**Title of the paper:**

**Chronic disease management in Lombardy Region: the challenge to co-opt physician and involve other operators on a network perspective**

**Information on the authors:**


**Giancarlo Nadin**
Università Cattolica del Sacro Cuore
S.E.GEST.A. – Department of Economic and business management sciences
Via Necchi, 7 I 20123 MILANO
Phone: +39 02 72342426 fax: +39 02 72342771
Email: giancarlo.nadin@unicatt.it

**Alessandra Tzannis**
Università Cattolica del Sacro Cuore
S.E.GEST.A. – Department of Economic and business management sciences
Via Necchi, 7 I 20123 MILANO
Phone: +39 02 72342426 fax: +39 02 72342771
Email: alessandra.tzannis@unicatt.it



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**Abstract**


Chronic diseases are becoming an important issue in our society as result of the aging population. The future demand for this kind of health services will increase dramatically; many researchers suggests that diabetes illness is strongly spreading like an epidemic as a consequence of the increasing overweight and obesity in the population.

On the other hand NHS (National Health Service in Italy is called SSN) is looking for more efficiency due to the cut in the budget related to the welfare state crisis.

According to this trends, in the spring of 2011, the Lombardy Region has launched a new project aiming at re-engineering the service provided in the territory to this specific chronic patients with the goal to save resources and improve citizen

satisfaction by outsourcing the care process service to a central providers instead of having many non-coordinated operators acting individually.

General practitioners (GP) have been co-opted by RHS (Regional Health Service) to become the “control room” and to create a network of collaboration composed by heterogeneous operators and professionals in order to respond to those healthcare needs.

GPs have aggregated into groups to govern the provider operational networks and are now approaching and learning the way to manage and face the intrinsic dualities between change (the new health configuration system) and stability (coerce vs concede, confront vs conform, create vs consolidate) (Ritter and Ford, 2004).

This paper is devoted to the evolution in the approach of chronic illness management and thus is aimed to investigate the challenge to administer the service to the citizen by a centralized network of physicians who act as general providers and who have to involve other health operators as operational and specific providers (nurses, specialists, pharmacists, etc.).

Based on the emerging theories on network relationship constructs, as stated by the IMP Group school, this work in progress paper wants to explore the deep nature of relationship among actors, the resources needed to deploy the new service model, the actor willingness to invest in a common setting and finally the activities and processes that should be established to assure a qualified service and the patient satisfaction.

As the Lombardy’s region project is in his pilot phase during all 2012 year long, the paper will report the synthesis of interviews held with the project leaders. The object of this first investigation is related to the design phase of the project and a first evaluation of the pilot phase outcome. In particular research questions pertains to some aspects such as: can it be effective to move from a general constellation of independent operators to a network focused on a pivotal provider responsible for anything? Can GPs aggregations will manage this kind of complexity evolving from a professional status to an entrepreneurial one? Can an existing service network be changed radically by an actor pressure? Can the evolution of a network be forced as regards time constraint or has its own natural rhythm?

From a methodological point of view, the investigation of the aforementioned issues and research questions are based both on some interviews made to operators and on the analysis of the information reported on newspapers, websites and other available public information systems.

The framework used to deploy this first understanding of the project is based on the ARA (Actors, Resources and Activities) model IMP approach . This descriptive and qualitative analysis will be the basis to a wider quantitative research aiming at assessing the framework of the new model and outcome.

**Introduction**

Due to the ageing population phenomenon primary care is becoming a great mandate for all communities both because elder people are a numerically significant segment and because they are, generally speaking, characterized by co-morbidity phenomenon and the majority of which are chronic diseases. Those pathologies require then reliable primary care services and the stronger primary care is, the less an expensive involvement of hospitals or secondary care is required, with a great saving for the entire community. The structure of the primary care is therefore pivotal. Primary care, composed by all professionals operating in the field of health (physicians, specialists, nurses, pharmacists etc.), is a fragmented constellation of single and independent operators who take care of the patient for their specific competences. As the overall service can be covered by many professionals, the final outcomes could not be effective or efficient therefore.

This is why European countries are trying to create aggregated pools of providers in order to manage top-down primary service, gaining in quality and in saving (Department of Health 2007; Goyder, 1990; Lowy, 1990).

The effectiveness and the success of these experiences are still to be verified and some researchers have reported, at best, neutral effects of those programs aiming at aggregating physicians and reinforce primary care services (Morgan and Beerstecker, 2009).

The authors suggest that there is a long-standing perception that aggregated groups have the capacity to provide a greater volume of services also diversified, which may explain the current trend towards the encouraging of larger aggregations of providers to entirely and better manage the process of chronic patient cure. Also in Italy, where physician aggregations started officially from the end of the 90ies, we can still find a sort of reluctancy of the professionals who think that mega-aggregations do not help to improve primary care (Carelli, 2009).

In the last years many projects have been launched to create collaborative networks among GPs (General Practitioners). In the Lombardy Region (one of the twenty

regions of the Italian state) half of the GPs belong to peer professional groups to practice their activity (Misericordia, 2011). Half of these groups are located in a physical structure and therefore share same premises. But in order to foster their capabilities and potentialities they also should have to implement common processes, work organizations and human resource management (Fattore and Salvatore, 2010).

A research made in another northern Region of Italy suggests that significant differences in the outcome of GPs groups, compared to the individual one, can be found in the prescription where groups of physician are more inclined to digitalize the prescriptions differently from independent professionals who continue to handwrite them. No differences were found as regards patient care. It seems that group practices are not able to leverage a common knowledge and a sharing of experience among the partners involved. The great risk is to lose any advantage from being independent.

This is a characteristic that can be found also in the UK experiences (Gulliford et al., 2004, Hippisley-Cox et al., 2001). Although knowledge sharing could be an implicit goal to the creation of a formal and common structure, this is not always reached because of a lack of heterogeneity among the members. Being highly homogeneous as professional expertise (age, level of specialization, culture, and so on) reassure themselves in the group, but do not offer opportunities for combination of new knowledge resources and confrontation in terms of care practices.

The redundancy of the connections - in terms of ties and of knowledge similarity - reduces the probability that new and different knowledge enters the network. Italian GP's networks are essentially uni-professional organizational forms and, therefore, the diversity of knowledge resources is not leveraged. As they are also likely to have a similar education, knowledge and competencies, there is a redundancy in the kind of information GPs are able to access and thus there is a modest impact on professional relations. Furthermore many networks are undifferentiated from the point of view of the internal organization. Each GP in the network performs the same kind of activities on the patients in charge without any sort of specialization. In this way each GP operates independently and autonomously. GP networks in Italy do not leverage the advantages of specialization that the network model may create. Furthermore, the lack of strong interdependencies among practitioners reduces the possibility of knowledge exchange through a multifocal observation. This could

happen if GPs would systematically share diagnosis, treatments and knowledge about patients cared by other colleagues.

At the same concluding points we can find the results of the research of Mascia et al. (2011) who suggest that organizational interventions are needed to foster heterophily whenever multidisciplinary cooperation is required to provide effective health care.

**The pivotal role of coordination**

Aggregation is the most effective model of organizations when to deal with open cooperation. This is particularly true among heterogeneous operators and especially in the case of complex interactions such as those between GPs and other professionals in primary care and chronic disease management. But in order to be effective aggregation requires strong coordination.

Leutz (1999) makes important distinctions among linkage, coordination and integration:

- **Linkage** allows individuals with mild to moderate health care needs to be cared for in systems that serve the whole population without requiring any special arrangements.
- **Coordination** requires that explicit structures could be put in place to coordinate care across acute and other health care sectors. While coordination is a more structured form of integration than linkage, it still operates through separate structures of current systems.
- **Full integration** creates new programs or entities where resources are pooled from multiple systems.

When we face the topic of chronic illnesses, especially towards elderly people, we are obliged to approach it from a multifaceted perspective. It is highly probable, in fact, that co-morbidity is emerging and due to this the therapeutic approach is complex and many cure plans intervene simultaneously (Di Stanislao, 2011). This means that interaction among each health care operator is crucial and consequently coordination or full integration is required.

In this framework of complex and multifaceted relationships a wider concept of organization should be taken. A concept in which the aggregative group encompasses the silos approach to foster collaboration among members.

We face therefore a paradox: primary care effectiveness requires aggregation and coordination among the players; at the same time the structure of health care

system has not been designed and implemented to facilitate coordination among operators. This last consideration lead us to think that, although pivotal, it will be difficult to foresee a future where autonomously and naturally health care professionals will work together in a coordinated way.

To bypass this natural constraint, Lombardy Region decided to launch a new project aiming at creating the coordination among operators as regards seven typology of chronic diseases: diabetes, COPD (Chronic Obstructive Pulmonary Disease), heart failure, hypertension, ischemic heart disease, osteoporosis and neuromuscular pathologies.

**Network for Chronic Diseases in Lombardy Region**

Nowadays the support service provided for chronic illnesses is supported by a fragmented offering where "silos" approach, strong specialization and weak top-down coordination, could create inefficiency and low service quality.

In a situation in which long-term degenerative illnesses, requiring ongoing management over a period of years/decades, is becoming more and more important and represents a social burden for the community and for the local administration, the Lombardy's project must be seen as a way to **push** aggregation instead of simply **pull** it by leaving a legal open possibility for natural aggregation, that is far from becoming effective as we have seen before.

The overall of the seven chronic pathologies involved in the project count more or less 1 million people in the Region and it can be assumed that the project absorbs 1 billion of Euros per year as regards primary care running costs, excluding hospitalization for the acute cases.

The project, launched in the spring of 2011, introduces not only a new system of governance of the chronic illness, a top-down strong coordination for all the professional players, but also a new approach as regards the remuneration of the actors.

Till now each operator involved in the process of care received a remuneration for the portion of the service provided: GP's remuneration is based on the quota per capita, specialists get a fee for each examination, pharmaceutical treatment has a cost per unit dispensed etc.

The project introduces the concept of fixed remuneration per pathology following a consolidated international approach existing in hospitals, the so-called DRG (Diagnosis-Related Group), thanks to which per each disease the NHS (National

Health Service) recognizes to the hospitals a fixed remuneration for the provision of the service.

Actually the name of the Lombardy's project is "Creg" which means Chronic-related group, precisely taking its roots from the DRG approach consolidated in the secondary care.

Considering the perspective of the RHS (Regional Health Service) this would signify the possibility to establish an expenditure roof for the chronic pathologies and maybe the opportunity to get a saving based on the total reengineering of the care processes.

The project not only states a new reimbursement model but also outlines a new way to deliver the health care services which means a general reengineering of the processes among the players. If the coverage of the patient service has been assured till now by a general and fragmented offering (GPs, specialists, nurses, ambulatories, laboratory of analysis, etc), the project aims at finding a main contractor (named provider) per each area (Local Health Authorities - LHA) to whom recognize the DRG per each chronic patient involved and to whom require top-down management and coordination of the service provided by each player.

The project has been launched in an experimental scheme in October 2011, and for its testing main-contractors have been selected for the coverage of 5 pilot LHAs in the cities of Milan (two LHAs), Bergamo, Como and Lecco. The experimental phase will last one year till the end of 2012. Then the Region will decide about the confirmation and extension of the project over the remaining 10 LHAs covering the Lombardy's territory.

Starting from a clinical point of view, the Region has formulated the desire for the cooptation of GPs as in charge of the role of main-contractor of the project although the enacted regional law opens up to general and private organizations the opportunity to candidate themselves as main-contractors.

In October 2011, with a combination of proactive emotional impulses and some reluctances, in each of the five pilot LHAs, different and separated GP's joint groups (labelled "Cooperative Society") have been created with the goal of managing Creg project as main-contractor.

This can be seen as a move from the actual position of the GPs in the primary care network, as seen previously, to a potential new picture that needs to be designed from the scratch, involving thus other actors as well.

The challenge of this project consists of the way in which the concept of “change” must be interpreted. The regional health authorities, differently from the past, would like to push the change instead of consider it as a normal path of evolution.
The GPs are required to aggregate themselves in groups, to became provider of the whole service for chronic illnesses and therefore to coordinate the entire line of supply: clinical, technical and supportive for the patient.
This would signify that it requires an induced radical change instead of a peaceful and timeless physiological evolution.
Many research questions may arise. Can it be effective to move from a general constellation of independent operators to a network focused on a pivotal provider responsible for anything? Can GP’s aggregations manage this kind of complexity? Can an existing service network be changed radically by the pressure of an actor? Can the evolution of a network be forced as regards time constraint or has its own natural rhythm?

In order to investigate these questions the authors find useful and fruitful to embed the roots of their analysis on the network approach study presented by the IMP group since it is centered on the notion of relationship seen by a multifaceted perspective: one organization, a dyad of two organizations and a network of interplaying organizations.
Before outlining the theoretical framework of the IMP schools, it could be useful to introduce more in detail the research questions in order to better finalize the content of this paper.

**Main research questions and methodology**

As stated before, many questions emerged at a first glance after the decision to launch a new project aiming at centralizing and coordinating chronic illnesses treatment on the Lombardy’s territory.
We want to focus in this paper to the ones related to the successful reliability of the network transition from an open structure without any gravitational center (as it now conceived, to a centered one in which GPs are the focal organization and the other operators gravitate around them. Furthermore we want to investigate how a network can reconfigure itself by one actor’s influence on another. The Region’s project would induce GPs to aggregate themselves in order to create new organizations (providers) who would centralize the service for the patients and for the other professional

suppliers. In this way the evolution should be governed by GPs who should have a new vision about their job and role in the actual health system. At the same time this push towards a change is also exogenous, since it is provided by a law enacted by the Health Department of the Lombardy Region.

A final question is devoted to the understanding and assessment of the commitment of the GPs toward the change. Are GPs ready for an evolution from a professional status to an entrepreneurial one? Do they believe this goal is achievable and affordable for them? Are they ready to cooperate in groups? Are they ready to attract the resources (financial, technological, etc) necessary to manage the wide net of the service?

If the first pilot project the RHS (Regional Health System) decided to co-opt GPs in order to become the “pivot” of the service network, in a second development of the project the final choice could move towards other kinds of operators such as hospitals, external providers (telehealth operators, ect.) who will be able to demonstrate capabilities in case of GP’s failure. Another feature related to this project can be finally investigated: are GP’s able to recognize the opportunities, let’s say a strategic window, and are tied together in order to show determination to exploit this opportunity?

An advanced experience of the project should give information in order to answer these questions, but nowadays at the state of the art a simple understanding of the problems can be drawn by analyzing the intentions of the operators. The project, in fact, has just been launched.

From a methodological point of view, the investigation of the aforementioned issues and research questions are based both on some interviews made to operators and on the analysis of the information reported on newspapers, websites and other available public information systems.

The framework used to deploy this first understanding of the project is based on the ARA (Actors, Resources and Activities) model IMP approach .

**The IMP school of though**

A solid framework to sustain this kind of investigation is provided by the IMP group theorization about networks.

Without any sort of reconstruction of decades of speculations upon the nature and concept of network, it’s easy and straightforward for the purpose of this paper to summarize it in the following framework (see figure 1):

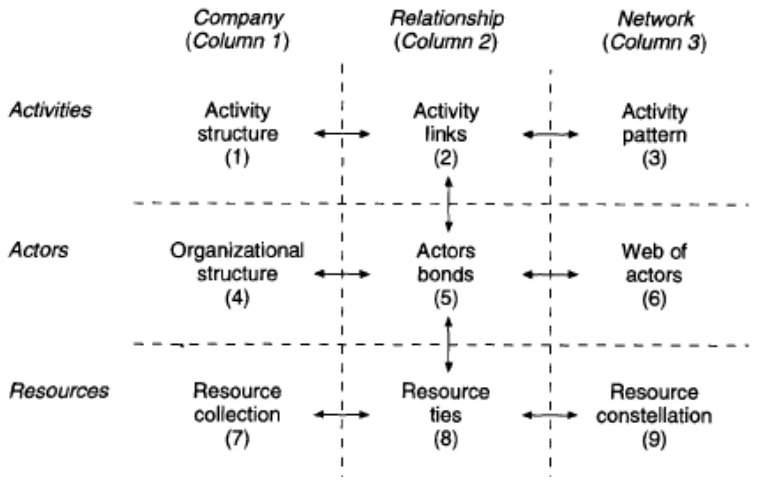


Figure 1: ARA model (source: Hakansson and Snehota,1995)

The model, named the ARA model (Actors, Resources and Activity), is basically built on two points of view: the relationships, which are essentially constituted by three main elements (actors bonds, resources ties and activity links) and the investigation of them from a triple perspective:

1. one single organization which tries to relate with others,
2. the dyad side in which the focus is the interaction between two organizations alone, and finally
3. the network viewpoint who takes care of the interaction among all the actors involved in an open domain: the market.

This last perspective is so wide that is able to interpret and rethink the nature of markets. Starting from this model, the IMP Group school of thought is postulating that markets are complex mechanisms in which many approaches of interaction coexist, sometimes they bring actors to compete but rather to cooperate. Interactions and relationships among actors are, metaphorically speaking, similar to the ecosystem of a rainforest (Hakansson et al., 2009) in which many species of plants and vegetation, although heterogeneous, find a proper locus of existence and co-habit in the same environment with others in a reconfigured balanced between antagonism and cooperation. The idea of balance between competition and collaboration opens up to a third element of the network analysis which is the dynamic feature. Because of the balance can be unstable, actors are always reconfiguring their world of interactions in a way to cohabit harmoniously in their changing environment. The dynamic of networks is therefore an element to take in

account when approaching the study of business relationships. Ford et al. (2002) outlined a model to conceive dynamics in networks (see figure 2).

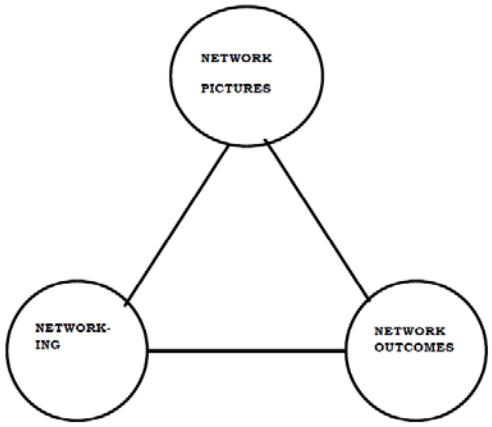


Figure 2: a model of managing in networks (source: Ford et al., 2002).

This concept of interplay implies that there exists a connection between the cognitive understanding (network pictures), the interaction process (networking), and the resulting new pictures and new network structure (network outcomes). It is interesting for the purpose of this paper to introduce the Weick's concept of sensemaking (Weick, 1995; Abrahamsen, 2011). The movement, or the tentative to move, made by each actor is driven by a sensemaking which is fed by the perception of the potentiality and the future equilibrium of the network.

In this context it is fruitful to investigate the notion of "battle of ideas" proposed by Abrahamsen et al. (2011). There the evolution of the network is something related to the strength of the actor's ideas and the capabilities to promote them among antagonist ones. This concept ultimately redirects to another theoretical construct of the IMP School, postulated by Ritter and Ford (2004), related to networking. They suggest that motion in the network consists of a continuing balancing between opposing forces referring to two macro antagonist positions of change and stability as depicted in figure 3.

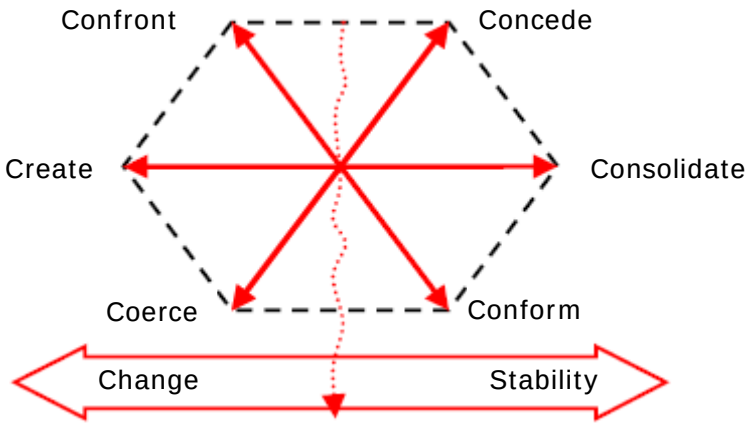


Figure 3: The six Cs of Networking (source: Ritter and Ford, 2004)

Starting from this brief, incomplete but preliminary reconstruction of IMP thought, we want to investigate with a solid structure and model the elements that constitute the primary health care network in the Lombardy Region and to understand its potential evolution for the future.

We start therefore depicting network pictures, envisaging potential networking approaches and then outlying future outcomes.

**Network pictures**

Health department of Lombardy Region is going to introduce elements of innovation in the network of primary care. Creg project will deeply influence the equilibrium among the actors operating in the context of managing and supporting chronic diseases. The role of GPs is especially having a great impact because GPs have been asked to become the focal point of the network. The law that introduced Creg envisages the role of the provider as coordinator of the entire network. The desire of the Local Administrator would be that this role could be covered by GPs. The question is to evaluate if this professionals are ready and willing to adopt a similar pivotal position in the network. A first attempt was devoted to frame their perspective of the actual position they covered in the network; their identity, their vision about how to interact with other actors and also with themselves considered as a group of professionals. Designing network pictures could be one of the approaches to give a first contribution to the definition of their actual positioning.

Network picture is a great research tool because it can be considered as the starting point of any reflection about movement and network evolution. Here we approach it following the method suggested by Abrahamsen et al. (2011) which can be synthesized in the following scheme (see fig. 4).

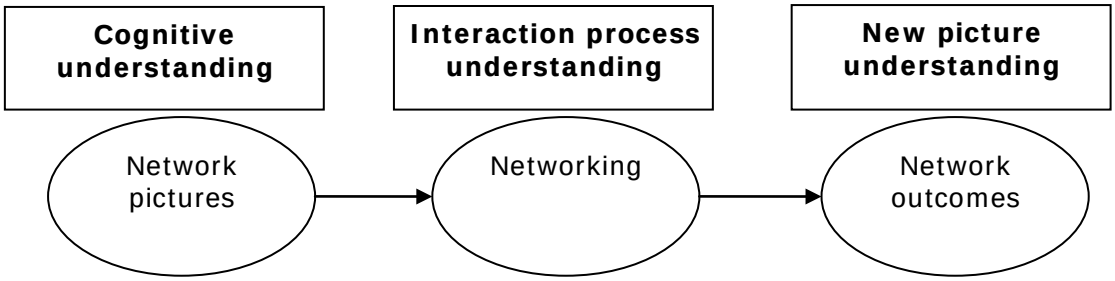


Figure 4 – Managing networks as a cognitive process inspired by sensemaking (modified from Abrahamsen et al., 2012).

The definition of the network, as perceived by the actors involved, is the milestone of the process and represents a cognitive approach influencing the perspective of evolution of the network.

Here we have chosen a representation that emphasizes two dimensions.

First of all the standpoint of actors involved and then the basic elements that must be considered in a network: actors, resources and activities. Basically, and from a theoretical standpoint, the perspective of actors involved in the relationship can be seen as triple: from a single point of view considering each organization;it can be seen as a dyad considering the interaction of two organizations; and it can be seen as a multiple point of view considering a network of actors who are interacting.

The deployment of this concept in the specific context of primary care setting and from the GP's perspective is represented as follows (see fig 5).

| | **Network picture from the GP's perspective** | | |
|---|---|---|---|
| | **Individual (single GP)** | **Group of professionals** | **Wide health network** |
| **Actor** | Individualism<br>lack of vision | limited initiatives<br>peer groups | arm's length<br>directness |
| **Resources** | clinician - technical | trust with peer | none |

| | | | |
|---|---|---|---|
| | | uni-professional homogeneity | |
| **Activities** | clinical only | ambulatory services | fragmented professionalism |

Fig. 5 – relationship factors and levels of interaction (source: personal elaboration?)

Since GPs are the focal point, the level of investigation of the relationship (one, dyad and many) has been modified dividing among **individual** (one side perspective), **groups of professionals** where two or more GPs collaborate in accordance to the existing laws, and finally **wide health network** where GPs are called to open and sustain relationships with all the health care operators.

The perspective of the network depicted in figure 5 (network picture) has been drawn up starting from information, knowledge and feelings gathered through informal conversations with GPs and other health care operators combined with a literature analysis (newspapers, journals, websites, etc.). Therefore the outcome of figure 5 must be taken in consideration at the sole purpose of a first subjective reconstruction of the relationships in the network.

It emerges a portrait of the different professional categories that is narrow focused on the clinical stand point of the profession with a limited structured interaction with other operators and minimum exchange among the colleagues as well.

For instance an investigation made by the research centre of the GP's syndicate association (research centre of FIMMG - Federazione Italiana Medici di Medicina Generale) (Misericordia, 2011), shows how GP's aggregations (groups or co-operative) involve 49% of the professional base but only 24% of them joints a structured group (co-operative with stable headquarter where to practice the activity). Only a small number of them share same ICT structure (information and communication technology), enabling open information sharing about patient files and care processes. The research also highlights that the aggregation often lack of coordination among the members; that's to say that these aggregations have been put in place principally to have common spaces and offer a wider service timetable. As said before, aggregations are strongly homogeneous in terms of competencies, experiences, practices and knowledge of the participants; this would signify that, in absence of heterogeneity, potential knowledge sharing is limited and therefore the evolution could be rather neglected.

In the area of Milan (the chief town of the Lombardy Region) on 1120 GPs, 733 work on an associative basis, covering more than half of the inhabitant population. Problems arise as regards (Locatelli, 2011):

1. Reimbursement of the diagnostic services (capillary glycemia, ECG, etc.) provided by GPs, not covered still
2. Problems related to the involvement of the specialist in the GP's ambulatories
3. Patient's file integration among the operators and therefore limited capabilities to interact as knot of the health network
4. Trust building among GPs belonging to the ambulatory and as well as between other external professional operators such as specialist doctors.

Actual NHS remuneration and incentive system is not designed to enhance cooperation among GPs and between GPs and other professionals, but rather it induces providers to compete. Individuals or professional groups are compensated for separate activities rather than for cooperation. There is rivalry over resources and power struggles between professional groups, as well as overlapping responsibilities and unclear accountability between professionals and providers. This is not a situation characterizing the only Italian context, but it is also signaled at an European level too (Nolte et al., 2008). It is intrinsic to every NHS the existence of structural barriers to a network coordination:

- Competing operational cultures and management approaches in different sectors (social care versus health care; primary sector versus secondary sectors, home practice versus general practice)
- Different ownership structures (lack of universal standard for the interfaces between the public and the private sectors)
- Separate and competing providers with no incentives to cooperate
- Rivalries between professional groups
- Lack of clarity about competencies and accountabilities

The lack of incentive for coordination and mutual interchange in the network limit the exploitation of interaction to direct links (Corsaro et al., 2011). That's to say that knot to knot and not across knots. The vision of the operators, first of all the GP's ones, is therefore narrow and focused on existing relationships. This vision myopia enormously influences the network perspective about its potential and ideal future evolution and position.

**Networking and the ideal Network**

Starting from the picture depicted in the previous paragraph and looking forward to the desired structured network, identified by the Health Department of Lombardy Region as regards chronic diseases management (called Creg), the ideal network would remarkably have to change.

Nowadays, operators have just been involved in the pilot project so it is difficult to define a common view of the GPs about the future perspective of the network, but an experimental framework can be hypothesized as a way to envisage potential networking strategies to be adopted by operators both incumbents and new entrants.

In figure 6 an ideal network outcome is proposed, following the same model reported in figure 5. It is basically constructed upon public information emerged during official launch of the pilot program, interviews gathered on newspapers, public speech at conferences and finally unstructured and pre-study interviews held by the authors of the papers during the final stage of the first release of the IMP paper.

| | **Ideal network related to CREG project** | | |
|---|---|---|---|
| | **Individual (single GP)** | **Group of professionals** | **Wide health Network** |
| **Actor** | Empowerment<br>Optimism | Involvement &<br>team building | Focal point position<br>Coordination of professionals<br>Indirectness |
| **Resources** | Commitment | Heterogeneity<br>Mutual trust<br>P/L responsibilities<br>Equity | Heterogeneity<br>Specific-investment<br>ICT & Structure |
| **Activities** | Clinical & managerial activities | organizational structuring<br>roles and responsibilities | define PDTA<br>manage PDTA |

Figure 6 – Ideal network (source: personal elaboration)

The declared intention of the Administration of the Lombardy Region towards Chronic diseases Management relates to the **empowerment** of the GPs who are assigned to become the focal point of the Creg network. Under these lens is to reread the

previous project called Dote Sanitaria (literally Health Dowry) (Locatelli, 2011) launched in 2008 by the Lombardy Region.

Dote Sanitaria it's a project aiming at reinforcing the role of GPs as pivot of the clinical service of the patient. Taking this role the GP is responsible for appropriateness of the patient care, leaving to the specialist a desired limited numbers of interventions only related to complex situations. On a basis of 1120 GPs operating in the Milan's area 346 have decided to participate. They receive a bonus related to the number of patients included in the program. Their task is to embed the patients' care in a PDTA (Piani Diagnostico Terapeutico Assistenziali) (Diagnostic and Therapeutic plans), to assure compliance and to monitor stabilization for the chronic illness reducing in this way the need of a specialist or worse, the need of hospitalization which is highly expensive (Locatelli, 2011).

This is a clear point of departure since GPs must ask the commitment of the patient (who signs a care-giving agreement) and therefore is empowered to sustain, reinforce and animate the respect of the agreement.

Nowadays the project involves more than 13 thousand patients affected by diabetes and hypertension, over a total of 150-200 thousand cases existing in the area.

Another basic characteristic of the future picture should be the **optimism** as a quality of GPs. Optimism can be seen as a prerequisite for involvement in the future and for unknown but cooperative projects. The starting point of the Creg pilot project is the first "acid test" to assess the level of optimism among GPs. From the 5 Local Health Authorities (LHAs) called to start as pilot in the territory, only one of them (Bergamo) have seen a strong commitment in the project of the GPs residents . On a total number of 711 GPs, 460 have shown interest and willingness to participate and 236 of them have furthermore signed the agreement to cooperate in the NewCo born as main contractor "provider" (Azzi, 2011).

On the other hand, in others LHAs the launch of the project has not received a similar hot acceptance (DoctorNews33, 2011a). In Lecco (a town in the north of Milan) the first call for GPs has fallen. The result was that the provider has been formed by a joint venture among two other providers (Milan and Como). This is a clear sign of reluctance to embrace the uncertainty of the future, especially made by a particular kind of professionals who are used to work as individual without any managerial or entrepreneurial behavioral scheme.

The first steps of the project launch have shown other issues that must be taken into account to understand the motion of the network from a fragmentation to a convergence on a focal organization, acting as provider.

GPs groups, acting as providers, have to face important rigidities. First they have to learn how to co-opt other reluctant GPs and manage with them long lasting relationship with mutual benefit (**involvement and team building**). **Trust resources** must be created in order to give a new vision to reluctant colleagues.

Due to the fact that new ideal network is expected to have a **focal point,** differently from the actual "no gravity" one, GPs have to learn to manage and **coordinate external resources** as well. This is not an easy task to accomplish as they should be prepared to negotiate interactions which must preserve the highest service quality but at the same time the lower cost to balance the fixed amount of reimbursement per patient handled (**Profit and Loss responsibilities**). In a network perspective they should learn how to manage the network with the leverage of **indirect links with new actors**. This would mean to rethink any kind of relationship with specialists, nurses, ambulatories, pharmacists, pharmaceutical companies, device providers, etc. under the bifocal lens of stability equilibrium and a status quo that changes (Ritter and Ford, 2004). One first effect would be represented by the evolution from a capability to only manage direct relationships (as in the simple connection with first tier partners), to the need to approach second tier relationships. The concept of **indirectness** is here pivotal (Corsaro et al., 2011). Indirectness is related to the dimension of broadness (Ramos and Ford, 2010) or boundaries (Henneberg et al., 2006). The search for service quality improvement and in the meantime cost savings in provision would impose to the the provider (GPs group) to learn how to exploit second or third tiers of relationships and therefore to extend and amplify the boundaries of the network. This is a clear need of management capabilities to add to the traditional clinical competencies already in possession of this category of professionals.

But problems would not arise in the network perspective only. Also the interactions inside the cooperative would create issues for the GPs associated. Differently from the small number of association groups till now experienced, the new Creg aggregations would have to manage **heterogeneity** inside the new association structure. As said before, existing GPs groups are simple organizations with limited strengths in knowledge sharing and management skills and structure.

The GP's NewCo is called to manage a rich and complex portfolio of cared patients giving them a service which follows rigid and embedded care protocols (namely **PDTA**). This will impose heavy investments as regards information technologies for data management (patient files) and inbound and outbound call centre (required by the LHA commissioner), and technology infrastructure to manage telemedicine and tele-health (**specific-investment**). Will the associated GPs be able to sustain such a similar investment? or will they require new technological partners? And in this perspective how would be the **equity equilibrium** inside the GP's association reached and maintained? Although the pilot project is in the starting up phase, some of these issues are just appearing on the horizon (DoctorNews33, 2011b). A technological consortium has been put in place between the GPs groups (formal providers for Creg project) and a private own company specialized in the field of telemedicine services and provider for hospitals and health organizations (Giannino, 2012). This consortium has centralized the service for all the 5 LHAs putting in place a common ICT infrastructure called "Buongiorno Creg" (Buongiorno Creg, 2012). This could be seen as an element that alters the equilibrium inside each GPs groups and that requires an overall coordination among the 5 pilot providers.

**Discussion**

Although the Creg project has just started and therefore the path of evolution cannot be clearly depicted, some considerations can be done as regards the trajectory of this evolution and the interpretation at the light of the IMP Group models.

First of all, some reflections must be done as regards the final outcome of the desired motion of the Chronic network of health. The project moves on the assumption that a top-down coordination of the entire network of service can generate benefits both on the side of the quality of care and on the treatments for the patient and that this can bring to a stabilization of the care cost for the entire community. In the mind of the policy maker (the Lombardy Region) this would lead to an improvement in effectiveness and efficiency for the same entire community. Academics and researchers involved in the study of networks and their mechanisms suggests that a network can better perform when it is left free to autonomously evolve from the diffuse initiatives of the actors, according to their actual perspective and vision of the future. In this sense, networks have no centre and therefore no boundaries (Ford et al., 2002). The decision to create a focal organization (named provider) which has the goal to coordinate the network of actors may be an

impairment of the natural network form. This path of evolution can bring the network to evolve towards a chain of service; an organizational form that is more locked than the network and more inclined to generate efficiency rather than efficacy. Service chains are structured upon sequential activities and therefore a top-down coordination is acceptable and desirable. Networks are open agglomerate of relationships where coordination could cut spontaneous links among knots and therefore reduce efficacy. According to Carelli (2009), the NHS projects aiming at creating mega-aggregation of health operators in order to improve service quality do not bring to any enhancement of the health system taken as whole. Morgan and Beerstecker (2009), referring to the UK 'GP-led health centres' experience, indicated that there is no evidence to suggest that very large practices could provide or are providing more volume or diversity than the traditional current UK individualized practice. From this point of view, our first question about the advantage to move from an open and un-centralized network to a network dominated by a focal organization which creates a service chain, remains unsolved and very critical not only from a practical point of view, but also in a theoretical perspective. And the evaluation of the efficacy of this kind of innovation becomes more doubtful, kept in mind that the centralization of the network is exogenous from the perspective of the actors (GPs) who have to activate it.

Secondly one consideration should be addressed to the model of the organization among the health care professionals.

Leaving aside the desire of the Regional Health Administration to put in place an evolutionary project for the chronic primary care, it is important to understand how operators (GPs primarily) perceive it as a stimulus to evolve. It can be seen that the response varies from one LHA to another and also from each GP inside each LHA in terms of participation in the project as provider (partners in the GPs groups) or as a simple player providing services. This GPs' behavior variety not only reflects different visions about the future of the profession but can be seen also as the effect of an activity of persuasion that is crossing, more or less intensively, the headquarters of the local professional association (local FIMMG branches). In certain locations the activities of persuasion is so strong that materialize or make change possible (see the Bergamo group where one third of the GPs have decided to participate) and in other contexts enact the stability or the failure of the project itself (DoctoNews33, 2011b). In these last situations, the 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. (2011) suggestion about network change as a battle of ideas. The evolution of a network is made by the continuous confrontation of different ideal perceptions of movement and the path of evolution is usually set by the strongest idea which prevails on the others and which has the authority, recognized by other actors, to better interpret the future.

In this battle of ideas the UMI (Unione Medici Italiani – the association of the Italian physicians[1]) has given a formal advice to GPs to participate as professional player but not to adhere as provider stating that the provider activity is in fact beyond the possibility both of individual GP and of GPs as associates in groups or cooperative (Falsetti, 2011). The Lombardy branch of SNAMI have stated the same consideration also (DoctoNews33, 2011b).

More intriguing, UMI has advanced the hypothesis that the intrinsic complexity of managing the Creg networks will show rapidly the failure of the GPs groups as main-contractor and will open the possibility to new entrants such as technology providers (ICT service provider), who now are supporting in background cooperative for start up, to become main contractor of the Creg with direct mandate from LHA or the Lombardy Region. The opinion of the President of UMI is that this potential path of evolution of the project (failure of the GPs' initiative and emergence of new comers) was already envisaged as the call of GPs' intervention was only a formal act. Undoubtedly this kind of negative communications and appreciations about the project have a strong reverberation on such a single neutral or non-committed GP. At the opposite the battle of ideas can fight this kind of advice reversing the message to local GPs. The President of the Physician Association of Bergamo has formally invited all the GPs to participate as supporter to the provider (Pozzi 2011) because the Creg project had to be seen as a way to innovate primary care as regards to chronic diseases. These facts can explain the great participation of the project from some GPs, especially the ones located in Bergamo, and the regret to participate of other county.

## Conclusion and Future research

The launch of the Creg Project is very challenging. Its aim is so ambitious but at the same time desirable as it would get important outcomes for the community;

[1] The UMI is designed to promote, enhance and support the professional role and the responsibilities of doctors in health, in public and privateorganizations in every field of activity

improving the quality of service for chronic patients and at the same time reducing public expenditures. Basically the idea is that if GPs are able to entirely manage the process of care (PDTA) and gain the patients' loyalty, they will assure a higher level of patient compliance, a wider stabilization of the chronic conditions and furthermore a smaller request for specialists' intervention and for hospitalization (Locatelli, 2011). If this happens the system will obtain great savings.

This sane and universally conceivable antecedent of the project must be connected to the realm of practice application.

Network theories postulate the un-centralization of network as the prerogative for the richness coming from heterogeneity and efficacy resource allocation research. The aim of CREG project is to centralize the network of chronic service suppliers around the pivotal personality of GPs.

This is a great challenge not only as regards the theoretical understanding of network functioning but also in relation to previous practical experiences made abroad. As seen before, the UK tentative to aggregate GPs in groups, in order to foster their capabilities to manage primary health care and consequently reducing the burden on the secondary care (hospitals) have not brought to significant improvements. This could be interpreted as a sign that primary care is naturally an open network made of many individual professionals who works autonomously and collaborate via network relationships.

Therefore the first questions we posed in this paper (centralization of the network around a service provider), although has not just found a clear solution, shows that the reliability of the project model is a great issue and must not be seen as an un-rebuttable point of departure.

Furthermore, at the core of the project, there is the pivotal position of GPs. They are said to be the gatekeepers of the care process because they handle the patient and can select the proper therapy and the proper supplier that can best suits to the patient problem and disease.

Although it is undeniable the centrality of the GPs' clinical role in patient treatment, it must be still verified their willingness to cover a pivotal role in managing the entire flow of the services. Till now the enacted laws have offered the option to GPs to create common a structure to manage a comprehensive patient service (general and specialized doctors, nurses, rehabilitation, etc); CREG project must be seen as a change in direction as it pushes GPs to create aggregation (service providers organizations). The transition from a "pull strategy" to a "push strategy" directly

reconnects to the second question of this paper: can a network reconfigure itself by one actor's influence on another? The evolution of the network starts from a movement of the GP's position that is pushed by an exogenous and compelling force that is the mandate of the region to create a service provider.

Generally speaking, network motion is the result of the perception of the actors about the future. This motion is something natural related to the concept of evolution. Creg project appears to be more inclined to revolution rather to evolution because implicitly induces a fast and guided change in the actor's position and therefore could not be respectful of the concept of natural motion emerging from the confrontation of different and divergent ideas about the future.

This question about the success of the project could be mitigated by the answer of the third question of this paper: are GPs enough committed to embrace the change? In the battle of ideas about the future will prevail the innovators or the reluctant ones?

We have seen a first polarization in the acceptance of the project primarily influenced by the interpretation given by the local professional association authorities. It is also remarkable that the day after the launch of the project an ideas confrontation "agora" has taken place and has lead some reluctant GPs to adopt the project, at least in a compliance perspective.

This paper highlights that many problems and many issues surround the possibility that GPs will become the focal organization of the Chronic disease supporting network.

The majority of these issues is still unsolved and needs more investigation to be verified.

Next steps will require therefore a closer contact with managers operating in the Health Department of the Lombardy Region, with the management in charge in LHA, with the directors of the cooperatives already settled and finally with the responsible for the Creg project operating inside the technology (ICT) supplier that helps the cooperative to process all the activities.

In order to understand the real sentiment of the GPs toward the future of this project, it will be required to make a survey of the GPs; the ones who sustain the cooperative, the ones who prefer to manage the patient service under the umbrella of Creg but with no partnership in the cooperative, and finally the ones who have decided to totally abandon this project.

Although this investigation is related to the understanding of the feeling of actors, is it fundamental to examine the feasibility of the model encompassing the new perspective of the network. This investigation should address the quest of the activity links reorganization and the resource ties reconfiguration as fundamental factors of the Creg network. Last but not list, one stream of research should be devoted to the costs and benefits of the project in the perspective of the Regional community: citizens, operators and Local Administration.

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