



# Chronic disease management in the Lombardy region: An evolutionary service network perspective ☆☆☆



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## ABSTRACT

This paper fits into the theoretical framework of service networks. Its aim is to understand service network change meaning, characteristics and connections with extant literature and to investigate how a service network can change in a specific context, a regulated sector. The regulated service network considered is the Italian health care network. A theoretical framework guided the analysis to explore how the actors' perceptions evolved during specific time, space, and relationship dimensions in terms of what, why and where changes happened, happen or will happen.

A pilot project, still on-going, is the longitudinal case study analyzed. Introduced at a territorial level by an institutional actor in 2011, the project aims at re-engineering the network service provided to chronic patient category, focusing the network supply on a specific actor, the General Practitioners.

The paper illustrates how involving/enhancing the role of each actor in a new network configuration makes it possible to generate dynamics and produce evolutionary processes co-created and shared between the involved actors. Service networks need orchestration, beginning with the actors most involved in the process of change, the focal actors, by co-opting them, including existing resources and new partners, exploiting the users' contributions to recreate the service network, and cooperating with external partners. As a consequence, innovation in service networks can derive from the action of single/group of actors who understand the need for improvements and activate themselves to drive that change. This consideration seems to be particularly relevant when the speed of changes is restrained as often happens in regulated sectors.

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## 1. Introduction

Services, both in business-to-business and in the business-to-

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Even if services have been deeply analyzed and been the object of many researches, and even if the trends toward increasing service importance is now well established in the consumer area, the business network literature has not yet received the same review and analysis (Rust & Chung, 2006).

Services are such unrepresented research topic that needs further examination (Ostrom et al., 2010).

☆☆ The present paper is the result of a research project jointly structured and shared with Giancarlo Nadin (Università Cattolica del Sacro Cuore, Milan, Department of Economics and Business Management Sciences. Email address: [giancarlo.nadin@unicatt.it](mailto:giancarlo.nadin@unicatt.it)). In particular, I shared the research framework and methodology with Giancarlo.

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In extending such research to services, an issue emerges as a priority, namely, which theories and concepts used to analyze and understand business marketing and manufacturing business are also suitable for the context of services. There are certain conceptual overlaps between

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actors that have indirect and direct influences on a focal actor or a focal relationship (Ford et al., 2003). Further, a business network is based on certain specific aspects of connectivity and interdependence (Henneberg, Gruber, & Naudé, 2013). On the other side, some of the definitions of services are seen as tangible or intangible activities, processes, and performances that take place during the interaction between a customer and a supplier (employees, physical resources, and systems), and these are provided as solutions and answers to the customer's problems (Zeithaml, Bitner, Gremler, & Bonetti, 2012). Services also are defined as any activity where one part can exchange with another that is essentially intangible and does not result in the ownership of anything. Its productions may or may not be tied to a physical product or even have physical aspects (Grönroos, 1990).

Accordingly, services have the same focus on the interaction between actors, relationships and resources, the same stress that is emphasized for business networking for connections, and on time development for the relationship between customer and supplier. These are specific

systemic structures based on interactions focusing on services and precisely the basic concept of service network (Scott & Laws, 2010).

That services arise from the interaction between providers and customers is an established theme. However, this paper fits into a recent theoretical framework that considers as a topic of research the service network, trying to understand its meaning, its characteristics and its connections to the extant literature.

The aim of this paper is to investigate how a service network changes. In particular the research question is: How can a service network change be generated in a regulated sector?

The specific service network considered here is the Italian healthcare network and particularly the health care system for chronic illness management.

The choice of this specific service network is supported by several elements of study.

The first element is that the Italian health care services are a dynamic context where there is a multitude of actors, resources, and activities that well expresses the idea of a network, where it continuously is evolving to respond to national development plans (Lo Scalzo et al., 2009).

The second element is that the Italian health care sector is a complex sector where change and dynamics tend to be slow and actor positions, resources, activities, relationships, and changes tend to be regulated, that is to say they are not free to evolve as traditionally conceived using a network approach.

The third element is that in this context, actors, resources and activities change over time under the influence of institutional actors in the network to reach a higher level of effectiveness (innovation, value creation, service quality, patient satisfaction, and health care process) (Corsaro & Snehota, 2012; Durrieu & Mandják, 2000) and a higher level of efficiency (resource saving) (Hsiao, Kemp, Van der Vorst, & Omta, 2010; Morgan, Deeter-Schmelz, & Moberg, 2007) for the entire system. It seems, however, that there are no studies that consider these two elements jointly as results or implications of service network change.

The fourth element is that healthcare is one of the most intangible sectors. In fact its core (the care process) is represented by the doctor–patient relationship and these tangible aspects become secondary, more or less supportive, and instrumental to the care process itself. Those characteristics place this sector in the “*third order service network*” that is to say, as defined by Henneberg et al. (2013), a pure service in which the tangible aspects become secondary, and the network core is linked to the offering of those services. In this way, the choice in this specific context, the health care network, is trying to answer to a call in terms of a special issue on service networks in 2012 for further research in this direction, thus trying to contribute to the study of a complex and emergent kind of third order service network.

As discussed above, the present research differs from the previous efforts. Service network has been investigated for several aspects including the nature of the evolution of business services (Ford & Mouzas, 2013); how firms can manage transition from a first to a second order service network (Kowalkowski, Witell, & Gustafsson, 2013); the characteristics of service networks as companies offering products and developing higher levels of infusion (Gebauer, Paiola, & Saccani, 2013); how customers value a change in strategy on the part of suppliers increasing the level of service offerings (Jaakkola & Hakonen, 2013); the ways in which manufacturing firms can improve their product offerings by infusing additional service elements (Spring & Araujo, 2013); and finally the impact that suppliers' R&D services have on profitability at the relationship level (Kohtamäki, Partanen, & Möller, 2013). But dynamics in regulated service network seem to be a topic that needs to be better explored.

In a regulated sector, network dynamics are complex, often guided by exogenous forces. The stronger actor, largely/usually the institutional one, acts by simply imposing and exercising its legislative power over all other actors in system to generate activities that involve resources and a different set of relations between actors, thereby generating changes

and the consequent dynamics of the actual network. This approach often generates resistance and does not generate results or changes based on a service network perspective. A regulated sector is a complex entity in which change and dynamics tend to be slow. Actor positions, resources, activities, relationships, and changes tend to be regulated as well, that is to say, not free to evolve, thus producing the effect of engulfing both relationships and the network. The final outcome of non-shared objectives determines the general impoverishment of the system. For this reason, the dynamic of the network can be activated only if the causes of resistance are cleared away.

Thanks to the conceptual framework, that adopt a longitudinal perspective for the context analysis, the authors explored how the perceptions of the different actors evolved during a specific time dimension (past, present and future) in terms of what, why and where changes happened, happen or will happen.

As a result, interesting considerations emerged about how a service network, in a regulated sector, can change and how conditions of resistance can be overcome. The paper illustrates how it is possible to generate dynamics: involving and enhancing the role and contribution of each actor in a new configuration of the network and thus produce an evolutionary process driven by innovation processes co-created and shared between all the involved actors. Previous considerations imply that the level of embeddedness and the level of interdependencies in the service network affect service activities and their driving forces to produce innovation. Service networks need to be orchestrated, beginning with the actors most involved in the process of change, that is to say the focal actors, by co-opting them, including existing resources and new partners, exploiting the contributions of users to recreate the service network, and cooperating with external partners during the process.

As a consequence, innovation in service networks can derive from the action of a single actor or group of actors who understand the need for improvements and activate themselves to drive that change. Those considerations seem to be particularly relevant when the speed of changes is restrained as too often happens in many regulated industries.

From a methodological point of view, the longitudinal case study approach is advantageous and used to build both through secondary data (reports, press releases, newspapers, websites, etc.), while including an exploratory research (direct semi-structured interviews addressed to institutional and healthcare operators). A specific pilot project, introduced at a territorial level by the institutional actor of Lombardy region (one of the biggest of the twenty regions of Italy) in 2011, is the object of the ongoing analysis. This project, named CREG, Chronic Related Group Project, seeks to re-engineer the network service provided to a specific chronic patient category and determine a new system for the service supply addressing this patient category, thus moving from a non-coordinated constellation of operators who are acting individually in the health care network to a centralized network of actors who will act as general suppliers (identified in the GP professionals) and thus coordinate other operators of the health system (specialists, nurses, care givers, pharmacists, etc.).

Because of the unique conceptual framework used for this case study, its results underline interesting considerations about the dynamics in service networks, an interesting context of analysis. These results evidence also how in a regulated sector, changes should be managed to prevent a more traditional top-down approach and overcome possible resistance from the involved actors to empower each position, perspective, and role. Further, due to a longitudinal perspective, the authors explore how perceptions of the different actors evolved over the several time dimensions (past, present and future) in terms of what, why, and where changes happened, are happening, or will happen.

This paper is organized as follows. The next section discusses the theoretical background, reviewing the literature on service networks, the change in those networks, and the concept of time. Section 3 presents the objectives and the research framework, and Section 4, the methodology and the research setting. In Section 5 we offer a longitudinal case study, followed by a discussion of the major findings in Section 6.

Section 7 reports general conclusions, managerial implications, limitations, and future research.

## 2. Theoretical background

### 2.1. Service networks

Service marketing traditionally has focused on investigating service encounters between individual service providers and customers (Tax, Smith, & Chandrashekar, 2011). This focus on service provider–customer dyads, however, does not reflect the true complexity of all service relationships (Morgan et al., 2007). Several services require a whole network of service providers to offer their service to the customer (Henneberg et al., 2013). Due to this complexity, research on service networks is still unexplored, being focused predominately on B2C contexts (Morgan et al., 2007, p. 375), and signaled by many authors as one of the 10 major research priorities (Ostrom et al., 2010).

While references to business networks are countless, service networks have not been examined conceptually for the same detail (Scott & Laws, 2010). Indeed, the literature reveals that issues of services networks are offered through two main research strands, namely, that of business marketing and service systems/service science.<sup>1</sup>

#### 1. The business marketing literature:

The literature on service delivery networks, service logistics networks, supply chain networks, and how embeddedness and interdependence affect service innovation activities, provides important insights. It often focuses on isolated business relationships and not cover aspects of service networks per se. The research on service networks often does not provide a clear definition and discussion of the actual concept (Leek & Canning, 2011; Scott & Laws, 2010; Zolkiewski, 2011) or the service network concepts are addressed interchangeably with service value chain models (Hammerschmidt, Falk, & Staat, 2012) which calls to mind networks based on the industrial network approach or the IMP Group approach (Ford et al., 2003). Similar approaches relate to orchestrated service networks (Evanschitzky, 2007), thereby implying a focal net perspective (Moller & Halinen, 1999; Moller, Rajala, & Svahn, 2005). Other interpretations relate to an exchange of resources between partners in the network (Evanschitzky, 2007), focusing only on direct interaction relationships (Håkansson, Ford, Gadde, Snehota and Waluszewski, 2009).

Seeking a definition that fits an industrial network approach perspective we cite the study of Morgan and Tax (2004) that considers service networks as two or more entities connected formally or informally which directly provide a range of resources and activities that create value and help customers solve short- or long-term problems.

This definition is the one used by the authors to investigate the context of the current research.

#### 2. The service/service system literature:

In this second strand, certain definitions of service system are provided such as: “value co-creation configurations of people, technology, value propositions connecting internal and external service systems, and shared information” (Maglio & Spohrer, 2008, p. 18; Vargo & Lusch, 2008a,b), or “a configuration of people, technologies, and other resources that interact with other service systems to create mutual value” (Maglio, Vargo, Caswell, & Spohrer, 2009, p. 395), or even “a service network is a team of individuals who establish relationships among homogeneous peers to provide a specific service” (Razo-Zapata, de Leenheer, Gordijn, & Akkermans, 2012, p. 47). All these definitions are interesting because they provide a network perspective of the concept of service system and include the interplay between actor internal and external aspects. However, these definitions are more restricting than the network interpretation using the industrial network approach,

<sup>1</sup> According to Agarwal and Selen (2011), the terms “service networks” and “service systems” are sometimes also used interchangeably.

as only value-co-creation relationships are included, and specific resources are the main focus or have a focus exclusively on the individual level. Also, more often the definitions are restricted to operational and process issues around service innovation.

The focus in the literature on service innovation and networks is not surprising, as service companies need to regularly renew themselves and thus must develop strategies for new service development (Henneberg et al., 2013). It is possible to generate new services by co-opting resources from outside; including existing or new partners, suppliers and customers who bring resources; exploiting the contribution of users to recreate the business network; and cooperating with external partners (Pisano & Verganti, 2008; Teece, 1986). These networks that include stakeholders, such as customers, suppliers, and research institutions (Mohannak, 1997), become especially important in complex and highly dynamic market conditions (Jones, Hesterly, & Borgatti, 1997).

The complex market, analyzed by the authors, is the healthcare; further, for an analysis of the dynamics from a service network perspective, all previously mentioned elements are also considered.

In particular, three different levels of analysis may also represent different intensities of possible service network constellations. These different levels are already distinguished as tangibility vs intangibility, wherein the transition from the first to the third level takes place through an increase in the tangible component supply and a consequent increase in the complexity of these relationships, as shown in Fig. 1.

1. A “first order” of service network relates to how third parties are used to provide additional services, that is, the use of services in interactions where the focal firm is manufacturing, i.e. product-based exchanges that are then further infused with services (either product-related or customer-related ones) (Eggert, Hogeve, Ulaga, & Muenkhoff, 2011; Mathieu, 2001).
2. A “second order” of service network is where customer-related services are part of a product-based exchange providing solutions and a new constellation of resources, actors, and activities (Tuli, Kohli, & Bharadwaj, 2007; Windahl & Lakemond, 2006).
3. A “third order” of service network delivers networks formed around a knowledge- or information-based core or a knowledge-intensive service (Muller & Zenker, 2001). Tangible aspects become secondary, and the network core links to the service offering.

This kind of service network is more complex due to a high level of intangible components that characterize the core business. It is to this third kind of service network that the context of investigation of the present paper belongs.

To understand this complexity many aspects need to be considered including: the change and time perspective driving the network toward evolution and an actor perspective that may play different roles at any

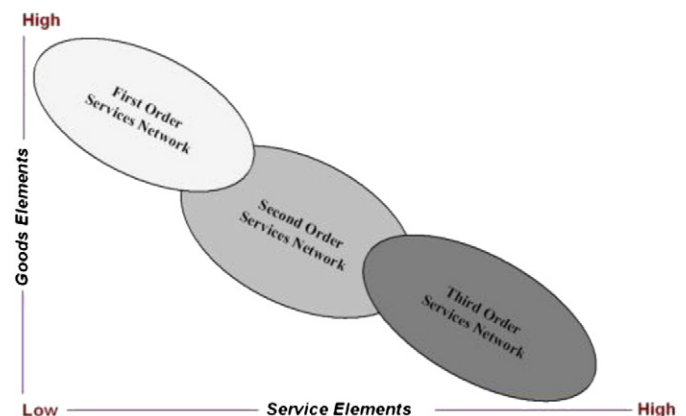


Fig. 1. The three service network layers. Source: Henneberg et al. (2013).

one point in time, not only with different counterparts but also with the same one. These concepts will be described in the following section.

## 2.2. Change in networks

In business networks, and thus according to our previous considerations, in service networks as well, any actor holds a distinct network position based on its connections with other actors. This consideration clearly implies that networks are dynamic entities because their actors are constantly looking for opportunities to improve their positions in relation to their counterparts and also looking for opportunities to create changes in those relationships (Håkansson & Snehota, 1995). Each actor's effort to change its network position is subject to the network perceptions and how the network is organized (Ford et al., 2003; Henneberg, Rohrmus, & Ramos, 2006; Holmen & Pedersen, 2003). Such subjective understanding represents also the actor's perceptions of its network role or how that actor decides to act based on an interpretation of its position and how that position relates to the positions of other actors (Anderson, Havila, Andersen, & Halinen, 1998). This understanding leads one to recognize that actors never act in isolation, and indeed, their roles and positions are shaped by interactions, not individual roles/activity. Network dynamics thus depend on an actor's ability to create or shape common role understanding with other actors, while these also perceive ongoing changes in time and space based on their network position.

In exchange relationships, actors tend to merge past, present and future perceptions in a continuum where all the parties take into account learning from their connected relationships. These experiences are then shaped and projected into the future, as the parties attempt to structure and control their own evolution trajectories (Araujo & Easton, 1996). Networks change as actors seek new ways of combining resources and activities. On the other hand, some actors resist these changes, seeking stability instead (Abrahamsen, Henneberg, & Naudé, 2012). However, due to the interdependencies of these network relationships, change in one relationship often spreads to other relationships, subsequently affecting the entire network.

Changes in networks are also often characterized as evolutionary processes (Easton, 1992) or as processes where stable periods are disrupted by radical changes (Halinen, Salmi, & Havila, 1999). These lead to the realization that actors base their future decisions and networking activities on their present interpretations of their past experiences (Medlin, 2004). Numerous scholars have investigated the different aspects of the concept of change: Relationship life cycles (Dwyer, Schurr, & Oh, 1987; Ford, 1980), change in network pictures (Abrahamsen et al., 2012; Ford & Redwood, 2005; Kragh & Andersen, 2009), time and interaction (Medlin, 2004), methods for measuring change processes (Halinen & Törnroos, 2005; Quintens & Matthysens, 2010), and change in business network relationship (Corsaro & Snehota, 2012; Håkansson & Snehota, 1995). Studies have generally adopted three different levels of analysis: The focal actor (Easton & Lundgren, 1992; Harrison & Easton, 2002), the dyad (Eggert, Ulaga, & Schultz, 2005), and the network (Abrahamsen et al., 2012; Andersson, Blankenburg, & Johanson, 2007) starting with the consideration that relationships are generators, recipients, and transmitters of change in all networks (Havila & Salmi, 2000). Change in networks depends on how interaction develops between parties; it drives change in relationships and thus evolution of business/service networks (Corsaro & Snehota, 2012; Håkansson et al., 2009). We need to take into consideration that there can be both an exogenous (e.g. technology) or an endogenous (e.g. originating within the network) source of change (Walsh, 1995).

Change is endemic to business relationships and networks. Several researchers emphasize the co-existence of stability and change in business networks, as some extent of stability is required for change to occur (Easton, 1992; Håkansson & Snehota, 1995; Sutton-Brady, 2008). Nevertheless, according to Kamp (2005), networks are not necessarily stable, and relationships do not necessarily endure. Continuity often is

interpreted as a sign of stability. Change in networks appears to result from change in relationships, which in turn depends on the mutual behaviors of managers in those relationships. Change in a network involves changes in both companies and relationships. An actor seeking change must always depend on the approval and action of other actors (Håkansson & Ford, 2002). These individual actors' perceptions are important because bonds arise in business relationships, as the two related parties mutually acquire meaning in their reciprocal acts and interpretations (Håkansson & Snehota, 1995).

Time is a central dimension to consider in network dynamics and then in service network dynamics and can be developed both as a linear perspective and a socially constructed one.

The linear perspective sees time as related to the past, present, and future (Medlin, 2004) and as an evolutionary process in which the sequential episodes of interactions are linked. Thus, exchange episodes are part of a vital change process that involve learning, adaptation, commitment and distance-reduction over time (Håkansson et al., 2009).

However, using past–present–future as delineations of time may limit the understanding of this central dimension needed for service and network and dynamics. It is also necessary to include a second perspective where time is also considered a social construct embedded in a cultural and contextual situation, then network specific.

Time can thus be seen as a mechanism that allows network actors to change their resource combination and performance of their activities, changing both their status and the configuration of the entire network (Ford & Håkansson, 2006a,b; Johnston, Peters, & Gassenheimer, 2006). Time permits the continuation of interaction within which actors can continuously learn from their past and improve the present and hopefully the future accordingly. Time allows actors to apply new knowledge acquired from the former interaction to present conditions for strategic purposes (Chou & Zolkiewski, 2010; Cohen & Levinthal, 1990). It is according to this that time dimension is considered in the present paper, acting as an environment that constrains, shapes, and patterns interaction and the deployment of resources and activities in space dimension (Medlin, 2004, p. 187).

## 3. Objectives and research framework

Using the theoretical background, we see relationships as the result of resource ties, activity links and actor bonds; also a change in ties, links and bonds modifies relationships. Changed relationships generate change in networks, and changes depend on how interactions during time under endogenous or exogenous pressures actually reconfigure the different actors. This process generates a change in the relationships among actors, thus driving the network to evolve. Applying this process, the interest of this paper lies in an analysis of how a service network changes during a specific time dimension. In particular the paper offers an answer to the question: "How is a service network change generated in a regulated sector?".

The service network considered here is a metaphor for constellations of direct and indirect relationships (Anderson, Håkansson, & Johanson, 1994) and defined in terms of how activities link together, how resources are utilized in relationships, and the strength of the bonds between the relevant actors (Håkansson & Snehota, 1995). The paper proposes an adaptation of the Abrahamsen et al. (2012) conceptual model to describe the service network change under observation.

Applying this adaptation, we conceptualize service network dynamics as suggested in Fig. 2 wherein we consider three dimensions of change, time, space and cause-and-effect, and combine them with an actor, resources and activities' multiple perspective.

In this way, we consider all elements and antecedents characterizing network dynamics: *time* (in terms of past, present and future perspectives) and *space* (in terms of actor, dyad, and network level). Those two dimensions define the service network change and are considered inputs to create the *conceptual framework* to use as a lens to analyze the specific context. In this conceptual framework, changes (in terms of

what happens and why it happens and where it is happening) are seen connected to another element/antecedent, relationships (considered the result of actor bonds, resource ties and activity links) because changes in relationships also generate changes in a network. The outputs from the analysis of this context using the conceptual framework will produce a better understanding of the network dynamic both in terms of changes that occur in network positions, and better interpretation of future perspectives of the network.

More precisely, Fig. 2 illustrates the conceptual framework and we can see that:

- The time dimension of the service network dynamic has been analyzed through two questions: *what happens*, that is to say the perceptions of where change happens, and *why it happens*, that is to say the perceptions of the origin/source of a change.
- The space dimension of the service network dynamics has been analyzed through one question: *where the changes are happening*, that is to say whether the changes result from actions by a single actor (A = actor level), or because changes occurred in the relationships between actors (D = dyad level) or due to changes in multiple or connected relationships (N = network level).

As Fig. 2 suggests, we look at service network dynamics in terms of changes in time and space, trying to understand how actors perceive changes in their related service network (changes in service network positions) and how they then act on these changes, through considering the evolutionary perspective of actor bonds, activity links, and resource ties (an interpretation of the service network future perspective).

If the “what happens” dynamic is proposed for the longitudinal analysis of the case study, then the “why it happens” dynamic becomes the starting point for the Discussion section of the paper. The support for this choice pertains to the nature of the project under analysis, still on-going. The reasons related to the changes occurring in this specific service network and the perceptions of the different actors regarding the origin and the sources of this change need to be better understood and focused by the actors themselves.

The specific service network of this study is the Italian health care network, a strongly regulated sector, and particularly its health care system for chronic illness management. The pressures for change were induced by the system due to cuts in budget and constraints related to public debt and the welfare state crisis. The change introduced pertains to a pilot project, the CREG project (Chronic Related Group project), introduced at a territorial level in the spring of 2011 by the Lombardy region and still ongoing. This project seeks to re-engineer the network service provided to a specific chronic patient category and determine a new system for the service supply addressing this patient category. Expected results of the project will see a shift from a non-coordinated constellation of operators acting individually to a centralized network

of actors (focused on the GP professionals) who will act as general suppliers.

The project (launched in an experimental scheme) selected for its testing 5 pilot Local Health Authorities (LHA): 2 LHAs in Milan, 1 LHA in Bergamo, 1 LHA in Como and 1 LHA in Lecco. The experimental phase will last two years to the end of 2013. Then the region, based on analysis of results, will decide on any extension of the project to the remaining 10 LHAs in the Lombardy territory.

4. Methodology

From a methodological point of view, the Lombardy pilot project represents the interesting change considered in our research perspective as it is a longitudinal case study. This project can be viewed as what Andersen and Kragh (2010) termed an ‘in vivo’ study wherein the aim of the analysis is to underline the context and the boundaries of the phenomenon to investigate how theory interacts with empirical observations (Dubois & Araujo, 2007). To overcome possible limitations in the use of a longitudinal study, we apply multiple data sourcing in the multi-method design as recommended by Jick (1979). Research development is based on systematic combining and continuous integration of both theory and empirical evidence (Dubois & Gadde, 2002; Piekkari, Plakoyiannaki, & Welch, 2010).

The approach followed is a case study one, seen as an adequate method to investigate network relationships, the actors involved and change generation. The case study approach is also useful for investigating phenomenon dynamics and delivering multidimensional understanding of the situation (Easton, 1995; Eisenhardt, 1989; Halinen & Törnroos, 2005). Since particularly suited to a case study methodology (Dubois & Gadde, 2002), an inductive process is adopted. This one allows the generation of data-driven theories (Järvensivu & Törnroos, 2010), namely, choices related to the theoretical framework that influence the empirical investigation. In this way, this study becomes much more focused from a theoretical point of view and an empirical one. In addition, continuous interaction between theory and empirical observation characterizes systematic combining that also involves the case study based on the inductive process (Dubois & Gadde, 2002; Piekkari et al., 2010).

A holistic description gathered from multiple sources (Järvensivu & Törnroos, 2010) was necessary to achieve the purpose of this study and analyze the impacts generated by evolution of the Lombardy project.

After collecting secondary data, namely, reports, press releases, newspapers, and websites, exploratory research was undertaken by contacting and interviewing both institutional and healthcare operators involved in the pilot project. This empirical research was carried out from June 2012 to January 2013. Semi-structured interviews were conducted following a general check list that enabled understanding of the project and surfacing feelings among these operators regarding the future.

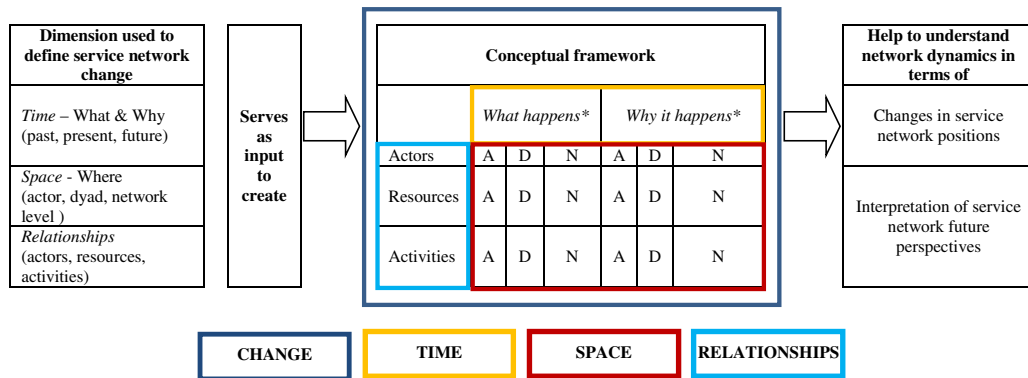


Fig. 2. The conceptual model. \*What refers to the specific event (what happens) and why refers to the level where the change manifests itself. A = actor level; D = dyad level; N = network level. Source: An adaptation of the conceptual framework of Abrahamsen et al. (2012).

During the interviews, we used *what* and *why* questions to address the time dynamics (see Fig. 2 above), and *where* questions to address space dynamics by asking the actors to reconstruct (or make sense of) ongoing developments in their service network (the actor level), within their immediate relationships (the dyad level), and also their multiple connected relationships (the network level). We were particularly interested in how these actors made sense of changes occurring to their roles and positions in the network.

Each interview lasted between 1 and 2 h. All interviews were taped, and written notes were also taken. Transcriptions were undertaken immediately after each interview, and some respondents were contacted a second time (by mail or telephone) to clarify content and meaning. The emerging information was analyzed using a qualitative discourse analysis, that is to say, an inductive analysis and a subjective interpretation of data (Semeraro, 2011). According to this kind of data analysis and according to the “common practice” methodological choice used in case studies (Piekkari et al., 2010), a three-phase discourse analysis (the interviews) was adopted: Phase 1 – code creation; phase 2 – identification of the relationships between the recognized codes; and phase 3 – code aggregation based on the situation, the processes, the activities, and the specific items of the studied conceptual framework (time, space, what, why, actors, resources, and activities).

Table 1 offers an overview of the chosen actors from the studied service network pilot project.

Informants were selected based on their knowledge of the project. The goal was to get in touch with all decision levels in the healthcare service industry and all actors directly involved in the project, as Table 1 shows. Therefore, we decided to interview the persons in charge at the region level, at the LHA level, at the provider level, and finally at the GP level (whether belonging or not to the project). Unfortunately, the Board Governor for the region resigned during the elapsed time of the survey. Among the five LHAs supporting the pilot project, we subjectively decided to interview the three largest (Milano, Bergamo and Como). In develop a clearer framework, we decided to include the top leaders from the GP unions in the informant samples, because of their major influence on individual GP decisions.

#### 4.1. Research setting

The offering system of the health care sector is typically based on a network of multiple actors, private and public, built on strong institutional frameworks of governance structures that are heavily regulated. More precisely, from an organizational point of view, the Italian health care system is a regionally based National Health Service that provides universal coverage free of charge at the point of service. The system is organized into three levels of networks – national, regional, and local. The national level is responsible for ensuring the general objectives and fundamental principles of the national health care system. Regional

governments, through Regional Health Departments, are responsible for ensuring the delivery of a benefit package through a network of population-based LHA (Local Health Authorities) and public/private accredited hospitals. Fig. 3 summarizes these main organizational actors as well as the relationships between them. From a service network point of view, at present the health sector can be distinguished as primary and secondary care, the first being more and more important, especially in terms of prevention, aid in the community, and immediate help. Secondary care is more connected with acute care and, therefore, surgery centers and specialized clinical care, normally located in major hospitals (see Fig. 4).

The Italian health care network system signals a double constraint (see Table 2). From the demand side: Due to an aging population phenomenon, primary care is becoming a major mandate for all communities both because elder people are a numerically significant segment and because they are, generally speaking, characterized as having comorbidity phenomena, the majority of which are chronic diseases. On the one hand, the future demand for these related health services will increase dramatically; furthermore, many researchers suggest that diabetes, one of the chronic pathologies, is spreading like an epidemic as a consequence of increases in overweight and obesity in the population in general that requires continuous and specific assistance. On the other hand, from the supply side, the Italian National Health Service (NHS) is seeking to better create, manage and optimize the service delivered and its process.

According to these trends, the pilot project for the Regional Health Service (RHS) has as its goal saving resources and improving citizen satisfaction by outsourcing the care process service to central providers instead of having many non-coordinated operators acting individually. The project has co-opted General Practitioners (GPs) to become the “control room” so to speak and create a network of collaboration composed of heterogeneous operators and professionals who will respond to the forecasted healthcare needs.

The Lombardy region project, still ongoing, mainly focuses on seven typologies of chronic disease: diabetes, chronic obstructive pulmonary disease (COPD), heart failure, hypertension, ischemic heart disease, osteoporosis, and neuromuscular pathologies. The seven chronic pathologies involved in the project count for, more or less, 1 million people in the region, and it can be assumed that the project requires 1 billion of Euros per year for primary care running costs, excluding hospitalization for acute cases.

The project was formally launched in April 2011, and 2013 is the year dedicated to full clinical experimentation as reported in the organizational chart presented in Fig. 5 below.

Below are the proceedings of the project from a longitudinal perspective, starting with a depiction of the project frame, then moving on to the pilot phase and finally closing with potential future decisions and directions recommended as a result of the outcome of the pilot project.

**Table 1**  
The actors interviewed for data collecting.

Role	Number	Organization	Period
Primary Care Director of LHA <sup>a</sup>	1	LHA of Milan	June 2012
Medical Director of LHA <sup>a</sup>	1	LHA of Como	July 2012
Service Procurement of LHA <sup>b</sup>	1	LHA of Bergamo	July 2012
General Manager of GP's group <sup>c</sup>	1	Como provider unit	September 2012
General Manager of GP's group <sup>c</sup>	1	Milano provider unit	December 2013
General Manager of GP's group <sup>c</sup>	1	Bergamo provider unit	January 2013
President of GP's Union	1	SNAMI (main GP's Union)	January 2013
GP (belonging to a provider unit) <sup>d</sup>	3	GP operating in Bergamo	November 2012
GP (acting alone) <sup>e</sup>	3	GP operating in Milano	November 2012

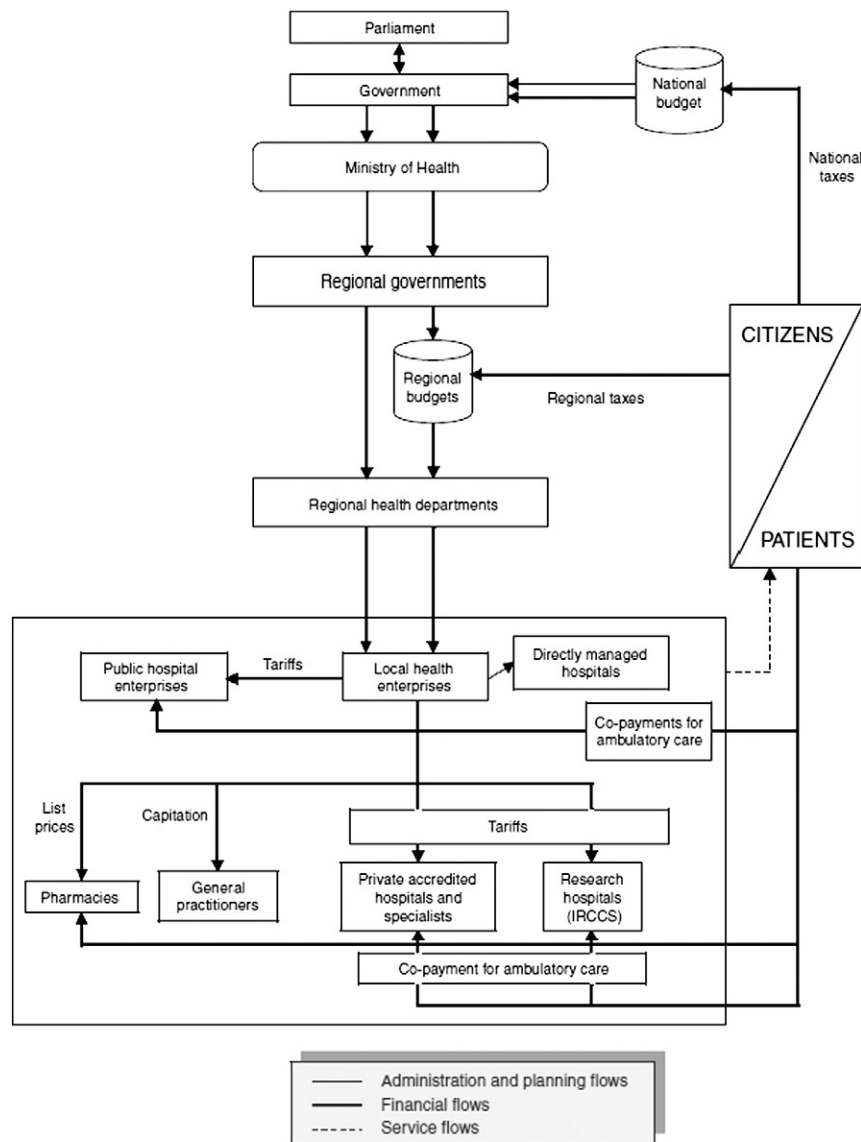
<sup>a</sup> In charge of strategic definition of the project in the LHA.

<sup>b</sup> In charge of project deployment in the LHA.

<sup>c</sup> In charge of the start-up of the new provider for the CREG project.

<sup>d</sup> General Practitioners who decided to join the new provider.

<sup>e</sup> General Practitioners who decided to work alone unlinked to any provider (they don't/won't sustain the CREG project).



Note: IRCCS: National Institutes for Scientific Research.

Fig. 3. The Italian health care network system and its organization elements.  
Source: Lo Scalzo et al. (2009, page 44).

## 5. The case study

### 5.1. The framework of the project

The public service provided for chronic illnesses is supported by a fragmented offering where typical “silos” approach, strong specialization and weak top-down coordination, can create inefficiency and low service quality. For this reason, Lombardy’s Regional Health Service is rethinking the governance of their services for managing chronic diseases.

Fig. 6 illustrates, in a general manner, the comparison between the actual set of relationships and the new desired framework following the innovations introduced by the project herein described.

The situation in which long-term degenerative illnesses require ongoing management over a period of years/decades, is today becoming more and more important and represents a future social burden for the community and the local administration. The Lombardy’s project is seen as a way to create a pivotal organization around which all health

professional operators can collaborate to improve the service to these patients. From Lombardy region perspective, the ideal service network is an interconnected web of operators that is centrally coordinated by a provider (or many providers) and mainly composed of General Practitioners (GPs) who manage the entire service from a clinical standpoint.

It must also be recognized that this process of converging toward a central provider organization is not a natural consequence of the health operators’ vision and their actual movement in the chronic health scenario, but rather an artificial and perhaps, exogenous aggregation that is simply pushed and induced on practitioners by the local administration.

The Lombardy project, launched in April 2011, introduces not only a new system of governance for chronic illness and a top-down, strong coordination of all professional players, but also a new approach for remuneration of the actors. Until now, each operator involved in the process of care received a remuneration for that portion of the service provided: GP’s remuneration is based on a quota per capita, and specialists get a fee for each examination, while pharmaceutical treatment has a cost per unit of drug dispensed, etc.

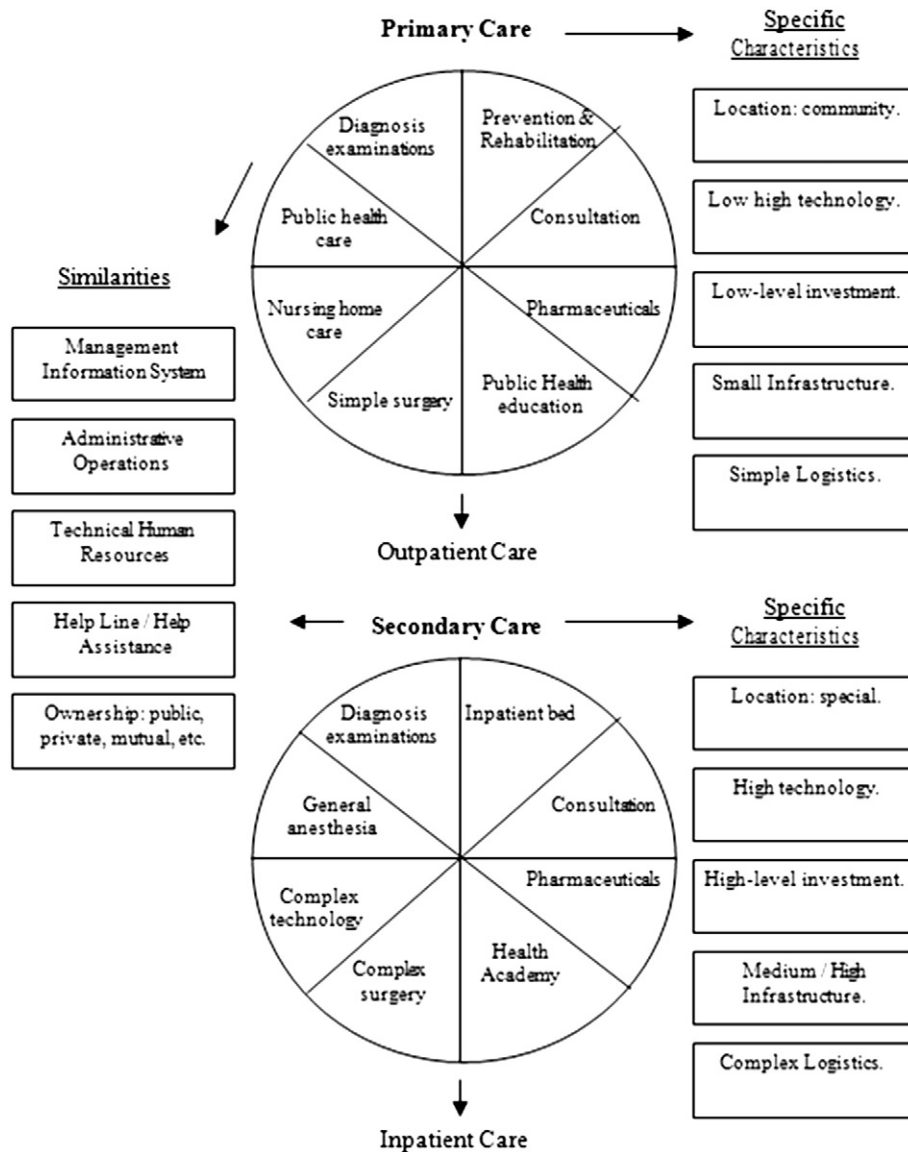


Fig. 4. The health care services organization.  
Source: Figueiredo (2003, pag 6).

The project introduces the concept of fixed remuneration per pathology, thereby following a consolidated international approach that exists in hospitals, the so-called Diagnosis-Related Group (DRG), where for each disease the National Health Service recognizes to the hospitals a fixed remuneration for the provision of that service.

The actual name of the Lombardy's project is "CREG" which means Chronic-Related Group. It takes its roots from the DRG (Diagnosis-Related Group) approach consolidated in secondary care.

Considering the perspective of the Regional Health Service, this approach signifies the possibility of establishing an expenditure roof for chronic pathologies and maybe the opportunity to achieve savings based on total reengineering of the care processes.

The project not only states that there is a new reimbursement model; but also outlines a new way to deliver health care services which means a general reengineering of the processes for the players. If the coverage of patient service has been assured until now by a general and fragmented offering (GPs, specialists, nurses, ambulatories, laboratory for analysis, etc.), this project now seeks to find a main contractor (named provider) per each area (Local

Health Authorities – LHA) with whom the DRG (Diagnosis-Related Group) per each chronic patient becomes involved and who requires top-down management and coordination of all service provided by each player.

Out of the fifteen LHAs (Local Health Authorities) in the Lombardy region, the local administration decided to select five LHAs to test as a pilot the new managerial approach for chronic diseases in primary care by selecting main contractors for coverage of the 5 pilot LHAs of Milano, Bergamo e Lecco.

Starting from clinical considerations, the region formulated its desire to coopt GP professionals as actors in charge of the role of the main contractor of the project, although the enacted regional law opens up the opportunity for general and private organizations to candidate themselves as main contractors.

In October of 2011, using a combination of proactive emotional impulses and despite some reluctance, different and separated GP's joint groups (labeled "Cooperative Society") were created in each of the five pilot LHAs with the goal of managing the Chronic-Related Group project (the CREG project) as main contractor.



**Table 2**

General assumptions of the case study research setting.  
Source: Our elaboration of the Italian healthcare context.

System side	Patient side
<p>Need for a higher level of efficiency</p> <p><i>Assumption:</i> Due to the aging population phenomenon, primary care is becoming a greater mandate for all communities, both because elders are a numerically significant segment and because they are, generally speaking, characterized by co-morbidity phenomena, the majority of which are chronic diseases. Those pathologies require reliable primary care services and the greater that primary care becomes, the less expensive involvement of hospitals or secondary care is required, with a greater saving for the entire community.</p> <p><i>Actual system organization:</i> Primary care, composed of all professionals operating in the field of health (physicians, specialists, nurses, pharmacists, etc.), is a fragmented constellation of single and independent operators who care for patients using their specific competences. As overall service can be covered by many professionals, the final outcomes may not be effective or efficient.</p> <p><i>Basic idea:</i> In Italy, where physician aggregations started officially at the end of the 1990s, we still find a sort of reluctance by professionals who think that mega-aggregations do not improve primary care (Carelli, 2009). European countries, instead, are trying to create aggregated pools of providers to manage top-down primary service and gain both quality and savings (Department of Health, 2007; Goyder, McNally, Drucquer, Spiers, &amp; Botha, 1990; Lowy et al., 1993). The effectiveness and success of these experiences are still to be verified, and some researchers have reported, that at best only neutral effects of those programs' aimed at aggregating physicians and reinforcing primary care services (Morgan &amp; Beerstecker, 2009).</p>	<p>Need for a higher level of effectiveness</p> <p><i>Assumption:</i> When we face chronic illnesses, especially in elderly people, we are obliged to approach the problem from a multifaceted perspective. It is highly probable, in fact, that co-morbidity is emerging and due to this circumstance, the therapeutic approach is complex and many cure plans intervene simultaneously (Di Stanislao, 2011). This issue means that interaction between each health care operator is crucial and consequently, strong coordination or full integration is required and necessary.</p> <p><i>Actual system organization:</i> Today the support service provided for chronic illnesses is supported using a "silos" approach, strong specialization and weak top-down coordination, which can create inefficiency and low service quality. Patients are obliged to manage themselves through the entire process by organizing autonomously the different steps of their personal process of care.</p> <p><i>Basic idea:</i> There is a long-standing perception that passing from a constellation of single actors to an aggregated network of actors creates a basis for providing a higher volume of services that are diversified and better coordinated for patient care. This view may explain the current trend toward encouraging larger aggregations of providers to entirely and hopefully better manage the process of chronic patient cure in any situation in which long-term degenerative illnesses require ongoing management over a period of years/decades. The health care services for chronic illness management are becoming more and more important and represent a growing social burden both for the community and local administration.</p>

### 5.2. Step 1: the pilot phase

In the Summer of 2011, each of the five LHAs (Local Health Authorities) launched a call and a bid aimed to stimulate GP participation in the project as aggregate providers.

Except for the Bergamo LHA, where GPs have strongly joined together and created an aggregation composed of half of the GPs operating in that area, in the other four LHAs, participation has been less intensive (ranging from 5% to 10% of the total number professionals operating in each area).

These numbers signify the existence of some reluctance of GPs to be involved in an innovative project where at different levels they have to accept and manage the risk of failure where usually their work is completely free and immune from such a risk.

Collective action by network actors, mainly institutional ones, from this perspective has played a major role. In the Bergamo LHA one Italian Union of GPs (named FIMMG) pushed and convinced each single GP to adhere to the aggregation. Therefore, the strengths of the group reinforced and overcome the reluctance of the individual, creating the conditions for project evolution (Medlin, 2006).

The following months after the nomination of the providers, which occurred around October 2011, the GPs worked together in each organization put into place to create a common platform for collaboration. Here was where the first problems emerged. Fig. 7, designed according

to our conceptual framework of analysis for the study, synthesizes the perceptions of GPs about the present service network changes, considering the time dimension (what happens), the space dimension (where the changes are happening at the actor, dyad or network level) and the relationship dimension (actors, resources, and activities).

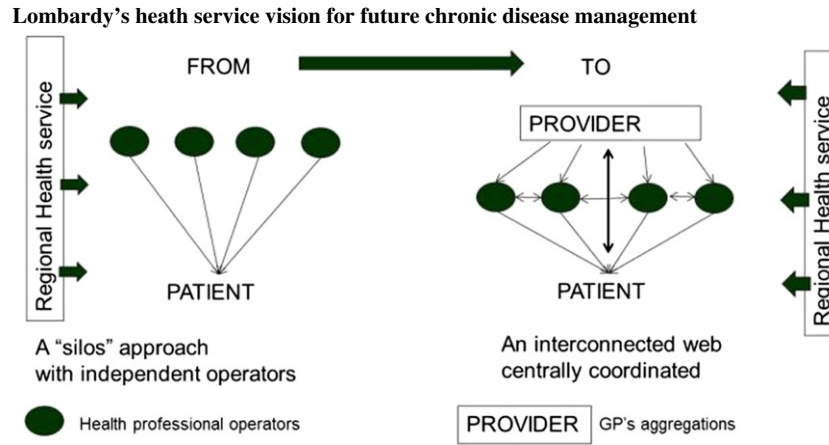
The analysis shows that GPs faced problems on three different levels. The first was at an individual level; the second, at an organizational level related to peer colleagues involved in the aggregation; and the third, at a wider organizational level related to the management and coordination of other professionals (specialist doctors for instance) and their patients.

Summarizing the main problems that occurred, as shown in Fig. 7, we found that GPs signaled a strong feeling and support toward individualism and sometimes a lack of vision for the potential future evolution of their profession.

A centered approach toward clinical activities is prevailing, instead of being mixed with organizational and leveraging capabilities of other skills. There exists a strong and rooted feeling of homogeneity which can narrow the ability of actors to appreciate and exploit the variety of heterogeneous experiences existing in the field (inside and outside each provider's organization). Furthermore the fragmented professionalism currently prevailing in the health system is a long-standing heritage that may burden the opportunity for new established providers to flourish to their full potentiality.



Fig. 5. The timeline for the Lombardy project.



**Fig. 6.** Comparison of the current fragmented framework and the desired framework for the future. Source: our elaboration.

After this first phase focused on dealing with organizational problems, each provider started patient recruitment programs in the spring of 2011. The pilot project counted on having 50,000 patients on board for the experimentation, a target aligned to the parameters fixed ex-ante per each GP, but rather under the threshold determined for the entire pilot phase.

After this recruitment phase, each GP started with a deployment of the individualized therapy plan for each patient involved in the project. Problems arose regarding the scope of customization related to the standard and general plan of cure and treatment defined for each pathology by the board of each provider. Starting from a common and agreed plan of action aimed at optimizing the stabilization of the five chronic diseases, each GP worked to define individualized plans, trying at the same time to fit the desire for standardization (meaning expenditure containment) and to deliver effective services and cure paths to each patient affected by one or more comorbidities (customization paths).

*5.3. Step 2: future perspectives*

Preliminary surveys suggest that in some cases providers are recording a fairly good level of patient satisfaction. Generally speaking, patients feel well cared for by the new organization being put in place; but in some cases, there do exist problems related to a feeling of patient dissatisfaction due to a lack of coordination among the operators in the service network.

In November 2012 the pilot project entered the clinical phase, representing the first real "moment of truth" for the entire experiment. Still ongoing, the measurement of these results will be possible only after a full year of roll out. As to the second condition, it is desirable to have more enhancement in management and in the organization of each single provider moving toward the line of evolution synthesized in Fig. 8. This figure represents, according to our conceptual framework, the foreseen perceptions of the actors in terms of the future evolution of this project.

<i>What happens</i>			
	A= Individual (single GP)	D= Group of professionals	N= Wide health network
<b>Actors</b>	Individualism Lack of vision	Limited initiatives Peer groups	Arm's length Directness
<b>Resources</b>	Clinician - technical	Trust of peers Uni-professional Homogeneity	None
<b>Activities</b>	Clinical only	Ambulatory services	Fragmented professionalism

**Fig. 7.** Problems that emerged during first-step aggregation of the project. Source: our elaboration.

<i>What will happen</i>			
	A= Individual (single GP)	D= Group of professionals	N= Wide health network
<b>Actors</b>	Empowerment Optimism	Involvement & team building	Focal point position Coordination of professionals Indirectness
<b>Resources</b>	Commitment	Heterogeneity Mutual trust P/L responsibilities Equity	Heterogeneity Specific-investment ICT & Structure
<b>Activities</b>	Clinical & managerial activities	Organizational structuring of roles and responsibilities	Defining diagnostic and therapeutic plans Managing diagnostic and therapeutic plans

**Fig. 8.** Desirable enhancement in the provider organization. Source: our elaboration.

	What happens			Why it happens		
	A= Individual (single GP)	D= Group of professionals	N= Wide health network	A= Individual (single GP)	D= Group of professionals	N= Wide health network
<b>Actors</b>	Individualism Lack of vision	Limited initiatives Peer groups	Arm's length Directness	Per-capita remuneration	Per-capita remuneration	Per-capita remuneration
<b>Resources</b>	Clinician - technical	Trust of peers Uni-professional Homogeneity	None	Lack of management skills	Lack of inter-professional training	Task separation
<b>Activities</b>	Clinical only	Ambulatory services	Fragmented professionalism	Individualism	Lack of coordination	Fragmented service supply

Fig. 9. Why it happens – summary of the conceptual framework. Source: our elaboration.

First, a feeling of optimism and consequently a sense of empowerment of the GP role as an actor of change must be spread over all the professionals, starting with the sensitization carried out by all the unions who collect GPs. The leverage of different skills that are existing in the network must be exploited to improve services and at the same time pursue an efficient target. For this purpose, trust resources must be cultivated to extend indirect linkages between players and actors and harmonize heterogeneous experiences and capabilities. Finally GPs and providers should evolve toward entrepreneurial approaches for their activities. In the pilot project, the Lombardy region decided to freeze the economic involvement and participation of GPs for cost containment, but in the extended rollout of the initiative, the application of DRG and a fixed amount of expenditures per pathology will be a must.

6. Discussion

Several key concepts have been introduced in this paper, including service network, change, relationships, time, and space. The two last concepts, time and space, have been briefly introduced to be able to interpret the conceptual framework used to describe which kind of changes are happening and which kind of changes will happen (see Fig. 2). Using this framework, the results of a longitudinal case study, the ongoing Chronic Related Group project (the CREG project), in the health care service network context, are presented. Although the CREG project has just started, and its path of evolution cannot thus be clearly depicted, some considerations can be done regarding the trajectory of this evolution and the interpretation of the “why” dimension of the framework, which can help discuss how a service network changes and how a service network change can be generated in a regulated sector, thus answering the research question.

In order to answer to the research question, underscore the main results of the ongoing project, and deliver evidence about possible motivations regarding the perceptions of the origin and sources of the service network change (the “why” dimension), the conceptual

framework is presented in its complete shape, always maintaining for this discussion the evolutionary paths of the project as the two steps referenced in the case analysis:

- Step 1: pilot phase = what happens + why it happens (see Fig. 9);
- Step 2: perspectives for the future = what will happen + why it will happen (see Fig. 10).

6.1. Step 1: the pilot phase

First, reflections are needed regarding the final outcome of the desired change to the chronic network of health in order to understand the “why it happens” dimension offered in Fig. 9 as a summary.

In the first step, the project moves forward on the assumption that a top-down coordination of the entire network of service can generate benefits both for the quality of care and the treatments for patients. This change can bring a stabilization of care costs for the entire community. Academics and researchers studying networks and their mechanisms suggest that a network will better perform and be more effective when it is left free to evolve autonomously from the diffuse initiatives of its actors, according to its actual perspective and vision of the future. Still, despite the fact that service chains are structured based on sequential activities and a top-down coordination is acceptable and desirable, networks are open agglomerates of ongoing relationships where coordination can cut spontaneous links between the knots and therefore reduce efficacy.

As also suggested in Fig. 3, NHS is based on the assumption that separation of tasks is important as a way to create clear boundaries of responsibilities for each operator. This focus means, when looking at Fig. 9, that GPs have learned/been taught to manage the service they provide to assigned patients individually on the basis of a per-capita remuneration and, therefore, without any sort of measurement of outcome of that activity or cost containment. GPs are not employee of the NHS, but professionals with an agreement with the Regional Health

	What will happen			Why it will happen		
	A= Individual (single GP)	D= Group of professionals	N= Wide health network	A= Individual (single GP)	D= Group of professionals	N= Wide health network
<b>Actors</b>	Empowerment Optimism	Involvement & team building	Focal point position Coordination of professionals Indirectness	GP's involvement as individuals in the therapeutic outcome and related cost of treatment	GP's involvement as groups in the therapeutic outcome and related cost of treatment	Integration of professionals in a territorial perspective
<b>Resources</b>	Commitment	Heterogeneity Mutual trust P/L responsibilities Equity	Heterogeneity Specific-investment ICT & Structure	Empowerment Managerial skills	Coordination Stimuli to evolve	Integration of skills Innovations
<b>Activities</b>	Clinical & managerial activities	Organizational structuring roles, and responsibilities	Define diagnostic and therapeutic plans Manage diagnostic and therapeutic plans	Focal point of the GPs regarding chronic pathology management	Focal point of the GPs regarding chronic pathology management	Effectiveness and efficiency pursued by re-engineering of service flows

Fig. 10. Why it will happen – discussion of the conceptual framework. Source: our elaboration.

System. That's why it is highly probable that the reason for individualism and a lack of vision and consequently more difficulty to put in place aggregation of professionals is rooted in the way the organization of health systems has put GPs to work.

As a consequence the activities put in place at each level (individual, dyad, and network) and the resources invested have been limited and not managed in a coordinated way. A lack of inter-professional training of GPs (and to other operators as well) and lack of management skills are two other causes that have led to poor collaborative participation among the players for the primary care management of chronic pathologies.

From this fragmented framework, in fact, there is a desire to innovate the network of primary care devoted to support of chronic diseases in the Lombardy region. The drivers of change are rooted first of all in the involvement of the GPs, as individuals and as groups, in the therapeutic outcomes and related cost of treatment.<sup>2</sup> The effort to integrate the competencies that do exist in the network will be pivotal as well as the re-engineering of these service flows. More important is the desire of the region to put the GPs in the driver's seat of this new network of service, as they should become the focal point for chronic pathology management.

## 6.2. Step 2: future perspectives

According to the conceptual model then and looking to the future perspective for the CREG pilot project, Fig. 10 offers a summary of foreseen perceptions about the sources that can help guide the future evolution of this service network change.

Leaving aside the desire of the Regional Health Administration to put in place an evolutionary project for chronic primary care, it is important to understand how operators (GPs primarily) perceive this possible evolution, if they consider it as a stimulus that should evolve, and understand which are its facilitating conditions.

From an actor point of view, it will be GP involvement as individuals and as a group that will become the level that overcomes the initial resistances of the first step, thus allowing the project to evolve and produce increased feelings of optimism toward it. Only through their managerial skills will GPs be able to handle being the focal point for clinical activities. Furthermore, a coordinated approach will create mutual trust in the service network reconfiguration and thus help support the different perspectives regarding clinical activities, further enhancing heterogeneity and skills integration at the service network level.

In the tradition of the reviewed literature, networks create and naturally evolve in a temporal perspective. They can have a focal point or not, but they are the result of a continuous process of comparison and produce a continuous seesaw effect between competition and collaboration among all actors, which at the end will generate a network status.

In Healthcare, this is not so. In the Italian healthcare sector, the network was established and structured by Institutions that originally established how it should be organized. The structure given to this network of primary care was based on certain fundamental points: 1) *A silos logic* – an organizational structure based on an impermeable environment in which each operator has a specific role or a script and in which each operator is not deputed to address each other, but talk only to LHA as the point of reference, namely, the outsourced reference of the healthcare facilities. 2) *A virtuous external context* – the Italian healthcare system has always worked thanks to the numerous resources at its disposal. The problem is that the system is still settled according to past conditions, even if the external context has profoundly changed. The healthcare mechanism is rusty. This is an important consideration to understand how the system evolved in terms of a time dimension because

that alone probably would not have evolved. Resources have become scarce, the silos approach is no more acceptable, so a network perspective must be adopted. Then there is also the need to revise the system of care taking into account, however, that it is an exogenous change that comes from the outside and not from the GPs. These considerations bring us back to the first consideration, namely how much is shared the need indicating that the system should change? How much do the GPs have an awareness that the system needs to change? and how many have a significant critical mass, the necessary force, to drag to the same outcome both those that do not think that the system needs revision and those who are neutral to such change?

Maybe GPs do not have this kind of awareness or the necessary force/determination. GPs have always worked independently, well entrenched in their positions, and if it was up to them, nothing would be changed. This is a major challenge, not only in terms of theoretical understanding of network functioning.<sup>3</sup> This dynamics could be interpreted as a sign that primary care is naturally an open network made up of many individual professionals who work autonomously and collaborate only via network relationships. GPs would not have taken these steps. But, under an exogenous request, some GPs appreciate and move (like in the Bergamo LHA, guided by the Union) even if they are outnumbered, while others resist and stay at a distance. In some cases there is a sclerotized vision that is anchored to the past where competences and GP roles are well distinguished, and the economical equilibrium is not the preserve of doctors because they are only in charge of their patient care paths.

Despite this general agreement, however, the response varies from one LHA to another and also from each GP inside each LHA in terms of participation and commitment to the project as provider (partners in the GP groups) or as a simple player who is providing services. This GP behavior and its variety not only reflects different visions about the future of the profession, but also can be seen as the effect of an activity of persuasion that is crossing, more or less intensively, the headquarters of local professional associations. In certain locations the activities of persuasion are so strong that they materialize or make change possible (see the Bergamo group where one-third of the GPs have decided to participate). In other contexts, the same activities and persuasion enact only stability or the failure of the project itself. In these last situations, a lack of optimism prevails and the professional association is not able to instill persuasion and commitment to the project.

From this point of view, it is interesting to take in consideration the Abrahamsen et al. (2012) suggestion about network change as a battle of ideas. The evolution of a network happens through the continuous confrontation of different ideal perceptions of movement. The actual path of evolution is usually set by the strongest idea that then prevails on the others and has the authority, recognized by other actors, to better interpret the future. In this battle of ideas, the UMI (Unione Medici Italiani – one of the existing associations of Italian physicians) has given its formal advice to GPs to participate as professional players, but not to adhere as providers, stating that provider activity is in fact beyond the capability of individual GPs and GPs associates in groups or cooperatives.

The Lombardy branch of the association, SNAMI (another operating union), has stated the same consideration. More intriguing, UMI has advanced the hypothesis that the intrinsic complexity of managing the CREG networks will rapidly show the failure of the GPs groups as main contractor and thus open the possibility to new entrants. These could be technology providers (ICT service provider), who now are cooperative background support for the start-up. They could become the main contractor of the CREG with a direct mandate from LHA or the

<sup>2</sup> Although the remuneration system based on a per-capita quota will still be working, the region would like to introduce a DRG (Diagnosed Related Group) for each chronic disease to find an expenditure platform. And thus better define the resources needed to cover the health demands of the territory.

<sup>3</sup> This consideration is true also for previous practical experiences accomplished abroad. As seen at an international level, the UK tentative to aggregate GPs in groups in order to foster their capabilities to manage primary health care and consequently reduce the burden on secondary care (hospitals) had not brought significant improvements to healthcare there.

Lombardy region. The opinion of the President of UMI is that this potential path of evolution for the project (failure of the GP initiative and thus an emergence of newcomers) was already envisaged. The call for GPs' intervention was only a formal act. Undoubtedly this kind of negative communications and appreciation of the project can have a strong reverberation on a single, neutral, or non-committed GP.

At the opposite end, the battle of ideas in place can fight this kind of advice by reversing the message to local GPs. The President of the Physician Association of Bergamo has formally invited all the GPs to participate as supporters of the provider because the CREG project has to be seen as a way to innovate primary care for chronic diseases. These facts can explain the greater participation in the project from some GPs, especially those located in Bergamo.

## 7. Conclusions

How a service network changes and more precisely how any service network change can be successfully generated in a regulated sector are the research questions for this study.

In a regulated sector, such as the health care service network, the stronger actor, the institutional actor, is in charge of guaranteeing the adequacy, timeliness, and accessibility of medical care. This 'player' could act by simply imposing and exercising its legislative power over all the other actors in the system. In this way this institutional actor can generate activities that may involve resources and a different set of relationships between the actors, thereby generating effective needed changes and a consequent new dynamics for the network itself.

However, as clearly already seen in the theoretical background discussed here, goals not shared generate resistance, do not generate results or changes from a service network perspective. The first step of the pilot project herein described well underlines this kind of resistance and the untoward consequences in particular for a specific actor (the General Practitioner), the most involved actor and the one most affected by the changes instituted by the pilot project.

It is only when involving and enhancing the role and contribution of each actor in a new configuration of a service network that it is possible to generate the right dynamics and thus begin an evolutionary process driven by innovation that is co-created and shared by all the actors. As the second steps of this pilot project seem to underscore, services (and healthcare services in particular), require a whole network of providers to be integrated and coordinated with a clear role and position at a territorial level so as to offer the best service to the customer (Henneberg et al., 2013). This focus implies that the level of embeddedness and the level of interdependencies in any service network affect service activities and their driving forces toward innovation. Service networks need to be orchestrated (Evanschitzky, 2007) because well representing actors connected formally or informally with a free agreement, these actors can provide valued resources and activities, through relationships, that mutually create value and help customers solve problems (Morgan & Tax, 2004). Such assessments should be ongoing, so that some actors can judge the continued commitment of other actors in the service network as conditions change. These different actors are likely to bring different perspectives of self and collective interests to the full relationship. This difference in perspective means that a degree of ambiguity will always be present and will vary according to how close and interdependent the different actors are at any one time. Actors must continue to assess the motives and goals of other actors in the service network as conditions change (Medlin, 2006).

The case study presented here contributes to the service network dynamics literature by identifying problems linked to network evolution and illustrating through a single service network case study how the roles, positions and perceptions of the different actors involved actually condition the evolution of both the single actor and the entire network. Some evidence on resistance and how it can be solved is also

proposed, taking as a lens the time, space and relationship dimensions involved.

More precisely, the case study presented here is an example that shows how, under institutional and thus powerful pressures, service actors can overcome their initial resistance to changes and renew themselves by developing strategies for new service process development. This process illustrates what was said by Henneberg et al. (2013) regarding co-opting of actors (in our case GPs), including existing resources (in our case clinical and technical resources), including new partners (in our case the ICT providers), exploiting the contribution of users to recreate the service network (in our case chronic patients as co-creators of the specific service supply process), and cooperating with external partners (in our case all the actors in the Lombardy region territory, but not necessarily linked to the health care sector). Actors are constantly looking for opportunities to improve their positions in the network. Maybe in this case, opportunity came from an exogenous opportunity – the need to improve the quality of health care services, according to the requirements of the National Health System Plan and the need to rationalize the costs of public health. The possible success of such projects will lie in the ability of the driving actor (an institutional actor in our case), to create or shape common role understanding with the other actors (in our case the GPs, the groups of professionals, etc.) while considering that relationships generate changes and the time dimension (past, present and future perspectives) does allow learning, adaptation, commitment, and distance reduction dynamics as suggested by Håkansson et al. (2009). In this way, service network reconfiguration and positive assumptions for a service innovation process can be created successfully.

In conclusion, to activate effective changes in a situation of immobility, it becomes necessary to identify the focal actors and implement actions able to move that inaction and demonstrate that the results desired can be obtained. The behaviors of focal actors and the relationships in their micro-network generate change both at an overall service network level and upstream to institutions and downstream to customers. Such a virtuous process can generate positive effects as efficiency (lower costs, shorter time, increased monitoring of results), and effectiveness (process, areas of improvement, customer satisfaction), which then spreads upstream with the ability to generate innovation by all actors involved in that service network.

### 7.1. Managerial implications

About this last consideration, the innovation in the case study analyzed and in particular its service network dynamics and changes, is indeed challenging, but in terms of managerial implications expressing precisely an efficiency and effectiveness point of view.

Many previous researches have underlined the capability of a network to evolve to reach better effectiveness and consider evolution in terms of innovation (Corsaro, Cantù, & Tunisini, 2012; Dhanaraj & Parkhe, 2006; Roy, Sivakumar, & Wilkinson, 2004), value creation (Alexander & Jaakkola, 2011; Corsaro & Snehota, 2012; Ehret, 2004; Järvensivu & Möller, 2009; Stabell & Fjeldstad, 1998), quality and knowledge improvement (Dyer & Hatch, 2006; Engelseth & Jafari, 2012; Figueiredo, 2003; Kogut, 2000), service failure avoidance (Tax et al., 2011), and better efficiency in terms of network management (Huuskonen & Kourula, 2012), saving costs and resources (Gulati, 2007; Hite & Hesterly, 2001; Hsiao et al., 2010; Knight & Harland, 2005; Pfeffer & Salancik, 1978), superior performance results (Capaldo, 2007; Morgan et al., 2007), and portfolio management (Moller et al., 2005). Effectiveness and efficiency are the basic conditions for the existence of networks (Jarillo, 1988). An organization is effective if it achieves the desired end and is efficient if it does so by offering more inducements to its members than the expected effort that those members have to put into it. Network effectiveness is the most discussed consequence of different network management dimensions,

but the two dimensions combined have not yet received the same attention within the service network perspective.

From this point of view, the project here presented as a case study is ambitious and desirable. Reengineering the service network and the service supply chain produces important outcomes and managerial implications for the community, improving the quality of services and satisfaction for a particular category of customers (effectiveness), and at the same time reducing public expenditures and controls service performance (efficiency). Basically, if a single actor (in our case GPS) can manage the process of service delivery (in our case the care process) and gain customer loyalty, it will assure a higher level of customer compliance, a wider stabilization of service quality, and fewer requests for other service network actor interventions (in our case specialists and hospitals). The system will then achieve great savings.

## 7.2. Future researches

Certain reflections can arise and be considered as future topics to investigate.

In highly regulated sectors, any possible change and evolution of a service network can be reached not through a top-down approach, but through better centralization of the service supply using the pivotal personality of a focal actor. Even if network theories postulate the un-centralization of a network as the prerogative for richness coming from heterogeneity and efficacy resource allocation, this question has produced no a clear solution. Thus, it could be interesting to investigate whether the same kind of network dynamics is found in other highly regulated sectors than just healthcare, but in other companies where change is driven by the identification of focal actors.

Service network innovation and its evolution revolve around the pivotal positions of a single actor as the gatekeeper of a service process. This actor handles the customer's needs and can select the proper supplier and the process best suited to solve customer expectations. Although it is undeniable that there is a centrality to this kind of actor, it could be interesting to verify his/her willingness to play such a pivotal role and manage the entire service flow.

The evolution of a network can start with the actors' position movement, pushed by an exogenous and compelling force. Generally speaking, network evolution originates with the perception of its actors regarding the future. This evolution is something natural and does not envisage an induced, fast, and guided change in the actor's position that is not respectful of the concept of natural motion that does emerge from the confrontation of different and divergent ideas about the future. This aspect that can be interesting to consider in future researches where actors are committed enough to embrace a change.

Many problems and numerous issues surround the possibility that a single actor will become the focal point of an organization and support an entire service network. Although the previous questions related to an understanding of the feeling of actors, it could be interesting and indeed fundamental to examine the feasibility of the model as well, encompassing the new perspective of the network. This investigation should address the quest of the activity links to reorganization and the resource ties regarding reconfiguration as two essential factors of service network development.

Finally, a single stream of research should be devoted to the costs and benefits of a service network change in terms of the perspective of all the territorial actors involved, both direct and indirect.

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