIONAL COMPARATIVE CASE STUDY³

Partnerships have been amongst the main *modus operandi*, either for the private or public sector. In particular, since the 1980s with the *New Public Management* reforms, the public sector has gradually started to enter partnerships with private actors in order to improve the efficiency of project management and realization (Osborne, 2000; Akintoye et al., 2003; Selsky and Parker, 2005; Torchia and Calabrò, 2015; Meleddu *et al.* 2019): PPPs.

PPPs, being a particular type of joint venture between public entities and private businesses (Selsky and Parker, 2005), have been adopted to alleviate, *inter alia*, issues caused by public-owned infrastructures and public reforms (Broadbent and Laughlin, 2003). They represent a mechanism that transform the role of the public organization from employer and service provider to a partner in the design, implementation, improvement and delivery of goods and services (Papadopoulos, 2012).

In fact, PPPs have a great set of advantages for both the private actor and the public sector. For the private actor, for example, it gives the possibility of buying back the project if that becomes necessary (Watts et al., 2000). Furthermore, it helps in consolidating relationships with the territory (Pratici and Singer, 2021), as well as allowing the gain of a strategic positioning in the market (De Schepper et al., 2014).

³ A consistent part of this essay has been published in a peer reviewed journal. The reference to the published article is: Pratici, L., & Singer, P. M. (2021). Public-private partnership in health care organizations. How to cope with complexity issues: a comparative case-study between Italy and the US. *International Journal of Organizational Analysis*.

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Even for the public sector, there are multiple possible advantages: accessing funds and know-how, exploiting a *modus operandi* based on objectives rather than the bureaucratic approach, and others (Mintzberg, 1993).

In light of this, PPPs have been widely adopted in many sectors characterized by a higher grade of complexity.

Above all, health care in many countries with an NHS, is one of the sectors that use PPPs the most, and it represents one of the top forms of investment in healthcare over the last 20 years.

Thus, given the wide use of PPPs in countries with an NHS (Pratici and Singer, 2021), how can they help to improve the performance of health organizations and, as such, of the whole system?

Chapter One of this work highlighted the importance of coordination in achieving a more sustainable NHS, and identified different level of coordination, whether internal or external. Chapter Two identified “managerial competencies” among health professionals’ as some of the most important tools to improve internal coordination within health care organizations. This chapter, instead, analyzes PPP as a possible tool to improve external coordination.

However, despite a widespread agreement on the fact that PPPs can represent a solid and effective way to improve external coordination of health organizations, a growing body of literature criticizing the ability of PPP to contribute towards the provision of effective and efficient public services has emerged. PPPs can bring a series of complicated issues to address, due to the complexity of the relationship they imply. This chapter, therefore, aims to address what advantages and what issues may emerge from PPPs in the health care sector. The analysis is made through two different case studies: one in a country possessing an NHS (Italy) and another in a country that does not have an NHS (the United States).

3.1. PPPs: what, why and how.

Healthcare systems around the globe face cost and quality pressure. Healthcare systems and policymakers have several options at their disposal to address these challenges – including privatization. Nearly all healthcare systems

involve a mixture of public and private providers (Brekke and Sorgard 2007). In countries with NHS systems, in which healthcare is generally financed by general taxation revenues (Propper 2000), the private sector still exists alongside the public. Indeed, in NHS systems the role of the private sector represents a growing phenomenon (Propper 2000; Brekke and Sorgards 2007), particularly as governments grapple with rising costs and limited resources (Mehl *et al.*, 2014), as well as public demand for improved quality of care (Goh and Marimuthu 2016).

Yet, privatization is not without risks and can lead to a variety of suboptimal consequences (Duggan *et al.*, 2015), including drifting from the core tenets of the public health sector system and raise concerns over equity (Thomson and Mossialos, 2006). Indeed, the issue of equity is often debated in NHS countries where the wealthy can purchase private insurance that supplies access to more timely care, more robust benefit plans, higher quality providers (Del Vecchio *et al.*, 2015; Hulleger and Klein, 2010), as well as private facilities (Herr *et al.*, 2011; Tiemann and Schreyögg, 2009).

One potential arrangement to manage these competing challenges is the Public-Private Partnership (PPP). While the promise of PPPs is great, so are its perils if the arrangements are not managed and regulated adequately through the contracting process. Managing the competing and complementary aspects of public and private organizations has generated well-established literature (e.g. Propper 2000; Meleddu *et al.* 2019). Policymakers need to balance the conflicting needs of reducing financial responsibilities for the state, improving the efficiency of privatization, all while ensuring the principles of equity. To manage these competing challenges, contracting is an essential process, though it has been understudied.

This essay analyzes how two health care organizations confront three central problems which can undermine the effectiveness of the PPP arrangement. We use case studies and textual analysis of contract sources as well as other officially published agreements to understand whether and how PPP arrangements vary across healthcare organizations in the United States and Italy and how they address the main issues occurring in a PPP contract.

3.2. Problems with PPP. How to cope with complexity.

PPP is conceptually any arrangement between public and private entities in a given domain. Several academic disciplines have conceptualized and studied PPP, including organizational economics, public administration and project management (Hodge and Greve, 2017). For example, scholars of managerial studies (Bovaird 2004; Brinkerhoff and Brinkerhoff 2011; Osborne 2000; Torchia and Calabrò 2015) proposed an inclusive definition of PPPs, arising from the *New Public Management* (NPM) approach. The use of PPP in our analysis follows from Kivleniece and Quelin (2012, p. 273), which classifies PPPs as a project-based organization involving collaborators from the public and the private sector in a long-term collaborative relationship – at least 10 years – between one or more firms and public bodies that combine public sector management.

Considering the length of the time frame, as well as the collaboration between two entities with very different structures and scopes, PPPs are subject to a complex framework of laws and regulations (Kivleniece and Quelin, 2012; Torchia and Calabrò, 2015; Shrestha *et al.*, 2019). Prior research highlights the potential problems in the use of PPPs. Torchia and Calabrò (2015) argue that measuring and auditing PPPs performances is challenging. Kivleniece and Quelin (2012) focuses on the problem of risk allocation, which sometimes represents a strong barrier for this market. Shrestha *et al.* (2019) argues that the effectiveness of PPPs can be limited by Principal Agent Theory the importance of the determination of compensation. Robinson and Scott (2009) included in their work the sum of these challenges to be faced by PPPs.

So, while essential to the success of a PPP arrangement, contracting is a complex, and an overlooked aspect of prior research. In this paper we address three potential problems that can impair the PPP process and the ways which contracting in the United States and Italy do, or do not, address these complications. We selected two cases which have different political, social, regulatory, and policy contexts to help understand different PPP approaches in healthcare. In the methodology section, we better explain how those issues have been selected.

Performance measurement and auditing.

One of the key arguments for the adoption of PPP in healthcare is the demand for higher quality of care (Du Toit, 2003; Robinson and Scott, 2009). Developing a robust and effective performance measurement and audit system is complementary to this objective, and has been associated with higher efficiency and positive outcomes (Partnership UK, 2006). For PPP arrangements, this is a crucial issue, since the private performer, can have different objectives, such as profit generation (Ke *et al.*, 2011). Therefore, it is essential that the public component of the PPP is able to audit and identify problems that may emerge through the PPP arrangement. At the same time, the private contractor has to be able to measure the performance in order to check on the economic sustainability of the undergoing activity.

Determination of compensation

PPPs can be costly arrangements. Both the public and private organizations take on financial risk. PPPs have many moving parts, with different organizations coming together in unique ways. This risk is heightened by having different stakeholders that do not all share the same goals. For example, the private entity seeks to maximize their profit, potentially at the expense of quality. The public organization, on the other hand, have asymmetrical information about the financial health of their organization. PPPs are typically structured to have private entities bear financial risk and setting remuneration linked to the achievement of predetermined performance standards (An *et al.*, 2018). Determining compensation needs to occur at two levels when constructing PPP relationships. First, contracts need to delineate how the separate organizations share financial resources (Garen *et al.*, 2019). Second, compensation needs to be delineated at the staff and provider level (Klingour *et al.*, 2015). In both cases, PPP contracting needs to clearly explicate the payment mechanisms and performance metrics for the different organizations and staff in a PPP.

Risk management related issues

PPPs are practical tools used by the public sector, among other things, to transfer a part of the whole risk to another entity. This type of contract often seeks to combine the advantages of competitive tender and flexible negotiation with a general reduction of risk for the public sector (Bing *et al.*, 2004).

Transparency is critical for the success of a PPP (Jefferies *et al.*, 2002; Shrestha *et al.*, 2017), it is important that risk allocation is clearly communicated and understood by both parties (Bing *et al.*, 2004). However, this often creates complexity in the managing a PPP. Therefore, it is essential to clearly identify the risks that are shared and taken on by each component of a PPP. A strong and consolidated contractual structure prevents mismanagement of risk. The risk identification process then becomes important to avoid possible litigations during the contract implementation. Prior literature has proposed different methods of risk identification, but there is a widespread consensus on the *checklist* methodology as a frequently used framework (Italian Ministry of Economy, 2017).

3.3. Method of the essay: case studies.

To analyze how healthcare organizations, manage the problems of PPPs, we employ a comparative case study approach. We adopted the method proposed by Villani *et al.* (2017), identifying single areas of analysis for a documental study of available sources (contracts and published agreements in our case), using the framework identified by Robinson and Scott (2009).

To identify the areas of complexity, which we outlined above, we conducted a literature review. Using the Scopus database, with more than 20,000 peer reviewed scientific journal listed (Brown *et al.*, 2020; Fanelli *et al.*, 2020a; Mishra *et al.*, 2017), we collected related literature. We conducted a Boolean research based on keywords: “Public Private Partnership” OR “PPP” AND Healthcare* OR “Health Care” OR “Hospitals”. To identify the area of major concerns, we defined what were the most recurrent keywords present in the literature, excluding keywords on non-related issues (e.g. name of countries, the same keywords used in the Boolean research process, fields of research, such as “Health Policy” or “Economics” and strictly medical related issues). We also excluded all papers not listed as “Business Administration”, “Management”, “Economics” and

“Political Science” related. We also excluded all the “grey literature”, considering only indexed journals’ publications (Fanelli *et al.*, 2020a). This led to an overall output consisting of 151 papers from the year 1982 to the year 2019 (the year 2020 has been excluded because it would have created a bias, having the keyword “Covid-19” and other keywords related to the pandemic crisis as outliers).

The most recurrent keywords, given all the criteria above, have been “*procurement*” appearing 6 times; “*risk management*”, appearing 5 times and “*performance measurement*” appearing 4 times. From the analysis of the paper which included the most recurrent keywords, three main topics emerged: (1) performance measurement, (2) determination of compensation of contractors and (3) risk management related issues.

In light of this, we compared this literature with a framework, supported also by institutional entities regulating PPPs internationally and focused the work on the three main issues identified. For each issue identified, several sub-issues emerged from the framework and we relied on them in order to assess the organizations taken into analysis.

Our case selection methodology sought to maximize variation along several dimensions. We selected two countries - Italy and the United States – which met several key criteria. First, we wanted to maximize variation in the level of privatization in the healthcare contexts. As discussed below, Italy adopted an NHS system more than 40 years ago, while the US is largely privatized. Second, we wanted to analyze country settings which regulate healthcare in different ways. Italy is highly structured in regulations of healthcare organizations, whereas the US has minimal public oversight of healthcare organizations. By looking at countries with different regulatory scope, we can help identify the benefits and drawbacks to these different approaches on how PPP arrangements address the core problems we outlined above. Third, we sought cases which were in different timelines of PPP development, to understand whether there had been changes in PPP arrangements over time. Lastly, we sought to select countries which faced similar challenges, namely quality and cost control, which would lead to the adoption of PPP arrangements. Both Italy and the United States

have seen healthcare costs increasing, while government financial support has been decreasing. Additionally, concern over the quality of care and outcomes has increased in both countries.

Once we selected the case countries of interest, we selected two healthcare organizations to analyze how they address the core problems related to PPPs. Italy has proactively adopted PPPs in the healthcare setting. In that country we selected one of the first-generation PPP projects. The project selected is well representative of a complete PPP, managing the construction of a building as well as all the non-healthcare related services. The US has a much smaller footprint in the PPP market for healthcare organizations. We assessed all PPP projects undertaken in the US and selected the most typical example of PPP arrangements – which in this instance was a PPP project which would require the private entity to maintain and manage a public healthcare organization which was facing dire financial challenges. Table 3.1. represents the main characteristics of the selected cases.

Furthermore, the methodology of case studies has been selected since it provides the possibility of an in-depth investigation (Feagin *et al.*, 1991). PPPs are generally very complex contracts, hardly conformable. So, while our case study approach is not generalizable, it does allow greater detail and the identification and comparison of themes across the two case studies. Furthermore, an international comparative case study, makes possible to sketch the main differences arising from the two systems in which the analyzed cases are operating and the complexities which govern their use and operation (Tellis, 1997).

To compare how these healthcare organizations address the core problems with PPP, the framework identified points out for the first two areas analyzed (audit and performance measurement and determination of compensation) a list of key issues. Analyzing available contracts as well as secondary documents present in the officially published agreement between the two parties available on the organizations' websites, we analyze how the two organizations addressed those issues. Additionally, to improve the model identified by Robisons and Scott (2009), adapting it to the purpose of this work, we included aspects on risk

allocation, which has been found to strongly affect the complexity of PPPs relations. The institutional framework used has been retrieved from the Italian Ministry of Economy (2017), which classified the risk allocation into different areas. This choice finds its roots in the fact that it seems to be the most complete institutional framework between the two countries, and it is based on previous literature (e.g. Bing *et al.*, 2005; Xu *et al.*, 2010; Carbonara *et al.*, 2015). Additionally, the framework has been applied in a variety of different fields (statistics, epidemiology, administrative law, etc.).

Before we provide an overview of the main results of our case studies, we will describe the characteristics of the countries in our case study.

PPP in different contexts

The Italian Context

The Italian NHS (I-NHS) in 2018 celebrated its 40th anniversary: it is one of the few countries in the world which is still providing Universal Health Coverage (Signorelli *et al.* 2020) and has been ranked by international organizations as one of the best NHS systems worldwide (WHO, 2000; WHO, 2019). The I-NHS was founded with the guiding principles of universality, equity and solidarity (Signorelli *et al.*, 2017).

Yet, in the wake of the 2008 financial crisis, the I-NHS had to make cuts to public health expenditure across each subsequent government (Ferrario and Zanardi 2011; Neri 2019) which has raised concerns over the quality of care provided (Falco 2019). Furthermore, the Covid-19 – currently ongoing – pandemic revealed the weaknesses of the system, suggesting potential issues to be faced (Fanelli *et al.*, 2020a). These stresses have provided an opening for greater involvement of the private sector (Torchia and Calabrò, 2015). Privatization concerns has forced the government to encourage and manage the formation of PPPs (Golinelli *et al.* 2017). The I-NHS, therefore, has developed the first PPP market inside the European Union (Osservatorio Finlombarda 2011) and the second in Europe, after the United Kingdom (Torchia and Calabrò, 2018).

However, PPPs in Italy are often subject to a series of challenges. The general requirement for a PPP in Italy is to meet the principles expressed by the “Value for Money” theory. This theory evaluates costs and quality (Grimsey and Lewis, 2004) over different determinants (Torchia and Calabrò, 2018), including: risk allocation related issues and auditing and performance measurement. Our case study will assess how the Italian health care organization dealt with those issues and how it contractually managed the intrinsic complexity of the PPP.

The United States Context

The US is the leading country in the volume of and the value of PPP projects globally, with more than \$81 billion in value over 326 PPP projects in 2018. Yet, the *healthcare* market for PPP is not as well developed as Italy, nor many other developed countries. The majority of PPP in the US is focused on technology, energy, and transport sectors, which have traditionally had sizable public spending. Indeed, the roots of the PPP in the United States started several hundred years ago as a mechanism to build roads after the country was formed.

PPP and health care in the United States is limited by several factors. There is very little coordination in the US health care system. Rather, regulatory power is fragmented across local, subnational, and national levels. The responsibility for providing public health is divided amongst 50 states, five territories, and 90,000 local governments (United States Census Bureau, 2020). The laws and regulations that govern PPP usage are largely the responsibility of the states, with some input from the national government. But, with states as the regulatory body, there is substantial variation in laws and regulations that limit the ability of PPP to be utilized everywhere.

PPPs have grown in popularity in the US over the past thirty years, when California enacted the first piece of legislation governing these organizational arrangements. The trend in PPP in the healthcare, as well as other areas, has been predominantly driven by the continuing healthcare cost crisis in the United States, as well as quality concerns. Public sector healthcare providers are challenged by the increasing costs of care, the patient populations they serve that are more likely to be low-income and uninsured (Fraze *et al.*, 2006), operating

older healthcare facilities (King *et al.*, 2018), and diminished financial support from their state governments (Krein *et al.*, 2010).

3.4. Findings and Discussion of results from case studies.

Table 3.1. Descriptive information of the two Hospitals analyzed

Table of comparison

	HOSPITAL A (value in EUR)	HOSPITAL B (Value in USD)
Project short description	New construction of 4 hospitals in the Northern part of Italy (we take into consideration only the construction of the first Hospital, out of the four built) and management of all commercial and non-sanitary services.	Maintenance, and management of large public health care system, opportunities for construction and expansion of health care system footprint. The facility is located in the North-East of the US.
Information about investment		
<i>Capital value of the project</i>	71.400.000	N/A
<i>Public Capital contribution</i>	2.786.585	N/A
Information about Procedure		
<i>Contract notice publication</i>	April 2006	
<i>Publication of contract notice</i>	December 2005	January 2019
<i>Bids Received</i>	N/A	October 2018
<i>Award of concession</i>	May 2006	February 2019
<i>Work begun</i>	September 2006	N/A
Information about operation		
<i>Length of concession</i>	24	10*

Nr. Of beds	363	169
Total revenue (2019)	584.833.530	803.100.000

*Automatic renovation of the contract, if not differently specified.

Case Study A

Case study A is a PPP contracted in a central Italian region for the provision of four hospitals and its relative maintenance services. All hospitals were completed in 2006 and since then there has not been any litigation between the two parties. The private contractor is the concessionaire and is a joint-stock company, while the public contractor, or named provider, is the regional authority itself. The asset and capital manager acted as project manager during the realization of the structure and throughout the whole construction phase. The role of intermediary has been fulfilled by the same project manager, who was technically not part of the PPP contract.

Case Study B

Case study B is a PPP that was contracted in the United States between a public health care organization (provider) and a private entity (concessionaire) to manage clinical operations in order to ensure long-term financial stability, to address the challenges of hospital consolidation in the region, and to enhance funding for the organizations academic and research mission. The hospital has more than 200 hospital beds, several outpatient clinics, and a medical group of providers. The PPP arrangement began in earnest in 2017, though financial strain over the prior years had led to public officials encouraging hospital officials to pursue private financial backing. The PPP was arranged by a global financial consulting firm with expertise in facilitating and coordinating the process, though they were not part of the PPP contract.

The major findings emerging from this work over the two said cases are schematically represented in the table 3.2., 3.3., and 3.4..

Issue 1: Auditing and performance measurement

The first issue analyzed over the two selected organizations consists of the auditing and performance measurement activity. The assessment of contracts found that, although they rely on the same framework, the two PPPs use a different approach for auditing and performance measurement (Table 3.2.).

Following the framework analyzed by Robinson and Scott (2009), the first sub-issue taken into account is the existence and the function of a monitoring system. Case study B identifies in the contract a detailed scheme of performance monitoring, institutionalizing a specific independent body in charge of this task. Furthermore, this body is due to provide a monthly report touching every aspect of the relation (financial, organizational and output and outcome assessment) and to limit, as much as possible, subjectivity in the analysis, requiring the report has to be blind reviewed during each assessment. While in case study A, the contract does not specify the methodology to be adopted and does not institutionalize an independent body to take charge of this aspect, leading to possible conflict of interests.

Customer satisfaction is the second aspect taken into account. Case study A does not provide any specification in the contract, while case study B uses it to base determination of deductions in the contract.

As for the third element of this issue, consisting of the performance reporting, the case study B does not require any specific transparent output while, case study A is required by public authorities to justify its performance each year. Furthermore, the public authority specifies the formula to use in this determination.

The last aspect taken into analysis consisted in the presence of a fault reporting procedure, that is found to be present only in case study B with the specific purpose, according to secondary sources viewed, to promote the culture of change in the organizations.

Issue 2: Determination of compensation

The second issue retrieved from the analysis of Robison and Scott (2009) concerns the determination of compensation (Table 3.3.). This aspect is strongly related to the risk taken by the two entities, which is deeper analysed in the next paragraph (Table 3.4.). In Case study A, the performance compensation is weighted to each area defined in the contract. Each area is defined in the contract and the same contract provides the formula to calculate the compensation as well as any possible adaptation in price changing. However, no performance deduction is directly specified in the document. Case study B does not report any specific remuneration formula. One area where case study B clearly delineates compensation is in addressing staff and management pay. Case study A does not include any specific determination of pay changes for staff and management in their contracting.

Issue 3: risk management.

To analyse risk management, we compare PPP contracting to a matrix developed by the Ministry of Economy of Italy (2017). Twelve major types of risks are defined in the matrix. We find that PPP contracts differ in several respects in how they account for and manage their risks. Case study A generally provides a more robust framework in their contracting to manage and allocate risk. For example, if delays are incurred during the PPP case study A delineates how the financial risk is divided between the provider and the concessionaire. In only one category of risk did case study A not specifically outline the contractual obligations of the parties involved in a PPP – that of risk of execution. In the case of that risk, case study B did include contracting language proportionally sharing the risk between the provider and the concessionaire.

Table 3.4. defines to which entity the risk is allocated to. Furthermore, Table 3.5. describe the type of risks selected.

Table 3.2. Key aspects on auditing and performance measurement.

Key Issue 1 – Auditing and Performance Measurement

	Case study A (ITALY)	Case study B (USA)
Monitoring regime	Contractors' performance is subject to periodical audit by the identified audit authority. The contract specifies a self-monitoring procedure to be followed, but there is no specification on the methodology of monitoring to be adopted by the contractors.	Contractors are both subject to continuous audit, one every month. A third entity is required to undertake this function and a monitoring system is well detailed.
Customer satisfaction	There is no reference to the customer satisfaction in the contract and therefore it is not able to influence deductions.	Customer satisfaction accounts in the determination of deductions
Performance reporting	The local authority (Regional government) requires a periodical performance report, with potential deductions for performance calculated according to a specific formula.	No performance reports are required by the governmental authority involved in the PPP contracts
Fault reporting	The contract does not require a staff reporting procedure. No location is available for this issue.	A self-reporting procedure is applied, promoting culture of change.

Table 3.3. Key aspects on determination of compensation.

Key Issue 2 – Determination of compensation

	Case study A (ITALY)	Case study B (USA)
Performance scoring system and deduction	Performance compensation are weighted according to the weight attributed to each area of interest defined in the contract with a provided formula. This means that each area has weighted coefficients for the determination of the remuneration.	The performance deduction in the determination of compensation accounts for more than 50% of the entire amount defined in the contract. Every area has a strong specification on the amount of deductions for any possible emerging issue but there are no coefficient used for the calculation, since every single area is well detailed and specified.
Function of payment mechanism	Payments, although can vary according to different specification in the contract, is not very flexible and accounts for less than 20%. Payments are made every 6 months	The payment scheme is not really clear and is not included in the contract
Staff management and compensation	The staff management issue is not addressed in the contract.	According to the contract a frequent change of staff is possible and can make strong work relationships. Furthermore, the component of staff compensation is very sensible to the entity's performance
Price adaptation determination	A specific formula is used	No specific formula is used

Table 3.4. – Key aspects on risk allocation.

Key Issue 3 – Risk allocation

	Case Study A (ITALY)	Case study B (USA)
Administrative risk	In case of delays and related greater costs, the risk is allocated to the provider has to be found responsible, while as for lower incomes the risk is allocated to the concessionaire	The risk is shared 50% between provider and concessionaire
Expropriation risk	In case of delays and/or increased costs, the risk is allocated over both the provider and the concessionaire	The risk is allocated 100% on the concessionaire
Environmental risk	In case of environmental damage, the risk has to be allocated 100% over the concessionaire.	Not specified in the contract
Risk of project modification	In case of project modification, the risk is allocated only to the provider.	The risk has to be defined on the different circumstances and is not well specified in the contract
Risk of delays in approval	In case of any delays in public administration approval, the risk is allocated only to the provider.	Not specified in the contract
Risk of execution	Not specified in the contract	The risk has to be shared between the concessionaire and the provider proportionally to the investment

Risk of underestimation of costs	In case of an underestimation of costs, both the concessionaire and the provider shares equally the risk.	The concessionaire detains 100% the risk of cost underestimation
Risk of delays in realization	In case of realization of a structure non-conforming to expectations, clearly stated in the contract, the risk is allocated only to the concessionaire	The concessionaire detains 100% the risk of delays in realization
Risk of demand contraction	In case of demand contraction for unforeseeable reasons, the risk has to be shared by both provider and concessionaire.	Both provider and concessionair equally share the risks
Managerial risk	The concessionaire detains the 100% of the risk	The concessionaire detains the 100% of the risk
Political risk	The concessionaire detains the risk 100%	Not specified in the contract
Financial risk	The concessionaire detains the 100% of the risk.	Not specified in the contract

Table 3.5. Classification of risks.

Classification of Risks		
Type of Risk	Risk Definition	Potential Consequences
<i>Administrative risk</i>	Risk related to delays or failure in obtaining necessary authorization by public or private competent entities to start the project.	Delays, increasing of costs, decreasing of incomes
<i>Expropriation risk</i>	Risk related to delays or failure in expropriation procedures and/or increase of costs for necessary expropriations.	Delays, increasing of costs.
<i>Environmental risk</i>	Non-foreseeable risks related to contamination of the territory.	Delays, increasing of costs.
<i>Risk of project modification</i>	Risk related to modifications requested by contractors on the original project.	Delays, increasing of costs
<i>Risk of delays in approval</i>	Risk related to potential delays in the approval of the project by public or private competent entities	Delays, increasing of costs, decreasing of incomes, redress application, contract resolution.
<i>Risk of execution</i>	Risk related to the possibility of realizing the project non-conforming to the original plan agreed by the two parties.	Delays, increasing of costs, decreasing of incomes, redress application, contract resolution.
<i>Risk of underestimation of costs</i>	Risk related to under-estimation of costs when the contract is signed	Delays, increasing of costs, decreasing of incomes.
<i>Risk of delays in realization</i>	Risk related to delays in realization by the concessionaire	Delays, increasing of costs, potential resolution of the contract.

<i>Risk of demand contraction</i>	Risk related to the concentration of the demand of services with established tariffs.	Decreasing of incomes.
<i>Managerial risk</i>	Risk related to potential increase of management costs, risk related to the provision of services non-conforming to standards, risk of failure in the provision of services.	Disservices, increasing of costs, decreasing of incomes, decreasing of contractors compensation, redress application, resolution of the contract.
<i>Political risk</i>	Risk related to potential change in regulations affecting the project; risk of change in political leadership making commitment to the project less intense.	Delays, increasing of costs, decreasing of incomes.
<i>Financial risk</i>	Risk related to the impossibility of accessing funds.	Delays, increasing of costs, decreasing of incomes, contract resolution.

3.5. Conclusions.

The use of PPP is not a recent phenomenon. In both Italy and the United States, it has long been used as a policy tool. In both settings there has been consistent growth in the use of PPP over the past twenty years (Torchia and Calabrò, 2015)

Yet, in the specific case of health care, our cases analysis shows the divergences between Italy and the United States in the use of PPP. Indeed, in Italy, where the public sector is more involved and present in the health care setting, our case confirms that it is possible to find a more substantial and robust use of contracting in PPPs. Although, due to its complexity, the saturation of the market reached and the issues to which this type of agreement is subject to, it has experienced a general decrease in the 2010s (Soeipto and Verhoest, 2018).

The different historical, social and economic contexts between Italy and the United States has led to the different use of PPPs and shaped the contracting of these relationships. Yet, in both cases, even with the different factors that have shaped their use and history, PPPs represent a challenge for the private sector as well as an opportunity for the public sector to modernize the provision of care (Robinson and Scott, 2009).

One of the core challenges associated with adopting PPPs are the innate complexity of the arrangements. It is difficult to standardize across different scenarios and arrangements. Yet, there are three themes which have emerged from our case studies and seems to confirm the general trend identified by scholars. First, case study B is more oriented to the culture of change rather than Case study A, sustaining the theory according to which US context may affect organizations to be more open to change rather than an organization located in Italy (e.g. Hofstede *et al.*, 2005; Fey and Denison; 2003; Brewster *et al.*, 2004). This emerged from the fact that the American contract analyzed is more flexible and open to possible drift in the management of the relationship. A wide literature has emerged on the topic of organizations' orientation to change, and indeed the conclusions don't differ much when it comes to formulating judgements on geographical predisposition to change. American organizations, according to several authors (e.g. Ongaro, 2009; Goodstein and Brooke, 1991) tend to be

more flexible and oriented to a rapid change in organizational culture rather than their European counterparts. In these cases, we found the same trend: a clear orientation to the management of staff and a general encouragement of researching different positions of the staff within the contractual agreement made by the two public and private entities seem to reflect this trend.

Second, the public contractor, namely the provider, takes on more risk in Case study A, rather than Case study B. This implies that Italian public organizations share more risks with private counterparts rather than American public organizations. According to Decressin (2002), countries that offer equal access to public services, namely healthcare, are thus subject to an increased risk.

It is also true that the risk in complex relations such as PPPs should be handled on a case-by-case basis (Bing *et al.*, 2005,) but several other authors reached the opposite conclusion, stating that the public party in Italy is the harassed and weak part of the contract (Carbonara and Pellegrino, 2014). Indeed, this has historical causes. PPPs in Italy represented a new way of accessing funds for the public sector in early 2000s, which has suffered from a general decrease of resources over time (Torchia and Calabrò, 2015). PPPs were seen as a possible solution (Carnis and Yuliawati, 2013), but in that circumstances the public counterpart had less contractual power and has been subject to harder conditions (Vecchi *et al.*, 2020). The analyzed case does not confirm this trend. Further studies are needed to better understand this phenomenon.

Lastly, there is much more flexibility in the deductibility and compensation determination in the American agreement. Cases seem to confirm the evidence, and suggests that the public sector pursue deductions in the “*spirit of partnership*” (Robisons and Scott, 2009) in exchange for less accountability, and therefore less risk, within the contract. The creation of a partnership with mutually agreed objectives is an essential aspect to be researched in order to minimize opportunistic behaviors associated with incomplete contractual fulfillment required. The complexity of this type of relation, which clearly represents the Principal-Agent Theory dilemma, needs to be regulated and defined in the

contract, providing a higher grade of flexibility. This issue seems to be addressed more in the American organization analyzed than the Italian organization, as flexibility in risk sharing and determination of compensation is indeed greater.

Therefore, PPP, despite representing an innovative alternative to privatization, surely has to deal with a certain number of issues. This may undermine the effectiveness of the common purposes, exposing PPPs to unforeseeable risks. This paper aims to detect what might be the most recurrent issues to be faced in PPP agreements and how two independent organizations face these issue in two completely different contexts. We indeed find that differences in the contexts strongly affect also the type of relations as well as the way the involved entities face the problematics. Each organization has its own path dependence.

CHAPTER FOUR

CONCLUSIONS AND FUTURE RESEARCH

This study aims to identify several tools that may be useful for policymakers when dealing with improving the I-NHS starting from its foundations: health organizations.

If the importance of the financial leverage is acknowledged, but increasing funds would not be sufficient to support the I-NHS (Lega et al., 2013). Considering the lack of funding that characterized the last decade and the anticipated funding relative to the Next Generation-EU, the main need now is to define several management tools that may help in managing the flow of funds as well as improving the sustainability of the whole system (Mintzberg, 1993; Dillard et al., 2008; Marques et al., 2019).

In Chapter One of this work, hospital CEOs, who should have a good understanding of the ongoing situation, suggested some aspects on which research and policymakers should focus on. Not all of these suggestions focused on the financial aspect. Funding of hospitals in the I-NHS follows a top-down approach and, as the process of improving the I-NHS needs to be bottom up (improving health organizations to improve the whole system), it cannot be considered as the key element to manipulate. Furthermore, economic constraints limiting management in the I-NHS have been considerably increased in the 2010s.

In light of this, managerial variables should be considered more carefully. The conclusions of Chapter One suggested two main issues to focus on: managerial competencies of health professionals and external coordination of health organizations, which involves private actors in the delivery process, and also assessing all possible risks of this area.

As such, Chapter Two investigated the self-perception of health professionals as to their managerial competencies as well as what are they requesting from their health organizations in terms of managerial training. It is important to notice that,

despite the regional differences across the Country, the need to improve management competencies seems to be universal.

Chapter Three, instead, focused on the issue of external coordination, studying PPSs that are a possible tool to improve the linkage between a health organizations and its territory, as well as achieving a better organizational outcome, making the I-NHS more sustainable. PPPs, in fact, are seen as a tool that can help to reach this objective. However, the essay of Chapter Three, also sheds light on what could be the risks of such cooperation. In fact, even if PPPs are a tool that have been widely used in the past, if not used correctly, they can put the public organization in jeopardy and, in the end, the whole system. A new wave of studies on PPPs should be undertaken in the next year to assess its efficacy in helping health organizations' management to employ all funds coming from the Next-Generation EU to the best of its ability.

In light of this, future research issues should be focused on how to create the best conditions for managing the flow of funds that will come into health organizations.

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