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Contractualization in primary health care in the Regional Health Administration of Lisbon and Tagus Valley until 2023

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Abstract *The article discusses contractualization in Primary Health Care (PHC), relating what has been contractualized and what has been achieved to answer the question: can contractualization contribute to guaranteeing equity and adequate access to PHC? A case study methodology was used, using data available on the SNS Transparency Portal and data used in external contractualization. Data was collected in December 2023. In the Lisbon and Tagus Valley Health Region, 29.6 percent of people were registered without a family doctor in 2023. One-year appointment usage rates fell progressively (-2.7%) between 2021 and 2023. As for cancer screening, in the case of colon and rectum screening, only 34.4% of those contractualized were performed in 2021 and 28.9% in 2022. Regarding the Overall Performance Index, the variation intervals between the negotiated proposals and those obtained were above 20 points. Drug therapy prescription in Diabetes Mellitus was analyzed, and no ACES achieved the expected values. We concluded that contractualization has not helped improve access and equity, as a gap between the situational or local strategic planning phases seems evident.*

Key words *Primary Health Care, Contractualization, Strategic analysis*

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Introduction

Portugal has a mixed healthcare system. The State provides national citizens with protection against financial risk associated with an episode of illness through the role of the State insurer. Citizens may also voluntarily contract additional protection through public or private health insurers.

As part of the health system, the National Health Service[1] (SNS), is an organized and articulated set of public establishments and services managed by the Ministry of Health. The SNS was founded in 1979 and is based on the Beveridgean model. The SNS performs the State's responsibility for protecting health through healthcare in the areas of promotion, prevention, treatment, rehabilitation and palliative care.

At a territorial level[2], the SNS was organized by health regions and levels of care at a functional level. The SNS included the five Regional Health Administrations[3] (ARS), which were created in 1982 to plan and manage in a coordinated manner actions involving health promotion, prevention and treatment of diseases, and rehabilitation. Within the context of the SNS organizational structure, the ARS were responsible for implementing health policies at the level of their geographical boundaries.

The abovementioned reorganization aligned with the CSP reform initiated in 2005, which resulted in a profound reconfiguration of its organizational structure. In 2008, a legislative intervention[4] was introduced and established the Health Center Clusters (ACES). These clusters were formed by merging the health centers in a given geographical area under the unified management of the ACES.

The ACES began operating as public services with administrative autonomy, consisting of several functional units (UF). Their mission was to ensure the provision of PHC to the population of a given geographic area. The UFs above were Family Health Units (USF, model A - fixed salary; and model B - doctors receive a fixed salary + incentives); the Customized Health Care Units (UCSP - fixed salary); the Community Care Units (UCC); the Public Health Units (USP) and the Shared Care Resource Units (URAP). There are 55 ACES in mainland Portugal, 15 of which are in the Regional Health Administration of Lisbon and Tagus Valley (ARSLVT).

Contractualization[5] was a key element of the CSP reform in the process of organizational reengineering, whose principal points were the creation of multidisciplinary, functionally autonomous teams, the development of a culture of clinical and health governance, and the introduction of a performance-based remuneration system. The USFs were created during this reorganization and are made up of voluntary applications from autonomous teams of health professionals, namely family medicine specialists, nurses, and clerical staff. These teams are responsible for defining an action plan, which includes the service portfolio, the care commitment, the opening hours, and the coordination with other units.

The contractualization process creates decentralized management. Performance contracts are a set of management instruments to hold each party involved accountable and achieve mutually agreed results. Implementing this mechanism aims to make CSP provision more effective, by guaranteeing care units greater autonomy and accountability to outline the most appropriate strategies to meet the population's health needs. It also seeks greater rationality in using resources and achieving improvements in the health of the populations served.

Contractualization in the CSPs has been established as a work in progress that includes two sub-processes, namely, external contractualization, performed between the ARS and their respective ACES, and internal contractualization, performed between the ACES and their respective UFs.

External contractualization[6] was based on a matrix of 20 indicators, organized into three axes: the national axis, comprising 14 indicators at national level, to assess health gains and aligned with the objectives of internal contractualization with the USFs and UCSPs; the regional axis, with four indicators selected by the ARS, aligned with regional programs or regionally defined health priorities, not overlapping with the previous ones; the local axis, giving each ACES the possibility, together with the ARS, to define two specific indicators per local health needs, not overlapping with any of the previous ones.

Internal contractualization was based on a matrix of 22 indicators: 12 indicators common to all USF/UCSP of each ARS regarding access or care performance; four indicators, selected every three years by the ARS, common to the respective USF/UCSP regarding access or care performance; two indicators, selected every 3 years by the ACES, specific to the USF/UCSP of the ACES; four indicators proposed by the USF/UCSP, for the three years, regarding access or care performance.

In 2017, the contractualization process in the CSPs[7] was based on a new conceptual model that removed the focus from negotiating established

indicator targets to pursuing health results in a context of good practices and management of integrated health pathways and the performance of organizations, considering their different areas and dimensions. In this way, the process became transversal, integrating ARSLVT, ACES, and UF. Instead of focusing the negotiation on targets and indicators, the reference point was the Global Performance Index (GPI) that one intends to improve and achieve.

The GPI is used to assess the results of the indicators and determine the incentives for ACES. Since 2014, it has been applied to assess ACES, with the indicators no longer having individual validity, as they are now understood as contributing to the construction of that index. The following factors contribute to calculating the GPI: the level of compliance with each indicator (percentage of achievement of the defined target) and the adjusted level of compliance with the indicator (level of compliance marked by an upper and lower limit); the relative weight of the indicator or weighting (relative importance of each indicator in the calculation of the GPI); the weighting of the level of compliance adjusted to the indicator (it is the value resulting from the product between the adjusted level of compliance and the relative weight of the indicator); the GPI (corresponds to the sum of the weightings of the level of compliance adjusted for each indicator); potential incentive (incentive to be attributed if the value is 100%); incentive attributed (monetary value of the incentive to which the contracted entity is entitled, calculated by the product between the GPI value and the potential incentive).

The incentive system included in the contractualization with the CSP is, despite its relative size and solely institutional nature, a central piece of the process because all the monitoring and follow-up work is based on the evaluation of the negotiated performance, this being the process variable that truly gives it a strategic dimension[8].

We conducted an exhaustive survey of the grey literature on contractualization in PHCs in Portugal. The concept of contractualization in foreign countries is not superimposable to that used here. We found that, in a 2020 study[9], the authors aimed to assess the impact of the implementation of Family Health Units (USF) on the population's health outcomes, measured by Hospitalizations for Causes Sensitive to Primary Health Care (ICSCSP), and another[10] where the authors found that, in general, the values of the indicators improved over time, in the three types of UF, particularly in those where payment for performance is applied.

Adequate care at the right moment

PHC providers are an essential part of the healthcare ecosystem, often acting as the first point of contact for patients. Accessible, high-quality, and equitable PHC is associated with positive health outcomes. However, access to PHC has been declining due to complex interplay between the citizen, the context, and the health services. A negative self-perception of health leads citizens living in care deserts to place less value on prevention and seek emergency care services.

Although equity is a fundamental pillar of Portuguese health system legislation, it has not been a priority in the past to implement, promote, and monitor this objective. When the World Health Organization (WHO) assessed the National Health Plan[11] (PNS) in force between 2004 and 2010, identifying its strengths, limitations, and gaps, it made it clear that the PNS paid very little attention to health equity, particularly regarding strategies and programs to combat inequalities. In another document[12] assessing the health system, the WHO noted significant improvements in this area. However, it did specify that relevant gaps in the health status of the Portuguese population persist by gender, geographic region, and socioeconomic level (by educational level or income). Thus, Portugal faces the challenge of consolidating and improving its citizens' health status by reducing inequality levels between groups and adapting its response to the Portuguese population's expectations.

CSPs make a decisive contribution to the Sustainable Development Goals and Universal Health Coverage. During the COVID-19 pandemic, Portuguese PHCs were instrumental in achieving one of the highest vaccination rates in the world[13].

An analysis conducted by the Public Finance Council for 2020 described the economic and social impact of the COVID-19 pandemic, besides the health crisis. In this context, Portugal was one of the countries in the Organization for Economic Cooperation and Development (OECD) where the in-person activity of doctors was most affected, with the number of appointments falling 66% in May 2020 against the same month in 2019. The Council also noted that, in 2021, the leading indicators of access, efficiency, and quality of CSPs recovered slightly against the previous year. However, they were still far from pre-pandemic levels. The following year (2022), the same entity wrote that the number of patients without a family doctor (FD) had increased and that this would

have an unfavorable effect on hospital emergency care services.

The Health Regulatory Authority (ERS)[14] notes that citizens who used the CSP between 2018 and 2021 complained mainly about access conditions, administrative procedures, and healthcare. These complaints were primarily addressed to ARSLVT (against the other four ARS). In 2021, access was mentioned in 89% of the complaints the ERS received.

Another vital aspect described by ERS is that, at the end of 2021, most citizens registered at the CSPs had been assigned a FD (88.8%). However, it also noted that this percentage has decreased since 2019 despite the increasing number of operating USFs. The distribution of these units is asymmetrical across the country. We have more USFs that use the model that benefits from financial incentives for professionals in the North region against the Central region, Alentejo, and Algarve. One of the conclusions of this ERS study is that the appointment usage rates are higher where there is a higher percentage of citizens with an assigned FD. Thus, having an assigned FD appears to be a factor that promotes access.

It is, therefore, clear that citizens not treated in the CSPs must seek care elsewhere or will be left without care because they cannot afford to obtain it, risk incurring direct health expenses, or go to emergency services. In this sense, access is closely related to equity. In this context, we will have to study whether contractualization will be a necessary and sufficient condition to promote access and equity, as is usually assumed.

Contractualization is a complex and challenging topic especially when it comes to healthcare. It's not just a technical or operational process, but also a value-based and relational one. This doesn't mean that the technical aspects are unimportant, but that we need to also consider the operational and relational elements of contractualization. This is a complex issue with many variables that cannot be controlled. However, it should be a topic for research and scientific debate. Perhaps the complexity of the issue is why there is so little research on it. This study aims to contribute to a better understanding of the challenges facing the financing model and CSPs in Portugal.

Methods

This research aimed to answer the following question: can contracting help to ensure equity and adequate access to primary health care?

We opted for a case study (CS) methodology because this research situation includes several variables that exceed the amount of available data[15]. Therefore, the case study defined in this way is not associated with any type of research or specific data collection form. The CS has sufficient flexibility to adapt to all contexts and situations where the boundary between the theme under study and its context is poorly defined.

Besides the literature review, we collected data on access indicators, the overall performance of ACES, screenings, and drug therapy prescriptions.

Data were collected in December 2023. The data are contained in the supporting documentation for the contractualization process between ARSLVT and the ACES between 2018 and 2022, and other data were collected in the open repository of the SNS Portal. The data were analyzed with a spreadsheet used for descriptive statistics purposes.

Drafting the article followed the Consensus[16] Reporting Items for Studies in Primary Care.

Results

In 2022, 3,721,156 inhabitants resided in the municipalities[17] included in the ARSLVT, the most populous of which were Lisbon (546,923 inhabitants), Sintra (388,001 inhabitants), Cascais (213,902 inhabitants), Loures (203,213) and Almada (178,113). The municipalities of Lisbon, Sintra, Cascais, and Loures comprised 41.1% of all inhabitants of the ARLVT.

The number of citizens registered is a dynamic reality[18] in the ARSLVT. A total of 3,761,865 and 3,929,061 citizens were registered in all ARSLVT states in 2019 and 2023 (November), respectively (Table 1). This corresponds to an increase of 167,196 new registrants in five years (3,439 citizens/year). Besides births, the growing increase in registrants is also affected by the migration wave[17], which is preferentially concentrated in large urban areas.

The same table shows a significant increase in citizens without an assigned FD (649,965) in the five years studied[18], reaching 1,162,043 in 2023. While the number of registered citizens and citizens without an assigned FD followed a growing trend, the opposite was occurring with citizens with an assigned FD, dropping from 3,240,187 in 2019 to 2,754,274 in 2023. The sum of those registered with and without FD does not correspond to the total number of registered citizens, as there

is a residual number of citizens (ranging from 9,600 in 2019 to 12,744 in 2023) who choose to be registered and not have an assigned FD. Finally, we observe 86.1% of registered citizens with assigned FD in 2019, declining to 70.1% in 2023, not recovering the initial value in any studied years.

The annual appointment usage rates[18] reveal a consistent increase in all ACES (mean of 10.8%) from 2018 to 2021, where the maximum value recorded in ACES Estuário do Tejo (14.1%) (predominantly urban area)[19] and the minimum in ACES Loures/Odivelas (6.5%) (predominantly urban area). The variation range was 7.6%, indicating what happened during 2020, with the conditioning of access to health units (Table 2). We noted a progressive decrease in the appointment usage rate (-2.7%) in all ACES from 2021 to 2023, ranging from a maximum of -6.8% in ACES Estuário do Tejo and a minimum of 0.4% in ACES Cascais (predominantly urban area).

The National Health Plan 2012/2015 (extended to 2020)[20] established, in the oncological context, the reinforcement of the availability and quality assurance in the performance of population-based screenings, thus ensuring access to prevention and early diagnosis strategies and the development and implementation of diagnostic and treatment care processes, so that citizens receive adequate and timely healthcare. The ARS were responsible for promoting screenings for breast, colon, rectal, and cervical cancer.

According to the 2016 Oncology Screening Monitoring and Evaluation Report[21], Portugal was among the European countries with the lowest preventable mortality rate. It was the European country with the highest rate of mammograms performed on women (84.2%), well above the European average (62.8%). The same occurred regarding Cervical Cancer Screening (RCCU), with Portugal recording a rate of 70.7% of women screened, compared to a European average of 63%. As for Colon and Rectal Cancer Screening (RCCR), European comparisons cannot be made due to the lack of an international consensus on the approach to be used.

Concerning population-based Breast Cancer Screening (RCM) (Table 3), the primary screening test would be performed every two years, with bilateral mammography (2 incidences). The target population would be women in the 45-69 years range, and the program started at ARSLVT in 1991. In total, 176,830 women were screened from 2019 to 2022, with the maximum corresponding to 2021 (333.1‰) and the minimum to 2020 (109.6‰).

The also population-based RCCR was grounded on a primary Fecal Occult Blood Test, and the target population was women and men aged 50 to 74. It should be repeated every two years. In the years considered, 64,866 citizens were screened, with the maximum occurring in 2019 (63.1‰) and the minimum in 2020 (21.2‰).

The population-based RCCU primary test was collected in a liquid medium, with HPV testing and reflex cytology in cases positive for high-risk HPV other than 16 or 18. It should cover women between 30 and 65 and be performed every five years. In the years studied, 163,462 women were screened, with the maximum occurring in 2022 (268.9‰) and the minimum in 2020 (104.9‰).

Negotiations regarding contractualization on this topic were studied, for example, in 2021 and 2022, for RCCR and RCCU. As for RCCR, we found that the 13 ACES with available data achieved, on average, 44.1% of the contractualized values. Five achieved values above the average, and ACES Amadora exceeded the contractualized proposal (it contractualized 2,500 screenings and performed 3,493). ACES Lisboa

Table 1. Status of those registered in Functional Units of the ARSLVT, Portugal, 2019-2023(*).

Years	2019	2020	2021	2022	2023
Total registered	3,761,865	3,751,354	3,848,748	3,909,749	3,929,061
Registered without FD assigned	512,078	546,177	754,411	990,731	1,162,043
Registered with FD assigned	3,240,187	3,193,411	3,077,978	2,903,235	2,754,274
Registered without an assigned FD (by choice)	9,600	11,766	16,359	15,783	12,744
% Registered without FD assigned	13.6	14.6	19.6	25.3	29.6
% Registered with FD assigned	86.1	85.1	80.0	74.3	70.1

(*) Reference = November/2023. FD = Family Doctor.

Source: SNS - Transparency Portal.

Table 2. Usage Rate for 1-Year Medical Consultations (All Users) in ARSLVT ACES, between 2018 and 2023.

ACES	2018	2019	2020	2021	2022	2023
			%			
Almada / Seixal	52.2	63.1	59.1	62.5	63.2	62.0
Amadora	46.0	55.6	52.2	54.5	55.6	53.7
Arco Ribeirinho	48.6	59.3	57.0	61.2	59.7	56.7
Arrábida	52.0	62.5	60.4	65.1	63.8	61.6
Cascais	45.0	55.6	54.6	53.9	54.8	54.3
Estuário do Tejo	47.7	61.4	59.9	61.8	60.9	55.0
Lezíria	59.2	69.5	69.4	73.1	71.7	69.2
Lisboa Central	43.1	52.1	49.1	51.5	50.5	48.8
Lisboa Norte	44.5	54.0	52.2	56.5	56.0	52.1
Lisboa Ocidental e Oeiras	45.6	56.0	55.2	58.9	57.6	56.3
Loures / Odivelas	49.3	58.5	55.7	55.8	56.7	53.8
Médio Tejo	59.6	70.4	69.2	70.2	70.8	68.6
Oeste Norte	58.5	68.9	66.4	71.2	70.2	68.3
Oeste Sul	55.1	66.7	62.4	63.1	62.7	58.0
Sintra	46.5	58.2	53.7	55.6	57.7	56.0

Source: https://www.sns.gov.pt/transparencia/

Norte contractualized 3,000 screenings and performed 2,457, achieving 81.9% of the negotiated proposal. Data from the 15 ACES were analyzed in 2022 (RCCR), in which they achieved an average of 22.8% of the contractualized values. The maximum was obtained in ACES Almada/Seixal (81.3% of the negotiated value), and the minimum was 0.8% from ACES Loures/Odivelas.

Regarding the RCCU contractualization, data were obtained from 11 ACES for 2021. These 11 ACES performed 44.8% of the contracted amounts. ACES Almada/Seixal completed 94.2% of the total negotiated, and ACES Sintra only carried out 13% of what it had contractualized (391 screenings against the 3,000 negotiated). In 2022, data were obtained from 15 ACES, which together performed, on average, 85.6% of what they had contractualized. ACES Loures/Odivelas exceeded what it had negotiated concerning contractualization (it carried out 6,946 screenings against the 5,000 contractualized). ACES Almada/Seixal completed 77.5% of the total contractualized (performed 10,457 and had contractualized 13,500).

The IDG was introduced in 2014 and intended to assess the results of the indicators and determine the allocation of incentives to the ACES.

The IDG values obtained in each ACES were compared between 2018 and 2022 (Table 4). Among all the years considered, we found that the minimum value was obtained in 2022 in ACES Amadora (37.6). The highest value occurred in ACES Almada/Seixal (2019) and was 71.2. The average IDG of each ACES in the five years studied ranged from a maximum of 65.5 (ACES Almada/Seixal) to a minimum of 51.4 (ACES Lisboa Central). The variation range breadth was 14.2.

For 2021 and 2022, the IDG proposed in the contractualizing process was compared with the IDG obtained by each ACES. Proposals that ranged from a maximum IDG of 75.5 (ACES Oeste Sul) to a minimum of 49.4 (ACES Sintra) for a total of 15 ACES, with a variation range of 26.1, were presented in 2021. The mean value of the IDG proposed to the 15 ACES in that year would be 61.1. The IDG obtained by the 15 ACES in 2021 ranged from a minimum of 48.0 (ACES Lisboa Central) to a maximum of 70.7 (ACES Lisboa Ocidental e Oeiras); that is, a variation range of 23.0 in the IDG obtained by the ACES and an average of 57.9.

For 2022, IDG proposals ranged from a maximum of 77.7 (ACES Almada/Seixal) to a minimum of 54.3 (ACES Amadora) (variation range of 23.4 in the IDG proposed to the ACES). The average IDG proposed to the 15 ACES would be 64.8, slightly above the previous year. The IDG

obtained by ACES in 2022 showed an average of 54.6 (compared to 57.9 in the previous year), with a maximum of 64.2 (ACES Almada/Seixal) and a minimum of 37.6 (ACES Amadora); that is, a range of 26.6 in the performance of ACES.

It follows from this analysis that the variation ranges of the negotiated proposals and the IDG obtained by the ACES are above 20 points (2021 and subsequent years), significant values for which there is a lack of evidence on whether the sociodemographic contexts were considered, either in negotiation or monitoring.

Prescription qualification is an underlying performance area encompassing pharmacotherapeutic prescription, complementary diagnostic methods, and care. To this end, the ARSLVT Pharmacy and Therapeutics Committee (CFT) prepares quarterly reports to analyze prescriptions as part of the contractualizing process. The primary purpose of these reports is to provide information to support reflection on drug use practices at ARSLVT in all prescription contexts (public and private).

In the first quarter of the 2023 report, the CFT stated that the CSP sector upheld leadership regarding financial costs generated by drug prescriptions, representing 41% of total drug expenditure in terms of Retail Price (PVP). The Other Private Locations sector was the second-most generator of this type of expenditure, followed by Private Hospitals and Public Hospitals. The CFT states that ARSLVT's CSPs increased the use of medicines in PVP value, expenditure for the SNS, in volume, and PVP/packaging in the first quarter of 2023, against the same half of 2022. The PVP/patient increased by 5.0% against the same half of the previous year. Medical devices and other health products represented €9.7M (year-on-year variation of 4.6% in the PVP). These values are associated with the provision of test strips and lancets for determining capillary blood glucose and also include incontinence devices, expansion chambers, ostomy elimination material, dressing material, homeopathic medicines, and manipulated products, albeit with less economic expression.

Table 3. Evolution of population-based cancer screenings ARSLVT, Portugal, 2019-2022 (data per 10 thousand inhabitants (%)).

Screenings	2019	2020	2021	2022
	%			
Breast cancer	155.0	109.6	333.1	307.1
Cervical cancer	217.4	104.9	245.6	268.9
Colon and rectal cancer	63.1	21.2	41.8	49.4

Source: ARSLVT/Ministry of Health, supporting documentation presented at the 2022 contractualization monitoring meeting.

Table 4. Evolution of the Global Performance Index, by ACES ARSLVT, Portugal, 2018-2022.

ACES	2018	2019	2020	2021	2022	Mean/ ACES
Almada/Seixal	64.4	71.2	57.9	69.9	64.2	65.5
Amadora	60.6	56.3	53.9	51.4	**37.6**	52.0
Arco Ribeirinho	56.3	63.9	52.2	57.2	47.9	55.5
Arrábida	45.6	54.9	53.4	60.0	43.9	51.6
Cascais	64.7	71.1	58.7	62.0	61.0	63.5
Estuário do Tejo	50.3	55.2	51.4	55.8	60.3	54.6
Lezíria	64.8	69.7	60.2	63.5	61.9	64.0
Lisboa Central	54.6	54.8	53.8	48.0	45.6	51.4
Lisboa Norte	54.7	52.5	55.4	51.5	53.2	53.5
Lisboa Ocidental e Oeiras	58.2	66.6	61.5	70.7	63.8	64.2
Loures/Odivelas	66.2	62.6	53.4	65.7	63.2	62.2
Médio Tejo	52.0	58.9	56.9	54.4	59.9	56.4
Oeste Norte	65.8	68.9	56.1	60.1	52.9	60.8
Oeste Sul	58.0	63.2	54.7	51.3	47.5	54.9
Sintra	54.5	55.5	51.7	47.7	56.2	53.1
Annual mean/All ACES	58.0	61.7	55.4	57.9	54.6	

Source: ARSLVT/Ministry of Health, supporting documentation for external contractualization in PHC, in 2021, 2022, and 2023.

Two indicators related to patients with Diabetes Mellitus (DM) were analyzed. The report cited emphasizes the fact that seven out of 15 ARSLVT ACES had values within the acceptable range for the indicators "Proportion of DM with last HbA1c≤8%" and "Cost of therapy for patients with controlled DM". However, none of the ACES achieved the expected values (Graph 1).

The expected range for the indicator "Proportion of DM with last HbA1c≤8%" was between 70% and 100%, where a slightly more comprehensive range between 55% and 100% was acceptable. At the level of ARSLVT, the proportion of DM patients with last HbA1c≤8% reached the value of 62%, which is acceptable, associated with an average cost of €425, a value above the acceptable range.

For the indicator "Cost of therapy for patients with controlled DM", a range between €0 and €350 was expected, and a range between €0 and €420 was also acceptable. As can be seen in the graph, ACES Lisboa Central was the closest to the expected value regarding costs (€352) but very far from the expected value concerning control of diabetic patients (52%). ACES Oeste Norte showed a more significant deviation regarding costs (+€144 than expected) to obtain the highest value concerning control of diabetic patients (70%), the minimum value in the expected range.

Discussion

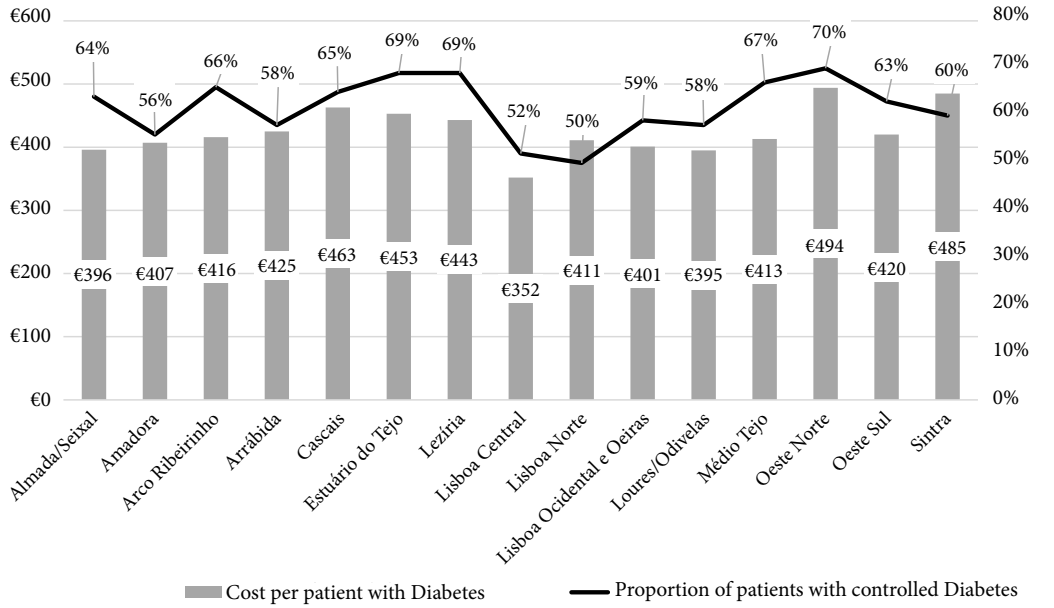
Portugal is facing a complex situation concerning recruitment and retention of public sector workers. In healthcare, the reasons for the staff shortage are well documented (burnout, lack of work-life balance, low salaries leading to double employment, for example), and the direct impact on access to healthcare is apparent. The shortage of medical staff in the ARSLVT is one of the main reasons for the considerable variability in healthcare services and outcomes and the increase in the number of citizens without an assigned FD.

ARSLVT complied with the administrative processes for recruiting and retaining medical staff and, over time, made efforts to structurally improve the CSP services, completing a notable amount of work and making a substantial financial investment in this area. Improving the working conditions of professionals and public service amenities was a priority, resulting from the negotiating capacity with municipalities. An example of this was the Collaboration Agreement called "Global Program for Modernization of Primary Health Care Infrastructure and Equipment in the Municipality of Lisbon 2017-2020 – Lisbon, SNS *Mais Próximo* (Closer SNS) Program" signed between ARSLVT and the Lisbon City Council on March 14, 2017. Under this agreement, a commitment was made to study the location, design, and build from scratch or adapt buildings to install 14 health units with the conditions for the proper functioning and care of the population. Most of these units were completed by 2023. Another health unit called "Ribeira Nova Health Unit" was built during the development of this agreement, besides the 14 planned. On the other hand, there was a significant investment in establishing model B USFs, their accreditation, and the establishment of UCCs.

Assigning FDs to registered citizens has been a government flag that, as shown above, is hard to implement, with massive repercussions on many contractualized indicators. This situation arises from the convergence of several factors: firstly, the difficulty that the public sector is having in recruiting and retaining health professionals; Secondly, it is clear that some regions have a better capacity to recruit and retain doctors than others, for reasons that have not yet been identified, which is also occurring with some geographical areas within the ARSLVT; of interest is the fact that some USFs receive incentives while other UFs are without this institutional and professional prerogative, which places citizens before two discriminatory realities, in the same care network. If, as ERS claims, having an assigned FD increases appointment usage rates, citizens without an assigned FD struggle to access appointments and, therefore, have to resort to available alternatives, including hospital emergency services.

In the United Kingdom[22], communities that combine material deprivation, population aging, health problems, and those with significant pressure to transfer hospital care to the community and greater obstacles to continuous learning and progression in medical careers are usually the least attractive to medical staff. Even recently, in Portugal, a study cited by the Expresso newspaper[23] revealed that "jobs that offer more autonomy and training opportunities are 'strongly preferred' by doctors.

The varying appointment usage rates among the ARSLVT's ACES highlights the difficult access, which should be assessed according to the sociodemographic context. It is possible to know which places have more older adults living alone[22], children up to 5 years old in single-parent



Graph 1. Proportion of patients with controlled Diabetes Mellitus and with last HbA1c less than or equal to 8% and the average cost of therapy in all ACES of the ARSLVT, Portugal, first semester/2023.

Source: Pharmacy and Therapeutics Commission of ARSLVT/Ministry of Health. Report for the first half of 2023.

families, unemployment, and precariousness. In these places, the low rates of appointment usage are of particular importance to citizens, which is the case of the ICSCSP, a recurring issue. In the United Kingdom[23], the ICSCSPs implemented a strategy of granting incentives worth 96% of their salary to doctors who volunteered to reduce these hospitalizations. This process reduced the variability of CSP practices, improved the use of electronic clinical records, and increased nursing interventions in multidisciplinary activities and with chronic patients, but did not affect mortality. Also, citizens over 85, especially women, who lived in areas of more significant economic, social, and environmental deprivation tended to resort to emergency services despite the abovementioned incentive project.

Our analysis in this article on the usage rates of annual medical appointments identified that they were higher in moderately urban areas, which allows us to discuss the traditional tendency to state that rural areas are health deserts. Most deprived ARSLVT areas are predominantly urban and least appealing to health personnel.

The analysis of data on screenings and the ACES IDGs refers to studies[24] that have argued that the role of systems in defending citizens' health is small since what defends health is strongly related to the conditions in which citizens are born, grow, work, and age, as a result of the structural and political conditions of each society. Indeed, the reverse care law[25] stated that medical care tends to be less accessible to populations with more significant health needs when exposed to market forces. Conversely, the effects of this law are attenuated where this exposure is reduced, which is one of the explanations for the increase in health inequalities in the ARSLVT.

Without detracting from all the work carried out by ARSLVT, screening programs knowingly do not guarantee the best results despite their universalist architecture. Some intermediate factors influence the desired objectives, such as the material circumstances of citizens, psychosocial factors (social support, for example), and receptivity to preventive messages, particularly among citizens with lower socioeconomic conditions and less health literacy. However, when identifying that the ACES fulfilled, on average, 22.8% of what was contractualized – given that one fulfilled only 0.8% and another 81.3% of what was contractualized – we are faced with an activity that exposes citizens to inequalities in access to preventive actions that accumulate with those

to which they are already exposed in their daily lives.

This situation means there is a need to act on adherence levels besides clinical screening guidelines. It is not a matter of centralizing screening initiatives and coordination. Multifactorial actions are needed to increase motivation, identify facilitators, and reduce barriers to screening adherence. On this subject, the results show greater participation of women in breast and cervical cancer screenings but worse results in colon and rectal cancer screenings for both sexes. Gender issues regarding adherence to screenings are well known[26], and masculinity greatly influences men's participation.

On the other hand, IDG aims to ensure the necessary balance between demand and feasibility in the sense of leading to health gains and reward efforts, greater availability, quality of care, and performance, then the varying IDG proposals to each of the ACES concerning contractualizing and the results indicate that we are faced with possible intervention needs to improve the Level of Compliance with the Indicators against the contractualized target and the adjusted level of compliance with the indicators.

Diabetes is a complex disease whose treatment can vary according to the patient's needs, resources, and preferences. Treatment includes dietary choices appropriate to the disease and adjuvant treatments and appointments, as the disease has a systemic impact. In the United Kingdom[27], one in 20 prescriptions written by a FD is for treating diabetic patients.

The graph included in the study shows the unequal costs per diabetic patient, what this will imply in the household budget, and the variable proportions of controlled diabetic patients and the associated costs. A study out in Canada[27] highlights the disparity in the costs of DM medications between the different provinces of the country and argues that this expense is a significant part of the direct health expenditure of citizens. It also states that a catastrophic expenditure on Diabetes medication will exceed 3% of all direct healthcare expenditures for each family. Given that families with fewer resources tend to have diabetic patients[28], even if the co-payment or reimbursement policy tends to favor this population group, it does not protect them from the expenses inherent in treating DM. In these circumstances, a diabetic patient has to opt between what he can spend to address the disease (in the short and long term) and the other household financial expenses.

Study limitations

Studying contractualization in CSP is challenging, mainly because the number of variables involved is uncontrollable. The aim is not to discuss the technical aspects of contractualization but rather the values and relational issues it entails. For this reason, the choice of methodology seems appropriate and easy to replicate. The study's main limitation is data collection on the units of analysis, especially when comparing values negotiated in contractualization and results obtained.

Another limitation is the lack of research results in this area. The theoretical foundations of this study and the research question would be enriched if there were more studies on this topic.

Conclusion

The starting question was whether contractualization could help ensure equity and adequate access to primary health care. We can develop two possible answers based on our analysis in this study. Firstly, the development of the contracting process concerning stakeholders, the conceptual framework, and the metrics used have contributed to the consolidation of one of the most successful reforms in Public Administration in the area of CSPs. A complex information system has grown with this process, enabling us to respond to the needs of the current model.

Secondly, we identified throughout the study that the population without an assigned FD is on the rise in the ARSLVT, which means that increasingly more citizens are having to resort to another care model, which exacerbates the inequality between those who benefit from an incentivized care model and those who can only resort to the traditional care model. One of the causes commonly cited is the lack of medical personnel. However, the CSP reform, which began in 2005, introduced a new model of organization and provision of care. After almost 20 years of reform, it would be time to propose new models of provision of care and reorganization of the UFs, which would meet the needs of citizens at the dawn of Industry 4.0.

We noted during the study that health deserts will no longer always correspond to the geographical areas furthest from large urban centers. They are occurring and deepening in the Lisbon Metropolitan Area, in the most deprived neighborhoods, which also concentrate the gentrifi-

cation victims due to urban regeneration and consequent real estate speculation, thus giving rise to changes in social and cultural dynamics. This problem is associated with the one identified regarding access to medicines for DM. The higher expenditure on medicines was widespread in 2022 nationwide, in hospitals and CSPs, and was higher in the ARSLVT (>€100M) than other ARS.

Furthermore, introducing IDGs has not yet resulted in the performance of ACES corresponding to the contractualized values. The aim is not to standardize performance but to achieve better performance in the areas where CSPs make a difference. Without discussing the technical aspect, but only the relational aspect of contractualization, it is clear that it has not been the strategy that contributes to better access and equity, as there seems to be an evident lack of harmony between the stages of strategic planning and situational or local strategic planning.

The first establishes contracting strategies to achieve long-term goals, seeking sustainable improvements to the health system. The second, especially useful in contexts of uncertainty and rapid change, analyzes the reality and social dynamics. It involves the analysis of the determinants of health (social, political, cultural, and economic) that influence the health of the local population. In ACES, the reality is fragmented, not only from a professional perspective but also from a population perspective. This dynamic requires the intervention – which has already been felt since the epidemic period – of the organized community, citizens' associations, municipalities and other active forces in the community.

Collaborations

BR Monteiro: methodology, data collection and analysis, writing of the article. LAC Pisco: critical review, data validation, conclusions and recommendations.

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