

# CONTINUOUS HEALTH CARE UNITS AS INTER-ORGANIZATIONAL NETWORKS: A PHENOMENOLOGICAL STUDY\*

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## Abstract

The main aspect for investigation at the foundation of this study is knowledge and understanding of continuous health care units as inter-organizational networks. Thus, a phenomenological methodology was adopted. Two major units of significance (themes) were identified: (1) obstacles in the continuous health care network related to difficult connection to the Hospital sector and (2) professionals' lack of specific training. However, the main inferences and conclusions of this study refer to the importance of continuous care in the health and social service sectors. Some implications, limitations and suggestions for future investigation in the area of public management are also presented.

**Keywords:** inter-organizational networks, continuous care, health sector, social services, public management, Portugal.

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## 1. Introduction

With a constantly ageing population, society is facing an increasing number of emerging problems, namely the shortage of resources to ensure a good quality of life for all individuals, both from a health and social point of view. Therefore, evolution of organizational formats has come to stress the approximation of organizations so as to strengthen their mutual relationship. Organizations connected by a cooperative relationship work together continuously rather than on single occasions (Brass and Burkhardt, 1993).

Cooperation within and among organizations has been on the organizational and academic agenda for many years (Huxham and Vangen, 2005; Huerta, Casebeer, and VanderPlaat, 2006; Casebeer, Huerta and VanderPlaat, 2006, Casebeer *et. al.*, 2006; Provan, Fish and Sydow, 2007), but has gained renewed attention due to the fact that organizations have become more complex, more international and generally more diverse. As noted by Rank and Tuschke (2010), in order to accomplish their highly complex and often interrelated tasks, managers at all hierarchical levels seek out colleagues who can provide necessary benefits such as advice, information, and support. In this context, inter-organizational networks depict current and intentional patterns of interaction directed towards successful achievement of mutual goals (Chen, Chen and Meindl, 1998; Milton and Westphal, 2005).

Reorganization of the health service and renewed social policies (MS, 2009) have shown the need for innovative and differentiated responses. As a result, health care managers and policymakers are considering new organizational forms (Kaluzny and Zuckerman, 1992). Costa and Melo (1995) suggest that today more and more means and methods are capable of easing the operation of inter-organizational networks that aim to provide services to both the general population and the oldest age-group specifically. These inter-organizational forms are characterized as a loosely coupled relationship among existing organizations, designed to achieve some long-term purpose not possible to be attained by any single organization.

In the last decades, various scientific studies were conducted on inter-organizational functioning as a formal and theoretical concept or paradigm. There is vast experiential understanding of the intricate and significant contributions and challenges of networks in a great variety of contexts (O'Toole, 1997; Hill, 2002; Agranoff, 2003; Milward and Provan, 2006). Even so, when the aim is to study their practical applicability, particularly in the health and social service sector, the lack of investigation is evident. As stated by Dedekorkut (2003), investigation so far in this specific area still presents little theoretical rigor. While there is considerable literature on motives for inter-organizational networks, relatively little is known about the factors that make that collaboration possible. In fact, inter-organizational networks and their antecedents have been examined intensively (e.g. Ahuja, 2000; Blumberg, 2001; Loeser, 1999; Mehra, Kilduff and Brass, 2001; Moody, 2004; Powell and Brantley, 1992; Shan, Walker and Kogut, 1994; Krebs and Holley, 2004), but the investigation of organizational relationships among health organizations has attracted surprisingly little academic attention (Kong, 2007; Löfström, 2010). In the

context of health, there are still some areas of uncertainty and a shortage of proven scientific knowledge.

From this perspective, this study aims to fill one of the gaps identified in the literature regarding inter-organizational functioning. More precisely, this study focuses on approaching a National Network of Integrated Continuous Care (NNICC) as an inter-organizational network based on and emerging from the heart of a Portuguese health and social services system in constant mutation. Therefore, the main objective of the study concerns identification and comprehension of the factors influencing the functioning of a NNICC in a region in central Portugal.

The present study contributes to the existing literature in a number of ways. Firstly, our analysis provides theory relevant to the study of inter-organizational networks in health service organizations. Secondly, using the level of relational dyads as our unit of analysis enables us to empirically understand the main factors that influence the network process.

This is considered an excellent area of culture for investigation, as, *a priori*, there are still no studies defining the characteristics of the inter-organizational functioning or of application of this recent paradigm in the context of health.

The rest of the paper is organized as follows. Next, we develop our conceptual logic about inter-organizational networks. Subsequently, we describe the phenomenological research approach, more precisely the data and research methods, followed by the presentation and discussion of the empirical results. We conclude by discussing the managerial and research implications of our study, we point out limitations of our approach and provide some directions for future research.

## **2. Conceptual background**

### **2.1. *Inter-organizational networks***

At present, the network approach is indispensable for understanding organizations and how they function. Networks of cooperation result from the division of labor within organizations, which is reflected in distinguishing different formal positions in the corporate hierarchy (Rank and Tuschke, 2010). As assignments, tasks, and responsibilities are divided among the work units involved in organizational processes, interdependencies between managers arise. These interdependencies are established by the recurring exchange of inputs and outputs as the work flows along work chains through the organization (Brass, 1984).

In these circumstances, inter-organizational networks are seen as a phenomenon of organizational nature, and the terms used are not always clear. Even the use of the word 'network' is not unanimous as, despite being the most frequently used term, other terms such as 'partnerships', 'strategic alliances', 'inter-organizational relationships', 'coordination' or 'association', 'cooperative agreements' or 'collaborative pacts' are sometimes mentioned (Provan, Fish and Sydow, 2007; Culpan, 2009). In spite of the similarity between the various terms, this study opted to use the concept of 'inter-organizational network' since, besides being the expression most commonly used by investigators, it is the one that seems most appropriate for the situation studied here.

On the other hand, various definitions deal with this paradigm. Provan, Fish and Sydow (2007) argue that it is clear in those definitions as a whole that organizations interact mutually in an effort to acquire and reach a common objective. Castells (1999, p. 232) approached the network concept as 'a system of means structured with the purpose of attaining specific objectives', creating a space for a wide range of definitions according to the focus of analysis. Mance (1999) states that networks can be considered a complex set of inter-relationships that provide dynamics for the competences of the units involved, focused on common or complementary objectives, reinforcing the organizational whole inasmuch as these competences are strengthened by the network.

Then from an economic perspective, the network is defined simply as a system of independent bilateral relationships (Dunning, 1995). However, Baker (1992) points out that these relationships are not enough for a clear and distinctive network concept, and adds that, by assessing only the existence of connections between agents, all organizations would be considered as networks.

Pesämaa (2007), while searching for a definition of inter-organizational networks, describes them typically as the result of individual institutions that operate concomitantly in cooperative groups. This author also states that between those organization units making up the network, formal and social links are established. This definition is closest to the phenomenon dealt with here, and so it was chosen as the guiding definition for our investigation.

Faced with the high degree of complexity in reaching a consensual definition, Casson and Cox (1997) state that the meaning attributed to the network concept differs from one individual to another, as a simple definition of that subject can be a set of links that directly or indirectly connect each member of an organizational group.

Networks require organizations and personnel within organizations to develop mechanisms to coordinate their activities in a way that is meaningful and relevant to the participating organization. Thus, there is a need for a configuration that accommodates the growing need for interdependence among participating organizations and at the same time ensures a level of organizational independence and autonomy (Kaluzny and Zuckerman, 1992).

Sharing objectives and interests in a network allows distinctive observation of various operating types or options. Pesämaa (2007) highlights the disparity between different constructions of relationships and proposes different roles for each of those strategic positions. Chong and Ooi (2008) also mention that analysis of the inter-organizational network should be based on the following premises: reciprocity, trust, cooperation, inter-organizational commitment and loyalty. The organizational climate has become increasingly competitive. In this connection, organizations aim more and more for maximization of operating efficiency (Chong and Ooi, 2008). Therefore, one of the ways which allows efficiency in organizations and aims for competitive advantage involves formation of inter-organizational networks.

Organizations rarely develop innovation individually, and in the few situations where that behavior is observable, it is often seen as an ineffective and unsustainable

process. According to Szeto (2000) and Carlsson (2003), more promising responses are based on developing mechanisms of cooperation between organizations aiming to acquire, conceive and share information, knowledge and other resources.

Cooperation in a network stimulates the development of interactive innovation processes. This organizational instrument provides conditions for joint efforts among organizations and institutions, to create and share knowledge and innovate learning mechanisms (Seufert, Back and von Krogh, 2003). Morgan (1997) also underlines that inter-organizational networks constitute one of the most efficient means of learning.

The literature describing the value of communities of practice for both individuals and their professions and organizations contains valuable information on why networks are useful spaces for generative learning and innovation (Wenger, 1998; Wenger and Snyder, 2000; Argyris, 1999; Knight, 2002; Soekijad, Huis in't Veld and Enserink, 2004; Quinn, 2004; Casebeer, 2007).

To summarize, collaborative relationships are formed to address a concern, problem or opportunity, though an explicitly formulated joint goal is often not the starting point.

## **2.2. Network operation**

Dedekorkut (2003) highlights that the determinants of inter-organizational network success include factors related to the characteristics of participants in that collaboration process, as well as process factors related to the operationalization of the cooperation and available resources. Concerning human resources, Kaluzny and Zuckerman (1992) argue that inter-organizational networks often seek a high degree of homogeneity among their members. Such homogeneity may be based on the characteristics of member organizations (e.g. size, mission, ownership, type of organization, and nature of services provided). In fact, creation of interdependencies among members, and not merely between members and the network, can further serve to strengthen commitment, increase communication and build mutual concern for individual as well as collective performance. This is especially true, due to parties being different, with different resources, identities, power bases, interests, perspectives etc., for an interest in networks to be triggered (Schruijer, 2006).

The availability of slack resources is a critical factor in inter-organizational networks. According to Kaluzny and Zuckerman (1992), networks with slack resources – areas where personnel and other resources can be spared to facilitate the required coordination – can more easily achieve higher levels of outcomes and implementation.

Kong (2007) stresses that shared cultural assumptions provide a solid basis for establishing a competitive network. Chebbi, Tata and Dustdar (2005) focus on the predominance of cooperation policies in the field of defining, controlling and strengthening interactions between organizational partners. These investigators point out that the cooperation policies are part of the role of those involved, together with cooperation, permitted information flows, and also levels of inter-visibility.

Pesämaa (2007) concludes that relationships between organizations are developed essentially based on prospective long-term orientation. In this connection, the

investigator emphasizes that the defining development of an inter-organizational network takes place in two complementary phases: a first phase, which is one of 'expansion' and incorporates the premises of friendly relationships, interpersonal commitment, reciprocity and trust; and a second phase considered as a state of 'stability' and 'maturity' based on cooperation, inter-organizational commitment and loyalty.

Another transversal conception in the emergence of inter-organizational networks and which allowed the present successful affirmation of this organizational paradigm concerns the technological innovations that accompanied the development of this concept. A new generation of intermediaries flourishes at the same time with the expansion of organizational network operation. Its support consists in the communication technologies which are not intended to become automatism or means for reducing intermediation, but which rather incorporate a focus of inspiration for new technological intermediaries to complement human organizations. In this way an organizational architecture is promoted, based on multiple levels of intermediation, and its arguments are presented through the extremely useful electronic market (Orman, 2008).

### *2.3. Network of Integrated Continuous Health Care*

Guaranteeing continuity and the suitability of interventions in health and social support have become priority matters given the recent challenges of the altered European socio-demographic context (MS, 2009). According to Nogueira (2009, p. 3), '(...) health and social services began working in articulation, to respond to the loss of autonomy and help the citizen to remain in the community with the maximum quality of life possible and families' well-being.'

In the European Union context, this new generation of responses is formally recognized and designated by the Committee for Social Protection as 'Long-Term Care' (Nogueira, 2009). Although the OECD, European Commission and World Health Organization (WHO) agree with this designation to define a service that provides health and social support for a period which is likely to be long, when discussing whether or not to include rehabilitation cases, the decision is not unanimous.

In Portugal, a National Network of Integrated Continuous Care (NNICC) emerged, connecting hospitals, primary health care, social services, patients and their families, to develop joint, personalized, continuous and complementary responses. These entities are made up of agents intervening in the network. This emerging model aims to be complete and integrated, multi-disciplinary and inter-disciplinary, adapted to the community, equitable, sustainable and ensuring efficient management of resources, according to the principles of quality and excellence.

This NNICC came about through Decree-Law no. 101/2006, of 6 June, and established itself as an innovative organizational model. This emergent paradigm aggregates public and private institutions that ensure a continuum of care. This was the foundation of a new response that promotes continuity of care in an integrated approach to users in situations of dependency and diminishing autonomy, regardless of their age. It

incorporates the main principle of the network concerning the provision of health care and social support with a continuous and integrated vision.

The NNICC represents a reform process developed by two sectors responsible for intervention in the citizen's best interests: the National Health Service (SNS) and the Social Security system. These sectors were designed to focus on patients' global recovery, promoting their independence and improving their functionality (UMCCI, 2007). As noted by Guerreiro (2009, p. 13), 'a NNICC is made up of a broad set of public, private and social institutions that provide continuous care, both in the user's home and on their own premises. It is above all organizational development dynamics of the systems of Health and Social Services with a view to implementing new services to promote continuous care (...).'

According to the Ministry of Health (MS, 2009), the general objectives/reasons for the use of this type of national network concern reducing the stay of chronically ill patients in hospital, as with the consequent increase in available beds for severe cases, the health service will achieve greater efficiency and a reduction in total costs.

Also according to Santos (2003, p. 5), the objectives of continuous care networks are: (1) to promote the health and quality of life of the elderly or other people in a situation of dependency and contribute to their integration in family life and the community; (2) preserve autonomy at home and in their usual environment; (3) ensure mobility and access to benefits and services; and (4) support and train families, volunteers and other people in the community who provide care or accompany this type of situation.

In fact, families face increasing problems in looking after their dependents. The Mission of Integrated Continuous Care (ICC) is 'the therapeutic process of active and continuous social support, aiming to promote autonomy by improving the functioning of anyone in a situation of dependence, through their rehabilitation, re-adaptation and reinsertion in the family and society' (Guerreiro, 2009, p. 13). When framing this type of network, it must be highlighted that the provision of health care and social support is ensured by the NNICC through in-patient and out-patient units and hospital and home-visiting teams (MS, 2009).

This Network's management model is based on decentralizing and contracting services. The NNICC is coordinated at three levels: national, through the Mission Unit for Integrated Continuous Care (MUICC), Ministry of Health, and is operationalized at regional and local levels: Regional Coordinating Teams (RCT) and Local Coordinating Teams (LCT). This decentralized structure aims for effective and efficient liaison between the different levels and agents of the NNICC, guaranteeing flexibility and sequencing in its implementation, accompaniment and monitoring, besides ensuring good functioning of the user/patient management process.

Its inter-sector constitution is a common characteristic at the three levels of coordination, with inclusion in these teams of elements from the areas of Health and Social Security. Therefore, the main intervening parties in NNICC coordination are presented in Figure 1.

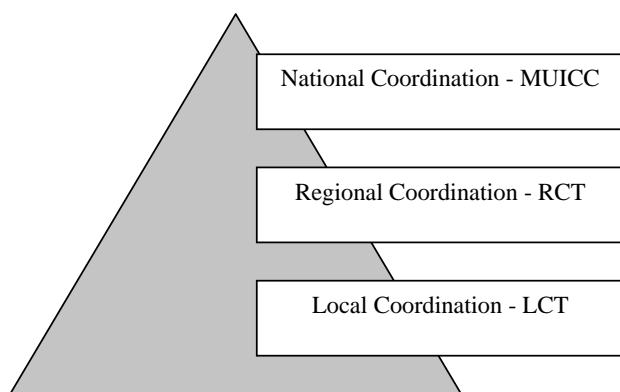


Figure 1: Intervening parties in NNICC coordination

Source: Own elaboration

a) **Mission Unit for Integrated Continuous Care (MUICC)**

It is the duty of the mission (UMCCI) structure to lead and launch the global project of NNICC coordination and contribute to implementation of local community services, through indispensable articulation between Health Centers, Hospitals, and services and institutions of a private and social nature, in liaison with national Health and Social Security Networks (MS, 2009).

b) **Regional Coordinating Teams (RCT)**

RCTs are formed of representatives from Health and District Social Security Centers. According to the MS (2009), this obligation is defined in the Joint Ruling no. 19040/2006 of the Ministries of Employment, Social Solidarity and Health. It is emphasized that the RCT is formed according to needs and available resources and by professionals with knowledge and experience in the areas of planning, management and assessment. These are based in Regional Health Administration.

The main competences of RCTs are: (1) disseminating information about the NNICC to the population; (2) analysis of proposals to join the Network; (3) accompaniment and control of financial operations; (4) assuring the quality of care provided; (5) monitoring the activity provided; (6) guaranteeing equality and suitability of Network access; (7) professional training; (8) Regional Implementation Plan and budget forecast; and (9) assuring liaison between entities and partners.

c) **Local Coordinating Teams (LCT)**

Analyzing coordination at the local level, firstly their distribution normally coincides with geographical local authority. Therefore, as defined previously, LCTs also have a multi-disciplinary formation with representatives from regional health administration and social security, including necessarily a representative from the medical class, nursing and social work. The specific details of local coordination are also defined in Joint Rulings no. 19040/2006 (MS, 2009).

LCTs are made up of at least two elements from healthcare (doctor and nurse) and one element from the social sector. Besides the co-responsibility of the two sectors

(Health and Social Security), there is also emphasis on regional decentralization of responsibility for NNICC planning, governance and human resource management.

At the local level, coordination is carried out by LCTs which act in their area of influence, in liaison with the respective Regional Coordination, with the main duties of: (1) ensuring the articulation of local units and teams; (2) supporting and accompanying the fulfillment of contracts; (2) holding the user reference flows in the Network; (3) updating the Network information system; (4) ensuring discharge preparation; (5) supporting and accompanying the use of Network resources; and (6) promoting partnerships for provision of integrated care.

**Referral.** Circuit of Referral to the NNICC, as approved by the MS (2009), can be carried out in operational levels: Discharge Management Teams (DMT), Local Coordinating Teams (LCT) and Regional Coordinating Teams (RCT). There is one other level, the Mission Unit for Integrated Continuous Care (MUICC) focusing on monitoring and regulation. Access to the network is through referral, originating in the National Health Service Hospital or Health Centre. To this end, each Integrated Continuous Care Team (ICCT) is responsible for assessing the patient’s health and social situation and for checking compliance with the referral criteria (UMCCI, 2007).

The following graphic presentation (Figure 2) shows the referral flow involved in accessing the NNICC, with the respective intervening parties responsible for the process, as well as their level/position inside the network.

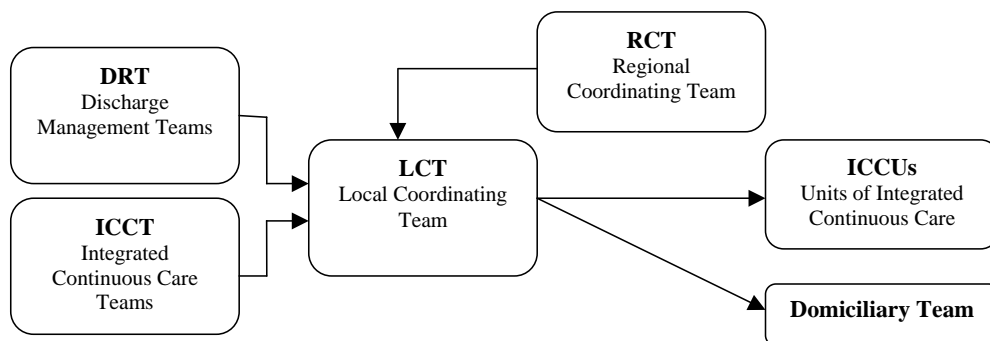


Figure 2: Referral flow involved in the NNICC

Source: Adapted from Guerreiro (2009, p. 51)

**DMTs** are multi-disciplinary teams, with the objective of preparing for and managing hospital discharge in liaison with other services, for patients whose health and social problems need to be followed up (cf. no. 1 of Clause 23 of Decree-Law no. 101/2006, of 6 June); and **ICCT** at Health Centers (HC) – primary health care also has an important role since referral to the NNICC can be made through the community via the ICCT doctor, nurse and social worker.

In this sense, if the sphere of action of this study is the focus on possible implications of the concept of inter-organizational networks in the area of ICC, it becomes clear

at the outset that one of the most important points of that network of coordination, cooperation and communication would be the Circuit of Referral (UMCCI, 2007).

Taking this system from a practical viewpoint, the circuit of referral begins in the Discharge Management Team (DMT) or Integrated Continuous Care Team (ICCT) who are responsible for opening and initial preparation of any user's process. 'Referral is carried out through a computer application' (Guerreiro, 2009, p. 58), which makes the process speedy and more transparent.

From the organizational point of view, 'the LCTs in the NNICC have a 'managerial' role between the different units, the family and the user, where the basis is articulation between all parties involved in the process' (Guerreiro, 2009, p. 61).

Finally, inter-organizational networks such as the NNICC appear to be one of the few organizational forms that can significantly improve the performance of health service organizations in a number of dimensions affecting both the cost and quality of care. Moreover, it accommodates the growing need for interdependency among participating organizations/units while recognizing organizational independence and autonomy.

### **3. Methodology**

#### ***3.1. Research objectives and phenomenological approach***

The purpose for investigation at the root of this study is knowledge and understanding of continuous health care units as inter-organizational networks. Specifically, the study focuses on three main research objectives: (Obj1) characterizing the NNICC as an inter-organizational network; (Obj2) identifying forms of communication, cooperation, and coordination of the NNICC in the inter-organizational context; and (Obj3) identifying deficiencies and obstacles to this network's operation.

In these circumstances, given our research objectives, we adopt qualitative research to find and understand the factors influencing the functioning of a NNICC selected in the Portuguese health context, particularly regarding inter-organizational operation. Qualitative research can take different approaches (Wright, 2008). One area is phenomenology. This approach takes into account the experiencing person (Drew, 1993; Giorgi, 1994; Goulding, 1999; Patton, 2002; Ruona, 2005; Marshall and Rossman, 2006) and the connections between human consciousness and objects existing in the natural world. In phenomenology, perception is regarded as the primary source of knowledge and is a source that cannot be doubted (Moustakas, 1994). The phenomenological approach involves an understanding of experience in order to obtain a comprehensive description that provides the basis for a reflective structural analysis.

Since the purpose of the investigation is to find out experiences and opinions regarding the inter-organizational operation of Integrated Continuous Care Units (ICCU), it was decided to direct this investigation to the phenomenological aspect. The primary intention in carrying out this study is identification and comprehension of informants' interpretations, experiences and opinions about the obstacles to the functioning of a NNICC as a network joining organizations within the social service and health sector.

### 3.2. Key informants

Purposeful sampling was used in our study. A total of nine informants/participants (Technical Director, Clinical Director and Coordinator) from each of three Units of Integrated Continuous Care (ICCU 1, ICCU 2 and ICCU 3) were chosen for the study of the selected NNICC. Despite several authors (e.g. Burt and Ronchi, 1994; Ibarra, 1993; Rogers and Kincaid, 1981) stressing that network analysis requires collecting data from all members of a previously identified network, considering all the particularities of this study, it was necessary to limit participating institutions to the ICCUs in a region in the center of Portugal. Figure 3 shows the three Units studied here, coming under two Local Coordinating Teams in this region.

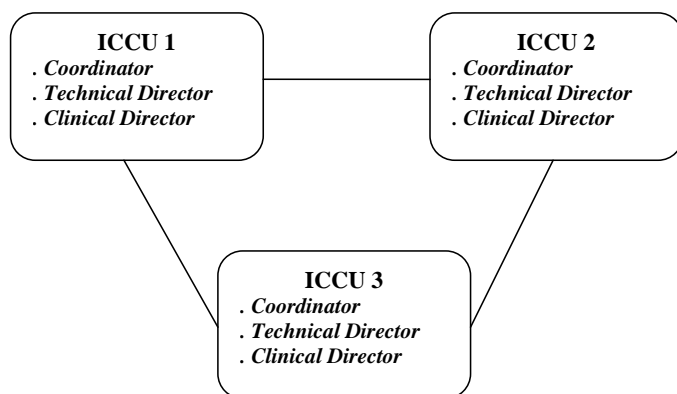


Figure 3: Graphical representation of the Network

Source: Own elaboration

A key criterion in selecting organizational members for this study was that these respondents are the most representative elements in each organizational structure in the ICCU in terms of inter-organizational relationships. Therefore, selection of those entities is justified since in each institution, the three functions mentioned relate to the individuals who regularly mediate inter-organizational processes, are more aware of the matter being dealt with and will best know how to define the main characteristics of the required network operation.

### 3.3. Data collection

Our data collection consisted of personal interviews, direct observation made through on-site visits, and document analysis. According to Yin (1989) and Patton (2002), these sources of evidence can be the focus of data collection for individual cases. The majority of the data was collected from interviews, which were conducted using a semi-structured questionnaire as a guide. This guide included questions associated with participants' demographic and professional characteristics and questions about factors influencing the functioning of the inter-organizational network (see Appendix).

In addition to the interviews with each of the nine representative members of the three target institutions/units, we exploited secondary data sources to verify the

statements and to obtain supplementary information. Such multiple-data collection allows a more thorough examination of each institution/unit. Herein, document analysis was considered for data triangulation (Denzin and Lincoln, 1994) and for larger construct validity (Yin, 1989). The document analysis we performed embraced all types of documents provided by the institutions or available in the public domain, such as the institutions' websites, legislation, and other official and non-official documents. The total of 9 in-depth interviews were conducted in April and May 2010 and lasted between 45 minutes and one hour, depending on the participant's level of experience.

Development of these techniques allows analysis to focus on specific data, thus overcoming the major problem of the phenomenological research approach, i.e. the huge volume of data generated. This methodological approach has also some limitations. First, the explicit subjectivity of personal story explorations and experiences, which concentrates on the individuals' narrative, neglects other social actors' interpretations and objective validations. General policy conclusions should, therefore, be drawn cautiously. Secondly, besides secondary data sources, our findings are mainly based on interviews with the participants as well as on our personal observations and impressions when visiting the health units, which may result in self-report and auto-evaluation bias.

### ***3.4. Data analysis***

The data were analyzed using content analysis (Weber, 1985; Patton, 2002; Miles and Huberman, 1994). Phenomenological interviews were transcribed, which was extremely useful during data analysis. It was thus possible to reproduce and re-analyze the collected data. In order to achieve this purpose, we compared the notes systematically to build a database. The interview results were then combined with other documentary evidence cited in section 3.3, to produce a detailed individual story report. Finally, variables regarding obstacles influencing the functioning of the NNICC were identified for each participant and we selected units of significance (themes) concerning these obstacles from the data.

## **4. Research findings**

### ***4.1. Informant characterization***

In this study, we interviewed nine organization members: Technical Director, Clinical Director and Coordinator in three Units of Integrated Continuous Care (ICCU 1, ICCU 2 and ICCU 3) which are part of the selected NNICC. It was possible to obtain some demographic and professional characteristics about participants (Table 1).

Table 1: Informants' characteristics

ICCU Informant	Sex	Age	Basic Training	Approx. no. of hours per week devoted to the ICCU
ICCU 1 Technical Director	Female	31	Degree in Social Work	35
ICCU 1 Clinical Director	Male	58	Degree in Medicine	7
ICCU 1 Coordinator	Male	29	Degree in Nursing	35
ICCU 2 Head of Social Work	Female	30	Degree in Social Work	35
ICCU 2 Clinical Director	Male	61	Degree in Medicine	6
ICCU 2 Coordinator	Male	35	Degree in Accountancy and Financial Management	10
ICCU 3 Technical Director	Female	39	Degree in Social Security	17,5
ICCU 3 Clinical Director	Male	70	Degree in Medicine	Variable
ICCU 3 Coordinator	Male	24	Degree in Nursing	35

Source: Research data

#### 4.2. Factors in the functioning of the NNICC

The objective of this section is to identify and understand the main factors associated with the functioning of the NNICC studied. Thus, concerning objectives one and two (Obj1 and Obj2) –characterize the NNICC as an inter-organizational network and identify its forms of communication, cooperation and coordination – we found that the inter-organizational connection in operation between the hospital and network structures was mentioned by the nine participating institutions, although with different viewpoints.

Based on the interviews, we verified that the Technical Director of ICCU 2 harshly criticizes the connection between the hospital situation and the ICC side, making her indignation clear and underlining that *'if there's a failing in the network, then it's in the 'health' circuit!'*

The Clinical Director of ICCU 2 is even more critical in his approach and comments that, whether in sending patients for admission to the ICCU, or in assistance in cases of patients' worsening state of health, *'it fails completely'*.

The Technical Director of ICCU 2 adds that *'(...) besides going to hospital due to aggravation, the need emerges for an appointment or a request for reference, and it breaks down...'*, complementing the feeling of breakdown caused, apparently by the hospital.

Concerning the clinical information sent by health professionals in the hospital domain, it is stated that in many situations, the patient is seen and returns *'without any reference, without any contact (...)'* (Coordinator ICCU 2).

In this connection, the Coordinator of ICCU 1 points out that often that information can only be obtained through informal contacts. He reinforces: *'it is something simple, but*

*there should be that inter-connection. An inter-connection that only exists because an employee works there and also works here'.*

The same informant confirms this opinion stating: *'but often there isn't the inter-connection that would allow a thousand and one problems to be solved. Concerning ourselves, internment units of the national network of continuous care, or hospital internment units, or Health Centers, or at patients' homes'.*

Also, in the opinion of this interviewee, *'generally, the bridge between primary health care and hospital care is a bit inside and outside the network (...). There's just one direction. The person that gave that information to the hospital doesn't get any feedback from the hospital, for example, for the Health Centre, and vice-versa'.*

The same informant highlights that all professionals working in the network should know what really *'is the national network of continuous care, what the objectives are, what it is for and what each typology of internment units is, what each DMT is and what the ICCT is (...)'.*

The Technical Director of ICCU 2 responds that sometimes, the patient loses out in differentiated health care by being inserted in a network of continuous care. She highlights: *'(...) in some cases, the patient loses out due to the fact of coming... of being in a network of continuous care (...). The patient who is in continuous care is being harmed in some aspects, namely the difficulty in accessing means of diagnosis, better examination of his clinical state, specialist treatment'.*

Indeed, we are faced with an intermediate system, centered on the patient, where the intention is to fill a gap existing between hospital treatment and returning home. Nevertheless, as can be seen from the information given by the informants, in the relationship between continuous care and the hospital, there may be some friction and, as identified by the Technical Director of ICCU 2, apparently the system is not successful in focusing on the patient.

*'After discharge from the Unit, the patient is no longer accompanied. It would be good to have this interaction, but it doesn't exist. We gradually find out, gradually have....'*

In this context, the Coordinator of ICCU 3, regarding the question of mobility permitted to patients according to their situation has stated that *'mobility does not work in just one aspect! Between serious cases in hospital and the network'.* He justifies, saying that the patient *'can be 15 days, a week, a month waiting to enter the network. The case is that the patient will lose some things that could already have evolved'.*

The Technical Director of ICCU 3 defines what should be the situation, highlighting that *'the objective of the network would be to be discharged from hospital and pass automatically to a unit'.*

One of the possible causes of this phenomenon is described as the lack of availability and places in continuous care, since the Clinical Director of ICCU 3 recommends as a solution *'the construction of new Units will certainly solve that situation because the hospital also... if they have a patient there, he can't be kept waiting'.*

About these situations emerging in this inter-organizational network, the Coordinator from ICCU 1 points to the lack of specific training in the area of continuous care as one

of the reasons for existing failings. He states that *'lack of training is without a doubt one of the aspects that should be improved (...). It is perfectly obvious, mainly on the hospital side...'*

On the same objectives, from the document analysis, there should be mobility within the network when the time set for internment ends without the therapeutic goals being attained, the person in charge of the network unit or team must prepare discharge, with a view to the patient being admitted to the most appropriate network unit or team, aiming to attain clinical improvement or recovery, visible gains in autonomy or well-being and quality of life. However, in the network studied here, this mobility does not exist. In fact, the discharge management team must ensure, namely: (a) liaison with hospital therapeutic teams for severe cases, to plan hospital discharge; (b) liaison with the Network's district and local coordinating teams; and (c) liaison with teams providing integrated continuous care at health centers within their field of operation (Decree-Law 101/2006).

According to the director of the Regional Health Board (RHB) for the Central Region and based on our findings from face-to-face interviews, observations, and other evidence, *'primary healthcare and continuous care teams should complement each other, working effectively in the Network'*.

Concerning our third research objective (Obj3) – identify deficiencies and obstacles to NNICC operation, we found that all interviewees indicate the lack of training. It was the representatives from ICCU 1 who placed most emphasis on this problem, naming it as the main failing of the NNICC. Their position is clear, *'there is a lack of training (...) in those involved in this national network of continuous care'* (Coordinator, ICCU 1). He reinforces this opinion, concluding that the *'lack of training is without doubt one of the aspects that should be improved'*.

Showing concern and alarm, he describes specifically the lack of training shown by the health professionals in charge of the ICCT: *"In the Health Centre ICCT (...), nobody knows what the national network of continuous care is, nobody knows the reference criteria for those units, nobody knows the criteria for admission in the long term, for palliative care, in the medium and short term, because they were never given this training..."* (Coordinator, ICCU 1).

However, developing the matter, two major areas were pointed out as having a noticeable lack of training: (1) specific professional training to carry out activities in continuous care, and (2) specific training to work with the computer platform.

Regarding the former, the Clinical Director of ICCU 1 emphasizes that it is only thanks to individual efforts and dedication that there is any preparation, stating that *'it is knowledge we are acquiring by our own efforts. We were given no training, we were not trained to be here in the Unit'*.

This feeling is shared by the representatives from ICCU 2, and its Technical Director, similarly to what was stated above, concludes, *'it was acquired over time, we never had training'*.

At this stage, the Coordinator from ICCU 1 raises this problem to the national coordination level, saying, *'in general, what we hope is that at national level they don't make the mistake of opening Units without training people (...). Preparation and support for the professionals making up this network'*.

So as was already identified, another gap relating to the lack of training has to do with using the computer platform. On this point, the Technical Director of ICCU 2 reflects, '(...) *I never had training in the platform (...) what we know is through trying things out*'. This informant also said: '*I never had training in the platform, it's not that an invitation to be present didn't appear but I never bothered to attend (...). What we know is through trying things out. Some of us try things out here, others somewhere else. It was acquired over time ...*'.

In the next participation, the informant makes his concern and indignation perfectly clear regarding the lack of training for working with the computer platform, with a worrying example: '*Quite a short time ago, four new boxes to fill in appeared in the platform together with a 'little note' above saying that boxes x, y and z are experimental (...). And I ask the question, would it not be more viable, before inserting these boxes, to give us training on how to use them?!*' (Coordinator, ICCU 1).

The position of the representatives from ICCU 3 differs from that presented by the other Units. Here, frequent attendance at training is declared by the informants, completing the idea by saying '*we are always at some stage, we always need to learn more and so training actions in this area are always important*' (Clinical Director, ICCU 3).

In fact, the Technical Director of ICCU 3 comments, '*last year we had training in Coimbra where they explained how things have to be, how they should be filled in*'.

Diverging from what was stated by the representatives from ICCU 1 and 2, she reinforces '(...) *everything we fill in, the patient's forms and all that, so constantly, when there are alterations, there is training. In fact, it is a network that functions very well.*' (Coordinator, ICCU 3).

These problems/obstacles are noted inside this network, but according to Decree-Law no. 101/2006, promoting specific and permanent training for the various professionals involved in providing integrated continuous care, and maintaining the information system that supports network management, are requirements to be considered.

According to the document analysis used in our study and also as referred to in the Decree-Law, the policy of human resources for units and teams in this type of network is governed by quality standards, formed through their members' initial and continuous training. In this new form of network organization, which implies permanent liaison between all levels of healthcare in different sectors and shared responsibility among all and with the social sector, '*only harmonious action by all parts of the system can guarantee its success*' (Lucas, 2009, p. 16).

Although there is a great need for the NNICC to have a suitable information system for carrying out its activity, in practice, this platform (integrated application), which '*allows a permanent follow-up of the network situation and of each unit providing services*' (Lucas, 2009, p. 18), does not function very well.

### **4.3. A comparative analysis and units of significance**

After concluding the data analysis, we make a comparative analysis of the position each active participant adopts concerning the main factors associated with the health care network studied and related with our three main research objectives. Table 2 presents the key ideas extracted from the results obtained in this phenomenological

study. According to the methodological approach chosen, the intention was also to raise subjects of interest which form Units of Significance. Thus, we identified two main subjects forming units of significance regarding obstacles to network operation: *inter-connection with the Hospital* and *lack of training*.

Table 2: Summary of the participations of ICCU representatives

Research Objectives	Unit of Significance	ICCU 1	ICCU 2	ICCU 3
<b>Obj1:</b> Characterize NNICC as an inter-organizational network  <b>Obj2:</b> Identify forms of communication, cooperation and coordination of NNICC	<b>Inter-connection with the Hospital</b>	Cause of countless problems;	A greater failing than those originating in the network;	Mobility does not work only between the hospital and the NNICC.
		Gaps are filled through informal contacts and personal knowledge.  Lack of training as one of the causes.	Professionals at the hospital do not send clinical information.  Patient loses out on access to hospital treatment due to being in the network.	
The informants are unanimous in characterizing interaction with the hospital as one of the main failings in the organizational connection.				
<b>Obj3:</b> Identify deficiencies and obstacles to network operation	<b>Lack of Training</b>	Lack of training for those involved;  Lack of training opportunities;  Highlighted importance of initial training as well as continuous training;	Reveal they have never had training on the platform.	They do not identify with this issue and state their satisfaction with the quantity and quality of training they have received.

Source: Research data

Regarding the first objective (Obj1 – Characterizing the NNICC as an inter-organizational network) according to the data, the following can be said: the NNICC studied here defines a new level of health care which crosses various services transversally. As underlined by the key informants of the three ICCUs, this new model of care is based on the conception of a network composition and operation where different typologies of response form the articulation between hospital and primary care, creating a network in the classic divided organization. This NNICC emerged as a response to a gap in the health and social support sector and brings benefits for users, families and society. In addition, this integrated care is labeled in its operation as an inter-organizational network.

With this NNICC, there are new and better responses in terms of both health and social support, to diminish hospital overload. In the social aspect, this type of inter-organizational network is defined as a mixed model where the social and health sector are interlinked to give support to families. With the emergence of the NNICC, it is possible to provide another type of response to these situations, not only concerning internment but also care at home.

Regarding the second objective (Obj2 – Identifying forms of communication, cooperation and coordination of the NNICC in the inter-organizational context), according to the data, we can conclude that the three ICCUs appreciate that organizational work in a network has advantages, but some problems exist in the network they are part of. Coordination, cooperation, contact, experience and communication between different organizations have been difficult. To overcome these difficulties, the actors involved in the three ICCUs claim that communication within the network has been very informal, since it is based on contact by telephone, internet and fax. Even so, the informants state there has been a double meaning in the NNICC. Indeed, for the NNICC, the capacity to accompany the situation of integrated continuous care the whole time is particularly relevant. To optimize its operation, correct referencing and accompaniment of the user's situation in the network must be assured, and at the same time, there must be monitoring at various levels, which also permits comparison with the objectives defined. This situation is not always found in the network studied, since the information system (computer platform) used to develop activities (referencing and monitoring of results) falls down. Although the computer platform is adopted as the main and predominant mechanism for inter-communication between the different network structures, the empirical evidence obtained emphasized various advantages in the platform's operation, but at the same time showed some negative aspects.

The main advantages associated with the computer platform are the early arrival of information, which is accessible before the patient is admitted, and the fact it is an ideal means to exchange network information quickly and effectively allowing feedback. However, some negative facts related to the platform's operation pointed out by the interviewees are this weak exchange of information, the existence of imprecise parameters and codification, the duplication of records, lack of uniformity and lack of training in how to use it.

The connection between hospital care and integrated care was mentioned as one of the major causes of problems and concerns in the inter-organizational work of UCCIs 1, 2 and 3, and so the articulation of differentiated care seems to be harmed by malfunctions. As a result, we consider 'interconnection with the Hospital' as one of the units of significance identified.

Finally, regarding the third objective (Obj3 – Identifying deficiencies and obstacles to this network's operation) according to the data obtained, it can be said, as already mentioned, that one of the attributes the MUICC aims to promote, in liaison with organizations of the Ministries of Employment and Social Solidarity, and Health, is strategic and technical orientation in the area of continuous and specific training for the various groups of professionals and careers involved in providing integrated care. Nevertheless, despite the importance of continuous training in developing the competences of professionals in the NNICC, in this study, some obstacles felt by those participating in the organizational functioning of the RNCCI concerned precisely the lack of training.

As for use of management and network access instruments, the deficient training provided to network teams and providers regarding the computer platform should be mentioned. The lack of professionals with suitable training, as well as the insufficient availability of others, were obstacles revealed by this study and include problems in connecting to other network units.

Apart from ICCU 3, actors in the other two ICCUs point out as the main deficiency and obstacle to network functioning, the lack of training opportunities, and so this is another unit of significance we identify.

## **5. Concluding discussion and implications**

The objective of this study was to explore the paradigm of functioning in an inter-organizational network set in the new and emerging network of continuous health care, which stands out as an innovative and as yet little studied concept, and here lies the importance and innovation of this study. To attain this objective we resorted to the paradigm of a qualitative character from the phenomenological angle, studying three organizations providing continuous care. In treating the information a phenomenological approach was used, which allowed identification and understanding of the main obstacles in the functioning of the inter-organizational network studied, as well as empirical evidence allowing definition of two main units of significance: (1) the matter of inter-connection with the Hospital and (2) the matter of lack of training.

In fact, our qualitative research performed within the Portuguese context reveals that lack of training seems to be a major obstacle to the functioning of the network analyzed. The informants' statements indicate there could be training needs which are not met. In this context, Kong (2007) approaches the potential concept of inter-organizational cultural locus and explains the importance of training in meeting this objective.

Concerning network communication, coordination, and cooperation, although identifying other means, the computer platform was accepted as the principle and predominant mechanism for inter-communication among the different network structures. Therefore, in carrying out data analysis, there was an emphasis on the common point of appreciation of the platform which is generally acclaimed as 'a good invention'. Even so, negative factors were found relating to platform functioning concerning its reductive nature, the existence of imprecise parameters and codes, duplication of records, lack of uniformity and lack of training in using it.

Based on our findings from face-to-face interviews, observations and other evidence, the inter-connection between hospital care and ICC was another major cause of problems in the inter-organizational work of the ICCU and the articulation of differentiated care seems to be harmed by malfunctions. As noted by Kaluzny and Zuckerman (1992), networks require organizations and personnel within organizations to develop mechanisms to coordinate their activities in a way that is meaningful and relevant to the participating organization. Dawes (2008) also speaks of the importance of inter-organizational networks and underlines that, in his opinion, the share of inter-

organizational knowledge can be an important source of professional and organizational innovation.

The lack of professionals with suitable training and the insufficient availability of others, were also obstacles revealed by this study and present problems in connecting to other network units.

Generally speaking, the perception that stands out on completing our study is of the importance of a NNICC in the health and social services sector, but as for inter-organizational operation, this is still at an early/intermediate stage of development.

This study also presents some implications and suggestions for the actors involved in inter-organizational networks in the public health care context, and fundamentally in the network case studied here:

- Health units should create systems based on training courses to adapt core professional competences to specific contexts, such as the functioning of the platform within the NNICC.
- Health professionals are in daily contact with difficult and extremely demanding situations. In this sense, health organizations must be alert, support their collaborators, motivate them and prepare them for these situations within the NNICC.
- There is a fundamental need to make health professionals individually responsible for their training, increasing their ability to learn and adding to their knowledge, as an indispensable resource for NNICC functioning.
- Teams belonging to continuous care networks must complement one another, working effectively as a network.

In this context, an interesting subject would be to study the obstacles felt in inter-organizational operation but this time dealing with the bodies that coordinate the network, namely the LCT and RCT. To complement this, the remaining suggestions go in the opposite direction compared to the first, and propose, not extending the field of study, but focusing on more precise aspects related to network micro-functioning in ICC. Investigation is therefore recommended in certain areas that were a source of concern for the participants in this study, fundamentally preparation and specific training for professional action in continuous care, or in another approach, study and characterization of the link between ICC and hospital care.

As noted by Dedekorkut (2003), thorough knowledge of how organizations collaborate is extremely important since the lack of development in this area seems to be connected to problems in applying cooperation networks between organizations.

Finally, limitations of the study include the limited number of health units in the network selected, the limited geographical diversity of the participants and the limited capacity to generalize the phenomenological research findings. However, despite its limitations, this study provides useful guidelines for researchers engaged in understanding continuous health care units as inter-organizational networks.

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## Appendix: Interview guide

### Section 1: Participants' Demographic and Professional Characteristics

Position within the ICCU:	
Sex:	
Age:	
Basic training:	
Work devoted to the ICCU:	

### Section 2: Factors Influencing the Functioning of the Inter-organizational Network

Research objective	Interview question
<b>Obj1:</b> Characterize NNICC as an inter-organizational network	1) How do you characterize the continuous care network as an inter-organizational network? 2) What are the elements of the operating network of integrated continuous care involved in the unit you represent?
<b>Obj2:</b> Identify forms of communication, cooperation and coordination of NNICC	3) How do you characterize communication, cooperation and coordination between network structures? 4) How important are these factors for the unit's operation at an individual level? And from a global perspective, how important are they for the network? 5) Concerning the computer platform, how do you define its usefulness and operation?
<b>Obj3:</b> Identify deficiencies and obstacles to network functioning	6) What structures and processes allow, or prevent, network functioning? 7) In what areas are there deficiencies within the network in need of development? 8) What difficulties, worries and obstacles jeopardize or limit inter-organizational functioning?