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Primary and Hospitalar Health Care: Building a happy marriage

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Abstract

We address the potential integration of the Hospital Dr. Fernando Fonseca E.P.E. with the Primary Care Units in its geographical coverage area in a Local Health Unit. We apply semi-structured interviews in order to understand how to best implement this model of local organization in the referred case. We classify the interviews of each unit according to pre-determined criteria and suggest measures to be implemented. Results demonstrate that the hospital is more able to promptly assume a change process towards the new organizational model when compared to the primary care units. Moreover, we reached the conclusion that the achievement of the expected benefits to the whole depends heavily on local characteristics and implementation process. There is the need to invest in key elements such as the maintenance and renewal of infrastructures and in a common information system. Albeit these investments do not assure the achievement of the benefits of an integrated management system *per se*, they are essential in the process of constructing an unique entity.

Key Words: Local Health Unit; Healthcare Integration; Hospital; Primary Care.

1. Introduction

In Europe, over the last decades health care policies have been devoting increased attention to the performance and organization of health services suppliers. The present demographic trend towards an older population has been causing an increasing pressure on the demand for healthcare services that cannot be disregarded by health authorities. These pressures require the services to improve their quality while reducing their costs through processes of redeployment and optimization of the available resources; nevertheless, there is not a model of organization that outshines all others in terms of performance and the discussion over the organization of the *Serviço Nacional de Saúde* (SNS) still endures open.

Nowadays, three decades into the inception of the SNS, its positive impact on the health of the Portuguese population is widely accepted by specialists. Nevertheless, the Organization for Economic Co-operation and Development (OECD) estimates that 9,9% of the Portuguese gross domestic product is allocated to this sector (OECD 2009), a number that is one percentage point above the OECD's average (Fig. I).

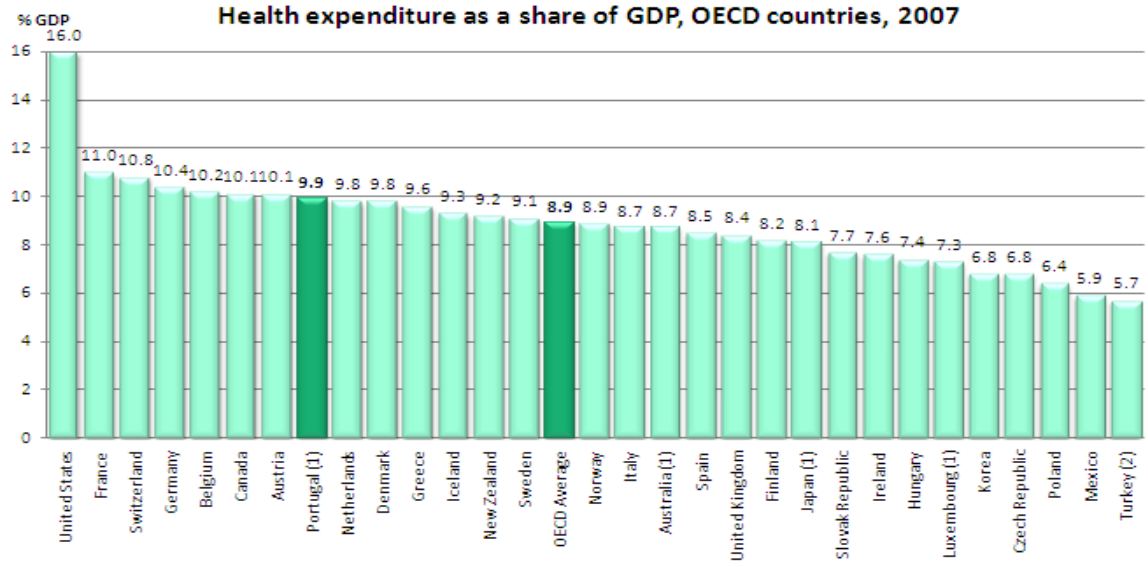


Fig. I - Health Expenditure as a share of GDP, OECD countries (OECD, 2007)

Given that the bulk of the SNS funding is based on general taxation and with these changes occurring in a context of public budget constraints, pressures towards a more efficient system tend to increase even further. There is the need to determine and adopt patient-centered health policies that allow gains through the optimization of resources and exploitation of possible synergies. It is essential to observe the system as a whole and structure it in the best interest of the citizen, achieving both health and efficiency gains.

Recently, care coordination issues are receiving greater consideration for two reasons; firstly it is known that the fragmentation in health care provision (given the increasing specialization and the weak linkages between levels) impedes patient-centered care; and secondly most health care costs are concentrated in a small percentage of the population, given the increasing prevalence of chronic diseases (OECD, 2007). Despite the fact that the benefits of care coordination are largely accepted, the concretization of the concept is not as linear, and there is not a consensual model to respond to this need. One of the models that intend to improve the capacity of the SNS to respond to the growing needs of the populations is the *Local Health Unit (ULS)*.

The ULS model was "experimentally" initiated nearly ten years ago (1999) in Matosinhos. Its idea is based on the concept of integrated management of health units per geographical area, including both primary care centers (PCC) and hospital units. The ULS Matosinhos is consistently considered as the reference case-study in this area.

The creation of the ULS Amadora-Sintra (ULSAS) was officially predicted in the Decree-Law n. 203/2008, in October 10th, 2008. This document legally created the Hospital Dr. Fernando Fonseca E.P.E. (HFF) after a period of 13 years of private management. It also decrees that the HFF will integrate the PCC's in its influence area to constitute an ULS in a moment to be determined by a responsible member of the Government; this is, the possibility is predicted but a concrete implementation date is not defined.

Since its inception in 1996, the HFF pioneered the Public-Private Partnership (PPP) concept, being the first unit of this type in Europe. The private management experience of the HFF took place during 13 years, period after which, in 2008, the aforementioned decree-law created the HFF EPE. The ULSAS will result from the integration of both the HFF and the *Agrupamentos de Centros de Saúde* (ACES) in the geographical areas of Amadora and Sintra. This will create a new entity that will ensure the continuity of primary, differentiated and continuity care; public health activities and the necessary means to the exercise of health authority in its geographical area.

The purpose of this paper is to perform part of the preparatory work that will assist the creation of the ULSAS.

2. Methodology

We started the necessary preparatory work of involvement by consulting the directors of all main structures implicated (Appendix I – Interviews Map). We opted to apply a semi-structured interview, conducting what is often referred to as qualitative research interviews (King, 2004). Given that we want to acquire insights over respondent's opinions and that we are interested in exploring potential particular events within each unit, a semi-structured interview will allow the interviewer to adapt the questions accordingly to the flow of the conversation (Saunders, 2007), gaining flexibility.

A semi-structured interview will be the best approach to attempt to obtain data, given that the questions are complex and open-ended and that the order and logic of questioning may vary over the interview process (Healey, 1991; Easterby-Smith et al., 2002; Jankowicz, 2005).

The semi-structured interview guide (Appendix II) will be applied in both the HFF and in the 4 ACES of the region. Moreover, we contacted the Municipal Hall of both the Amadora and Sintra counties (receiving response only from Sintra). With this approach, we intend to achieve a deeper knowledge of the specific context of the units in the ULSAS, involving both health and social elements that are to be integrated in the project in the future. To get a deeper insight of the potential benefits and conflicts that can emerge from the creation of an ULS, we also apply an interview in the ULS Matosinhos. As this was the first ULS to be established, it can provide some interesting insights from its experience.

We will opt for the interview method instead of a survey once we consider that handing a survey to be filled would limit the scope of the questions and lead to biases that we would not be able to control, moreover, with face to face interviews we will be able to get a deeper understanding of the perceptions of the interviewees. Questionnaires work better when we are able to define standard questions that will be interpreted in the same way by all respondents (Robson, 2002). In the context of this study, the option for a questionnaire would lead to several problems, from the difficulty of trying to design a viable survey, the time needed for the respondent to fulfill it, the interpretation of the collected data and the number of observations needed to treat the data statistically.

Considering both methods, we can expect a skillfully conducted interview to provide us with more - and better - information. Moreover, the secondary information on this topic is scarce and usually institutional (leading to bias risk), which reinforced the semi-structured interview option.

Nevertheless, we are aware that despite having several advantages, the qualitative methodology has weaknesses in what concerns to the lack of standardization and interviewer/interviewee bias (Saunders, 2007).

After the interviews, we will use a scale of 0-10 to quantify the data collected on six pre-determined criteria. These topics were determined as the most pertinent ones to get a comparative perspective over the most relevant viewpoints from both levels. After acquiring the broad knowledge of the theoretical benefits of the model, the specific knowledge of the units that the ULSAS will embrace and what each of the leaders expects of it, we will propose recommendations to respond the initial problem of how to successfully implement a ULS in the Amadora-Sintra region, stating practical measures and a priority assessment scale to assist their implementation.

3. Local Health Unit – Local Organization of the SNS

The potential benefits of the model

Currently, the lack of frequency and quality of communication between primary care centers and hospitals is held as one of the reasons of inefficiency of the SNS. Furthermore, there is poor articulation between primary and secondary health care, an opinion that is corroborated by most physicians (Roque, 2008).

The poor articulation between levels of care ultimately leads to an inefficient, less functional and accessible system. The actual partition between levels of care does not benefit the citizen that needs to use the service nor the professionals that work in it. Roque (2008) enumerates some of the main barriers to an efficient relationship between ACES's and Hospitals, namely the excess of bureaucracy, the gap between institutions, the inexistence of communication channels or guiding lines to the referral processes and the differences between cultures and methods.

The ULS system beholds healthcare processes as more attentive to the individual needs of the citizens, ensuring an integrated response both in acute episodes as well

as providing healthcare endeavored to stabilize health levels over longer periods in less costly environments, particularly supported by the ACES.

One of the main facts that have to support the implementation of an integrated model is its focus on the needs of the population of the region; the focal point should thereby shift from the organization's needs towards users' needs. The vertical integration of health services will assist the achievement of these needs in a more efficient manner.

The OECD itself argues the need to integrate health care management in order to reduce inefficiencies and avoid duplications (OECD, 2007). The SNS may find in the ULS model one of the possible answers to the above mentioned directory given its expected benefits (Table I). Furthermore, it is generally alleged that the attainment of both efficiency and quality goals may be hindered in the absence of enhanced collaboration and co-operation amongst the different parts of health and social support systems (Schmidt, 2006, Kohn *et al*., 2000).

Table I - Expected benefits of the implementation of an ULS model

• Quality of care (impact on health outcomes on the long run);
• Better responsiveness to patient needs;
• Better use of installed capacity, both with equipments and human resources;
• Partnerships/projects can be generalized and capitalized;
• The presence of representatives of the ACES in the ULS board will allow a better articulation between levels of care;
• Cost-efficiency of provided healthcare;
• The circuit of the user in the system, between different levels of care appears as better defined and more easily traceable;
• Better information available, allowing better decisions.

The ULS model benefits from approaching the different types of health needs (e.g. acute, chronic) in an integrated, holistic manner. Although these advantages may appear to be obvious, in reality the benefits of this model are still to be proven and depend heavily on the local implementation, which has to be tailored to each specific reality. Furthermore, it is known that implementing modifications in the organization of systems as complex as health units is always challenging, and should be preceded by all the relevant preparatory work of collecting contributions that can add value and the proper benchmark with similar examples. In the ULS case, we can refer to the several previous examples in the national context as benchmarks.

Previous Experiences

In Portugal, the history of integrated management of hospitals and primary care centers is still recent. The first ULS was created in Matosinhos in June 9th, 1999. By then, it integrated the Pedro Hispano Hospital and 4 PCC's (as well as 4 extensions). Nowadays, it integrates the Hospital, 1 ACES (4 PCC's and 7 Familiar Health Units) and a pneumological diagnose center (ULS Matosinhos institutional webpage, 2009).

It was only in 2008 that we could observe the creation of new ULS entities, namely the ULS Norte Alentejano (February) and the ULS Baixo Alentejo, ULS Alto Minho and ULS Guarda (September). The year 2009 saw the inauguration of the ULS Castelo Branco (September). Despite the fact that there are 6 ULS's functioning and that the ULS Matosinhos was created over a decade ago, there is not still a solid debate base at a national level concerning the results of the ULS implementation that allow us to state clearly what gains we will be able to achieve with the introduction of the new model. It would be essential to plan, monitor and evaluate the new ULS from the beginning so that its examples – both positive and negative - can provide lessons to be analyzed and used in future ULS's.

In terms of institutions, the ULSAS will embrace the HFF and the 4 ACES in the geographical area (thereby including 9 of the formerly called PCC's - 3 in Amadora, 5 in Sintra and 1 outside the limits of the ULS – Mafra), as well as the new Algueirão Basic Urgency Service (SUB). Furthermore, there are currently 6 USF's functioning in the geographical area that will be integrated, with several more waiting approval.

SWOT

The SWOT analysis (Fig. II) depicts the main topics in terms of internal (idiosyncratic) and external (environmental) determinants, as perceived after applying the interviews. Referring to the internal environment, we have considered as the main strengths the existence of a good level of communication and professional relation between the leaders of the main implicated units. Likewise, the quality focus of all units will reinforce the establishment of a ULS. Still, we have to take into account several intrinsic weaknesses as the great dimension of the ULSAS and the characteristic differences between the levels, both in terms of culture and final purpose. The analysis enhances the need to have an administration board particularly sensitive to the needs of the primary care units.

In terms of external environment analysis, the opportunities are numerous and have been previously mentioned as expected benefits (Table I). In what refers to threats,

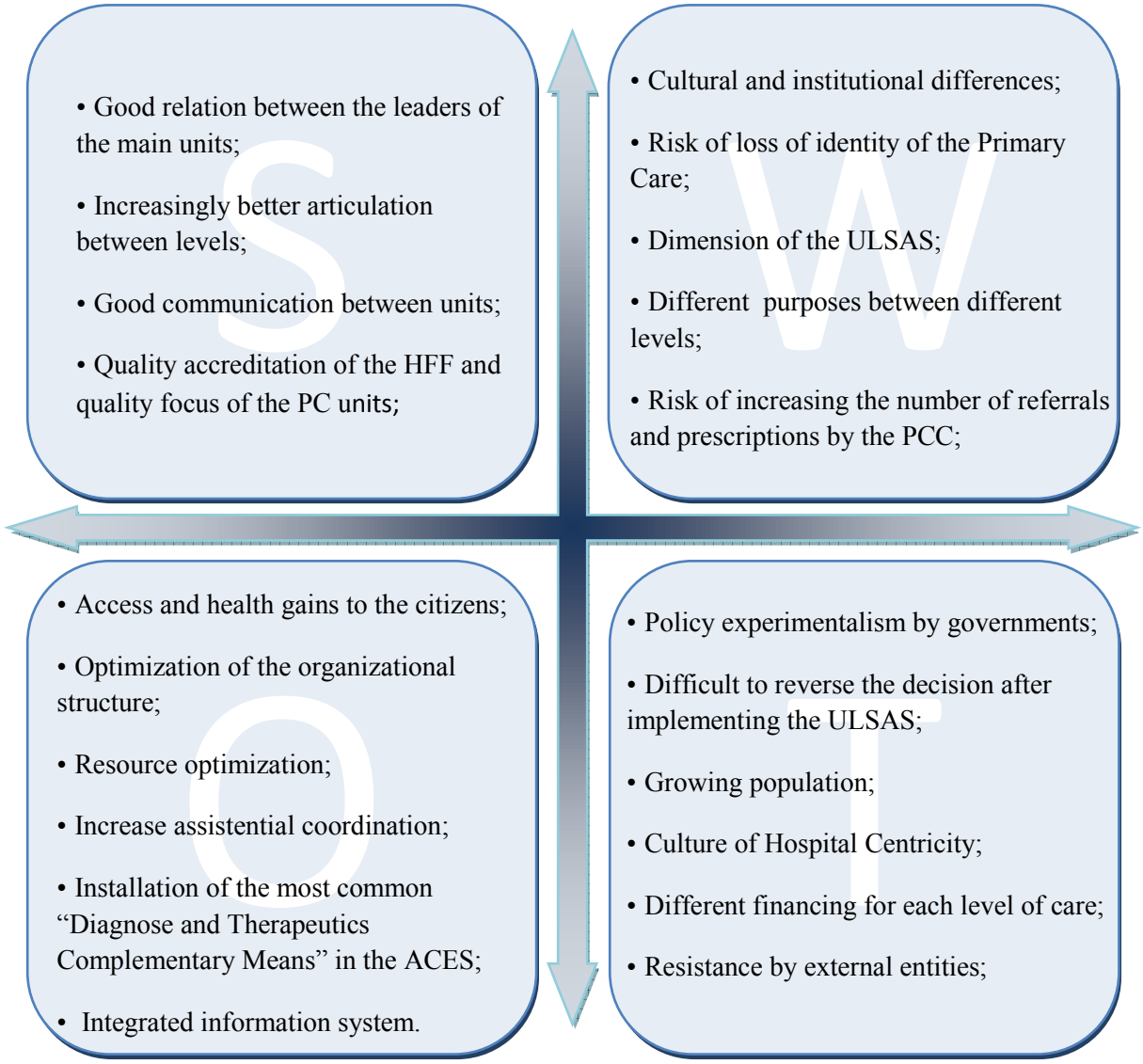


Fig II – S.W.O.T. Analysis

there are several to be considered, as the fact that the ULSAS is to be implemented nearly simultaneously with the Primary Care Reform. Moreover, apart from internal resistances, we can also expect to face external resistances towards the implementation of the ULSAS, this is not a unanimously accepted model and there will be approval voices as well as strong criticism. Given that the implementation is a decision that cannot be reversed once executed, it has to be prudently assessed and planned.

The ULS organization strategy is not consensual. Given that in the ULS we are to integrate several different units that act frequently with dissimilar objectives and in distinct manners, we will propose a governing system based on the principles that the whole should allow the local best practices to continue and when possible to be spread out through the system. An abrupt rupture with current practices would increase internal resistances of the units and personnel towards the ULS, thus, we

suggest an approach to the integration that is similar to that of a jazz orchestra guided by its maestro – stating general directions but allowing the creativity of each of the members to adapt and add something to the whole; furthermore, it should promote the equality between units (Lapão, 2008).

In the Amadora-Sintra case, interviewees defended the principle of having an equal number of representants of both levels at the ULS administration board. Assuming the actual organizational structure of the several units to be embraced by the ULSAS, an institutional organigram is proposed as a base for future debate (Appendix III).

The discussion of the external contracting process is essential to the goal we intend to attain. Its relevance is related to the fact that the payment scheme will strongly condition the behavior of the ULSAS.

The contracts of the ULS should be discussed in terms of a capitation base, instead of having a mixed system as observed in the ULS Matosinhos. Mixed systems tend to create a perverse effect, since the hospital receives monetary incentives as it treats more disease episodes. As incentives determine most of behavior, the mixed payment system creates an incentive whereby it is beneficial to the hospital to have a population with more diabetics, to have further hypertensive and obese patients, additional cancer episodes, etc.; this is, to have a sicker population.

On the other hand, in a pure capitation system, the incentive shifts towards the maintenance of overall health costs as low as possible, therefore boosting the relevance of the primary care units as a less costly environment where quality care can be provided, satisfying a large part of the population health needs. Within this payment scheme, the incentive goes towards the preservation of population as healthy as possible, since illness implies a cost that is not rewarded by the financing system.

4. Interviews – analysis of collected data

The interviews were tape-recorded, being available in the attached CD-ROM. In order to achieve a deeper understanding of the perceptions that the interviewees have on the topics discussed, this analysis entails not only the content expressed but also the form of the language. After this, we were able to systematize the main ideas acquired in the interviews, by attributing a numeric valuation to each of six pre-determined criteria. The valuation is subjective and was done by the interviewer, not

necessarily representing the views of the groups mentioned. Opinions varied even inside the same group, depending on the personal perspective of each of the interviewees. However, the use of this scale is helpful in terms of the general representation of the results obtained.

The results are presented by groups (ACES, Hospital, Municipal Hall), as opposed to individually, since the desired result was to achieve a general idea of what the main perceptions were within each group and how they counter, or not, each other. With this approach, we intend also to avoid that the results are interpreted as individual judgments, proceeding to a broader analysis that tend to be more fruitful.

A) **Internal Organization of processes** (Perception of internal organization of processes, information systems, aggregation of information at the unit level)

Assessment Scale

0 – Chaotic internal organization;
2 – Most information is still in paper format and not systematized for the different units;
4 – Some information is in paper while other is digitalized, information is not systematized for the whole;
6 – Most information is digitalized but there is no integration of the different units' information;
8 – Most information is digitalized and there is some integration of the information between units;
10 – Perfect internal organization, integrated and digitalized information is widely available.

The ACES, being in the center of the Primary Care Reform, are still in a restructuration phase, which may justify the fact that most units do not have their internal data systematized and aggregated for the PCC's they embraced. Nevertheless, this result shows that presently there is a certain degree of disorder in the ACES, typical of transition periods.

The Hospital, despite the fact that there was a transition from the private management at January 1st, 2009, presented a good level of internal information organization. There is aggregated information available, mainly from the annual performance planning. A renewed hospital webpage was launched, systematizing the most relevant information from the patient's point of view. In terms of the implementation of the ULSAS, the disparity between the informatic systems used and the different level of information aggregation verified can constitute a barrier. Investments will have to be made in order to overcome this, leveling all units within the ULSAS.

B) Awareness of the conceptual idea behind the model (Perception of what an ULS consists and the implications of it)

Assessment Scale

0 – Absolutely unaware of the existence of the ULS model;
2 – Vague idea of what the model consists in, unable to identify any of the existing ULS;
4 – Vague idea of the model. Able to identify at least one of the existing ULS's;
6 – Concrete idea of the model and of some of the existing Portuguese ULS's;
8 – Concrete idea of the model, identifies examples but cannot describe the implications to the unit.
10 – Complete awareness of the conceptual idea behind the model and its implications to the unit.

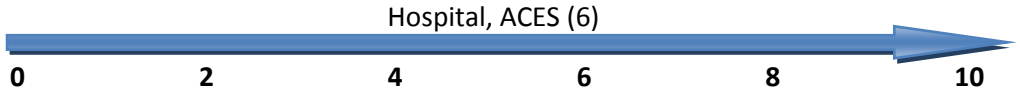
Both the Hospital and the ACES have showed perfect awareness to the conceptual idea behind the model of the ULS. The concept was not new and had already been debated between the leaders of all the main units. The implications of the implementation of an ULS in the region were debated with knowledge of fact in both levels of care.

The Municipal Hall representatives, who were responsible for the health nucleon of the Sintra's municipal hall, also demonstrated knowledge of the model and of previous existing cases, but were not able to describe what would be the potential implications of it, demonstrating interest in knowing more about how the model was to be implemented.

C) Current articulation between levels (Perception on how functional is the current articulation between care levels)

Assessment Scale

0 – Total absence of articulation;
2 – Weak - Current articulation processes' are inefficient;
4 – Limited - Current articulation processes' have several relevant flaws;
6 – Good – Current articulation processes' are well-organized, but need several significant improvements;
8 – Functional – Current articulation processes' are efficient but need some minor developments;
10 – Perfectly functional articulation, no need for further enhancements;



The articulation between care levels has some limitations, assumed by both sides. Even though the same result was attributed to both levels, the underlying reasons differ. The hospital, having evolved from a period of private management where there was not a strong incentive to invest in the communication with the primary care on the long run, is progressively taking the relevance of this factor into account, even

though there is not an adequate financial incentive to act on this problem. On the ACES part, with the decentralization processes related with the Primary care reform, several USF's have been adopting different informatic systems (directed towards the USF's needs), which will probably difficult the process of communication with other units within the ULSAS.

Currently, the articulation is done both using paper and the ALERT P1® system (being introduced both at the ACES and the HFF). Moreover, there are clinical consultancy meetings at the primary care units to jointly decide cases to be referred to the hospital. Despite this good example, several relevant fails are referred such as the inexistence of a common clinical file and the lack of information of what occurs in other units. The functionality of the articulation is a shared responsibility of both levels that is essential to achieve health and efficiency gains. The main measure that would assist the attainment of these gains would be the implementation of a common information system, which is further debated on topic 6 – Action Plan.

D) Potential Benefits to the articulation with the implementation of the ULS

(Potential foreseen benefits to the articulation between care levels)

Assessment Scale

0 – Inexistence of foreseen benefits derived from the articulation;
2 – There are almost no benefits to be achieved with the articulation;
4 – The benefits exist, but can be achieved without the ULS;
6 – The benefits exist, but the implementation of the ULS may or may not lead to them;
8 – There are several interesting benefits to the articulation that can be achieved with the ULS;
10 – There are several relevant benefits to the articulation that will only be achieved with the ULS.

Both interviewees at the ACES and in the Hospital recognized several potential benefits in the ULS model, although most criticized the lack of previous experiences of similar scale and the lack of evidence surrounding the potential benefits. Moreover, the need to implement an ULS to achieve the predicted gains was questioned more than once.

In terms of the perceived benefits, we will group them in complementary and conflictive benefits (between levels). Complementary benefits being positive to both care levels and of common interest while conflictive benefits are the ones that being positive to one of the levels, may not be of the interest of the other part.

As complementary benefits, we can refer to the improvement of the articulation in terms of patient referral, the use of a common professional education system and of a

common patient file, allowing for better decisions. Furthermore, we may refer the broader perspective when assessing the health needs of the population (integration of healthcare), leading ultimately to a better service provided to the citizen.

As potentially conflictive benefits, we can refer the higher degree of auto-determination, given the internal contracting process (on the ACES perspective) and the existence of a larger budget to be utilized (HFF perspective).

E) Interest in constituting an ULS (Acceptability of the idea of implementing the ULSAS)

Assessment Scale

0 – Totally uninterested, does not accept the idea of constituting an ULS;
2 – Uninterested, the idea of constituting an ULS in the region is not well accepted;
4 – Weak interest in constituting an ULS, indifferent between implementing or not the ULSAS;
6 – Interested in constituting the ULS, passive position towards the implementation;
8 – Strong Interest in the constitution of the ULS, active position towards the implementation;
10 – Totally interested, assumes a leadership role towards the implementation of the ULSAS;

Both the HFF and the ACES showed openness to the idea of the constitution of the ULSAS, although in different levels. In some cases, the ACES stated some apprehension towards the implementation of the ULSAS due to the fact that the hospital, given its dimension, high-technology and resource-absorption power, could merely integrate them and absorb a higher percentage of the resources allocated to the whole. This is a credible risk and it is essential that the administration board has a particular sensitivity to the relevance and needs of the primary care.

The hospital showed more interest in constituting the ULSAS than the ACES. As predicted in the document of its constitution as an E.P.E. institution (decree-law 203/2008), the hospital is assuming an active role towards the implementation of the ULSAS, suggesting the elaboration of the current paper as a preliminary study.

F) Inexistence of Barriers towards implementation (Potential barriers to the implementation of the ULSAS)

Assessment Scale

0 – Total impediment, structural barriers that can not be overcome;
2 – Strong structural barriers, difficult to overpass;
4 – Considerable barriers that may be impeditive to a successful implementation;
6 – Some relevant barriers that have to be considered, but that are not impeditive;
8 – Weak barriers, which can be easily surpassed;
10 – Inexistent barriers, expectable fluid adaptation process.

In the ACES, several barriers were referred as: weak territorial coverage area definition (Mafra PCC), the complexity introduced by initiating a new local reform simultaneously with Primary Care reform and the division of power to be done in the administration board of the ULSAS. In addition, the dimension of the ULSAS, serving nearly 7% of the Portuguese population, was referred as a potential cause of complexity and problems.

The hospital referred a certain degree of apprehension, not due to internal barriers but given the innovative character of the experience, that has not a similar guiding example, particularly when considering its particular dimension and population characteristics. Furthermore, the implementation of the ULSAS constitutes a step that would be difficultly reversible and therefore is one that has to be carefully planned.

Aggregated Analysis of Interview Results

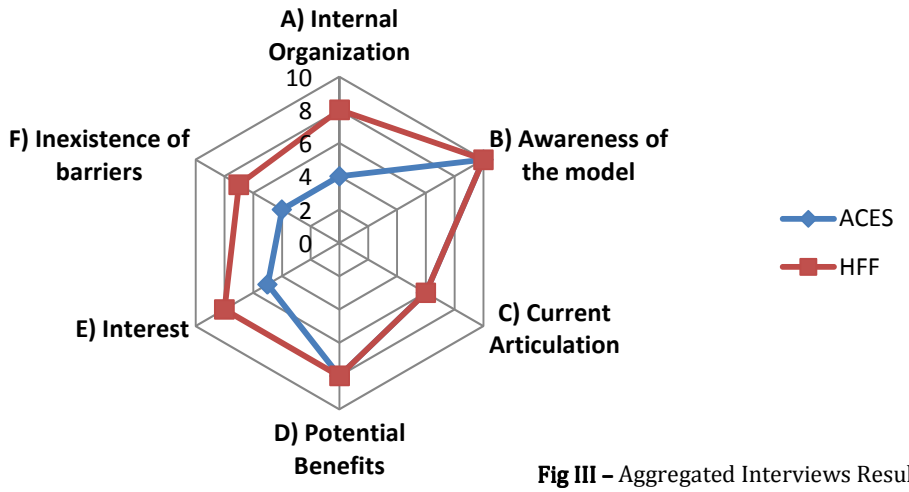


Fig III – Aggregated Interviews Results

The radar plot above (Fig. III) depicts - in an aggregated manner - the main results obtained with the interviews. Generally, we can observe that the hospital scores the same or higher in all of the six fields, which leads us to think that currently it is more able to assume a change process towards an ULS system. This same idea is reflected by the scores in the topic E) Interest (ACES - 5; HFF- 8). The biggest score gap occurs in the A) Internal Organization field (ACES–4; HFF-8), which demonstrates the difference in organizational terms, probably due to the reorganization process the primary care is actually going through. A relevant difference was also verified in the topics F) Barriers (ACES-4; HFF-7), which is also in line with the rest of the interview results.

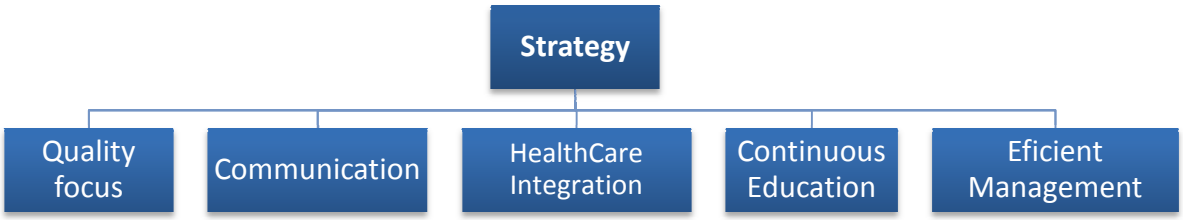
5. Action Plan

It is not possible to assure that the implementation of the ULS in the Amadora-Sintra region will determine an improvement in terms of the service provided, and subsequently if it will present health and efficiency gains to its population, to its professionals and to the SNS itself.

The lack of evaluation of the previous ULS experiences, the huge dimension of the ULSAS in terms of population served, units embraced and current institutional resistances in the region present serious threats that need to be assessed. It is essential to create work routines as a unique unit, create multi-professional teams between different care levels, systematic coordinated activities, education and investigation projects in order to understand what functions better as an aggregated whole. Several examples of interesting synergic activities between levels can be transferred from other ULS's (particularly from Matosinhos). Instead of following the traditional top-down approach - determining by law the characteristics of the ULSAS and subsequently motivate on-field workers to abide by the legislation – it would be beneficial to start with a peripheral approach, adapting the legislation to specific aspects detected by professionals, which are more aware of how to best serve the health needs of the population. This approach would imply the postponement of the inauguration of the project for several years.

The lack of serious evaluation of previous examples raises a cloudy environment around the creation of the ULS that cannot be ignored. The policy experimentalism that the SNS has been experiencing, shifting as governmental directions fluctuate is unfavorable to the well-functioning of the system. Moreover, there is the risk of occurrence of a perverse effect inside the ULS, as referred above, depending on the financing system adopted. The main concept of the ULS is to integrate health units to the benefit of the patient; in this context, a poorly designed financing system will induce the units embraced by the ULS to act in benefit of its own interests instead of the interest of the whole – the citizens' interest. This risk is enhanced by dissimilar institutional cultures and different finalities of their action – the ACES to prevent, the HFF to cure. Albeit none of these factors is impeditive to the constitution of the ULS, their presence demands additional attention when assessing this project. Taking into account the limitations described above, we will present an action plan that is intended to assist the earlier phase of the implementation process.

In order to design the intervention plan to the ULSAS implementation, we propose five priority areas of intervention (Figure IV).



ty areas of intervention

Thereon, we suggest several practical measures that are intended to respond these main strategic areas. The proposed measures will be then classified in terms of expected costs, time needed to implement and relevance to the success of the project (according to Table II).

	Symbol	Description (Expected values)
Expected Costs	€	**Very low** - Less than 100.000€;
	€ €	**Low** - Between 100.000 and 250.000€;
	€ € €	**Medium** – Between 250.000€ and 1.000.00€;
	€ € € €	**High** - More than 1.000.000€.
Time to Implement	◔	**Express** – Less than one month;
	◑	**Rapid** – Less than Six months;
	◕	**Medium** – Less than one year;
	●	**Long** – More than one year.
Relevance to success	C	**Core –** Strategically essential to the success of the ULS;
	I	**Important –** Relevant to the accomplishment of the expected benefits of the ULS;
	A	**Accessorial –** Unessential activities that will improve service provided/ satisfaction.

Table II. Assessment scale

5.1 Quality focus

The HFF is an institution of certified quality, having received in July 2009 the 2nd re-accreditation by the CHKS Healthcare Accreditation and Quality Unit (HAQU), as well as the re-accreditation of several services by the ISO 9001:2000 norm.

From its inception, the ULSAS should be characterized by an organizational policy aimed at high quality standards, taking advantage of the good work the HFF has seen recognized in the accreditations and the good examples in the Primary Care level to boost further improvements. We suggest several measures that are in essence supported by the enhancement of multidisciplinary work and by the recognition of the interdependency between different professional classes, all essential to a proper patient care.

Quality focus 

Resp: Administration Board; Quality and Safety Office **Date:** 2010 (continuous);

Focus on the quality of the service provided, establishing quality indicators in order to periodically review the achievement or not of those goals. The quality goals should be aligned with the desired humanization of care and focused on health gains. Although the ULSAS is a unique entity, goals should be distinct between primary and hospitalar care. The achievement of a global quality certification for the ULSAS (ISO 9001) should also be pursued.

Establishment of a health observatory 

Resp: Administration Board; Health Observatory **Date:** 2011

This observatory should integrate professionals mainly from the public health and epidemiology areas. The main objectives of the observatory will be the continuous health characterization of the territory and early detection of health/disease trends; implementing a periodic survey and collecting continuously health indicators from the ULS units. This activity is essential to implement adequate, tailored measures; being able to adjust them over time accordingly to the detected trends.

Impact assessment studies 

Resp: Administration Board; Quality and Security Office **Date:** 2010 (continuous);

In order to detect problems as soon as possible, being able to assume and correct errors, we recommend the implementation, from the inception of the ULS, of an impact assessment plan in order to evaluate consistently the impact of the measures assumed. The main goal of the impact assessment studies is to understand to what extent the implementation of the ULS and of the specific implemented measures assist or not the achievement of the predicted benefits, being able to adequate action accordingly. This activity will assume relevance both internally to the ULS Amadora-Sintra and to other ULS's to be implemented in the future.

Maintenance and renewal of structures and equipments 

Resp: Administration Board; Maintenance Department **Date:** 2012 (continuous);

The quality of the infrastructure is at the baseline of the quality of the service provided. An analysis of the needed investments has to be made, prioritizing the most emergent needed interventions. Some interventions at the infrastructural level need to be done both on the hospital and on some of the ACES, which leads us to predict potential conflicts, the decisions should be based on criteria such as expected costs *versus* predicted benefits to the citizens, moderated by the sensitivity of the Administration Board.

Expansion of the Citizen's Office 

Resp: Administration Board; Quality and Security Office **Date:** 2010;

The creation of a central office with branches in all units of the ULSAS would have the objective of listening to the citizen's voice, receive complains and suggestions, and being available to answer and receive the citizens. The office would periodically suggest concrete measures to the administration board to implement, promoting a environment of continuous improvement. While the health observatory would focus on health related topics, the citizen's office would focus its action on customer satisfaction.

5.2 Communication

Communication will be one of the key success factors of the ULS, both at the internal and external level. The first in the sense of coordination and availability of information. The second in terms of renewal of the institutional image and of the re-education of the population in terms of services available and how to most efficiently use them.

5.2.1 Internal Communication

Common information system 

Resp: Administration Board; I.T. responsible **Date:** 2012;

The common information system is, single-handedly, the most expensive and strategically relevant of the measures proposed. A functional intranet system would induce, in one hand, health gains, due to the improvement of medical decisions given the better knowledge of the patient's history and current situation. On the other hand, it would induce efficiency gains by reducing duplicated acts and avoidable referrals of patients. The intranet system should also be able to automatically monitor key

management indicators. Here it is possible to assume one of two distinct paths, the first is to design and implement a new system, which would substitute the current ones; the second is to adapt the existent informatic systems so that an higher degree of coordination is possible. The first, being more costly, allows the implementation of a tailored system, since it does not have to be adapted to the limitations of the existing ones. On the reverse, we have to consider internal resistances towards the need to adapt to a new informatic organization and the time needed to adapt and then implement such a system. The second, being faster and cheaper, may lead to some limitations given the differences between systems used, the ULS Matosinhos used this approach, currently facing some limitations and the need to upgrade the system.

Internal Newsletter 

Resp: Administration Board; Communications Office **Date:** 2010;

Creation of an internal ULSAS Newsletter, with the main goal of disseminating good practices of both levels of care and promote an unity culture within the ULS.

5.2.2 External Communication

Development of institutional image 

Resp: Administration Board; I.T. responsible; Communications Office **Date:** 2010;

An institutional image is relevant in terms of creating an identity to the unit, with which people can immediately recognize the individuality of the ULSAS.

Improvement of the communication with citizens 

Resp: Administration Board; I.T. responsible **Date:** 2010;

Aligned with the proximity strategy of the USF's, the ULS needs to be as close to the citizen as possible. The HFF has already a citizen's office that has to be maintained and potentiated. Here some strategies may be adopted as text messaging, e-mailing or the start of an ULS newsletter.

Development of the partnership network 

Resp: Administration Board; I.T. responsible **Date:** 2010;

Involvement in the design of municipal health plans. Detection of social partners that can collaborate with the ULSAS to improve the service provided to the citizens.

5.3 Healthcare Integration

The topic of the healthcare integration mingles with the main purpose of the creation of the ULSAS. When discussing the ULS topic, it is frequent to reach the topic

integration of services *versus* integration of health care. The mere integration of services *per se* is insufficient to validate the creation of an ULS entity; the final purpose has to be related to the improvement of the health levels of the citizens and of the quality of healthcare provided. In order to accomplish these objectives, we need to achieve a superior level of integration – health care integration.

One of the main facilitators here, and considered by many as an essential investment to be made, is the integrated informatic system.

Creation of a debate group 

Resp: Administration Board; **Date:** 2010;

Inclusion of leaders from both sides, with the purpose of debating the main lines proposed in this preliminary work, designing over it and implementing concretely the renewed work plan.

Determination of the institutional organigram 

Resp: Administration Board; Planning and Control Direction **Date:** 2010;

An institutional organigram (appendix III) is proposed for debate purposes. We suggest a threefold division of the structure of the ULSAS. The Administration board and its support departments and consultive commissions; the clinical assistance area and the administrative, logistic and financial area.

Improved Patient Flow 

Resp: Administration Board; I.T. responsible **Date:** 2011;

Demonstrate clearly how patients are supposed to flow in the system, informing them of the available options and to which one are they suppose to head firstly in case of need. The Internet and posters at the units could be used for this purpose. Making the information on waiting times visible would also assist this goal, depicting the benefit of going firstly to the primary care units; on the long run, we can expect this information to have a pedagogical effect on the population, reinforcing that the hospital has a higher "usage cost". The system should be centered in the family physician, reinforcing his functions as the gatekeeper of the system.

Partial internalization of common complementary exams 

Resp: Administration Board; **Date:** 2011;

This measure has been implemented in the ULS Matosinhos with good results – cost reduction of over 20% since 2007. Practically, part of the exams requested at the Primary Care units would be performed internally (HFF), instead of being performed

at external entities as actually. Nevertheless, the capacity to bargain with external entities should be maintained, in order to accommodate periods of greater demand.

5.4 Education

The quality of the professionals is at the base of the success of the entity. The evolution of knowledge has led to an increasing partition between the knowledge of each professional, which became progressively more specific. An ULS intends to approach the health of the citizens in an integrated manner, and as so, several possibilities of synergies emerge. We propose two main measures, directed to strive towards the goals of excellence and continuous improvement.

Establishment of a Common educational center 

Resp: Administration Board; I.T. responsible **Date:** 2011;

This center will be responsible for the detection of human resources' needs, promoting an environment of continuous self-improvement and adjusting the educational sessions promoted to the needs detected.

Articulation with Academic institutions 

Resp: Administration Board; **Date:** 2012;

Continue to develop medical and nursing internships at both levels. Create lines of investigation with the universities. Promoting a favorable investigation environment - giving monetary incentives to professionals involved in investigation processes that are relevant to the ULS.

Library Access 

Resp: Administration Board; Library responsible **Date:** 2010;

The HFF has a well functioning library that its employes can access and use, this access should be extended to all ULS employes

5.5 Efficient Management

Adequate Resources to detected needs 

Resp: Administration Board; Planning and Control Direction **Date:** 2011;

Re-organization of internal resources, both human and material, adapting according to the real needs detected on the services. Focus on the optimization of work processes and on the main activities of the ULS, in order to progressively achieve higher internal production of value.

Creation of an internal auditing office 

Resp: Administration Board; **Date:** 2011;

The internal auditing will be responsible for the elaboration of the main procedures manuals, defining key controls (manual or automatic, preventive or detective) in order to harmonize the internal control of the institution. This service will also be responsible for the design of a risk management manual.

Internal Contracting 

Resp: Administration Board; Internal Auditing Office **Date:** 2012;

Evolution to a context where all units, from an USF to any hospitalar clinical department negotiate internally their contracts with the administration board. This currently occurs within the hospital and in the context of an ULS should take place with all units.

6. Final considerations

The ULS model is not a panacea to the structural problems of the SNS. In fact, the mere implementation of an ULS does not imply the coordination gains one could expect to observe with the integrated management.

It is known that most health care provision coordination problems emerge at the system's bridging points (from one level to the other), albeit they exist even within the same care level. Our study suggests that the creation of the ULSAS with its unique administration will assist the overcoming of barriers that difficult this coordination, therefore making the whole system more "user-friendly", benefiting the citizens of the region. Nevertheless, some prior investments are essential as the renewal of some of the infrastructures and a common information system.

There are new health trends emerging (namely the ageing of the population and the increase of chronic conditions), and therefore there is the need to adapt the system's structure to the population's changing needs. In this sense, the ULS can be helpful in that it would tend to improve the coordination between levels, thus improving the follow up of chronic patients and reducing the risk of re-hospitalizations, maintaining citizens in a healthier and less costly environment for a longer period. This is, it may support the achievement of better global health provision at lower costs.

Considering the implementation of the ULS, there is not a clear path to follow that can assure its success. The likelihood of success of this project lies on the capacity to

plan and involve people, assuming a certain degree of uncertainty. The present paper was performed as a preliminary work towards the ULS implementation and we expect that the discussion raised and the directions suggested can provide a solid base for further debate on the topic; ultimately leading to a smoother implementation process and a better regional health service provided to citizens at a lower cost.

We foresee that the ULSAS has the potential to be a successful project, which will lead once again the Amadora-Sintra region to step ahead and be involved in a health project with unique characteristics.

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Appendix I – Interviews Map

Date	Interviewee	Position	Duration
01.09.2009	Dr. Artur Vaz/ Dr Manuel Neves	HFF Administration Board	1h25
18.09.2009	Dr. Joaquim Martins	ACES VIII Executive Director	1h13
14.09.2009	Dra Helena Cargaleiro	ACES VII Executive Director	1h06
15.09.2009	Dra. Fátima Rodrigues/ Dra. Inês Loureiro	Sintra's Municipal Hall - Health Nucleon responsables	1h03
15.09.2009	Dra Clara Pais	ACES X Executive Director	2h14
14.10.2009	Dr. Fernando Martins	ACES IX Executive Director	1h05
30.10.2009	Dr. Torcato Santos	ULS Matosinhos Executive Director	1h17

Appendix II - Interview Guide

Purpose of the interview – This interview has the purpose of obtaining a deeper understanding of how Primary Care Centers relate with the Hospital Fernando Fonseca. The interviewer will gather information that will permit to diagnose the present situation and predict the foreseeable priority areas of intervention in a context of integrated management;

Conceptual organization – This interview-guide was created as a tool to allow a more systematic conduction of the interviews to be done in the Primary Care Centers, focusing the conversation on relevant topics and assuring that all the interviewees answer the same main questions. This is not a rigid guide of pre-determined topics from which the interviewer should not scatter. It intends merely to work as a conversation guide and therefore, it has a semi-structured configuration, allowing the interviewee the required leeway to express opinion;

Administration of the interview – This interview guide is to be applied individually by an interviewer in the above expressed context.

UNIT NAME _____

DATE: ___ /___ /_____

Good morning/evening. My name is Eduardo Machado and I am a student from Universidade Nova de Lisboa. I am developing my masters' thesis concerning the possible implementation of a new Unidade Local de Saúde (ULS) in the Amadora-Sintra region, which will integrate the management of all public health units in the region, involving both the Hospital Dr. Fernando Fonseca (HFF) and the Primary Care Centers (PCC) in this geographical area.

My intention is to collect as much information as possible so feel free to express your views freely and to extrapolate the questions towards other subjects that you may find relevant to the topic. I would like to ask your permission to record an audio file of this interview with the sole purpose of posterior treatment of the information collected.

Interview-Guide

Bloc 1 – Perceptions on PCC-HFF interactions

- In which ways does this PCC interacts with the HFF?

(Patients referrals, Information flows, direct contact between physicians)

- Do you consider the interaction between the HFF and this PCC to be fully functional? Can you name a typical situation where the interaction is essential and sometimes does not function well?

- What measures could be implemented to improve it?

(Do you believe that an integrated informatic system would benefit the PCC-HFF interaction?

Bloc 2 – Perception on PCC functioning

- Do you consider that a considerable proportion of the patients that go directly to the hospital could have been treated in a PCC instead? How would you deal with this problem?

- What is the capacity of this PCC in terms of patient input? How are the human resources organized? Do you operate at full capacity? What is the normal waiting time?

- Do you consider that there is a margin of improvement? How could it be explored?

Bloc 3 – Perspective on the establishment of an Amadora-Sintra ULS

- What is your opinion concerning a context of integrated management of the HFF and PCC in the Amadora-Sintra region?
- Do you consider that there is a margin for the improvement of the system as a whole with the integrated management system? In which sense?
- What kind of opportunities/benefits do you expect to emerge (e.g. health gains, efficiency gains)? Possible conflicts and how to deal with them?

Opportunities/Benefits

- Heath gains (common protocols, better articulation)?
- Efficiency gains (conjoint management of material resources)?
- Better communication between units?
- Structural flexibility?
- Knowledge exchange between institutions?
- _____?

Conflicts

- Management conflicts due to reorganization?
-Employee and institutional resistance towards a different system?
- _____?

Appendix III – Institutional Organigram

ULS Amadora-Sintra, E.P.E.