Comparative Analysis of Chronic Disease in the Portuguese Functional Units USF & UCSP

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Master's in Management

Supervisor:

Professora Doutora Generosa do Nascimento,

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ISCTE – Instituto Universitário de Lisboa

October, 2022

Department of Marketing, Strategy and Operations

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Acknowledgments

This study was based on a special appreciation for the area of Health and motivation to know and explore, in greater detail, relevant issues in today's society, particularly in the performance of the Portuguese National Health System. A complex environment that requires dedication and effort for those who genuinely seek to improve its functioning, working conditions, and the way users are treated with humanity, commitment, and respect.

My thanks to all health professionals who dedicate themselves daily to providing the best care and improving the lives of our people.

To Professor Generosa do Nascimento, for her sympathy and sharing of knowledge, who guided me through the various stages of my academic journey and agreed to help me and give a valuable contribution to this subject and final work.

To Dr. José Neves, for his availability and hours of conversation, for the help in developing this study, and for sharing a unique experience in the area and his work.

To my mother, Nurse Graça Santos, for her endless and tireless support throughout my life and journey and her precious help in data collection.

To the Executive Director Luísa Prates (ACES Sotavento) and Head Nurse Nuno Murcho (President of the Ethics Committee for Health) for their help, availability, and contribution to this achievement and proposed goals.

To my father, Luís Marques, for his ever-present support, sharing of knowledge, and discussion about the various topics covered here.

To my Cátia, for her patience and help in a long journey full of challenges. For walking with me side by side, sharing the same tiredness, and helping me to achieve my goals.

To my sisters, Adelina and Rute, who make me never forget my abilities, never give up, and always motivate me to give more.

To my daughter, Noa, who arrived during this phase, and whose smile brought the necessary joy for everything looks easier.

To my closest friends, who gave me the necessary motivation and strength to keep going, always forward.

To the health professionals and patients willing to participate in this study, creating a contribution of great value.

Resumo

Com o aumento da população idosa e mudanças do estilo de vida da população, a multiplicidade crónica têm-se tornado numa crescente preocupação em torno dos serviços de saúde, aumentando em número de casos e custo. A primeira fase de intervenção neste ciclo de cuidados começa, precisamente, com os Cuidados de Saúde Primários. Em Portugal, existem duas unidades de saúde funcionais, UCSP (Unidade de Cuidados de Saúde Personalizados) e USF (Unidade de Saúde Familiar) modelo A e B, cada uma com processos de trabalho distintos. Este estudo pretendeu encontrar dimensões de sucesso e de melhoria nestas unidades em torno do tratamento destes utentes crónicos e, com isso, consolidar o Valor na Saúde.

Para tal, desenvolveu-se um estudo exploratório onde foram aplicados 2 questionários, a 10 médicos e 152 utentes diabéticos e hipertensos, procurando compreender a opinião e experiência em torno do funcionamento das Unidades de Saúde. O tempo de consulta e a centralidade do serviço no utente, como o seu envolvimento, foram duas principais dimensões destacadas. Concluiu-se de que existe uma distinção de foco em cada modelo, e que o atual sistema de saúde não está ainda adaptado à realidade dos diferentes utentes. Ainda assim, a USF-A demonstrou ser capaz de manter um maior equilíbrio de satisfação e de ser um modelo a seguir com vista à implementação e alavancagem de novos métodos de trabalho.

Palavras-chave: Multiplicidade Crónica; Cuidados de Saúde Primários; Sistema Nacional de Saúde Português; USF; UCSP.

JEL Classification: I11 Analysis of Health Care Markets; I14 Health and Inequality; I18 Government Policy, Regulation, Public Health; I19 Other.

Abstract

With the increase of the elderly population and lifestyle changes, chronic multiplicity has become a growing concern around health services, with an increasing number of cases and costs. The first phase of intervention in this cycle of care begins, precisely, with Primary Health Care. In Portugal, there are two healthcare functional units, UCSP (Personalized Health Care Unit) and USF (Family Health Unit) model A and B, each one with a different work process. This study aims to find critical dimensions of success and improvement among these units when treating those patients with chronic conditions and, with that, consolidating value in healthcare.

To this end, an exploratory study was conducted with 2 questionnaires, to 10 physicians and 152 diabetic and hypertensive patients, to understand their opinion and experiences around the functioning of the health units. The main dimensions highlighted were the consultation time, centeredness of the service to the patients, and their involvement. That leads to the conclusion that each model has a distinct focus, and the current health system is not quite suitable enough for the reality of different patients. Still, USF-A proved to be capable to maintain a better balance of satisfaction and a model to follow for implementation and leverage new working methods.

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Nomenclature

ACES – Health Centers Group *(Agrupamento Centros de Saúde)*

ASCVD - Atherosclerotic Cardiovascular Disease

ARS – Health Region Administration *(Administração Regional de Saúde)*

IMP - Inappropriate Medication Prescription

HC – Health Center

MCD – Multiple Chronical Diseases

OECD - Organization for Economic Cooperation and Development

PHC – Primary Health Care

PHCM - Primary Health Care Mission

UCSP - Personalized Health Care Unit *(Unidade de Cuidados de Saúde Personalizados)*

USF – Family Health Unit *(Unidade de Saúde Familiar)*

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Introduction

The health care concept, in its true meaning, includes the profession of several subspecialties of clinical medicine, public health, nutritional, sanitary support and health infrastructure. Through this network of services, patient's care-cycle normally begins with prevention and goes on with disease management, preventing disease's reoccurrences and aggravation (Porter & Lee, 2013). In this matter, primary services represent an important rule by encompassing the crucial aspects of health care delivery (Hirshon 2013). People without any kind of preventive care are more likely to get a worst health condition by not identifying symptoms at a good time, to be hospitalized and use emergency services, which, consequently, brings to us more mortality and higher costs (Starfield, Shi, & Macinko, 2005).

As the case of study, Portugal has investigated through time, strategies to improve the national healthcare delivery to get the population closer to health care services. One of those strategies, in the reform of 2005, was focused on Primary Health Care (PHC) with the creation of the Family Health Unit (USF) (Biscaia & Heleno, 2017) in parallel with the existing Personalized Health Care Unit (UCSP). These two different units, although both providers of primary services, differ from each other in autonomy, retribution policies, incentives and objectives contracted (Order nº 24 101/2007).

Through the functioning of this new USF model along the years, patient's satisfaction has increased as well as quality, performance results and financial aspects. Being a good reference inside and outside, OECD (Organization for Economic Cooperation and Development) supports that all UCSP should be transformed in USF to deliver patients a high-quality service (OECD, 2015).

One of the most critical group of patients in primary care today, are the patients with Multiple Chronical Diseases (MCD) or multimorbidity, considered when possessing two or more chronical conditions, including diabetes, hypertension, cancer, cardiovascular or respiratory disorders (Wallace, et al., 2015). In those cases, patients require more attention in consultations or a more frequent attendance, comparing to the ones with acute diseases. In Europe, it is estimated that patients with multimorbidity are responsible for nearly 78% of primary care consultations (Salisbury, Johnson & Purdy, et. al., 2011), and tends to increase with aging population.

For this group of people with MCD, the use of multiple medicines, termed as polypharmacy, is frequently part of the treatment, where one or more medicines are prescribed for each condition. Although is something needed, polypharmacy is also associated to unfavorable outcomes such as bad drug reactions, mortality, and longer hospital stays (Masnoon, Shakib & Kalisch-Ellett, et. al, 2017). Inappropriate Medication Prescription (IMP) is one of the factors that lead to bad outcomes and can be in form of: prescribing medicines with more risk than benefit, omission of an indicated therapeutic method or over prescription for what a condition really needs (Cima, et al., 2011). This adverse practice, besides putting at risk patient's wellbeing and longevity, also brings serious repercussions on health expenditures.

The adoption of a patient centered approach is normally helpful in controlling those negative outcomes. This approach, known for striving "to tailor interventions to individual need" (Gillam, 2008, pp. 538; Unger, 2002), includes patient's involvement in decision making (Rao & Raslan, 2018), where, according to OECD (2017), the Portuguese system has a limited patient's involvement in decision making.

The interaction of the different factors that influence the healthcare delivery can be included in an interesting concept of Value in Health Care. This subject has been object of research by several authors. We can see, constantly, the difficulties of the health care system dealing with rising costs and the efforts among well-intentioned professionals in providing a quality service (Kim, Farmer, & Porter, 2013). According to Porter (2010, 2008) and Rao & Raslan (2018), value is defined as the results per dollar spent; and, we must know in a first instance, that the true value encompasses the measurement of all services around the patient and their needs. Improving value, requires enhancing an outcome without raising costs or, in other way, not compromising outcomes by lowering them (Porter & Lee, 2013).

This dissertation aims to conduct an exploratory study to analyze critical success factors and identify points of improvement in each of the health units (UCSP and USF model A & B). Gathering insights from both physicians and MCD patients, with diabetic and hypertensive conditions, will be possible to understand which functional unit returns more positive results in the care of this type of illness.

Structurally, it starts with a literature review, encompassing literature research of dissertation's main topics and a context of the Portuguese primary health care. Study methodology will be after described, with the qualitative and quantitative methods,

followed by the discussion of collected data. Finally, main notions of the study are agglomerated with conclusive ideas and valuable insights for future research.

Chapter I - Theoretical Content

1.1. The Health Care System

Health care system, in a global perspective, encompasses all "the institutions, people and resources involved in delivering health care to individuals" (WHO, pp. 105, 2003). Commitment in global health has expanded and the interest of the human wellbeing has increased services' delivery in both developed and developing countries. It is important to notice the evidence of the rise of funded research on the development of clinical features that brings to us new preventive, diagnostic and therapeutic methods, mostly technological solutions.

From European perspective, Health Care System tries to get a balance in individual freedom with community wellness by linking some aspects such as demand, provision, and funding. By demand, we talk about people in general, including workers, elderly or disable people. In provision, we can find healthcare providers as physicians, pharmacists, public and private sector. And funding, can come from sources such as government, public and private insurance companies. In the end, this system flow should be able to respond to society's needs, to provide the right access to health services and to be financially healthy. Nevertheless, the results depend on society's priorities and values, that are the base for the overall wellbeing (Odier, 2010).

According to WHO (2007), the concept of delivering health care services remains elusive when asking for the right objectives or definition. Will depend on the inputs from international organizations about priority health problems, which guide health services to prevent and control those priorities (Hirshon, et al., 2013). However, for Kim, Farmer and Porter (2013) the concept of delivery of health care means the provision of services to individuals which diseases have a concrete therapy. The provision should be always local, according to the living place of the patient; it is considered negative for the patient, if receiving care in a place with high class services and knowing that doesn't have social, geographical, or financial capacity to access them.

Access to health services came to be crucial to improve outcomes. The importance of reaching health services goes beyond the treatment of acute diseases. Preventive life-saving measures such as vaccines, are imperative, as well as the ability to treat both old and new diseases (Kim, Farmer, & Porter, 2013). Providers should be

frequently involved in promoting health care conditions in the community and bringing proximity to those services by developing the primary health care (WHO, 2003).

Value, as social scientists say, is subjective and depends on context. From the perspective of a patient in a particular service, if preventing the heath condition worsening, value may be infinite. On the other hand, from management point of view, the concept could be more difficult to find, if an investment in certain treatment can damage the budget of another (Kim, Farmer, & Porter, 2013).

Through literature on recent studies and articles, there is a consensus that value is defined by achieving the best outcomes for the patient at the lowest cost (Porter & Lee, 2013). Providers of health care services are interdependent and, in this way, for an assertive measurement, it is not enough an analysis of a singular occurrence, but the entire cycle of health care services provided to patients, since diagnosis until the expected result, including a new evaluation in case of future disease recurrence (Porter, 2010). It is important the objective of value creation and not just cost reduction, in other words, do more with less. In contrary, initial cutting costs may be translated in a bigger increase long term spending (Porter, 2008). Based in an adequate measurement between quality and cost, reporting and outcomes comparison, this will lead to health care services improvement.

In other perspective, according to Rollow & Cucchiara (2016), patient's value can be described with five concetps: *Health* – the balance, experience and functioning of dimensions such as somatic/physical, emotional/cognitive productive/social and spiritual; *Cure* – renewl one or more of the health dimentions above, normaly somatic/physical; *Healing* – improvement of those dimentions; *Health Preconditions* – there are food, housing support, activities, jobs and income; and the *Experience of care* – all about the relationship, acess, technical quality and amedities. For each five concepts, value is perceived in a different way according to the type of patient. If we talk about the manteinance of health in each dimension, then healthy people will value. Cure is valued whenever is possible, mainly in acute conditions. For chronically illness, healing is valued, as well for supporting disable or disavantages communities. In overall, major of people value experience of care.

Althoug value has different meanings, depending on context, it is intended that leveraging value starts with prevention for a specific health condition or a set of associated conditions. The investment in primary care and disease prevention has

crucial importance on strengthening the health system (Walt, 2004), in both life quality and financial resources.

1.2. Primary Health Care

1.2.1. Patient-centeredness

Primary Health Care can be characterized as a "whole-of-society approach to health and well-being centered on the needs and preferences of individuals, families, and communities (...) and interrelated aspects of physical, mental and social health and wellbeing" (WHO, 2019).

According to Rao (2018), he states that there are four components that are patient centered. *Access*, characterized, for instance, by convenience, considering the lack of flexibility in working hours or in patient's family responsibilities, as well as the geographical area and adequate transportation. *Respect*, which characterizes the patient's influence on decision-making, as well as on organization's visibility in terms of patient satisfaction. *Safety*, which includes episodes of infections acquired on site and measures imposed to prevent such events. Finally, the *outcomes*, an important dimension that can encompass all the previous ones; the author mentions that the differential factor is in accurately determine the outcome to be achieved, the best way to measure it and the comparison between groups.

For past ideas that are still valid today in patient-centered objectives, Starfield, Shi & Macinko (2005), indicate six principal benefits of PHC:

First, PHC allows the *access* to health services for poorer population groups. In contrast with specialized care, primary care is associated to a more equivalent distribution in the population, reducing differences between subgroups.

Second, PHC contributes for the quality of health care: physicians of primary care can treat general diseases as good as specialists' physicians. The major difference is the focus where, at first, patient condition is analyzed in the context of other problems that patient has or may have had and not just the specific condition itself. For less common conditions, specialists support is important.

Third, PHC has a huge impact on prevention. By stop smoking or having an active and healthy life are two examples of a wide range of actions and advises. Those general practices result in an increase state of patient's health condition.

Fourth, PHC have an important role in managing health problems and treatments before requiring emergency services and hospitalization.

Fifth, the accumulated characteristics of PHCs can provide a more appropriate care to patients; the objective is to develop patient's health outcomes in a generalized manner and not just to improve a specific condition. The initial contact of primary care services over time reduces the need for specialist physicians (Hurley & Taylor, 1989; Martin & Richardson, 1989). Furthermore, the continuity of this services is statistically correlated with greater patient satisfaction, better adjustment to their needs and, in turn, fewer hospitalizations and use of emergency services (Freeman & Hjortdahl, 1997). Continuous monitoring of patients has an impact on the probability of physicians to identify psychosocial problems that influence their health status (Gulbrandsen, Hjortdahl & Fugelli 1997). Both the first contact and the continuity of care allows an efficient work timesaving in the consultation process, laboratory tests and health expenses (Forrest & Starfield 1996, 1998; Hjortdahl & Borchgrevink 1991; Raddish, Horn & Sharkey 1999; Roos, Carriere & Friesen 1998). PHCs also gives the possibility to choose a physician (Starfield, 1998), creating a healthy relationship in continuous monitoring.

Finally, the unnecessary use of specialized services tends to decrease. Several studies conducted in the United States point out that, to a certain extent, there are no major effects in improving population's health status with the increase of specialists in action. The use of specialists for a PHC service may have adverse effects on the cure of the patient's health with inadequate use of diagnosis and therapeutic modalities. In addition to costs, the focus on the specialty will not provide a complete diagnosis and the effectiveness of the service may be further reduced., both in identifying the problem and its treatment.

1.2.2. Disease Management and Multiple Chronic Diseases Impact

Disease management consist in a set of programs performed to reduce costs and improve outcomes in patients with certain conditions (Rothman & Wagner, 2003). One important group to manage are patients with multiple chronic diseases that influence primary care strategies. It is proved, that patients with chronical conditions required more time for medication and lifestyle counseling (Rothman & Wagner, 2003) According to Beaglehole, et al. (2008), due the increase of aging population it is

predicted that chronic diseases tend to intensify, such as diabetes, cancer, heart disease, hypertension, and mental disorders.

In Portugal, citizens with the age of 60 or more years, represent 21,8% of the population and the prospect is a steadily growth over the coming decades (INE, 2019). A study conducted in 2015, with individuals between ages of 25 and 64, concluded that 57,8% of them had at least one chronical disease, with 37,4% having two or more chronical conditions. In the list, *hypertension* was the most reported in both male (25,1%) and female (26,1%) individuals (INSA, 2019). Hypertension is a strong risk factor when talking about heart failure, microvascular complications, atherosclerotic cardiovascular disease (ASCVD) and is also common among *diabetic* patients. In diabetics, ASCVD is the main cause of morbidity and mortality and the greatest source of diabetes's direct and indirect costs (Boer, et al., 2017).

Primary health care has a true impact on prevention and control on these situations, by detecting at an early stage and combine pharmacological and psychosocial interventions. PHC strategies at this stage, will not be completed if not in accordance with public policies for chronic disease prevention. These types of diseases persist over time and require a long-term monitoring and promotion of the right treatment, which is a responsibility of primary care to deal with it in the best way possible.

Health care of older adults with multiple chronic conditions can be expensive tough and some recommendations may not always be focused on what patient needs the most; an intervention for one condition can compromise the treatment of another. The decision making in this process should involve consideration of several factors such as benefits, burden and harms to determine the best option according to health outcomes goals and individual preferences (Boyd, et al., 2019).

Cost-effectiveness of these increasingly necessary preventive measures tends to be a real challenge since high-cost patients are the ones with multiple chronic diseases and mental illness. Higher costs in health care are normally concentrated in a small group of patients so, it is important that measures chosen are tailored according to patient's needs, avoiding unnecessary and ineffective care (Wammes, et al., 2018).

Medication is one of the treatments that can be used to control diseases. Using the right type of medication for a given patient can maximize the benefit for both cost-effectiveness and quality delivery. Multidisciplinary care teams working in a coordinated way and using the same patient's medical record could improve the quality of health care delivery. It is proven that pharmacists can improve on prescriptions

reducing medication costs and improving clinical conditions, however, pharmacist group are not, yet, integrated in primary care services (Dolovich, et al., 2008). In this way, primary care should have the ability to choose the right option taking into account both patient's health and service's cost.

With the long-term monitoring of patients with multiple chronic conditions, safety in medication has become a topic of concern. Some studies clarify that inappropriate medication and prescriptions are given to patients, specially to the elderly ones. This justifies many occurrences of new anomalies after taking the non-appropriate medication. Patients when exposed in a long period to potentially harmful medication, the risk of hospitalization is higher than not taking those medicines. This kind of behavior should be improved by physicians, being updated of the best practices and pharmaceutical advances, otherwise, it will be harmful not only for patient's health condition but also for health expenses (Lin, et. al., 2008)

1.2.3. Pharmacotherapeutic prescription

Chronic diseases have become the largest cause of death and disability, namely, with aging population, requiring multiple medications. In developed countries, 30% of the patients over 64 years are taking 5 or more prescribed medications (Maddison & Fisher, 2011). Five or more it is intended as a *major* situation, where this phenomenon is called of polypharmacy (Cima, et al., 2011). Adherence to prescribed medication is higher in patients with acute conditions comparing with the chronic ones. This poor adherence, consequently, led to more problems and higher healthcare costs (Khunti, et al., 2017). An interesting fact, in a study performed by Hernaez, et. al., (2019) concluded that prescription's expenditure per patient was higher among physicians with less patients, trying to manage and moderate prescriptions.

In this matter, inappropriate medication prescription (IMP) is nowadays a concern and a significant risk for patient's health (Opondo, et al., 2012). IMP is the action that causes an adverse drug event when an equal or more effective alternative exist and was not chosen (Fick, 2003) or, in other way, the failure of achieving the best outcome of the medication used (Lund, 2010). Specially in older people, this has potential risk factors that can cause several undesirable situations. Physiological changes are some problems associated, like reduction in hepatic and renal function, causing consequently cognitive and visual decline (Opondo, et al., 2012).

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According to Curtin, et. al. (2019), each country has their own criteria to improve prescription's quality for patients. Over time, criteria has been evolving and adapting as a tool to evaluating quality of care, like Beers criteria developed in United States, 1991. This was the first criteria having a set of medications to be consulted to improve prescriptions quality, however, it was later connected to a high risk of unplanned hospitalization and, consequently, some regions created derivations of that criteria. The Beers criteria had negative outcomes in US, Australia, and Taiwan but not in Europe, due the fact some medications are barely prescribed or don't even exist in Europe's formularies. These criteria have been updated over time and is still the most use in healthcare services.

Another and more positive example, is the FORTA criteria. These criteria, initially created in 2005 by German pharmacologists, evolved over time and, in 2015, were created and validated six region-specific European list, being used nowadays, and called EURO FROTA.

Existing criteria exist as tools to support medical decision, improving prescriptions and medical care. Physicians do not know all the best decisions, but they can optimize their choices by being oriented with a valid tool. A universal tool does not exist, but a valid tool should be adapted in the circumstances of each region according to the type of medications commercialized in that market.

Portugal's ageing population is having a big growth rate. Patients are who more frequently use health care services and consumes more medication, concerning the existence of pluripathology (Souto & Pimentel, 2018). In a study made in the United States, it was observed that 39% of adults with more than 65 years were taking five or more medications per day (Kantor & Rehm, et. al., 2015). In a study made about the primary care service in the North of Portugal, it was noted that the average number of medication in patients with more than 18 years was of 2,94 and that 91,1% of them were elderly with more than 75 years, taking medication for chronical diseases (Cima, et al., 2011).

Soares & Llimós, et. al. (2008) operationalizes Beers criteria in Portugal, being the most used criteria of inappropriate medication prescription, adapted to the Portuguese market.

1.2.4. Performance Indicators

According to Perera, Dowell, Crampton, & Kearns (2007), the use of performance indicators will encourage processes changes to improve quality, predicting better outcomes in both patient's health and financial issues. It is assumed, that the indicators chosen will provide reliable measures, as a tool for the improvement of value.

In primary health care, there are exiting good and bad practices, making certain elements measurable and others don't. It is a complex environment with multiple agents acting and performance indicators focused on specific topics. In this way, performance indicators will give only partial measurement of the performance and organization's quality.

Selecting a set of indicators, it isn't a job for a single group of agents, since it has impact in all organization. It is important to be discussed with major elements like policy makers, clinicians, investigators, end users and others, getting a useful agreement on appropriate indicators for the service.

Past approaches like Crampton, et al., (2004) for The New Zealand Journal, were already defending the focus on multidisciplinary teams in primary health care services. The complexity of the service and all its participants suggest that indicators should reflect and measure different dimensions, as Population Health, Patient-centeredness, Clinical or Organizational. Furthermore, each dimension should not be measured with equal weight, giving to each dimension the necessary number of indicators to evaluate what is expected.

There may be some barriers in the implementation of performance indicators in organizations. Firstly, in some cases, it is possible that some providers consider that certain indicators or a set of them isn't appropriate for the service's context. Another way could also be the perception of indicators usability in a negative way, by controlling behaviors and outcomes. In a governmental view, although indicators are truly valued to improve service's quality, data colleting could be synonym of more costs.

1.3. Context of Portuguese Primary Health Care

The National Health System, created in 1974 and enshrined by legal regulation in 1979 (Baganha, Ribeiro, & Pires, 2000; Miguel & Sá, 2010), allowed widespread coverage of the national territory by Primary Health Care. Until then, a centralized structure was

established in the Health Regional Administrations (ARS), making contact between the sub-regions and the Ministry of Health (Miguel & Sá, 2010; Branco, 2001; Baganha, Ribeiro, & Pires, 2000;). The ARS were endowed with administrative and financial autonomy, responsible for the distribution and management of resources, activities coordination, technical and administrative support, and assessment of health care service providers (Simões & Lourenço, 1999), being these institutions the Hospitals and primary Health Centers. Until then, health care centers had a weakened position regarding hospital units (Baganha, Ribeiro, & Pires, 2000). Primary Health Care (PHC), which is always considered the basis of the Health System, had a lack of autonomy and a disproportionate distribution of funds and resources in relation to the Hospitals. At that time, Hospitals already had a wide use of emergency services that brought several problems: on one hand, worsening the accessibility of primary health care and, on the other hand, affecting hospital services (Baganha, Ribeiro, & Pires, 2000). All of this led to dissatisfaction and lack of motivation among health professionals, undermining their capacity to provide a quality care (Miguel & Sá, 2010; Branco, 2001).

Was in this situation that emerges experiences of new organization and remuneration schemes that included performance incentives (Miguel & Sá, 2010; Branco, 2001). Initiating in 2005 an important reform in Portuguese PHCs through the Primary Health Care Mission (PHCM) initiative - a program that aimed to "create the legal and operational instruments that allow the refocusing of the Portuguese health system on PHCs and, at the same time, monitoring this new plan for care organization" (Pisco, et al., 2006, p. 2). This mission led to a major historical reform, intervening in areas such as the autonomy of primary health centers, implementation of Family Health Units (USFs), development of human resources, development of information systems, development of competencies, among others.

1.4. Portuguese Primary Health Care Today

Primary health care in Portugal is considered the pillar of the National Health System, with an important role in chronic disease with ongoing management, first-line care in acute disease and in promotion and prevention actions, namely Maternal Health, Oncological Screening and Family Planning. (MH, 2018).

The Portuguese National System consists in five ARSs (North, Centre, Lisbon Vale do Tejo, Alentejo and Algarve). As a result of the reform plan in 2005, there has

been a decentralization of the ARS to the founded Health Centers Group (ACESs) (Miguel & Sá, 2010; Branco, 2001), being now 55 ACESs (SPMS, 2022), aimed at providing primary health care to the population in each geographical area (Decree-Law nº 28/2008, articles 3 and 7). Each ACES is governed by several functional units, including the UCSP - Personal Health Care Units and the USF - Family Health Units (Miguel & Sá, 2010).

These ACESs have been witnessing a steady and increasing growth in the last decade of Registered Health Entities on primary care services (HM, 2018; ERS, 2016). According to the public tool BI-CSP (SNS, 2022) among them, there are registered 315 UCSP and 604 USF – 290 model A and 314 model B, including approximately ten thousand health professionals for six million users. It should also be noted that there was an increase spending on human resources, however, a study conducted by the Coordination for the Reform of PHC, based on data from the Ministry of Health, showed that the USF-B have more efficient and immediate medium/long term gains, offsetting HR spending and showing very positive results (Pereira, et al., 2018).

Despite the success and growth of PHCs, the new health system experienced a setback and a stoppage in retirement in 2017, identifying dissatisfaction of the coordinators with both the Central Administration and at regional level with the ARS (Biscaia, Pereira, Cardeira, & Fehn, 2017). Among the problems identified, were information systems at the software level, institutional incentives, the career development of the Clinical Secretary and, finally, other equipment apart from IT devices, such as clinician's equipment. In the number of accreditation processes, those are already lower from 2015/2016, since 2018 the number of USFs starting activity was the lowest recorded (Roberto, 2018). The creation of model A and evolution to USF-B has stagnated, hindering the access of health professionals to a more motivational regime. In the contracting process[1], coordinators consider that there is no transparency, and there is disagreement about the indicators applied, stating that they should be defined according to the context of the unit. Decentralization problems still reside, requesting more autonomy of the ACES and communication between USF - ACES – RAG, where the system is still considered very centralized and bureaucratic, leading to slow interventions. There is also a lack of communication between HCs and Hospitals, which inhibits health care of improving (Boas, 2018).

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[1] Internal Contracting - Between ACES and Functional Units.
External Contracting - Between ACES and ARS. (ACSS, 2017)

It is at this stage, based on the weak political support, that the health system anticipates a set of challenges for the near future. Even if the results are satisfactory, there is a long way to go towards the desired performance.

1.4.1. Definition and differences between UCSP and USF

The UCSPs and USF are Functional Units inherent to ACESs. In each ACESs, it must comprise at least one UCSP or USF. These units are composed of multidisciplinary teams with technical and organizational autonomy in cooperation with the other functional units of the ACESs (Decree-Law No 28/2008, Article 8).

USFs are defined as "elementary health care units, both individual and familial" (Decree-Law 298/2007, Article 3, No. 1) that contract performance objectives and goals related to accessibility, adequacy, effectiveness, efficiency, and quality of services provided (ACSS, 2017).

These units can be organized into development models A, B and C, having current application just the models A and B, differentiating themselves by their autonomy degree, remuneration and incentives to health professionals, financing model and respective legal status. Model A refers to an initial learning phase, teamwork improvement and a first step towards internal contracting and development of performance appraisal practices. In this model, professionals will be able to benefit from additional services and institutional incentives, reverting to the USF. Model B assumes a higher degree of operational maturity than model A, accepting a higher level of contracting. This model brings to the health care professionals, financial benefits in form of variable remuneration through performance (Order nº 24 101/2007).

The UCSPs just have a similar structure in ensuring the accessibility, continuity and overall care provided, with a team composed of physicians, nurses and administrative staff not integrated in the USFs (Decree-Law No 28/2008, Article 10).

The evolution for each model, from UCSP to USF-A and then USF-B, is based on the voluntary application and initiative by the multi-professional team (Biscaia, Pereira, Cardeira, & Fehn, 2017) a long with observation of the access terms and plan defined by the Primary Health Care Mission, as well as the acceptance of a contracting level with more demanding requirements upon performance. According to a comparative study conducted by ERS (2016), we can state that the present UCSPs are those whose professionals did not join or were not able to constitute an USF.

Furthermore, similarly to what occurs in the USFs, UCSPs do not have a participative management of professionals neither autonomy in fulfilling the action plan. Also, institutional and/or team awards based on performance are not attributed.

1.4.2. Contracting process and Indicators

The contracting process is based on the negotiation of a set of indicators that stablish guiding principles for objectives, activities, and outcomes to achieve. Since 2017, this process has been extended the focus for the continuous evaluation and monitoring of good practices and performance according to the different areas and dimensions. In other words, focusing on the progressive evolution instead of achieving goals (ACSS, 2018).

There are two types of contracting process: Internal – an action plan between ACES and Functional Units; and External – a performance plan between ARS and ACES. The National, Regional and Local plans should be aligned to get the best outcomes (ACSS, 2017).

All the contracting process imply, after stablishing the indicators, the monitoring and evaluation of the different participants to get two things: Recognize and assign incentives to units with higher performance or develop new processes to the ones with less performance. Furthermore, it is useful to recognize difficulties and limitations, being considered in the performance level (ACSS, 2017)

According to the contracting program for 2022 (ACSS, 2022) and complementing indicators definition, evaluation focus was set by, firstly, defining areas, sub areas and respective dimensions to be monitored (table 1). Based on the dimensions presented, indicators were defined (table 2).

Table 1 - Multidimensional Matrix – USF/UCSP Contractualization, 2022

Area	Sub-area	Dimension
Performance	Access	Coverage or Use
		Customization
		Maximum Response Times Guaranteed
		Consultation on the day itself
		Distribution of In-Person Consultations on the Day
	Health Management	Children and Youth Health
		Women's Health
		Adult Health
		Health of the Elderly

	Disease Management	Diabetes Mellitus
		Hypertension
		Respiratory Tract Diseases
		Multimorbidity and Other Types of Disease
	Prescription Qualification	Pharmaco-therapeutic prescription
		CDTM[2] prescription
	Patients Satisfaction	User Satisfaction
Services	Welfare Services	Character Assistance Services
	Non-welfare Services	Clinical Governance Activities at ACES
Organizational Quality	Continuous quality improvement	Access
		Continuous Quality Improvement Programs and Integrated Assistance Processes
	Safety	Safety of Patients
		Safety of Professionals
	Patient-Centeredness	Patient Involvement
Professional Training	Internal	Training of the multi-professional team
		Training of Interns and Students

Table 2 - Multidimensional Matrix – USF/UCSP Contractualization, 2022

Sub area	Dimension	Indicator
Disease Management	Diabetes Mellitus	36 – Patient proportion DM with GTR register
		37 - Proportion of patients with diabetes, with last year's diabetes surveillance nursing appointment
		39 – Proportion of DM with last HbA1c <= 8,0%
		261- Patient proportion DM with foot ulcer patients
		274 - Proportion of users with type 2 diabetes and indication for insulin therapy, to make appropriate therapy
		275 – Patient proportion DM type 2 in metformin monograph therapy
		314 - Proportion of users with diabetes with last blood pressure value over 140/90 mmHg
		315 - DM proportion with LDL-C < 100 mg/dl
		350 - Cost of Diabetes Mellitus Patient with Therapy
		351 - Cost with therapy for patients with controlled Diabetes Mellitus
		382 – Proportion of adults with DM with diagnosis
	Hypertension	18 – Proportion of hypertension patients with IMC (12 months)
		20 – Proportion of hypertensive < 65 A, with PA < 150/90
		23 – Proportion of hypertensive with risk of CV (3 A)
		352 - Cost of therapy for hypertension patient
		353 - Cost of therapy for the patient with controlled hypertension
		383 – Proportion of adults with HTA, with diagnosis.
Prescription Qualification	Pharmaco-therapeutic prescription	255 - Ratio of quinolones among invoiced antibiotics (packages)
		257 - Proportion of cephalosporins among invoiced antibiotics (packages)
		259 - Coxibs ratio of invoiced non-steroidal anti-inflammatory drugs (DDD)
		276 - Ratio of the sum of prescribed DDD in PPD-4 inhibitors and in oral antidiabetics

[2] Complementary Diagnostic and Therapeutic

		354 – Expenditure with MCDT prescription per standard registrant
18		378 – Proportion of PVP[3] medications prescribed by the Family Physician in a private context
		409 – Proportion of patients with no long-term prescription of anxiolytics, sedatives, or hypnotics, adjusted for a standard population

[3] Retail Price

Chapter II - Methodology

In this research, is used a qualitative and quantitative exploratory method in two functional healthcare units, UCSP (Personal Care Health Units) and USF (Family Health Units). Particularly in the FHU unit, will be analysed units of model A and model B. Geographically, the research will be carried out on the constituent units (USF and UCSP) of the ACES Algarve Central and ACES Algarve Sotavento; the choice was made for the closeness and convenience of the region to apply the investigation.

As data collection technique, is used two types of surveys: one for doctors and another for patients. Further on, as data treatment technique, is carried out descriptive statistics and content analysis.

2.1. Medical approach

This online survey comprises open-ended questions based on a semi-structured qualitative analysis and a quantitative scale question. Open questions have been selected because this is an opinion survey, due to the criticality and complexity of the topic, allowing capturing a free and authentic response (Malhotra, 2006). The questions that comprise the survey were based on concepts from the theoretical review conducted and formed to find answers to the proposed objectives (Annex 1).

Requests for participation were sent to each of the Health Units belonging to the ACES Central and ACES Sotavento. According to SNS (2022), there are 153 medical professionals in ACES Central and 43 in ACES Sotavento.

For this analysis, *Gioia* methodology was used. As Gioia et al. (2012) refer, this method aims to highlight the respondents' testimony and collect a proper discourse of experiences. Prior theoretical content analysis often brings judgemental lens to the research. On the other hand, this method allows the interviewees' voices to be placed in the foreground, creating space for emerging new concepts and their deepening.

In a first analysis, data and accounts collected from respondents are placed as 1st order concepts. Disorganization and the wide range of data collected are expected at this stage. The objective is to discover patterns and similarities between them and then to reduce and organize the list of concepts established.

The next step is to structure the 1st order concepts, aggregating them into categories based on their similarities and then forming the 2nd concepts. This aims to

understand which topics are being discussed and whether they have an existing theoretical basis. A third phase is to create a set of aggregated dimensions of these same 2nd order concepts, creating an overview of the topics to be discussed. This concludes the basis for building the data structure (Annex 3).

2.2. Patient approach

This survey, distributed in paper format, is directed to respondents with one or both chronic disease: Diabetes and Hypertension (Annex 2). It was distributed among the ACES Sotavento population due to convenience and accessibility for the study, with a total of 300 surveys, 50 per each of the 6 Health Units chosen.

The survey was based on multiple-choice, closed-ended responses and structured collection (Malhotra, 2006), complemented by two open-ended questions to identify new concepts. Like the medical survey, *Gioia* methodology was also used to analyse the open-ended questions, building the second data structure (Annex 4). The formulation of those questions was based on concepts from the theoretical review, carried out to find answers to the objectives proposed.

It was anticipated that most of the sample surveyed would be elderly. Thus, the survey is characterized by its simplicity in the number of questions and the type of question-and-answer options to facilitate its completion and understanding.

Chapter III - Results and Discussion

In this chapter, both medical and patient survey outcomes will be discussed. Content results will be described, compared, and completed with some considerations and reflections to help with conclusions.

3.1. Medical approach

The medical survey was distributed, and it was possible to get a sample of 10 valid responses (Annex 1). It is unclear the exact number of professionals that received this survey, however, considering the existing 196 medical professionals among both ACES (SNS, 2022), this corresponds to a 5.1% response rate. From this, 5 belonged to the ACES Central and 5 to the ACES Sotavento. Among the Health Functional Units, 6 respondents belonged to the USF model B, 2 to the USF model A, and 2 to the UCSP Unit (table 3). Due confidentiality procedures, the Unit names were not identified.

Table 3 - Number of respondents per ACES

	UCSP	USF-A	USF-B	%
ACES Central	1	1	3	50
ACES Sotavento	1	1	3	50

Analysis of aggregated dimensions

The 1st dimension under analysis corresponds to understanding *Value in Health in the PHC context* and is divided into 2nd concepts of *Clinical Management* and *Patient Management*.

It should be noted that the 1st Order Concepts referring to *Clinical Management* correspond exclusively to reports coming from an USF-B environment. That is, topics related to working conditions, performance indicators, and resource management are referred to this model, which values methods that allow maximum efficiency for an expected result in the patient.

The *Patient Management*, more comprehensive to the opinion of the different models, already translates the existence of a holistic and patient-cantered vision, capable of establishing measures for prevention, treatment, and Monitoring.

The 2nd dimension seeks the *Opinion of the organizational models UCSP, USF-A, and USF-B* of health professionals. It is divided into three 2nd order concepts:

Organizational Inequalities and Improvements, *Performance Indicators Improvements*, and *Positive Recognition*.

To be highlighted, through the experience of those who have worked in the three models, inequality starts with the valorisation of processes and not quality, not distinguishing between professionals and patients. In addition, there is also inequality in remuneration. Professionals from USF-B and USF-A also mention the existence of indicators that do not translate the creation of Value in Health or are not very ambitious. However, professionals from USF-A and B, support this organization, setting an example to follow.

The 3rd dimension seeks to identify ideal *General parameters in treating chronic patients*, subdivided into two 2nd order concepts: *The Patient Experience* and *Organizational and Resource Management*.

Within the *Patient Experience*, the opinion from UCSP reports the need to have lists with an adequate number of patients per physician to provide the necessary response, and values processes related to Detection, Treatment, and Monitoring. Within the scope of USF-B, consultations with an adequate (longer) time, the involvement of family members or the closed ones throughout the Monitoring/treatment, and also the investment in patient literacy, meeting the concept of the patient centeredness, and the involvement in discussion and decision making.

As for *Organizational and Resource Management*, there is an agreement in the three models that there should be a multidisciplinary team with specialties and a better communication with the hospital units. The holistic diagnosis and approach of the patient become increasingly essential at any stage (Prevention, Detection, Treatment, and Monitoring). Particularly in the USF-B model, there is a strong mention in articulating the service with the Long-Term Care Unit (UCC). The status of the informal caregiver (people close to the patient) is also mentioned, calling for training by the necessary medical professionals. In parallel, social, and psychological support has been discussed as an integral part of the Monitoring.

The 4th dimension seeks to explore the *Health Units' spaces for improvement in the treatment of chronic patients*, dividing into 2nd order concepts the *Gaps of Patient Experience* and *Organizational Gaps*.

Considering the analysis made in the previous aggregated dimensions, where USF-B elements gave more voice in their opinion at the organizational level, speaking now about practical improvements in their Unit they were an exclusive voice in the

Gaps of Patient Experience. Out of 6 respondents from the USF-B model, 4 of them highlighted *Consultation Time* as a clear need in the monitoring of the patient. They also emphasized prevention strategies (which have been lost with the "mechanization" of the processes), family involvement, and easier access to services when the patients need them, since scheduling appointments is not always sufficient.

In terms of *Organizational Gaps*, there are themes distributed among the models, namely, hiring more professionals, professional training, shorter patient lists per physician, fewer bureaucratic tasks, and communication with hospitals.

Finally, the 5th dimension portrays the *Challenges to the evolution and stability of the models*, with the 2nd order themes being *Organizational* and *Professionals Involved*.

In terms of *Organizational* challenges, USF-B stands out, mentioning the challenge of maintaining the standards of quality and accessibility of the consultation and the compliance with indicators that do not indicate the actual health status of the patient. Here we have two crossed poles because performance analysis is based on pre-established indicators. How can we guarantee the quality of care if these indicators are not directed to that end?

As for the *Professionals Involved*, the UCSP mentions a lack of motivation to evolve to the following models, USF-A with a lack of training in the secretariat and nursing professionals, and USF-B concerned with the lack of medical professionals to replace those who will soon retire.

In addition to the open questions in the medical survey, a rating question was also asked, based on ten analysis aspects, according to parameters discussed throughout the theoretical context. The evaluation score ranges from "0-very negative" to "4-very positive". The values shown represent the average for each aspect.

Table 4 - Average values about aspects of medical opinion

Analysis Aspects	UCSP	USF-A	USF-B
Quality of service	2	2,5	3
Adequate service time	2	1,5	2,5
The efficiency of resource use/cost-effectiveness (material and equipment)	1,5	2	3
Effectiveness in results	3	2,5	2,8
Professional satisfaction	1,5	1,5	2,5
Involvement of the patient in decision-making/information sharing	3	2,5	3,2

Appropriate prescription of complementary diagnostic tests	3	2,5	3
Autonomy	2,5	3	3,2
Technology used	1,5	2	2
General environment	2,5	2,5	3,2

In table 3, USF-B emerges as the unit model with the most positive scores, except in the perception of "*Outcomes Effectiveness*", where UCSP presents a higher score of 3, compared to 2.8 from USF-B.

USF-A presents a positive overall assessment, only behind UCSP with a difference of 0.5 points in three aspects, namely "*Outcomes Effectiveness*", "*Appropriate prescription of complementary diagnostic tests*" and "*Involvement of the patient in decision-making/information sharing*".

The most significant difference between USF-B and UCSP is in "*Quality of care*", "*Efficient use of resources/cost-effectiveness (material and equipment)*", and "*Professional satisfaction*", with a difference point of 1.

Among the three models, USF-A shows a better balance in its operating policies, concluding that the most significant difference is in adopting the USF-B model or the permanence in UCSP. USF-A is the basis for adapting new policies for a possible future transition to USF-B.

UCSP presents itself as model oriented and focused on the patient, transmitting concerns related to the treatment process and monitoring instead of methodologies and organizational processes based on assertive objectives. It values the holistic treatment of the patient, prevention, cure, and monitoring. It is aware of its differences and believes that, in the end, the work methodologies presented in the USFs, even with their benefits, will not measure the performance of professionals with the quality of the service provided. It is a Unit that seeks a better articulation with specialties and hospital care, a healthy distribution of the number of patients per doctor and hiring more professionals. It feels that more labour training is needed on various topics, more teamwork and that there is not enough motivation to adopt an evolution in the working model.

Compared to USF-A (table 3), it is balanced in several aspects, standing out positively in "*Appropriate prescription of complementary diagnostic tests*", "*Involvement of the patient in decision-making/information sharing*" and "*Effectiveness in Results*" where it also stands out compared to USF-B.

In parallel with the UCSP, the USF-A also presents itself as a Unit concerned with dimensions focused on the patient in a holistic approach based on prevention, treatment, and monitoring. However, this approach has begun to target a more restricted population, focusing less on other types of conditions such as smoking and alcoholism. Already noted in this model the need for more precise indicators for measuring the natural quality of the service and the demand for more regular monitoring for some patients. It agrees with a policy of proximity, availability, empathy and that both having more time for the patient and smaller patient lists are necessary for higher quality work.

As in UCSP, a multidisciplinary team in communication with the hospital area is missing. Organization, bureaucracy, training of the secretariat, and hiring nurses are some more points for improvement. Some see it as the type of model to follow, in line with the evolution to USF-B, showing improvements compared to the UCSP in terms of "*Quality of care*", "*Efficiency in the use of resources/cost-benefit (material and equipment)*", "*Autonomy*" and "*Technology used*".

In USF-B, there are different objectives and differences in what concerns the concept of Value in Health, being divided between the focus on the patient's needs, processes, work methodologies, and organization of resources. There is a clear necessity to improve working conditions, professional literacy, better performance indicators, and effectiveness in clinical governance. It is proven that those factors are based on proximity, holistic view of the patient, more time, and the ability to educate patients and family members about their health.

In parallel with UCSP and USF-A models, they value the existence of multidisciplinary teams and better articulation with hospital entities, with particular attention to the insertion of UCC as a support team. Also, compared to the previous models, that lack for better organizational support, the USF-B, equipped with these methodologies, recognizes a more significant number of gaps in the patient's experience, highlighting the need for prevention strategies and more availability in prompt service to the patient. Although differences in remuneration may cause some inequality, the incentive format is considered beneficial as long as if increases the actual quality of the service to the patient's needs.

The aspects of analysis in table 3 demonstrate a positive self-perspective when working in this model, with a clear distinction compared to UCSP and USF-A, clarifying the potential of functioning to find the balance between organizational

management and patient management. Despite the difficulties, there are arguments that it is a model to be followed.

3.2. Patient approach

For the patient's survey, it was distributed 50 surveys per each of the 6 health units chosen of the ACES Sotavento. Out of this, we get a sample of 152 respondents with a total response rate of 50.7%.

Table 5 - Number of patients respondents per Health Unit

Health Unit	Nº of respondents	%
UCSP Mar	26	17,1
UCSP Aleo	10	6,6
USF-A Esteva	29	19,1
USF-A Gilão	48	31,6
USF-B Balsa	6	4,0
USF-B Levante	33	21,7

Of these, about 31% had diabetes as a chronic disease, 40% had hypertension, 18% had both, and 11% had other chronic diseases. Approximately 60% of the respondents were over 60 years old, and 20% were over 50.

Table 6 - Respondents Age

Age	% respondents
≤ 20	0,7
21-30	4,1
31-40	7,5
41-50	9,5
51-60	20,4
61-69	29,3
≥ 70	28,6

The 1st question aimed to assess the *3 most relevant aspects of the provision of health services* for respondents (Annex 5, A).

Proximity, which has been one of the challenges in the development of Primary Care, is characterized by the accessibility of the Health Unit to the place of residence, appearing as the most important aspect, with 59% of respondents selecting this aspect.

Next, the *Attentiveness* of the medical professional, almost equal to the previous aspect, with 59% agreement, where sympathy and the focus on the patient are valued,

involving him in the treatment process, in the sharing of teaching, knowledge, advice, translating the theoretical foundations of the Centrality in the User.

In the third plan, we have the *Waiting Time* in making an appointment, with 41% of respondents selecting it, arising not because of the periodic scheduled appointments, but because of the imminent need to make an appointment for an unexpected situation, seeking a shorter time and greater flexibility in this process.

The 2nd question seeks to clarify the aspects that reflect the *patient experience* (Annex 5, B). In this analysis, it is essential to consider the low number of respondents from UCSP Aleo and USF-B Balsa.

"I am received with kindness, friendliness, and dedication".

This was the most selected option, with 74% of the total respondents selecting this option. Although with a low number of respondents, the USF-B Balsa and UCSP Aleo were the units with the highest response rate in their population, with 90% and 100%, respectively. The remaining units had a response rate above 75%, with the UCSP-Mar having the lowest response rate with 46%.

"I can easily get to the Health Unit."

With 62% of respondents selecting this option, it is led by respondents from USF-B Balsa, with 100% agreement, followed by USF-B Levante (76%). The remaining units have an agreement rate above 55%. UCSP Mar has the lowest rate of agreement with 42%.

"I am informed transparently about my health condition."

With 48% of respondents selecting this option, we have USF-B Balsa with a 100% agreement rate, followed by USF-A Gilão with 65%. The remaining Units range between 38-42%, with the UCSP Aleo and Mar having the lowest rate of about 30% agreement.

"I have an adequate waiting time to be seen at the consultation."

Also, with 48% overall response, UCSP's Aleo and Mar emerge as the Units with the highest agreement among their respondents, with 60% and 62%, respectively. The remaining Units have a concordance rate higher than 41%, with USF-B Balsa presenting the lowest concordance rate, with only 17% of its respondents confirming this aspect.

"I have had the expected results, in what depends on the doctor's competence."

With an overall response rate of 44%, USF-B Balsa appears as the unit with the highest agreement in its population (83%), followed by USF-B Levante with 61%. The remaining Units are above 37%, with the UCSP Mar having the lowest level of 31% agreement.

"I am informed of the various types of treatment I may be subjected to"

With 36% of the overall sample selecting this option comes the USF-A Gilão with the highest acceptance (42%). The remaining Units are above 33%, with UCSP Aleo at the lowest acceptance of 10%.

"I am involved and have a say in decision making, namely, in the medications/treatments prescribed to me and whether or not they are essential to the treatment."

The option with the lowest overall agreement rate of 29% depicts the low participation and involvement in discussing treatment options. The patient often receives the treatments/medical prescriptions, assuming what is needed to solve the problem, not knowing the purpose and characteristics for each option prescribed and if they would have a second option, according to their needs. USF-B Balsa presents itself as the unit with the highest agreement rate with 50%, followed by the USF-A Gilão with 38%. The remaining units have an agreement rate of 20%.

In more than a half of the overall sample, the aspects that stands out the most in the patient experience are being received with *attentiveness*, *friendliness* and *dedication*, and the *ease of travel to the Health Unit*. These are the two main aspects identified in the previous question as most important when providing health services.

The medical professional's willingness to have a friendliness posture may be related to several factors, mainly the working conditions, but also the region's culture is essential in changing behaviours. The proximity of the units to the population meets one of the objectives of the National Health System, with strategies to promote this access as a citizen's right. Only the UCSP Mar had an agreement rate below 50% in both aspects.

Generally, the USF models A and B assume a positive preponderance in the patient experience. On the other hand, both units of the UCSP model present the lowest rate in that topic. The scenario is inverted when talking about the *waiting time for*

consultation, with both UCSPs having the most positive rate and the USF-B the lowest. Since the USF model has a strategy that seeks discipline and efficiency in time between appointments, shouldn't this result be different? What is different between the models about this?

Even though friendliness and dedication are positively part of the Units daily routine, results point out to a low involvement of the patient in the discussion of his health condition and respective treatments, leading to the concept of patient centeredness, in which literacy shows that this is one of the ways to improve health services (Rao, 2018; Starfield, Shi & Macinko, 2005; WHO, 2019). Even so, USF models A and B are shown as the ones that provide the most involvement.

Therefore, we have the UCSP model with more effective management of expectations in the time between appointments but less involvement of the patient. *Is the time being used in the best way?*

On the other hand, USF models with greater patient involvement but less expectation management in the time between consultations. *Is the time sufficient for the adequate provision of the service?*

The 3rd question aims to *understand how the patient knows about the effects of medication, both negative and positive* (Annex 5, C).

In this analysis, the selection of three main aspects is notable.

First, 66 % of respondents said, *"My doctor explains it to me straight away"*. There was a balance of responses in the various Units, with a response rate of their populations above 60%, with the USF model A standing out (>75%), except for the UCSP Mar, with a response rate below 50%.

Then, about 41% of respondents said, *"I ask my doctor"*, with the USF-A Gilão, USF-B Levante, and UCSP Mar standing out with 45-50% of responses from their populations, demonstrating a good communication with the doctor.

Also, with 39% response, respondents selected *"I try to read in the package insert",* showing concern about knowing the medicine. In this option, no significant relationship was found between the responses of this option and the previous options. Reasons for this choice may vary, considering the respondents' literacy, genuine concern for their health, or indication by the medical entity or others.

An exciting level of doctor-patient communication is observed in the various models. There is still room to promote the patient's involvement, investing more in explaining the treatment and promoting the patient's willingness to comment and ask.

As we previous saw, Rao (2018) said that *Respect* is the way we characterize patient's influence on decision making.

The 4th question aims to understand the degree of *satisfaction with the response of the health unit to their needs* (Annex 5, D).

About 38% of respondents assume to be *Very Satisfied* with their health unit. Although with a low number of respondents, the USF-B Balsa has the highest response percentage from its population with a significant 67%. The remaining units with a response rate between 50% and 38%, with the UCSP Mar presenting the lowest result with 15%.

Most of the sample is *Satisfied* with the health care provided, with 53% of the votes. Of those, UCSP Mar shows the highest response rate in this option, around 65%. USFs model A are very similar, between 56% and 59%. Next, the UCSP Aleo (50%) and USFs model B (33-39%)

In the most negative prism, 5% of respondents show *Some Dissatisfaction*, with greater relevance in the UCSP Mar, with 12% of its population selecting this option. Only 1% of respondents are *Dissatisfied*, represented by 3% of the USF-B Levante. No one expressed themselves as *Very Dissatisfied*.

Based on this analysis, it is observed that the sample's generality is found to be *Satisfied* with their health unit's response. We were able to observe that UCSP and USF-B models have shown a relevant percentage of respondents from a high degree of satisfaction to some degree of dissatisfaction, demonstrating that the models' *modus operandi* may be very well aligned for specific needs but not so much for others. On the other hand, USF-A model shows a better balance, and overall satisfaction of its *modus operandi* towards the patient needs.

Previously, we saw that Ministry of Health predict that USF-B would have more efficient medium/long term gains (Pereira, et al., 2018). Does this go along with patients' satisfaction and positive results? What is missing?

The 5th and last question, with open answer, aimed to analyse *aspects missing in the monitoring/treatment of the health condition according to the patient's needs*. Here we also added answers given under "other considerations" by the patient because of the proximity of the answers. Based on the data structure design (Annex 4), were analysed points for improvement in several dimensions.

The most central point is *Scheduling Appointments*. Namely, the time gap between the appointment and the day it occurs is too broad. This report was the most described by the UCSP and USF-B, meeting the results presented in the previous 2nd question.

Overall, there is a need to improve the ability to communicate, discuss and involve the patient in defining the treatment method because not all are satisfied with the current method or seek complementary actions.

The management of the prescription and monitoring in complementary exams should also be discussed, as some disorientation among patients has been identified. Inaccessibility, because not all exams can be done at the unit, patients travel out of town often; furthermore, older patients have less autonomy to contact external entities to schedule tests, with emphasis, reports from USF-B.

There is an expressed need to extend the Health Units' working hours to cover more time options for the population. The accessibility of the phone service could facilitate several issues.

Removing the emergency services brought some discomfort, especially for the population whose transportation and access to the nearest hospital are not the best, as well as the unit's communication with the hospital center, which, similarly to the reports in the medical survey, is also a point for improvement highlighted by the patient.

Patients with more specialties and multidisciplinary teams (also a topic in the medical survey) feel the need for a more complete and accessible diagnosis. In some cases, they also feel the lack of more medical professionals on duty.

USF-A stands out, with the highest number of proactive compliments from the participating patients. In line with the analysis of the previous questions, the praise comes from USF-A that shows a better balance of satisfaction between the service provided and patient's needs.

It is also important to point out some limitations of this work: due to an interruption of this investigation during Covid-19 pandemic, other studies and articles have been published since then, and are not included in the literature review; the sample was limited to the number of respondents available during the data collection period, both physicians and patients in all three models; the study was based on a limited geographical area, so the results should not be associated with the reality of other areas; in the medical survey, even though the conduct of the survey categorizes the qualitative analysis, several 1st order concepts can be associated with different 2nd order themes by

the similarity of the questions and answers: e.g., answers associated with "Ideal general parameters in the treatment of chronically ill patients" may be similar to "Spaces for improvement in Health Care Units in the treatment of chronically ill patients"; most of the patients population under study is already in advanced age. The survey was developed based on simplicity in the type, number of questions, and answer options; there were unanswered questions, and in the questions limited to 3 options, some respondents selected more than the requested, having no insight of which ones are the most important ones. All choices were considered for the study, as well as surveys with no response to some question, as long as it has information relevant to the analysis.

Chapter IV - Conclusion

The reform of Primary Health Care has brought interesting work and health service management methodologies, such as efficiency and programmed productivity. However, the analysis of this study concludes that service delivery in primary care is not yet adapted to the reality of different patients, namely, those with chronic conditions.

There is a focus distinction in the different models. UCSP and USF-A focus more on the patient experience and USF-B on processes and organizational efficiency of methods and resources. With the evolution of the models, some flaws have been circumvented, but others have appeared. The evolution led more professionals to identify the management of consultation time as one of the main aspects of discussion to improve patient monitoring and the existence of reliable indicators that reflect the tangible results of service quality. And we know already, from Rothman & Wagner (2003), that patients with chronical conditions require more time and counselling, however, it seems that this is not considered when planning towards efficiency, like USF-B. The evolution also brought a focus on a more restricted population, minimizing awareness and general prevention actions for the population. At a common level, communication with hospital entities, functional multidisciplinary teams, and the literacy/training of professional teams are points for improvement in all three models.

In the patient experience, an exciting duality is identified. UCSP with more effective management of consultation time but less involvement felt by the patient. The question then arises: *How is this time being used?* In the USFs, the involvement felt is greater, but the management of the consultation time is less: *Is the time disposed adequate for the service provision?* There is also room, in all models, for greater involvement of the patient in discussing the treatment to be followed, helping, and accompanying the execution of complementary exams, and adapting the service to the patients' schedules and routines.

On the professional side, along with the necessary improvements, USF-B presents a positive perspective and potential as a model to be followed. On the patient side, in some cases, it also presents a high level of satisfaction but, in others, not so much. USF-A is the model that, so far, presents the most significant balance of satisfaction in the most diversity of cases. It is also a model seen as a line of evolution

and adaptation to new work contexts and in which the balance of results is higher between the focus on the patient and the organizational *modus operandi*.

The concept of value in health establishes a principle of holistic analysis in time, space, and results. To this end, improving existing indicators is essential to establish a real commitment to build a sustainable system based on quality and efficiency. The models under study present dimensions that translate the construction of this value, but they are incomplete, mostly in adapting and assuming a posture of service centrality to the various types of patients.

As Porter (2010) says, and always to recall:

"Value should always be defined around the customer."

"Value for the patient is created by providers' combined efforts over the full cycle of care."

"Value for patients is often revealed only over time and is manifested in longer-term outcomes."

"Value is defined as the health outcomes achieved per dollar spent"

"Since value is defined as outcomes relative to costs, it encompasses efficiency"

"Value should define the framework for performance improvement in health care."

This study has a valuable information base and relevant dimensions as a starting point for future research. The methodology chosen was the survey due to its greater accessibility. However, this study would provide more and better insights if conducted in interview mode, both for physicians and patients.

With the possibility of greater geographical scope, the study will bring a better national view if analysing some Units from different regions. Besides the organizational structures, the regional culture is greatly valuable to understand their functioning.

A comparative analysis of the results of health indicators among the Units and discussing them with medical professionals, along with the organizational results and testimony of the patient experience, would bring an added value to better understand the cost/benefit ratio and exploring value creation.

Results of this study may suggest some types of future research. One option is to maintain the same purpose but in a broader geographic scope, preferably in interview mode. Another option is to deepen some of the identified dimensions to clarify their context and build action proposals for their improvement.

In a more in-depth and temporal intrinsic analysis, touching on the measurement of value in health based on previously identified dimensions, can be performed an analysis and monitoring of a demographically identical sample, with identical health conditions, in different Health Units. The goal is to measure, in greater depth, the results about quality of service concerning the processes and methods implemented.

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Annex 1: Medical Survey

Thank you for starting this survey!

The purpose of the study is to explore the perceptions of medical professionals and patients (parallel survey) about the current state of Primary Care Units due to the growing number of users with one or more chronic conditions.

The survey is anonymous and consists of 10 questions. They are all arranged on the same page, so please ensure that your answers are complete before proceeding to the next page.

To add quality and authenticity to the data under study, you will find open-ended questions. Therefore, I ask you to please take some consideration in answering these topics. Your opinion is very important.

In the end, I will leave my contact for any questions or comments.

Thank you so much for your attention and participation.

Please indicate the model of your Healthcare Unit

○ UCSP

○ USF-A

○ USF-B

Indicate the ACES to which you belong

○ Central

○ Sotavento

Have you had experience in another Health Unit model (other than the current one)?

☐ USF-B

☐ USF-A

☐ UCSP

☐ No

In your understanding, considering Primary Health Care, what is the concept of Value Creation in Health for you?

Objectively speaking, what do you think about the current organization of healthcare models, namely, USF-A, USF-B, and UCSP?

What do you consider the best treatment and monitoring scenario for patients with chronic multiplicity? Identify 3 or more main aspects.

Considering the reality of the increasing number of cases with chronic multiplicity, namely diabetes and hypertension, what is missing for your Health Care Unit to meet the needs of the patient increasingly?

Considering an environment of users with chronic multiplicity, please rate the aspects concerning your current Health Care Unit.

Very negative				Very Positive
0	1	2	3	4

Quality Care

Adequate Attendance Time

The efficiency of resource use/cost-effectiveness (material, equipment)

Effectiveness in results

Professional satisfaction

Patient involvement in treatment and decision-making/information sharing

Appropriate prescription of complementary diagnostic tests

Autonomy

Technology used

General environment

If your Unit is a UCSP or USA-A: Identify 3 or more reasons that limit moving to the following model(s).

If USF-B: What are the challenges/difficulties ahead?

What would you suggest, as added value, to the improvement of your current Health Unit in the short/medium, or long term?

Other considerations:

Thank you very much for your participation!

For any questions or comments, you can contact me by e-mail: jdsms11@iscte-iul.pt

Or, if you wish to receive the results of this study, please leave your e-mail in the field below:

Annex 2: Patient Survey

Thank you for starting this survey!

The purpose of this study is to explore the perceptions of users and medical professionals about the current state of primary care facilities given the increasing number of users with one or more chronic conditions.

The questionnaire is anonymous and consists of 10 questions. They are all arranged on the same page, so please ensure that your answers are complete before proceeding to the next page.

Your opinion is very important.

Thank you so much for your attention and participation.

Which Health Unit is your family doctor?

○ USCP Aleo

○ UCSP Mar

○ USF-A Gilão

○ USF-A Esteva

○ USF-B Levante

○ USF-B Balsa

Please indicate if you have any of these chronic conditions. You may select more than one option.

☐ Diabetes

☐ Hypertension

☐ Both

☐ Other(s), which one(s)?

From the options below, please indicate what you consider to be the three most important aspects of service delivery in a Healthcare Unit.

☐ The Health Care Unit being close to the residence

☐ O tempo de espera para marcação de consulta

☐ The attentiveness of the doctor (teaching/counseling)

☐ Transparent communication and participation in the choice of treatment

☐ Achieving the expected results for your health condition at the lowest financial cost (medications/treatments)

☐ Operating conditions, hygiene, and safety of your Health Care Unit

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Please select the options that reflect your experience:

- [ ] I have an adequate waiting time for the appointment
- [ ] I am received with warmth, kindness and dedication
- [ ] I am informed in a transparent manner about my health condition
- [ ] I am informed of the various types of treatment I may be subject to
- [ ] I am involved and have a say in the decision-making, namely in which medications/treatments I am prescribed and whether or not they are essential for my treatment.
- [ ] I have had the expected results, as far as the doctor's competence is concerned
- [ ] I can quickly go to the Health Care Unit

With a prescription drug, how do you usually know the positive or negative effects? You can select more than one option.

- [ ] My doctor explains it to me right away
- [ ] I ask my doctor
- [ ] I know from experience
- [ ] Sei através de pessoas conhecidas
- [ ] I look in the drug's package insert
- [ ] I don't know what to expect

What is your experience like when buying the drugs prescribed in a prescription? You may select more than one option.

- [ ] As a rule, I always buy all of them
- [ ] I consider that some are not essential for the treatment
- [ ] Because there are several doses, I buy them over time
- [ ] I can't afford all of them.
- [ ] Other remark:

How do you feel about the Health Unit's response to your needs?

○ Very Satisfied

○ Satisfied

○ Some dissatisfaction

○ Dissatisfied

○ Very Dissatisfied

What aspects are missing in the follow-up/treatment of your health condition according to your needs?

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What is your age?

○ ≤ 20

○ 21-30

○ 31-40

○ 41-50

○ 51-60

○ 61-69

○ ≥ 70

What other considerations would you like to add?

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Thank you very much for your participation!

For any questions or comments, you can contact me by e-mail: jdsms11@iscte-iul.pt

Or, if you wish to receive the results of this study, please leave your e-mail in the field below:

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1ST ORDER CONCEPTS	HOSPITAL			2ND ORDER CONCEPTS	AGGREGATED DIMENSIONS
	UCSP	USF-A	USF-B		
Optimization of resources, with results from the users' perspective.			X	CLINIC MANAGEMENT	HEALTH VALUE CREATION IN THE PHC CONTEXT
Improvement of professionals' working conditions to provide better care.			X		
Better health indicators.			X		
Improved and effective clinical management and governance (e.g. practical and updated computer tools).			X		
Health literacy for professionals			X		
PHC centered on the patient as the human and technical structure closest to the person.		X	X	PATIENT MANAGEMENT	
Valuing and evaluating the user's health holistically, in terms of physical, psychological, and social well-being. Society and its environment.	X	X	X		
To be able to provide health care appropriate to the wearer's condition.			X		
More time for the user, less focus on the number of consultations.		X	X		
Valuing prevention in the provision of care. Later cure and follow-up.	X	X			
Surveillance, follow-up, and early detection of cases in vulnerable groups.		X			
Empowerment of users and risk groups.			X		
Health literacy to users			X		
The existence of wage differences and difficulties in moving from USF-A to USF-B is an unsatisfactory situation.			X	INEQUALITY AND ORGANIZATIONAL IMPROVEMENTS	OPINION ON ORGANIZATIONAL MODELS UCSP, USF-A AND USF-B
The unequal model, which values process goals and not quality, distinguishes professionals and users in a non-equal way.	X				
With the USFs, there was a loss of originality in dealing with more complicated patients related to alcohol and tobacco.		X			
There must be an effort to move all units to USF-B, creating local monitoring teams to all UCSP and USF-A, assuming the commitment of this transition and recognition after evaluation of needs and guarantee of the quality of service, within a reasonable period.			X		
Working by indicators makes sense. However, most indicators do not show value in health.			X	IMPROVED PERFORMANCE INDICATORS	
More dynamic and "daring" indicators.		X			
USF-B is the primary and organized model for managing the user, prevention, disease, and teamwork. The model to be followed and implemented.		X		POSITIVE RECOGNITION	
Positive reinforcement with incentives will always be the best way to achieve better results.			X		
Model organization is positive as long as it ensures accessibility, proximity, and celerity in response to health problems.			X		

IDEAL GENERAL PARAMETERS IN THE TREATMENT OF CHRONICALLY ILL PATIENTS

PATIENT EXPERIENCE

Item	Col 1	Col 2	Col 3
Smaller lists to improve access to services and consultations.	X		
Consultations with longer attendance time.			X
Regular consultations, quarterly in most cases, or more frequent if necessary.		X	
Nutrition and psychology consultations are easily accessible.		X	
Detection, treatment.	X		
Follow-up.	X		X
Proximity, availability, empathy.		X	X
Ensure the involvement of the user's family in treatment and follow-up			X
Increase user literacy.			X

ORGANIZATIONAL AND RESOURCE MANAGEMENT

Item	Col 1	Col 2	Col 3
More resources in the community for social and psychological support, especially for people with health limitations			X
Multidisciplinary team, including better coordination/articulation with specialties and hospital colleagues, either by video call or telephone (but rare are the specialties that comply, notes usf-a).	X	X	X
Home care with UCC teams in articulation with USF/UCSP.			X
Creation of more medium and long-term units and extending the network of continuous care to the entire national territory.			X
Strengthen and disseminate the status of the informal caregiver (training and labor issues), as well as develop group activities in the different functional units of the ACeS (e.g. URAP) for these caregivers, with the support of various collaborators (doctors, nurses, psychologists, social workers, physical therapists, etc.).			X
Independence of the leaders from the interest groups of doctors and nurses.		X	

IMPROVEMENT OF HEALTH CARE UNITS IN THE TREATMENT OF CHRONICALLY ILL PATIENTS

GAPS IN PATIENT EXPERIENCE

Item	Col 1	Col 2	Col 3
Early diagnosis and access to the necessary means (including specialty consultation).			X
Creation of integrated follow-up centers.			X
Prevention strategies focus on early intervention in lifestyle changes.			X
Nutrition, prescription of physical exercise, psychological support.			X
More consultation time.			X
Involvement of the user's family.			X
Organization of group or individual health literacy activities (e.g., creation of an exercise prescription consultation or a health promotion consultation, or a Unit walking group).			X
Increasing the user's ability to purchase.			
Faster access when patients need it, without complications.			

ORGANIZATIONAL GAPS

Item	Col 1	Col 2	Col 3
Hiring more health professionals (USF-A referring nurses).	X	X	
Training for themes and teamwork.	X		
Smaller user lists to personalize the consultation and to have more follow-up appointments.		X	
Less bureaucratic and extra-unit tasks for the doctor.		X	
Better response from hospital care when needed.			X

CHALLENGES TO MODEL EVOLUTION AND STABILITY

ORGANIZATIONAL

Item	Col 1	Col 2	Col 3
Limitations by the ACSS.	X		
Facilities.			X
Maintain assistance and accessibility without losing the quality of the consultation.			X
Comply with indicators that do not indicate the actual health status.			X
Lack of organization.		X	

PROFESSIONALS INVOLVED

Item	Col 1	Col 2	Col 3
Training in secretarial management.		X	
Lack of motivation of professionals.	X		
Lack of nurses.		X	
Lack of medical professionals to replace those who will retire in the next few years.			X

Annex 4: Data Structure, Patients Survey

1ST ORDER CONCEPTS	HOSPITAL			2ND ORDER CONCEPTS	AGGREGATED DIMENSIONS
	UCSP	USF-A	USF-B		
More agility in scheduling appointments and exams promptly. Long waiting time for an appointment.	X		X	SCHEDULING APPOINTMENTS	PATIENT EXPERIENCE REPORTS
Appointments too far apart		X			
Sometimes too long to wait for resource consultations.		X			
Finding alternative treatment due to the user's discomfort		X		ALTERNATIVE TREATMENT	
More follow-up appointments with other options (e.g. nutritionist, physical activity programs)	X				
More accessibility to complementary exams at the Unit, for some, it is necessary to travel several kilometers.	X		X	COMPLEMENTARY EXAMS	
The health centers should schedule complementary exams because it is difficult for most people.			X		
I would like and need to do more routine exams due to my health condition.			X		
The family doctor should always do the service				ATTENDENCE	
Longer opening hours		X			
More accessibility on the phone.	X		X		
		X			
Celerity in the communication between Health Unit and Hospital				CONDITIONS AND SERVICE	
Better conditions and emergency service (there was a setback)			X		
Lack of a water and coffee machine.	X	X			
		X			
More doctors and specialists				DOCTORS	
Lack of a family doctor	X	X			
	X				
I am always treated very well.				COMPLIMENTS	
I am satisfied with the services.		X			
Good treatment, attention, understanding.		X			
The medical staff and nurses are spectacular, humane, and warm.	X	X			
I congratulate the Unit for the service.		X			
I think that this Unit is excellent and that they are always attentive to the users.		X			

Annex 5: Patients Survey Data Support

			Which Health Unit is your family doctor in?						
			Total	USCP Aleo	UCSP Mar	USF-A Gilão	USF-A Esteva	USF-B Levante	USF-B Balsa
A	From the options below, please indicate what you consider to be the 3 most important aspects of service delivery in a Healthcare Unit.	The Health Care Unit being close to the residence	59.2%	80.0%	73.1%	43.8%	58.6%	66.7%	50.0%
		The waiting time for scheduling an appointment	41.4%	50.0%	46.2%	41.7%	31.0%	45.5%	33.3%
		Attentiveness of the doctor (teaching/counseling...)	58.6%	90.0%	90.0%	60.4%	65.5%	45.5%	100.0%
		Transparent communication and participation in the choice of treatment	22.4%	20.0%	30.8%	18.8%	17.2%	21.2%	50.0%
		Achieve the expected results, for your health condition, at the lowest financial cost (medications/treatments)	37.5%	40.0%	26.9%	41.7%	34.5%	36.4%	66.7%
		Operating conditions, hygiene and safety of your Health Care Unit	39.5%	20.0%	26.9%	41.7%	44.8%	48.5%	33.3%
B	Please select the options that reflect your experience.	I have an adequate waiting time for the appointment	47.4%	60.0%	61.5%	45.8%	41.4%	45.5%	16.7%
		I am received with, kindness, friendliness and dedication	74.3%	90.0%	46.2%	81.3%	75.9%	75.8%	100.0%
		I am informed transparently about my health condition	48.0%	30.0%	30.8%	64.6%	37.9%	42.4%	100.0%
		I am informed of the various types of treatment I may be subjected to	35.5%	10.0%	34.6%	41.7%	34.5%	36.4%	33.3%
		I am involved and have a say in the decision making, particularly in what medications/treatments are prescribed to me and whether or not they are essential to my treatment.	28.9%	20.0%	23.1%	37.5%	24.1%	24.2%	50.0%
		I have had the expected results, in what depends on the doctor's competence	44.1%	0.0%	30.8%	47.9%	37.9%	60.6%	83.3%
		I can easily get to the Health Care Unit.	61.8%	60.0%	42.3%	62.5%	55.2%	75.8%	100.0%
C	On a prescription drug, how do you usually know what the effects on you are, whether positive or negative? You can select more than one option.	My doctor explains it to me right away	65.8%	60.0%	46.2%	75.0%	75.9%	60.6%	66.7%
		I ask my doctor	41.4%	20.0%	50.0%	50.0%	27.6%	45.5%	16.7%
		I know from experience	13.8%	0.0%	19.2%	16.7%	10.3%	12.1%	16.7%
		I know from acquaintances	1.3%	0.0%	3.8%	2.1%	0.0%	0.0%	0.0%
		I try to read in the drug's package insert	38.8%	70.0%	19.2%	41.7%	27.6%	48.5%	50.0%
		I don't know what to expect	2.6%	0.0%	7.7%	2.1%	3.4%	0.0%	0.0%
D	How do you feel about the Health Unit's response to your needs?	Very satisfied	38.2%	50.0%	15.4%	37.5%	37.9%	48.5%	66.7%
		Satisfied	53.3%	50.0%	65.4%	56.3%	58.6%	39.4%	33.3%
		Somewhat dissatisfied	5.3%	0.0%	11.5%	4.2%	3.4%	6.1%	0.0%
		Dissatisfied	0.7%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%
		Very dissatisfied	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%