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Monitoring and performance indicators in family health units and the objectives of Sustainable Development Goals (SDG 3) in health: a comparative analysis in Portugal in the 2013-2018 period

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Abstract *The scale of transformation required to achieve all Sustainable Development Goals (SDGs) is considerable. The third SDG (SDG3) is explicitly health-related to ensure healthy lives and well-being for all, at all ages. Primary care (PHC), in this context, is the backbone of a health system that can improve people's health, reduce spending and inequalities. A robust system orientation towards PHC must be temporally stable since its reformulation. This analysis uses an instrumental case study. This type of case study provides the opportunity to learn about events. We analyzed and debated 13 indicators, comparing over time, the results obtained by the type of Portuguese health units: USF-A, USF-B, UCSP, UCSP-M. The results show some discrepancies when comparing USFs and UCSPs and may contribute to the deterioration of access inequalities. This is a problem related to clinical governance and not the health unit model. Empowering coordination and improving the effectiveness of middle management is crucial.*

Key words *Primary health care, Monitoring, Pay for performance, Portugal*

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The Sustainable Development Goals (SDGs) and Primary Health Care (PHC)

The scale of transformation required to achieve all Sustainable Development Goals (SDGs) is considerable. One must grasp what happened to the Millennium Development Goals (MDGs) from a strategic perspective to understand the scale of change and the new ways of working recommended. Historically, the main actors in international development have made commitments and their development actions, taking into account the specificity of each objective, which has led to very uncooperative work performed in specific sectors. Instead, the SDGs have evolved into a systemic approach to society that aims to reduce inequalities within and between countries and set more significant opportunities for comprehensive change. For this reason, the World Health Organization (WHO) has established a series of multisector activities explicitly for the health-related SDG.

In this context, health promotion has a crucial role in achieving the whole agenda. Unlike MDGs, the 2030 agenda highlights health as a component of all SDGs, and a critical element of the future development process as it establishes a direct and indirect relationship of health with all 17 SDGs, which underscores both the complex role and the relevance of health promotion for achieving equity, such as its importance for empowering communities and people and protecting human rights.

SDG3 is aimed at ensuring healthy lives and well-being for all at all ages. It has 13 goals, namely, three related to reproductive health and children's health, three related to communicable diseases, chronic diseases, and addictive behaviors, two related to environmental health, one related to Universal Health Coverage (UHC), and four related to the use of tobacco, vaccines and medicines, and preparedness to address global health risks. If SDG3 indicators are clustered into Inputs, Outputs/Outcomes, and Health System Impacts[1] as per the health systems theory, i.e., outputs/outcomes refer to the outcomes of activities or changes at the population level, inputs should relate to efforts made because of desired outputs, outcomes or impacts. From this perspective, we can conclude that SDG3 has few indicators that allow the assessment of PHC contributions to the UHC, as there is no comprehensive approach to disease prevention, diagnosis, treatment and maintenance, and the existing indicators do not allow to evaluate impact on the protection of financial risks and citizens' satisfaction with health services.

It is assumed here that this conceptual framework is fundamental for guiding public health policies and analyzing the participation of all stakeholders and that, concerning SDG3, achieving sustainable change through multisector action can be difficult to show or even to implement in the short term. It follows that any short-term evaluation should use process indicators as the adequate form of success assessment[2].

This is how this paper proposes the use of contracted indicators, taken as process indicators (concerning Donabedian's conceptual framework), which allow evaluating the performance of PHC units in Portugal. Indeed, in this context, PHC is the backbone of a health system that can improve people's health, curb spending, and reduce inequalities[3]. A robust system orientation to PHC (often described as first contact, comprehensive, continuous, and extensive)[4] should be temporally stable[5] since its reformulation[6]. The commendable intentions around this focus are not enough, as we believe the time to change the debate and action has come, especially concerning performance indicators that allow us to achieve the SDG3 goals.

While differences are found between national PHC organizational models and available resources, many of the sustainable development challenges assessed in SDG3 can be met through citizen-centered health policies and population-based approaches, especially concerning chronic diseases. Vaccination and access to medicines lack organized PHC units close to citizens. Access to urgent health care and UHC is closely related to the functioning of primary health care.

More than 40 years after the Alma-Ata Declaration, there is still no reference to the role of PHC in achieving the SDGs. Two conclusions can be drawn from this: firstly, PHC is unnecessary or peripheral to the SDGs, or their role is so crucial in achieving the SDGs that highlighting their role in isolation in one or another of the SDGs would eventually erase their cross-cutting relevance.

Material and methods

This analysis uses the instrumental case study, defined by Miils et al.[7], as it proposes to transcend the case under study. This type of case study provides us with the opportunity to learn about the events that are related to the case by proposing analysis models in future work.

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Looking for evidence of the PHC's contribution to achieving the SDG3, but also to discuss the trend of contracting over the last six years, we started from the following assumption: if we can monitor the performance of PHC through the contracted indicators, then we can resort to a set of information from these indicators, allowing us to know how this level of care as a whole and its underlying units, is contributing to the results presented, either by the National Statistics Institute (INE) or by international fora[8].

Following the first objective, the contracted indicators were clustered as per the SDG3 targets and indicators. The contracted indicators were found to correspond to the following SDG3 indicators: indicator 3.1.1; indicator 3.1.2; indicator 3.2.1; indicator 3.3.1; indicator 3.4.1; indicator 3.4.2; indicator 3.7.1; indicator 3.8.2; indicator 3.a.1; indicator 3.b.1. Correspondence was based on the criteria of a description of the contracted indicators (designation, purpose, indicator description, calculation rules, and general observations) contained in the Monitoring and Contracting Indicators Identity Card[9].

The contracting methods developed for Family Health Units (USF), operating since 2006, provided for the existence of institutional incentives per their level of performance. Subsequently, the criteria for granting institutional incentives to USFs and financial incentives to nurses and technical assistants who are part of the USF model B were regulated.

More recently, the criteria and conditions for granting institutional incentives to the USF have been reviewed, introducing, on the one hand, a Global Performance Index (GPI) consisting of the sum of the adjusted level of compliance of each indicator, weighted by its relative weight, and, on the other hand, a set of new indicators for the contracting and monitoring of USFs activity, to cover other areas and pathologies such as respiratory and mental health diseases, and to reinforce the number of outcome indicators.

This was intended to provide incentives that reward relative performance rather than absolute performance, ease of evaluation, respect for a weighting stipulated for each indicator, enabling the adaptation of measures and targets to the regional and local needs of the population thus assumed to be significant advantages over the previous model. Some problems had already been identified in countries with similar incentive experiences, namely: that professionals focus on short-term objectives and compliance with the metrics subject to evaluation[10], and a clear tendency to normalize earnings by performance and results of the metrics evaluated. Also, most indicators focus on the accuracy of clinical records, hindering the assessment of health gains or their impact on citizens' health.

In 2017, the PHC contracting model was reformulated and built on a new conceptual model based on areas and realms, to remove focus from the negotiation of pre-established indicator targets. This was intended to pursue desirable results in the context of clinical governance, ethical practices, and management of integrated health pathways, as well as the performance of organizations.

Accordingly, instead of negotiating indicators and their targets, their continuous monitoring and evaluation began, focusing on the evolutionary path of the observation unit. The leading utility of the indicator is the demonstration of its trend and the input to a score that contributes to the formation of a sectoral Performance Index value to which the indicator belongs. Thus, the negotiation of internal contracting reinforced the discussion of the three-year Action Plan, with the definition of expected annual results, and the evaluation was operationalized by a multidimensional matrix of the activity of these units, based on the Global Performance Index (GPI)[11] and Sectoral Performance Indices (SPI) that are intended to be continuously achieved and improved. This contracting model is performed annually with the USFs and the Customized Primary Health Care Units (UCSP).

Analysis and discussion of results

We intended to discuss whether the contracted indicators allow to measure the contributions of PHC to the results obtained in some of the SDG3 indicators, using the results obtained between 2013 and 2018, and compare the results obtained by model A (USFA) and model B (USFB) USFs, with those of the UCSPs in the same contracted indicators, in the 2009-2018 timeframe, reflecting on the contracting process of this time bracket. The UCSP-M designation to be used in the text refers to a part of the UCSPs whose users are on lists with an assigned family doctor.

It should be explained here that the PHC Reform implemented in 2006[12] provided for the establishment of teams (doctors, nurses and administrative staff) who volunteered to create a USF, whose first level is the model A USF, that is, in practice, corresponding to a learning and

improvement phase of family health teamwork, while at the same time making a first contribution to the development of internal contracting. Once this first level has been stabilized, teams may require an organizational assessment that would allow them to access model B USF, i.e., those where teams already show more organizational maturity, where teamwork is already a practical reality, available to accept a level of contracting with higher performance levels.

UCSPs are elementary units for the provision of individual and family health care based on multi-professional teams, consisting of doctors, nurses, and administrative staff, developing their activity with organizational and technical autonomy, integrated into a network rationale with the functional units Health Centers' Cluster. The UCSP performance monitoring indicators' panel is typical to USFs, given the coincidence of their care missions, but goals are more modest.

Thus, 183 indicators were considered adequate to the respective sustainable development goals, and most of them (111, or 60.6%) were organized under Indicator 3.4.1 (Mortality rate attributed to circulatory system diseases, malignant tumors, diabetes mellitus, and chronic respiratory diseases) and the remainder were scattered across the other SDG3 indicators. Of all these indicators, only 13 (7.1%) were considered eligible for the study (Table 1). The eligibility criterion used was that it was a complex indicator that resulted from an equation in which the numerator and its denominator were a medical activity score in the PHC (and not just records).

The 13 isolated indicators for the study were grouped as follows: two in "Indicator 3.1.1 Maternal mortality rate"; five in "Indicator 3.2.1 Mortality rate before 5 years of age"; four in the Indicator "Mortality rate attributed to circulatory system diseases, malignant tumors, diabetes mellitus, and chronic respiratory diseases"; two in the "Indicator 3.7.1 Proportion of women of reproductive age (15-49 years) using modern family planning methods". We chose to keep the original numbering of the indicators adopted by the Portuguese Ministry of Health, and didactically number from 1 to 13 those that were selected for this study (Table 1) to make PHC managers' reading easier.

Contracted indicators and PHC contribution to SDG3

In mainland Portugal, at the time of this survey, there were 357 UCSP, 300 USFA, and 254 USFB, whose subscriber lists included 10,244,711 users (Table 2). The INE estimates (2018) the resident population would total 9,779,826 inhabitants in mainland Portugal.

The PHC units of mainland Portugal totaled 9,591,832 users with assigned family doctors, and 629,026 citizens still awaiting the assignment of family doctors. The (models A and B) USFs accounted for 62.8% of the total number of users enrolled in the PHC, although the UCSPs had more users than any of the other PHC types individually.

Reading Table 2 also allows us to understand that two particular issues have dragged on since the founding of the National Health Service (SNS) in 1979 and the PHC Reform in 2006. Firstly, since its inception, the SNS hardly managed to fulfill its ambitious role[13] since it has not been able to articulate universality, generality, and gratuitousness. The problems are not specific to given governance, as they accompany four decades of SNS developing trends. Two opposing stances debate the necessary solutions: those who hide their heads in the sand and argue that it is about throwing money at the problem, and others who are now arguing that the solution to the SNS' sustainability would be to limit the universality and generality of care, either by inducing the preferences of professionals (compulsory doctors' stay in the SNS after training, under an exclusivity regime) or of users (where they prefer to be treated), in a market context. The other problem is related to the difficulty (since 2006) of assigning a family doctor to all Portuguese (despite successive incentive schemes and clinical governance models), to which is added the medical care differentiation (between UCSP and USF) that is still ongoing.

Nevertheless, the SNS has achieved very good comparative results[14], including 26th place in the global ranking that measures the performance of all countries in the 17 SDGs, with a score of 76.4, with a regional mean of 77.7 (Denmark has the best score, of 85.2).

Table 1 shows the indicator (SDG3) "3.1.1 Maternal mortality rate per 100,000 live births" as an impact indicator, with two process indicators (051 and 270). The INE[15] said that, in 2017, the maternal mortality rate stood at 10.4 per 100,000 live births, well above 2012 (4.5 per 100,000 live births). Two indicators contracted with the PHC units that express the percentage of pregnant women enrolled who had an adequate follow-up, and the index of adequate maternal health follow-up were considered. The results in-

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Table 1. Correspondence between Indicators 3.1.1 and 3.7.1 (SDG3) and contracted indicators and the analysis of their evolutionary results (Mainland Portugal - 2013-2018).

Indicator 3.1.1 Maternal mortality rate per 100,000 live births								
Contracted indicator	**Type of UF**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**Diff. 2018 to 2013**
051 - Proportion of pregnant women with adequate follow-up	Mainland ARS mean	9.52	14.22	21.64	24.97	25.54	30.45	**20.93**
	USF-B	31.39	38.02	50.87	52.66	52.88	58.95	**27.56**
	USF-A	11.77	22.30	34.32	36.59	38.27	42.65	**30.88**
	UCSP	3.33	6.89	11.53	12.08	13.94	17.28	13.95
	UCSP-M	3.61	7.28	12.32	12.23	14.49	18.13	14.52
270 - Adequate maternal health follow-up index	Mainland ARS mean	0.51	0.54	0.61	0.65	0.65	0.68	**0.17**
	USF-B	0.71	0.62	0.83	0.85	0.85	0.87	**0.16**
	USF-A	0.57	0.57	0.71	0.74	0.75	0.77	**0.20**
	UCSP	0.44	0.46	0.51	0.53	0.55	0.58	0.15
	UCSP-M	0.43	0.47	0.53	0.54	0.56	0.59	0.16
Indicator 3.7.1 Proportion of women of reproductive age (15-49 years) using modern family planning methods								
Contracted indicator	**Type of UF**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**Diff. 2018 to 2013**
052 – Proportion of women of childbearing age, with adequate family planning support	Mainland ARS mean	25.04	29.22	33.23	34.69	36.00	36.49	**11.45**
	USF-B	53.78	57.73	61.21	59.85	60.50	59.01	5.23
	USF-A	37.03	43.06	39.84	39.67	44.04	41.57	4.54
	UCSP	17.88	20.89	21.25	23.46	24.97	25.44	**7.57**
	UCSP-M	18.96	22.73	23.59	25.06	26.65	27.25	**8.29**
267 - Adequate family planning follow-up index for women of childbearing age	Mainland ARS mean	0.47	0.49	0.53	0.55	0.56	0.56	**0.10**
	USF-B	0.74	0.63	0.78	0.78	0.78	0.77	0.02
	USF-A	0.59	0.57	0.59	0.60	0.63	0.61	0.02
	UCSP	0.39	0.41	0.42	0.45	0.47	0.47	**0.08**
	UCSP-M	0.41	0.44	0.45	0.47	0.49	0.50	**0.09**

Source: Central Administration of the Health System. Master Data System. https://sdm.min-saude.pt/bi.aspx?id=270&fonte=DW_ACSS. Accessed on 07/10/2019

Captions: ARS = Regional Health Administration, USFA = Family Health Unit - Model A, USFB = Family Health Unit - Model B, UCSP-M = Customized Health Care Unit, whose users are on lists with an assigned family doctor.

Note: USF-B are units where professionals earn a pay-for-performance linked to clinical and public health outcomes goals

dicate that there is a potential for growth in the adequate monitoring of pregnant women and maternal health and that this is a priority given the increase recorded in national statistics, thus contributing to better results in the SDG3 indicator.

Regarding Indicator (SDG3) "3.7.1 Proportion of women of reproductive age (15-49 years) using modern family planning methods", it is noted that the mean of all mainland ARS functional units was 36.49% (2018), which represented an increase of 11.45% compared to 2013, and that a definite possibility of growth should be recorded here due to the slight increase over the six years considered.

PHC activity in this area (promotional, preventive, and intervention in monitoring pregnant and family planning) addresses complex problems. Firstly, women's empowerment, taboos, and maternal behaviors during pregnancy and birth[16], and secondly, issues of access to care, closely related to equality. Equality should be the goal of health financing in Portugal.

Equality before the State and the exercise of the right to live longer and better, as well as to have their problems solved quickly and transpar-

Table 2. Type and number of functional units in Mainland Portugal (*)and their users, in number and percentage Mainland Portugal – 2019.

Type (nº of units) / assigned doctor	Users	
	Nº	(% of total)
UCSP (357)	3,809,468	37.20
With doctor(**)	3,228,418	31.53
Without doctor(***)	560,851	5.47
Without doctor by choice(****)	20,199	0.19
USF-A (300)	3,030,563	29.60
With doctor	2,983,815	29.14
Without doctor	52,858	0.51
Without doctor by choice	1,694	0.01
USF-B (254)	3,396,876	33.20
With doctor	3,379,599	33.01
Without doctor	15,317	0.14
Without doctor by choice	1,960	0.01
Overall Total (911)	10,236,907	100.00
With doctor	9,591,832	93.70
Without doctor	629,026	6.15
Without doctor by choice	23,853	0.25

Source: Central Administration of the Health System, 17/10/2019. (*) Mainland Portugal is the name given only to Portugal as a single territory, without regard to the Atlantic archipelagos of the Azores and Madeira. It comprises 278 of the 308 municipalities, 4,050 of the 4,260 districts (which would be called "neighborhoods" in Brazil), 89,015 km2 of the 92,145 km2 of the national territory (96.6%) and about 95% of the Portuguese population. (**) User with a doctor - any user of the unit who is included in a medical list. (***) Users without a doctor - those who, having requested a family doctor, have not yet seen their request satisfied. (****) User without a doctor by choice - users who (while registered) have expressed the wish not to be assigned a family doctor.

ently. In this regard, a clear tendency is observed in the SNS towards equity, that is, to try to compensate the most vulnerable because of their difficulties in accessing the increasingly established health market. However, it is equality, rather than equity, that promotes social cohesion and political stability, and thus emerges as a guarantee of the universality of care.

The impact indicator "3.2.1. Mortality rate before 5 years of age, per thousand live births" (Table 3) is related here to two process indicators (follow-up of children aged 1 and 2 years). In this regard, the INE[15] said that the number of deaths of children under the age of five in Portugal was 4.0 in 2018, and 3.2 per 1,000 live births in 2017. While the results seem to indicate a better follow-up of 1- and 2-year-olds from 2016 (after the 2010-2014 economic crisis), there seems to be a relationship between the increase in these mortality rates and the quality of the health system[17]. The evidence from the studies shows that financial risk for households must be reduced – out-of-pocket spending by Portuguese households was 28% in 2016[18] – while access to health care should be increased.

In Indicator "3.4.1 Mortality rate attributed to circulatory system diseases, malignant tumors, diabetes mellitus, and chronic respiratory diseases" (Table 4), four indicators were selected referring to two chronic diseases: arterial hypertension (AH) and diabetes mellitus (DM).

The indicator "proportion of patients with AH, with an adequate follow-up" that monitors the hypertension program and expresses the proportion of patients with arterial hypertension, with follow-up per the standards of the Directorate-General for Health, obtained on average from all mainland ARS, an increase of 24.27% between 2013 and 2018. In the studied time interval, the UCSPs reached the lowest values of hypertensive follow-up. There is a growing tendency for USF-B and UCSP results in the coming years, even if the current incentive and remodeling or facility construction regime remain focused on USF-Bs.

The mean proportion of adequate follow-up of DM users was 35.81% (2018), with a mean growth of 12.73% (2013-2018), which corresponds to an annual value of 2.1%.

The Global Burden of Diseases[19] attributes the elevation of chronic diseases to the prevalence of risk factors (e.g., obesity) and aging. Health systems must be able to organize responses around prevention, early intervention, and adequate treatment[20] to cope with the rising levels of chronic diseases and population aging. This guidance requires PHC to be appropriately integrated with other levels of health care (curative, rehabilitative, continued) as it allows patients to be referred and monitored.

The use of process indicators can, in fact, help in measuring the path towards SDG3. The visibility of these contributions traverses the reorganization of the contracting indicators around the SDG3 goals, with particular attention to those that capture the principles of equality, community participation, prevention, appropriate technology, and intersectoral management, with the possibility of documenting elements of the first contact, continuity of care, comprehensiveness, coordination, and family and community orientation that evidence suggests is where PHC is successful. The model of clinical governance and the empowerment of health unit managers is es-

Table 3. Correspondence between Indicator 3.2.1 (SDG3) and contracted indicators and the analysis of their evolutionary results (Mainland Portugal - 2013-2018).

Indicator 3.2.1. Mortality rate before 5 years of age, per 1,000 live births								
Contracted indicator	**Type of UF**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**Diff. 2018 to 2013**
058 - - Proportion of 1-year-old children with adequate child health care during the first year of life	Mainland ARS mean	28.95	40.18	45.24	50.44	NA	NA	**21.48**
	USF-B	67.94	74.94	74.68	79.97	NA	NA	12.04
	USF-A	39.90	51.02	60.84	60.56	NA	NA	20.66
	UCSP	16.44	28.62	34.90	38.91	NA	NA	**22.47**
	UCSP-M	17.92	30.54	37.38	40.82	NA	NA	**22.91**
268 - 268 - Adequate child health follow-up index, the first year of life	Mainland ARS mean	0.63	0.70	0.73	0.76	NA	NA	**0.13**
	USF-B	0.84	0.73	0.88	0.91	NA	NA	0.07
	USF-A	0.71	0.72	0.81	0.81	NA	NA	0.10
	UCSP	0.56	0.64	0.67	0.69	NA	NA	**0.13**
	UCSP-M	0.58	0.67	0.69	0.71	NA	NA	**0.13**
301 - Proportion of children aged 1 year with adequate follow-up in the area of child health during the first year of life	Mainland ARS mean	NA	NA	44.72	49.90	51.54	52.95	**8.24**
	USF-B	NA	NA	74.10	79.47	80.45	79.73	5.63
	USF-A	NA	NA	60.60	59.90	66.59	65.03	4.43
	UCSP	NA	NA	33.43	37.92	42.10	41.46	**8.02**
	UCSP-M	NA	NA	35.80	39.75	43.97	43.08	**7.28**
269 - Adequate child health follow-up index, the second year of life	Mainland ARS mean	0.59	0.62	0.65	0.70	0.71	0.73	**0.14**
	USF-B	0.84	0.70	0.86	0.90	0.91	0.91	0.07
	USF-A	0.70	0.64	0.75	0.78	0.80	0.81	0.11
	UCSP	0.54	0.57	0.61	0.63	0.67	0.67	**0.14**
	UCSP-M	0.56	0.61	0.64	0.66	0.69	0.70	**0.14**
060 - Proportion of children aged 2 years with adequate follow-up in the area of child health during the second year of life	Mainland ARS mean	33.80	40.56	45.01	52.00	53.37	55.52	**21.71**
	USF-B	71.47	72.33	74.67	81.59	82.41	81.98	10.51
	USF-A	39.76	47.01	57.52	62.35	65.87	67.14	27.38
	UCSP	23.29	32.18	36.14	41.73	46.06	45.78	**22.49**
	UCSP-M	25.13	35.60	39.59	44.82	48.08	47.96	**22.84**

Source: Central Administration of the Health System. Master Data System. https://sdm.min-saude.pt/bi.aspx?id=270&fonte=DW_ACSS. Accessed on 07/10/2019.
Captions: ARS = Regional Health Administration, USFA = Family Health Unit - Model A, USFB = Family Health Unit - Model B, UCSP-M = Customized Health Care Unit, whose users are on lists with an assigned family doctor.
NA = Data not available.

sential for the equitable and cost-effective integration of care within the UHC.

The trend of indicators contracted over the last six years

The joint analysis of the previous tables (Tables 2 to 4) suggests the following findings when observing data for the total of the contracted units:

The values indicated for 2013 for all types of "Portugal-Mainland" functional units are always lower than 2018, and the growing value of "indicator 025 - Proportion of users with AH, with an adequate follow-up", which registered the most significant mean increase in all types of mainland health facilities: 24.27%. It may mean there has always been an improved performance, regardless of the organizational and remuneration model.

Table 4. Correspondence between Indicator 3.4.1 (SDG3) and contracted indicators and the analysis of their evolutionary results (Mainland Portugal - 2013-2018).

Indicator 3.4.1 Mortality rate attributed to circulatory system diseases, malignant tumors, diabetes mellitus, and chronic respiratory diseases								
Contracted indicator	**Type of UF**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**Diff. 2018 to 2013**
025- Proportion of users with hypertension, with adequate follow-up	Mainland ARS mean	5.86	21.28	25.27	28.32	28.16	30.13	**24.27**
	USF-B	21.14	51.74	60.09	62.11	57.38	58.12	**36.98**
	USF-A	11.39	34.05	34.10	36.45	36.73	35.93	**24.54**
	UCSP	2.64	12.18	13.84	16.82	17.88	19.13	16.49
	UCSP-M	2.75	13.40	15.19	17.90	18.97	20.12	17.36
272 - Index of adequate follow-up of patients with hypertension	Mainland ARS mean	0.51	0.56	0.60	0.62	0.62	0.63	**0.13**
	USF-B	0.74	0.68	0.85	0.86	0.83	0.83	0.10
	USF-A	0.61	0.62	0.66	0.68	0.68	0.67	0.06
	UCSP	0.42	0.47	0.50	0.53	0.53	0.54	**0.13**
	UCSP-M	0.43	0.51	0.53	0.55	0.55	0.56	**0.13**
043 - Proportion of users with diabetes mellitus, with appropriate follow-up	Mainland ARS mean	23.08	27.76	31.12	33.28	33.04	35.81	**12.73**
	USF-B	53.56	56.82	61.63	61.81	56.48	57.79	4.23
	USF-A	35.30	41.23	38.92	40.22	40.29	40.01	4.71
	UCSP	13.69	18.32	18.22	21.77	21.98	24.29	**10.60**
	UCSP-M	14.63	20.35	19.97	23.21	23.40	25.66	**11.03**
271 - Index of adequate follow-up of patients with diabetes mellitus	Mainland ARS mean	0.53	0.56	0.59	0.61	0.61	0.63	**0.10**
	USF-B	0.77	0.66	0.84	0.84	0.81	0.82	0.05
	USF-A	0.65	0.63	0.64	0.66	0.67	0.66	0.00
	UCSP	0.43	0.46	0.45	0.49	0.49	0.52	**0.08**
	UCSP-M	0.45	0.50	0.48	0.52	0.52	0.54	**0.09**

Source: Central Administration of the Health System. Master Data System. https://sdm.min-saude.pt/bi.aspx?id=270&fonte=DW_ACSS. Accessed on 07/10/2019
Captions: ARS = Regional Health Administration, USFA = Family Health Unit - Model A, USFB = Family Health Unit - Model B, UCSP-M = Customized Health Care Unit, whose users are on lists with an assigned family doctor.

In the 13 indicators studied, USF performance was better in three indicators (051, 025, and 043); UCSP performance was better in nine indicators (058, 268, 301, 269, 060, 272, 271, 052, and 267). It may mean that the remuneration and organizational model, as well as better infrastructures of USFA and USFB, did not influence the results in the studied years.

There was a positive performance indicator of equivalent performance (indicator 270) between USF and UCSP.

In the 13 indicators, when comparing the results of the USFA and the UCSP, the UCSP outperforms the USFA in ten indicators (058, 268, 301, 269, 060, 272, 043, 271, 052, and 267). It may mean that the remuneration and organizational model, as well as better USFA infrastructures, did not influence the results in the years studied.

In the 13 indicators, when USFA and USFB results are compared, one is the same (indicator 267) in both types; seven show better USFA results (indicators 051, 270, 058, 268, 269, 060, and 043); five show better results in USFB (indicators 301, 025, 272, 271, 052). It can be said that the desire to obtain results that allow us to ascend to the following type (shifting from USFA to USFB) may influence the results obtained by USFA in the years studied.

These results illustrate that the creation of a multidimensional performance matrix is a good move towards parsimony and flexibility, as it includes an adjustable number of indicators orga-

nized into a finite set of realms and areas, where all indicators are now the same weight by realm, varying by number of indicators available.

The analysis of the trend over the past six years should take into account that maintaining PHC provision by differentiated units (USF and UCSP) tends to aggravate inequalities in the access to quality health care[21]. By itself, this statement seems sufficient to characterize the national reality in this matter. If viewed in context, we find that we are facing problems at both ends of the age spectrum: the child poverty rate is above the European Union mean, our population is one of the oldest in Europe, ill and with poor life quality in recent years[22]. Also, it can be safely stated that the poor and the growing migrant population tend to be served in the UCSPs. These units still have inadequate infrastructures to provide the services, staff that have not shown characteristics to be selected to work in the USF teams, and the service is often provided by hired personnel. Such units are located on the outskirts and the most populous and socially impoverished neighborhoods.

PHC plays a crucial role in reducing inequalities and promoting social justice. Historically, population growth has been linked to the natural balance (total births minus total deaths). However, since the 1970s, the natural balance has begun to shrink, leaving no capacity for generational renewal. With the enlargement of the European Union, the relationship between emigration and immigration and the population movements from one region to another have become more critical. This seems to be the most crucial variable in the social transition, resulting in a continuous flow of citizens to the capital and metropolitan areas, while the population of rural and peripheral areas continues to decline[23]. Is the establishment of USFBs throughout the national territory an answer to these new challenges? What work have we been doing around new models of primary health care and clinical governance? How can we sustainably and adequately accommodate migrants in PHC?

Private supply is expanding at the moment, and when facing the sharpest peak of professional medical reforms, professionals seek employment in the private sector and abroad and refuse public services to avoid attending urgent care. Dental appointments, diagnostic tests, and medicines[24] are the services most often provided by the private sector, leading to increased patient care costs, leading to difficulties in accessing care and continuing treatment. The OECD[25] report states that this expenditure is significantly higher than the EU average (15%). Other elective treatments are becoming restricted to the population who can afford their treatment.

In the recent past, according to the analyst's perspective, incentive pay has been seen as an isolated project, an end in itself that could be both a panacea and a spending enemy in health financing initiatives[26-29]. However, policymakers and practitioners should discuss how the incentive system interacts with the health system, particularly in the area of health outcomes, patient centrality, and the remuneration system[30-33], combining these issues with the response to the challenges of UHC and the SDGs.

The PHC contracting model has to be equated in the context of the New Public Management (NPM) that served as the baseline ideology for the creation of the USFs. The NPM's view that the user is a "supreme" consumer (with the right to choose doctor and health facility) is appealing to both users themselves, politicians, and institutions[34], as they contradict the idea of an omniscient state and a paternalistic system. In practice, however, being a consumer entails several elements. The first is the choice based on the quality of services and products. The second is the citizen's ability to get involved because the choice is more than just setting preferences. However, not all population subgroups will have the same level of involvement, and it is urgent to invest in health literacy.

Equality, rather than equity, promotes social cohesion and political stability, and the State should ensure universality of care is the idea that emerges above. Thus, the State should allocate the SNS budget exclusively to its activity, organizing public financing of private provision, avoiding competition and lack of transparency in the public-private relationship, strengthening its regulatory capacity, and on private provision covered by insurers, either by making use of private valences already installed in the country.

There is a clear tendency for USF results' normalization, which would lead to an almost overlapping of results between them and the UCSPs. As the current tendency is to increase the number of USFs, as this is the most expedient way to assign family doctors to all citizens, the great challenge is to ensure public regulation of practices and processes, because of the desired results.

Final considerations

In the case study presented, we found that the contracted indicators must be carefully selected to produce an analysis of this nature. The issue of indicator selection criteria is fundamental, as most of them are very dependent on the clinical record. However, the ability to explore the relationship between the trend of contracted indicators' results and the impact of SDG3 at the national level is evident. Therefore, future studies to address the relationship between PHC indicators and SDG3 would be fascinating, as would the possibility of organizing indices and proportions of outcomes across all indicators covering the activity of PHC health units to further explore the relationship between national PHC outcomes and SDG targets and indicators.

This selection of indicators should be even broader and not limited to contracting alone. There is much work related to the SDGs that are produced with the support of the PHC units and are not included in the contracted indicators, such as screening, smoking cessation visits, and others).

We also concluded that the results show some discrepancies when comparing the USFs and the UCSPs, which may contribute to more deep-seated inequalities of access. This is a problem that relates to clinical governance and not to the health unit model. Empowering coordination and improving the effectiveness of middle management is crucial here.

It is challenging to correct paths in the middle of a hurricane, but necessary health care change requires more than funding and debates on human resources.

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