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Census of Brazilian social health organizations: survey and characterization

Censo das organizações sociais de saúde brasileiras: levantamento e caracterização

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Keywords:
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ABSTRACT

Objective: To identify and characterize the Brazilians' establishments managed by the Social Health Organizations (OSS). **Methods:** The identification of these establishments was carried out through primary research on four search procedures on the websites of the health departments of the states and municipalities, and consultation on the websites of the OSS and in the Survey of Basic Municipal Information of the Brazilian Institute of Geography and Statistics (IBGE) in 2018. A descriptive analysis of the establishments managed by OSS was carried out comparing with the AD according to hospital indicators. **Results:** The OSS are concentrated mainly in the Southeast and South of the country, with 69% of these establishments are being managed by 20 social responsibility organizations. he establishments managed by OSS are concentrated mainly in the Southeast and South of the country, with 69% of these establishments managed by 20 OSS. The characterization of the hospitals shows that the OSS has a better performance than DA; however, the difference decreases as the size increases. Larger hospitals performed better than other sizes, and this is where the highest proportion of OSS is concentrated among hospitals. **Conclusion:** This is the first work that surveys the OSS at the national level. This list of OSS is an important tool for planning, monitoring, and organizing the structure of service provision in public health in Brazil. The results found demonstrate the need to organize an administrative database that allows a temporal monitoring of the establishments.

Palavras-chave:
parcerias público-privadas, administração hospitalar, organização e administração, administração de serviços de saúde, indicadores de gestão, gestão em saúde

RESUMO

Objetivo: Identificar e caracterizar os estabelecimentos geridos por Organizações Sociais de Saúde (OSSs) no Brasil. **Métodos:** A identificação desses estabelecimentos foi realizada mediante quatro procedimentos de busca por meio de pesquisa primária nos sítios das secretarias de saúde dos estados e dos municípios e consulta nos sítios das OSS e na Pesquisa de Informações Básicas Municipais do Instituto Brasileiro de Geografia e Estatística (IBGE), em 2018. Foi realizada uma análise descritiva dos estabelecimentos geridos por OSS comparando com as Administrações Diretas (ADs) segundo indicadores hospitalares. **Resultados:** Os estabelecimentos geridos por OSSs estão concentrados principalmente no Sudeste e no Sul do país, e 69% desses estabelecimentos são geridos por 20 OSSs. As OSSs estão mais presentes em hospitais-dia, seguidos de prontos atendimentos e de hospitais. A caracterização dos hospitais mostrou que aqueles administrados por OSSs apresentam

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melhor desempenho; contudo as diferenças diminuem à medida que se aumenta o porte do serviço. Os hospitais de maior porte apresentaram melhor desempenho em relação aos demais e é onde está concentrada a maior proporção de OSSs entre os hospitais. **Conclusão:** Este é o primeiro trabalho que faz uma identificação das OSSs em nível nacional. Essa listagem das OSSs é um instrumento importante de planejamento, monitoramento e organização da estrutura de oferta de serviços no Sistema Único de Saúde (SUS). Os resultados encontrados demonstram a necessidade de organização de uma base de dados administrativa que permita um acompanhamento do desempenho dos estabelecimentos no tempo.

Introduction

The Brazilian healthcare system is complex, made up of multiple financial, organizational, and ownership arrangements, encompassing both the state and private sectors for-profit and philanthropic purposes (La Forgia & Couttolenc, 2009; La Forgia & Harding, 2009). In the late 1990s, the management of public institutions changed with the enactment of Law No. 9,637/98, which instituted the management modality of Social Organizations (SO), allowing the transfer of the state sector to the public non-state sector through a management contract (Bresser-Pereira, 1995; Ibañez & Neto, 2007).

In health, this management method is called Social Health Organizations (OSS). It is up to the state and/or municipal Health Secretariats to negotiate the management contract with the managing organizations, inspect, control, and verify their results. The contract specifies the purpose of the service under OSS management and defines the responsibility levels for carrying out the activities. The assessment of accounting-financial procedures is the responsibility of different Courts of Auditors (Bresser-Pereira, 1995; Carneiro-Junior & Elias, 2006; Ibañez & Neto, 2007). This type of management came from criticism of rigidity, political interference, and excessive bureaucratization of those under Direct Administration (DA). The reform aimed to reduce the participation of public authorities' direct management in the provision of services by organizations of the Brazilian Unified Health System (SUS), with appreciation and expansion of shared management spaces (Ibañez *et al*., 2003; Ibañez & Neto, 2007; Campos, 2009). At the same time, the management contract grants managerial autonomy to hired managers (OSS). It establishes goals to be met to absorb the demand with quality (Carneiro-Junior and Elias, 2006).

This model came to Brazil based on the New Public Management (NPM) model, popularized by partnerships between the public and private sectors spread worldwide between the 1980s and 1990s. It came as a proposal to make public administration more flexible and increase accountability (Sano & Abrucio, 2008). However, NPM does not have consistent results around the world. Some studies show that management through private partners has resulted in increased expenditure in certain countries: Australia, Spain, France, England, and New Zealand (Ashton, 1998; Ashton *et al*., 2004; McKee *et al*., 2006; Simonet, 2013; Cabeller-Tarazona & Vivas-Consuelo, 2016). However, there was a reduction in expenditures in Cambodia and Guatemala after outsourcing health services management (Odendaal *et al*., 2018).

Regarding transparency, there is difficulty in the availability of information and monitoring indicators of those hired by the respective contracting governments (Ashton, 1998; Ashton *et al*., 2004; McKee *et al*., 2006; Simonet, 2013; Cabeller-Tarazona & Vivas-Consuelo, 2016). The only favorable evidence for transparency concerns hospitals in Nicaragua, which were more accountable than the previous regime, which was poorly supervised and did not respond to the population's needs (Jack, 2003). Regarding health outcomes, in the district of Alzira, Spain, hospitals managed under the PPP modality (public-private partnership) had efficiency levels above the average of public hospitals in the region (Caballer-Tarazona *et al*.; 2010).

In terms of the quality of services provided, the evidence also shows different results. In some European countries, New Zealand, Guatemala, and Cambodia, no differences have been observed in the quality of services in alternative management modalities to the so-called direct public management, both in providing vaccines and in reducing mortality (Ashton, 2004; McKee *et al*., 2006; Odendaal *et al*., 2018). It is a different result from Lesotho where a significantly lower mortality rate was observed after hiring hospital services (McKee *et al*., 2006; Sekhri *et al*., 2011; McIntosh, 2015; Vian *et al*., 2015). Regarding hospital productiveness, in Spain, at 'Hospital de Alzira', the results indicated the end of the waiting list. They presented better hospital indicators concerning the cost of hospital procedures. In Lesotho, there was an increased number of hospitals and outpatient appointments after the partnership (Sekhri *et al*., 2011; McIntosh, 2015; Vian *et al*., 2015; Cabeller-Tarazona & Vivas-Consuelo, 2016).

In Brazil, the empirical literature on OSS is still scarce, relatively recent, and focuses mainly on assessing hospital performance. This type of management has been disseminated for a longer time, in some cases, in the state of São Paulo (Ravioli *et al*., 2018). Some authors credit this greater dissemination because OSS's first twelve hospital units were implemented in new establishments (Costa & Ribeiro, 2005; World Bank, 2006). The Camata Law (Law No. 82/1995), which establishes restrictions to public expenditure on personnel,

was one of the main reasons for starting this type of management in these establishments. The Supplementary Law 846/1998 was enacted to enable the management of some hospitals newly built by the Metropolitan Health Program of the São Paulo State Government, which transfers the management of these hospitals to the OSS. The public treasury budget would fund these hospitals, so such professionals are not being considered civil servants (Ibañez *et al*., 2001; Costa and Ribeiro, 2005; World Bank, 2006; Pahim, 2009). From a regulatory point of view, São Paulo was also a pioneer in implementing a Supplementary Law to the federal regulation that requires establishments to meet performance targets defined in specific management contracts for each situation. (Supplementary Law Nº 846/1998 – São Paulo).

The literature indicates greater efficiency in São Paulo hospitals managed by OSS compared to hospitals that remained under DA regime (Costa & Ribeiro, 2005; World Bank 2006; Sano & Abrucio, 2008; Carneiro-Junior and Elias 2006; La-Forgia & Couttolenc 2008; La-Forgia & Harding 2009; Quinhões, 2009; Santos, 2012; Coelho & Greve *et al*., 2016; Greve & Coelho, 2017; Mendes & Bittar, 2017). Despite the favorable results, there is no consensus on the transparency and regulation of management contracts. Although some studies question the capacity of the São Paulo State Department of Health (SES) to regulate management contracts (Carneiro Junior & Elias, 2006; Sano & Abrucio, 2008, Pahim, 2009; Congressional Investigative Commission of Social Health Organizations, 2018) La-Forgia & Harding (2009) understand that the SES has been able to exercise its regulatory role adequately.

Outside the state of São Paulo, evidence is scarce. In a study in Santa Catarina State, Rodrigues & Sallum (2017) found greater efficiency in state hospitals managed by OSS than in other state public hospitals. A similar result was reported by Gaigher & Teixeira (2017). They did a comparative case study for Espírito Santo State, indicanting that the hospital managed by OSS showed better performance than those under DA.

OSS in Brazil is also responsible for managing other public health establishments besides hospitals. In primary care, as in-hospital care, the evidence is ambiguous. Ramos and Seta (2019) analyzed the establishments in Southeastern Brazilian capitals managed under contract and found no statistically significant performance differences concerning those under DA. Greve and Coelho (2017), in turn, evaluated the implementation of OSS contracts in 645 municipalities in the state of São Paulo using the differences-in-differences model to analyze primary care outcomes. The authors found increases in the coverage of visits and a reduction in hospitalization for preventable diseases in primary care. Similar results were found by Silva *et al.* (2016) for Rio de Janeiro, who observed expansion of the Family Health Strategy (ESF in Portuguese) coverage in the city due to the OSS role. However, this expansion of access took place without greater transparency and social control concerning those own managed.

Despite this specific evidence for some states and groups of public institutions, there is not yet a more comprehensive study of these organizations for Brazil. This study fills this gap and proposes to carry out a census survey and a characterization of OSS performance throughout the country. The study analyzes the location and distribution of OSS in Brazil, between states, types of public institutions managed, and the year of the beginning of the contract. After the survey phase of these organizations, a comparative analysis was carried out between administration by OSS and those own managed, including only public hospitals. Hospital indicators of case-mix, financial resources, infrastructure, geographic coverage, and performance were studied. The database generated in this study is unprecedented and may support future studies to plan and monitor the SUS hospital network.

Methods

It is a cross-sectional, observational, and descriptive study. The first challenge to carry out this study was identifying which Social Health Organizations manage establishments since no official database in Brazil provides reliable information. From May to December 2019, a survey of active OSS was carried out to overcome this limitation, using four search procedures:

Search procedure 1: search on websites of state and municipal health departments in Brazilian capitals for information regarding the existence of OSS either in these municipalities or in states and the local regulatory framework.

Search procedure 2: search on transparency portals. Searching health departments may not exhaust the possibility of existing OSS in these locations. One possible site for accessing this kind of information is state and municipal transparency portals. The respective transparency portals were accessed for all states and capitals that did know the existing OSS. If there is still no easily accessible information on the portals, a request was made via the Electronic System of the Citizen Information Service (e-SIC) about the presence of an establishment managed by OSS, including the identification of the managing OSS, name of the establishment and year of starting the contract. For the states of Ceará, Pará, and the municipality of São Paulo, the health departments only identified the OSS but not the establishments they managed.

Search procedure 3: investigation on both OSS and IBROSS sites. This step consisted of consulting OSS websites and contacting them directly through phone calls, when possible. Search procedures 1 and 2 identified the OSS and surveyed all establishments managed by such organizations. A search was also carried out on the Brazilian Institute of Social Health Organizations (IBROSS) website, where nineteen of these organizations are located.

Search procedure 4: Search in the Municipal Information Survey of the Brazilian Institute of Geography and Statistics. In addition to the primary survey, it is possible to obtain information at the municipal level about the existence of OSS through the Municipal Basic Information Survey - MUNIC - carried out annually by the Brazilian Institute of Geography and Statistics (IBGE). Regarding MUNIC, there is a question that identifies the municipalities that have contracts with OSS. In this search stage, all cities that declared to have this type of contract were identified. For this municipalities pool (270), search procedures 1, 2, and 3 were performed.

Partnerships between health departments and the OSS are practiced heterogeneously across the country and may occur through a management contract or shared management. In the management contract, the OSS is responsible administration of the entire establishment. In the shared management, only one sector or a set of services is under the OSS's responsibility, with the remainder under direct public management. As shared management is very heterogeneous, the survey of this study includes only establishments that have management contracts with OSS, i.e., they manage all services provided at the institution.

After identifying OSS, these establishments were characterized using three administrative databases: the National Register of Health Establishments (CNES), the Hospital Information System (SIH), and the Outpatient Information System (SIA-SUS) that are available at DataSUS.

The CNES is a registry of all health establishments with mandatory monthly completion and contains information about equipment, their employees, and the availability of beds (Ministry of Health, 2018a). In this register, although there is an item on the legal nature of the establishment, it is not sufficient to identify OSS. As the OSS survey is carried out for active establishments, its characterization requires more recent information. In this study, we chose, as a temporal reference in the CNES, the month of July 2018, which was the most recent that presented consolidated information on the date of starting the research. From this database, data were collected on the number of existing beds, SUS beds, legal nature of the establishment (private, state, philanthropic), type of service, type of management (municipal, state, or mixed). Data was also collected on the municipality, the number of doctors, nurses, health technicians, administrators of the establishments and their respective working hours, number of imaging, and life support equipment used at SUS.

In addition to the CNES, two other official databases made available by DataSUS were used: the SIH, which provides information on the Hospital Admission Authorization (AIH), and the SUS Outpatient Information System (SIA/SUS). These two databases made it possible to measure OSS's hospital and outpatient clinics' productiveness for the entire year of 2018. These two databases are mandatory for managers to fill in for production payment purposes. The AIH is a document that identifies the patient and services provided under the inpatient hospital regime and is generated when there is an admission to a provider, public or private, associated with the SUS. This database allows for a survey of health care provided in hospitals (Ministry of Health, 2018b). SIASUS is a database fed by managers of public health establishments every month about all outpatient procedures financed by the SUS (Ministry of Health, 2018c).

All performed procedures at hospitals, including information about the primary diagnosis, AIH value, patient age, city of origin, the reason for discharge, length of stay (days), and complexity of hospitalizations, were extracted from the AIH per establishments. From the SIA, the aggregated value of outpatient clinics' productiveness for each establishment was collected. Access to microdata from CNES, SIH, and SIA was performed using the R program version 3.4.3 by the RStudio software with the read.dbc package (Saldanha *et al*., 2019).

All public establishments active in 2019 were included to compare those administered by OSS with those under DA. The characterization of these health establishments (OSS and DA ones) considered the attributes "spatial location", "state and municipal regulations", "the type of service and management (municipal, state or mixed)", and "beginning of the contract's validity".

In the CNES, in July 2018, 6,154 hospitals were registered in the country. All those with a private legal nature (1,966), philanthropic (1,778), or with SUS beds equal to zero (43) were excluded. Of the public hospital pool, 102 were not counted, i.e., those that did not have doctors, equipment, beds, or production in the SIA and SIH in 2018. The final base is composed of 2,290 hospitals.

For public hospitals, productive indicators were built, measured in-service units and volume of expenditure, infrastructure, coverage area, and allocation of inputs stratified by size: small size (below 50 beds), medium size (from 51 to 150 beds), and large size (over 151 beds). The list of indicators is described in Table 1. The total number of monthly hospitalizations and the total outpatient expenditure, which represents the billing of outpatient procedures, were used to assess hospital productiveness. Outpatient procedures, being very heterogeneous, are more difficult to be counted. Using the total expenditure variable is a way to overcome this difficulty since all procedures are measured in terms of remuneration by the SUS and the average cost of hospitalizations (AIH). Monetary values were converted into US dollars at the 2018 exchange rate - conversion of R$3.51 to US$ 1 (Central Bank, 2018). Infrastructure indicators refer to the number of professionals and imaging and life support equipment per bed. Both professionals directly linked to caring and administrative professionals were included. The calculation of the

number of professionals was standardized, considering the entire period of 40 hours per week (full-time equivalent - FTE) as a reference.

The proportion of hospitalization of patients residing outside the city characterizes the geographic coverage of the hospital, i.e., it captures the importance of that hospital in a given region. The occupancy rate, bed turnover rate, and average length of stay were observed regarding performance indicators. The hospital occupancy rate is the ratio between the number of days the beds are occupied and the number of beds available in the year. The number of beds occupied is obtained directly from the stay of patients in each AIH. In contrast, the number of available beds is estimated, assuming that all beds in the hospital would be available 365 days a year. The average length of stay represents the average length, in days, of the hospital stay. The indicator usually varies according to the patient's diagnosis and profile, level of technology of the equipment available in the establishment, and remuneration mechanisms. The renewal or turnover rate represents the use of installed capacity. It indicates the relationship between the total number of discharges (discharges, deaths, transfers, or administrative closures) in a given period and the number of beds available to clients in the same period.

The hospital mortality rate is an indicator of the result of the care provided, measured by the ratio between the number of patients who die during hospitalization divided by the number of hospitalizations performed. This indicator depends on patients' general state of health, especially on hospital admission, the complexity of cases, its resolubility, and the quality of care provided (Travassos *et al*., 1999). In this sense, to be interpreted as an indicator of the result or quality of the care provided, it is necessary to ensure that the establishments receive patients with a similar profile.

In addition to hospitals characteristics, it was also described the risk profile of patients treated. If we consider the indicators without controlling the case-mix differences, hospitals with higher severity levels may perform worse. (La Forgia & Couttolenc, 2009). Indicators have been constructed to control differences in patients' age profile, the proportion of highly complex hospital admissions, the proportion of admissions due to Ambulatory Care Sensitive Condition (ACSC), and the mean value of the AIH. The elderly generally demand a greater volume of procedures, impacting expenses

Table 1. Description of hospital indicators of case-mix, financial resources, production, structure, demographic profile, and performance

Indicators	Description
Case-mix	
% of high complexity admissions	The proportion of highly complex hospitalizations to the total hospitalizations.
% patients over 60 years old	The proportion of older people over the total number of AIH appointments.
% of ACSC	The proportion of hospital admissions included in the list of Ambulatory Care Sensitive Condition over the total number of admissions.
Average AIH expend (US$)	Average expense on inpatient procedure per month.
Production indicators	
Total SIA expenditure (US$)	Total expenditure on outpatient procedures per month.
Total number of admissions	Number of admissions per hospital.
Infrastructure	
Number of beds	Number of beds per hospital.
Number of professionals per bed	Number of health professionals (doctors, nurses, nursing technicians and assistants) and administrative sector standardized by the number of hospital beds.
% high complexity equipment	Proportion of imaging and life support equipment compared to the total available equipment.
Geographic coverage	
% patients living outside the municipality	Proportion of patients living outside the municipality over the total number of hospital appointments in the establishment.
Performance	
Hospital occupancy rate (%)	Ratio between the number of days occupied and the number of total days available in the year.
Average length of stay (days)	Average time in days that patients were in hospital.
Mortality rate (%)	Ratio between the number of hospital deaths over the total number of hospitalizations.
Bed turnover index	Total number of leaves (discharges or deaths) over the total number of available beds.

Source: CNES e SIH/SUS, 2018 (Ministry of Helth, 2018a; Ministry of Helth, 2018b; Ministry of Helth, 2018c).

(Costa & Ribeiro, 2005). The proportion of ACSC can capture both the presence of demand induction by hospital providers and the quality of primary care services provided to the municipality (Alfradique *et al*., 2009). The idleness of hospital equipment can change the decision to hospitalize patients, as already observed in small municipalities of Rio Grande do Sul (Souza & Costa, 2011), leading to unnecessary hospitalizations. As it reflects the number of procedures performed in one hospitalization, the average cost of AIH can be interpreted as a proxy for the complexity of care provided at the establishment.

The descriptive analysis considered the calculation of means and standard deviations by OSS administration and those under DA, with the t-Student mean difference test. Calculations were performed using STATA software version 14.2. Maps construction was carried out in QGIS version 3.12.0.

Results

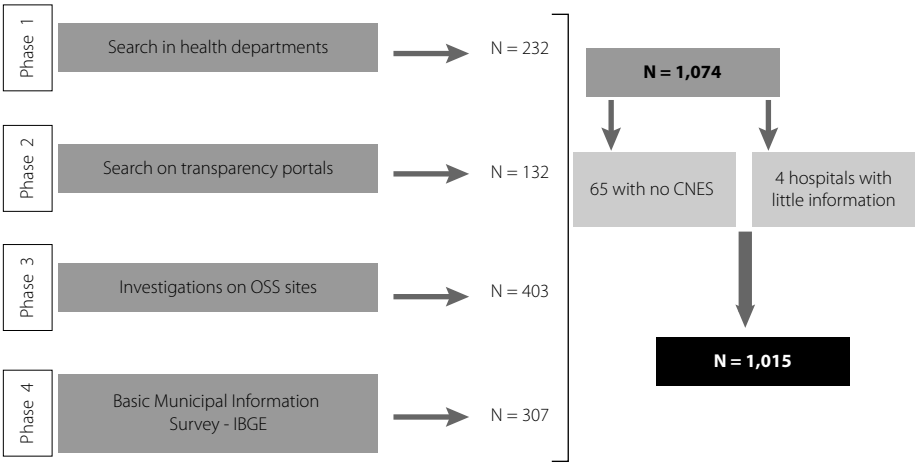
General characterization of Social Health Organizations in Brazil

Figure 1 illustrates the flowchart of steps with the respective number of the establishments in each step. A total of 1,074 units were identified in 2018, 65 of which were not in the National Register of public health establishments (CNES), and four hospitals had missing information despite having an active registry. The final base included 1,015 hospitals managed by OSS, representing 1.4% of the 70,462 units. Searching the websites of the OSS social responsibility organizations was the procedure that yielded the most significant number of results from the surveyed census.

Each OSS participates in bidding documents to manage healthcare facilities in the management contract model based on their preferences. Figure 2 presents a graph with the number of OSS that administer a given number of health facilities, with eight blocks ranging from one to more than eight facilities per OSS. This information was found for 767 units in the identification. 114 OSS manage these public units, and most of these organizations manage few establishments (46 OSS are responsible for only a single public institution). Another 20 organizations administering eight or more establishments represent 69.36% of those operated by OSS in Brazil, emphasizing the São Paulo Association for the Development of Medicine (SPDM), responsible for administering 158 establishments. The 19 OSS linked to IBROSS manage 349 establishments, representing 32.49% of the surveyed population.

Table 2 shows the states and the number of municipalities that have their regulations for OSS and the number of establishments managed by OSS listed in IBGE units, and those collected in this study. Even with the federal and state law for OSS, some municipalities throughout Brazil still work with their own rules for OSS operation in their territory. The number of OSS informed by IBGE is higher than the one found in this study. It is partially due to the difficulty of obtaining information about OSS (only 71 municipalities responded to the request). Some, who claimed to have contracts with OSS, actually have other types of partnership that do not fit as a management contract. Overall, the survey proportionally approaches the number of OSS informed by IBGE. Some states, such as Amazonas, Maranhão, and Santa Catarina, had more OSS in the survey than reported by IBGE.

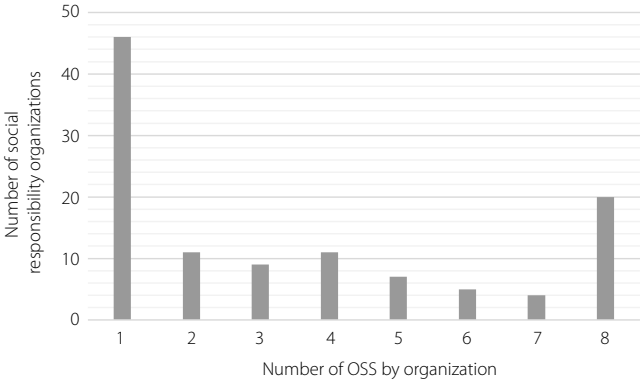
Figure 3 shows the total number of active health facilities managed by OSS by the Federative Unit and its proportion among public establishments, regardless of the management type. Of the 26 Brazilian states, 16 have a contract with OSS, besides the Federal District, and among Brazilian capitals, 16 recorded OSS. The presence of public establishments managed by OSS is more significant in the Federative Unit



Source: 1st phase: websites of state and municipal health departments. 2nd phase: Transparency and Access to State and Municipal Information Portal. 3rd phase: IBROSS and OSS website not linked to the Institute. 4th phase: IBGE Basic Information Survey (IBGE, 2019).

Figure 1. Flowchart with the OSS number by

located on the Brazilian coast, with the highest concentration (58.3%) in the state of São Paulo, followed by Rio de Janeiro (13.2%) and Pernambuco (3.8%). There were few establishments with this management in the North and Center-West regions, except Pará and Goiás. The state of Bahia was one of the first to implement the organizational model. However, in this location, the OSS did not expand as in São Paulo. The focus of OSS management in Bahia was hospital care: of the 32 establishments, 23 were hospitals. In Rio de Janeiro, most of the services managed by OSS are health centers and basic health units, followed by emergency care services and general and specialized emergency care (see Appendix 1A).



Source: Results of the four phases of the OSS survey in Brazil

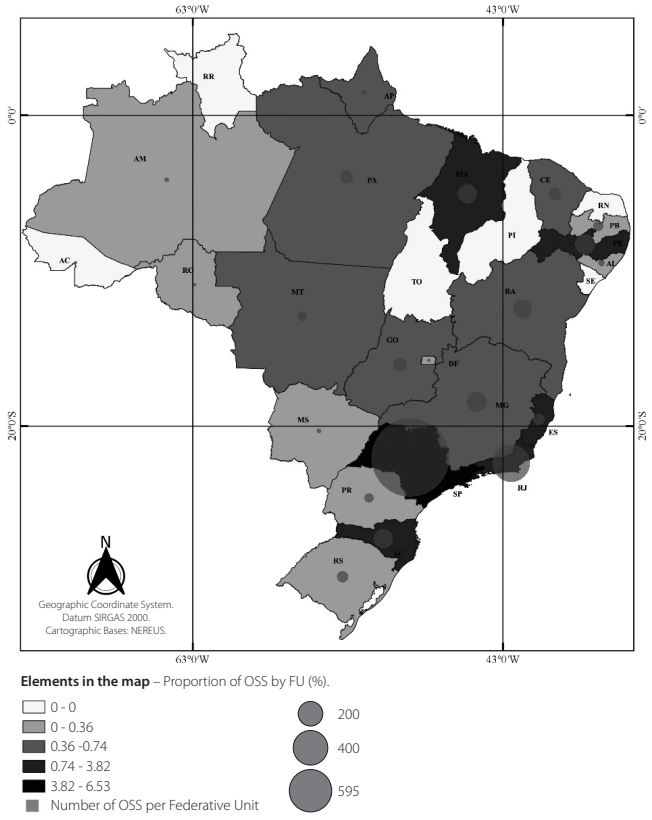
Figure 2. Distribution of OSS according to the number of social responsibility organizations that manage them. Brazil, 2018.

As discussed, the presence of OSS in Brazil is not widespread; its distribution occurs heterogeneously among the Federative Units. The states of Maranhão, Pernambuco, Rio de Janeiro, Santa Catarina, and São Paulo recorded the participation of these organizations as the manager of more than 1% of the establishments. São Paulo and Rio de Janeiro have the highest share of establishments managed by OSS, 6.5% and 3.8%, respectively, although in absolute terms, the volume observed in São Paulo (595) is higher than that observed in Rio de Janeiro (135). Pharmacy services (0.1%), public health laboratory (0.1%), medical offices (0.1%), telehealth (0.3%), and

Table 2. States and number of municipalities that have regulations with OSS and number of OSS per Federative Unit. Brazil, 2018

State	Law	No. munic. w/ Law No.	Nº OSS IBGE	Nº of OSS survey
Acre	None	0	0	0
Alagoas	Law 7,777/16	0	4	4
Amapá	Law 599/01	0	2	2
Amazonas	Law 3,900/13	0	0	2
Bahia	Ordinary Law 8,647/03	3	55	32
Ceará	Law 12,781/97	5	23	14
Distrito Federal	Law 4,081/08	-	1	1
Espírito Santo	Supplementary Law 489/09	4	13	12
Goiás	Law 15,503/05	3	17	18
Maranhão	Law 7,066/98	0	13	36
Mato Grosso	Supplementary Law 150/04	2	7	8
Mato Grosso do Sul	Law 4,698/15	1*	4	2
Minas Gerais	Law 23,081/18	12	162	36
Pará	Law 5,980/96	2	24	16
Paraíba	Provisional Measure 178/11	3	9	10
Paraná	Supplementary Law 140/11	5	20	8
Pernambuco	Law 15,210/13	5	41	39
Piauí	Ordinary Law 5,519/05	1	0	0
Rio de Janeiro	Law 5,498/09	13	302	135
Rio Grande do Norte	Supplementary Law 27/04	1	0	0
Rio Grande do Sul	Bill 44/16	6	42	12
Rondônia	Law 3,122/13	1	1	1
Roraima	None	0	0	0
São Paulo	Supplementary Law 846/98	51*	1.196	595
Santa Catarina	Law 12,929/04	5	24	36
Sergipe	Law 5,217/03	1	28	0
Tocantins	Law 2,472/11	1	3	0

Source: IBROSS and Basic Information Survey (IBGE, 2019).
*The municipalities of Santa Bárbara do Oeste-SP and Chapadão do Sul-MS have ongoing bills to establish Social Organizations.



Source: CNES, 2018 (Ministério da Saúde, 2018). University of São Paulo Regional and Urban Economy Center (NEREUS, 2018).

Figure 3. Spatial distribution, proportion of OSS in relation to the total of health establishments and their nominal amount per Federative Unit. Brazil, 2018.

indigenous health care unit (0.2%) have not been included in the total sum of establishments because, in number, they are not relevant for the analysis.

Table 3 shows the distribution of public health establishment types administered by OSS and those under DA identified in the CNES in July 2018. Most of the establishments are composed of health centers and basic health units (41.7% OSS and 50.2% DA). The importance of hospitals (23.0%) and emergency care (14.4%) in the OSS distribution is noteworthy. Clinics/specialty centers, polyclinics, and hemotherapy and hematology care centers also show a high frequency of DA establishments. The service with the highest frequency of administration by OSS is day-hospitals (32.8% of the total of these establishments), followed by emergency care (10.5%) and hospitals (10.2%).

Table 4 categorizes the types of services administered by OSS and those under DA according to administrative level. Most OSS have a contract with the municipal management (69.1%), followed by state (29.7%) and mixed (1.2%). Although most OSS contracts are carried out with municipalities, there is an expressive presence of state management. In hospitals, e.g., 63.7% of executed contracts are under state management, while only 16% DA are under state management. In health centers, OSS have 99.8% of these municipal under DA, similar to that observed in those under DA (95.3%).

Figure 4 shows the distribution of contracts according to the starting year of the partnership between public entities and OSS. This information is only available for 739 establishments. The official regulation that allows this type of management in Brazil dated to 1998, when a slight increase in contracts executed in the state of São Paulo (opening of 12 hospitals) was observed. However, even before the regulatory framework, there are contracts of this type registered in Brazil. The most significant number of contracts started in 2008, and the highest number of contracts was between 2014 and 2016.

Since OSS have expressive participation in the management of hospital services, Figure 5 shows the spatial distribution of hospitals managed by OSS according to Federative Units. All Brazilian Federative Units that have contracts with OSSs also made partnerships for the management of hospital services, with the exception of Rondônia. Again, the state of São Paulo stands out, with the highest proportion of hospitals managed by OSS (38.9%). Despite having few public establishments managed by OSS, Rio Grande do Sul e Santa Catarina show a high proportion of hospitals - 25% and 21.4%, respectively. When compared with other types of health establishments in the state of Rio de Janeiro, it did not show expressive participation of OSS in hospital services (16.1%).

Hospital indicators of OSS and DA

In 2018, of the 2,290 public hospitals, 234 were managed by OSS. Table 5 shows public hospitals according to the management type, detailed by size and purpose of the hospital (general or specialized). Most hospitals are small (1,282), with 3.0% being managed by OSS. The OSS are more present in large general hospitals (31.82%) than in medium-sized (18.99%). The distribution of OSS in specialized hospitals is more homogeneous, regardless of hospital size.

The performance analysis was restricted to the group of general hospitals. Specialized hospitals are more heterogeneous in terms of procedures performed and are therefore less comparable. As this analysis is carried out in a cross-section, it may present endogeneity problems since, on the one hand, there is a selection of which units will be offered to be managed by OSS. On the other hand, OSS also choose the establishments they are interested in managing. We compared the hospital indicators between the two groups to characterize the results obtained with both types of management in the hospital segment.

For small hospitals, the differences between OSS and those under direct administration are important. The OSS are responsible for a monthly volume of hospitalizations greater than those under direct administration, they have a higher outpatient cost, and are more intensive in human resources (doctors, nurses, assistants, nursing, and administrative

Table 3. Health establishments administered by OSS and those under Direct Administration categorized by type of services

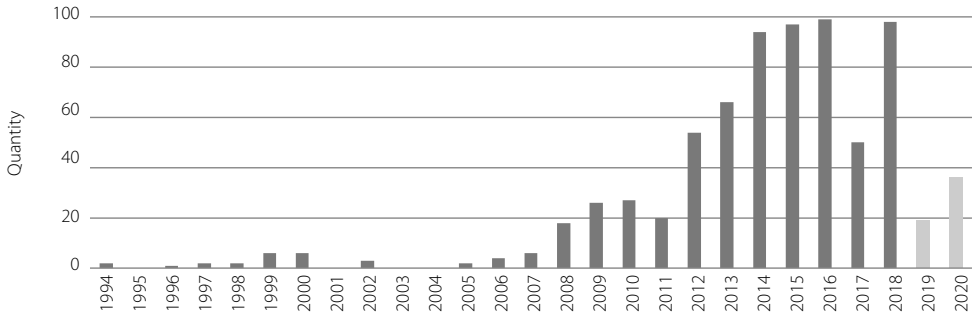
Institution	OSS		DA		OSS/Total (%)
	No. of OSS	(%)	Number	(%)	
Access Regulation and Emergency Medical Center and Surveillance Unit	9	0.9	3,598	5.0	0.2
Psychosocial Care Center	35	3.4	2,931	4.0	1.2
Health Center/Basic Health Unit	419	41.2	36,362	50.2	1.1
Clinic/Specialty Center, Polyclinic and Hemotherapy and Hematology Care Center	105	10.3	6,576	9.1	1.6
Pharmacy	1	0.1	1,965	2.7	0.1
Hospital	234	23.0	2,052	2.8	10.2
Day Hospital – Isolated	19	1.9	39	0.1	32.8
Public Health Laboratory	1	0.1	34	0.0	2.9
Health Center	12	1.2	8,995	12.4	0.1
Telehealth	3	0.3	63	0.1	4.5
Diagnosis and Therapy Support Unit	7	0.7	1,448	2.0	0.5
Mixed Unit	4	0.4	578	0.8	0.7
Mobile Unit	19	1.9	4580	6.3	0.4
Emergency Room, General and Specialized Emergency Room	146	14.4	1,231	1.7	10.6
Medical office	1	0.1	960	1.3	0.1
Indigenous Health Care Unit	2	0.2	1,023	1.4	0.2
Total	**1,015**	**100**	**72,435**	**100**	**1.4**

Source: CNES, 2018 (Ministério da Saúde, 2018a).

Table 4. Distribution of services administered by OSS and those state owned by management type

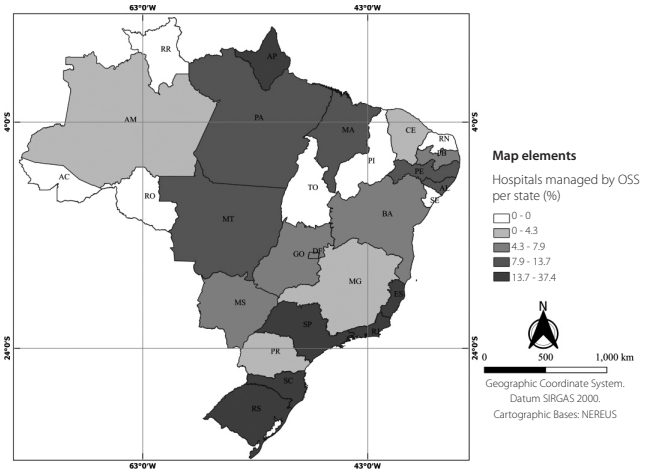
Institution	OSS Management (%)			Public Adm. Management (%)		
	Munic.	State-owned	Mixed	Munic.	State-owned	Mixed
Access Regulation and Center and Surveillance Unit	11.1	33.3	0.0	94.6	5.1	0.4
Psychosocial Care Center	100.0	0.0	0.0	91.4	7.2	1.4
Health Center/Basic Health Unit	99.8	0.2	0.0	95.3	0.9	3.8
Clinic/Specialty Center, Polyclinic and Hemotherapy and Hematology Care Center	30.5	68.6	0.0	81.9	8.2	9.9
Pharmacy	0.0	100.0	0.0	92.8	6.5	0.7
Hospital	32.1	63.7	4.3	62.9	16.0	21
Day Hospital – Isolated	100.0	0.0	0.0	82.1	12.8	5.1
Public Health Laboratory	100.0	0.0	0.0	61.8	29.4	8.8
Health Center	100.0	0.0	0.0	99.4	0.2	0.4
Telehealth	0.0	100.0	0.0	71.4	23.8	4.8
Diagnosis and Therapy Support Unit	42.9	28.6	0.0	75.4	18.4	6.4
Mixed Unit	75.0	25.0	0.0	68.7	9.5	21.8
Mobile Unit	89.5	10.5	0.0	77.5	18.4	4.1
Emergency Room, General and Specialized Emergency Room	63.0	34.9	1.4	85.1	4.0	11.0
Medical office	100.0	0.0	0.0	99.7	0.3	0.0
Indigenous Health Care Unit	100.0	0.0	0.0	99.7	0.1	0.2
Total	**69.1**	**29.3**	**1.3**	**91.9**	**4.2**	**4.3**

Source: CNES, 2018 (Ministério da Saúde, 2018a).



Source: 1st phase: websites of state and municipal health departments. 2nd phase: Transparency and Access to State and Municipal Information Portal. 3rd phase: IBROSS and OSS website not linked to the Institute. 4th phase: IBGE Basic Information Survey (IBGE, 2019).

Figure 4. Beginning of contracts in establishments managed by OSS in Brazil from 1994 to 2020



Source: CNES, 2018 (Ministry of Health, 2018). Center for Regional and Urban Economics at the University of São Paulo (NEREUS, 2018).

Figure 5. Spatial distribution of the total number of hospitals managed by OSS by the total number of hospitals by Federative Unit.

technicians) and technology (equipment). The volume of assistance to non-residents (30.71%) indicates that these hospitals have regional relevance. Small hospitals managed by OSS show unsatisfactory performance but are still higher than observed for those under DA regarding performance indicators. For example, the OSS occupancy rate was 42.65% against 18.93%; the bed turnover rate was 46.2 against 22.72 in DA institutions. Regarding the type of care, hospitals managed by OSS receive relatively fewer older people, carry out less ACSC and have a lower average AIH expense.

The results for medium-sized hospitals are similar to those observed for small-sized ones. In general, indicators showed favorable results for the OSS as they perform less ACSC, record a higher monthly hospitalization volume, and higher costs per hospitalization. They are more intensive in human resources and equipment and receive a more significant proportion of non-resident patients. The number of nurses per bed in OSS is high compared to DA ones, with 0.42 urses/bed against 0.25. The patient's profile has also shown some differences. Medium-sized OSS present proportionally less ACSC (10.01%) than those under DA (13.31%).

Indicators comparison for large hospitals administered by OSS and the DA ones shows more similar results than those observed for the other two sizes. The difference between the means was significant only for the number of life support equipment per bed, the bed turnover rate, and the average length of stay. Compared to hospitals of other sizes, indicators of case-mix dimensions (except hospitalization of the elderly), production, financial resources show this segment with a high volume of admissions per month, a high proportion of highly complex care, and high average expenditure per hospitalization and a longer average length of stay. The OSS participation is more expressive in this segment (Table 5).

Discussion

This study shows the evidence on OSS characterization in Brazil. A total of 1,074 establishments managed by OSS were found, of which 1,015 with active contracts in 2018. This survey progresses over most previous studies by investigating all the states in Brazil and checking some of the numbers raised about OSS by IBGE. Until then, the most significant number of OSS identified was available on the IBROSS website, which contains 19 organizations managing 800 establishments (IBROSS, 2020).

The prior studies were mainly focused on the state of São Paulo, either due to the phenomenon's long existence, the greater concentration of establishments, or the availability of data (Ibañez *et al.*, 2001; Costa & Ribeiro, 2005; World Bank, 2006; La Forgia & Harding, 2009; La Forgia & Couttolenc, 2008; Quinhões, 2009; Barbosa & Elias, 2010; Greve & Coelho, 2017; Mendes & Bittar, 2017). In this state, 26 large state hospitals were identified, a number higher than that investigated in the studies by Barbosa and Elias (2010) and Costa and Ribeiro (2005), 10 and 12 hospitals, respectively. Rodrigues and Sallum (2017) had already identified the same six hospitals mentioned in this study for the state of Santa Catarina.

Table 5. Distribution of hospital size and type between OSS and those under Direct Administration

Size	Hospital type	OSS	DA	Total	OSS/Total (%)
Small	General	34	1,299	1,333	2.55
	Specialized	8	57	65	12.31
	Total Small	**38**	**1,244**	**1,282**	**3.00**
Medium	General	90	384	474	18.99
	Specialized	17	105	122	13.93
	Total Medium	**107**	**489**	**596**	**17.95**
Large	General	77	165	242	31.82
	Specialized	8	42	50	16.00
	Total Large	**86**	**209**	**295**	**29.11**
Total		**234**	**2.052**	**2.286**	**10.24**

Source: CNES, 2018 (Ministério da Saúde, 2018a).

In Espírito Santo in 2018, there were four state hospitals managed by OSS, a number higher than that stated by Turino *et al.* (2016), three hospitals, and Gaigher & Teixeira (2017), one hospital. For the other Federative Units, no publication on the subject was found in an indexed journal.

The characterization of the OSS profile showed that, in addition to hospital services, OSS are already present in other types of health services, mainly Basic Health Units/Health Centers and Specialized Clinics. Regarding their spatial distribution, there is a concentration in some regions of the country, especially Southeast and South, and few in the North, which seems to have a relationship with socioeconomic conditions.

Although most of the contracted services are municipal management responsibility, the presence of the state level is also essential. The role of state governments in the OSS expansion had already been mentioned by Carneiro Junior and Elias (2006) when they noticed the importance of state managers in ensuring access to health services and the effective public control of OSS in the state of São Paulo. The health manager's commitment to overseeing OSS can be assured based on regulations in the municipality and the state, which represent the government's concern with transparency and oversight, but it is not always enough (Sano and Abrucio, 2008; Pahim, 2009; Baggenstoss and Donadone, 2014; Coelho and Greve, 2016). Responsibilities assigned to the public and private sectors are diffuse, and lack of transparency was claimed, which hinders social participation (Dualibe, 2012; Pacheco *et al.*, 2016; Graf *et al.*, 2019).

The progress of OSS in the state of São Paulo was due to the Camata Law, the predecessor of the Fiscal Responsibility Law (LRF) of 2002. It came as an incentive to outsourcing in managing the workforce in the public sector since a large part of expenditures is directed towards salaries and pensions (Costa & Ribeiro, 2005). Resolution 40, e.g., establishes that states with a Consolidated Net Debt twice the Current Net Revenue cannot request new loans from the Federal Government. The relative success observed in the OSS in São Paulo, and the LRF was the great precursor of the management contract model across Brazil (Costa & Ribeiro, 2005). Possibly due to this law, there has been a contract increase since 2007. Its peak was between 2014 and 2016, the Brazilian crisis period.

Due to the significant presence of OSS-managed hospitals in Brazil and their importance to Brazilian public health, the performance characterization of these hospitals was carried out through the construction of indicators. One of the main results pointed to a reduction in disparities between OSS and those under DA as the size of hospitals increases. For large hospitals, the differences observed in hospital indicators are less significant. The significant differences between the two types of management at this size are seen in the turnover rate and average length of stay, which showed a more substantial turnover of patients in the OSS. For small and medium-sized hospitals managed by OSS, the differences are more important, although there is less participation of Social Organizations. Establishments managed by OSS had a lower proportion of hospitalizations due to ACSC, more excellent geographical coverage, bed turnover rate, and higher occupancy rates. Although the occupancy rate is higher than observed in DA establishments, they are still much lower than recommended by the National Supplementary Health Agency (ANS) - from 75% to 85%. There are studies comparing hospital indicators of OSS with other establishments, but either did not disaggregate by size or only studied large hospitals (Ibañez *et al.*, 2001; Costa and Ribeiro, 2005; World Bank, 2006; La Forgia and Couttolenc, 2008; Sano and Abrucio, 2008; La Forgia and Hardlng, 2009; Quinhões, 2009; Barbosa and Elias, 2010; Coelho and Greve, 2016; Greve and Coelho, 2017; Mendes and Bittar, 2017; Rodrigues and Sallum, 2017). Such disaggregation is fundamental, given the economies of scale and scope of in-hospital care (Botega *et al.*, 2020). It is essential to investigate to what extent the complexity required by a larger establishment changes the results depending on the type of management. Although other studies have pointed to a lower use of human resources in OSS (Costa and

Table 6. Results of hospital indicators between hospitals administered by OSS and those under Direct Administration by size

Size	Small			Medium			Large		
Management	**OSS**	**DA**	**p-value**	**OSS**	**DA**	**p-value**	**OSS**	**DA**	**p-value**
Number of hospitals	34	1299		90	384		76	166	
Case-mix									
High complexity admissions (%)	0.58	0.15	0.33	1.45	1.37	0.13	6.04	7.46	0.31
	(2.28)	(2.39)		(4.87)	(7.23)		(11.82)	(9.40)	
Número de hospitais	30	1190		90	379		76	166	
Number of hospital	26.05	31.75	0.04	26.23	24.76	0.38	27.01	26.08	0.52
	(18.00)	(15.06)		(13.69)	(14.42)		(11.81)	(9.75)	
Elderly hospitalizations (%)	15.65	23.19	0.00	10.01	13.31	0.01	8.10	7.03	0.13
	(14.34)	(13.12)		(7.92)	(10.93)		(6.29)	(4.52)	
Average cost (US$/hospital stay)	159.34	116.61	0.00	224.4	179.48	0.00	433.83	412.54	0.7
	(98.04)	(26.66)		(102.17)	(100.87)		(621.89)	(210.89)	
Production indicator									
Monthly admissions	142.41	54.04	0.00	374.67	253.33	0.00	1027.4	919.25	0.14
	(109.14)	(53.93)		(222.13)	(167.87)		(469.18)	(544.83)	
Number of hospitals	34	1272		86	378		75	165	
Total outpatient expense (thousand US$)	280.04	143.91	0.00	666.97	530.48	0.06	2273.3	2791.95	0.28
	(235.79)	(258.38)		(537.41)	(608.51)		(2824.8)	(3719.09)	
Number of hospitals	35	1300		90	384		76	166	
Indicadores estruturais									
Beds	33.47	26.56	0.00	93.54	81.21	0.00	268.37	295.73	0.20
	(12.93)	(11.35)		(26.53)	(29.10)		(134.89)	(159.67)	
Doctors/bed	1.74	0.24	0.00	0.48	0.39	0.05	0.84	1	0.06
	(7.51)	(0.65)		(0.33)	(0.39)		(0.58)	(0.67)	
Nurses/bed	0.63	0.22	0.00	0.42	0.25	0.00	0.48	0.47	0.75
	(1.60)	(0.35)		(0.26)	(0.19)		(0.18)	(0.27)	
Nursing Tech. and Assistants/bed	1.70	0.78	0.00	1.25	0.95	0.00	1.48	1.42	0.48
	(3.91)	(1.32)		(0.71)	(0.65)		(0.54)	(0.58)	
Administration/bed	0.11	0.03	0.00	0.03	0.02	0.00	0.02	0.01	0.11
	(0.42)	(0.06)		(0.03)	(0.02)		(0.02)	(0.02)	
Imaging equip/bed	0.18	0.08	0.00	0.06	0.05	0.00	0.05	0.06	0.16
	(0.46)	(0.15)		(0.03)	(0.03)		(0.01)	(0.02)	
Life supports equip/bed	3.09	0.35	0.00	1.34	0.60	0.01	2.11	1.56	0.00
	(12.54)	(0.74)		(1.33)	(0.74)		(1.12)	(1.09)	
Geographical Coverage									
Number of hospitals	30	1190		90	379		76	166	
% patients living outside the municipality	30.71	9.41	0.00	41.75	24.94	0.00	34.4	34.6	0.95
		(12.54)		(26.46)	(22.86)		(25.13)	(21.81)	
Performance indicators									
Mortality rate (%)	3.31	2.20	0.04	5.60	3.94	0.00	6.12	6.12	0.99
	(3.88)	(2.84)		(3.91)	(4.56)		(3.72)	(3.77)	
Occupancy rate (%)	42.65	18.93	0.00	60.07	42.79	0.00	72.7	69.41	0.17
	(24.10)	(15.27)		(22.62)	(25.60)		(19.42)	(16.02)	
Turnover rate	46.20	22.72	0.00	45.70	36.00	0.00	45.69	35.44	0.00
	(29.36)	(18.56)		(20.86)	(20.33)		(17.84)	(12.62)	
Average length of stay (days)	3.70	3.34	0.28	2.78	4.29	0.36	6.04	7.41	0.00
		(1.81)		(25.85)	(8.71)		(2.51)	(3.16)	

2018 Average Exchange. Historical Series of the Central Bank of Brazil.
Source: CNES e SIH/SUS. 2018 (Ministério da Saúde. 2018a; Ministério da Saúde. 2018b; Ministério da Saúde. 2018.c).

Ribeiro, 2005; World Bank, 2006; La Forgia and Couttolenc, 2008; Quinhões, 2009; Barbosa and Elias, 2010; Mendes and Bittar, 2017), this study observed a higher average volume of professionals per bed. Only Quinhões (2009) indicated a higher concentration of doctors per bed. This result is noteworthy since the OSS expansion initiative was aimed at cost containment given by the LRF. It should be noted that, compared to what is spent on government employees, expenditure on outsourced professionals is lower (World Bank, 2006).

It is important to emphasize that this study is intended to be a census and characterization of OSS in Brazil; there was no selectivity analysis of those establishments. OSS do not register for managing establishments randomly across the country. They participate in publications that they consider attractive, as they already have expertise in the requested services or identify areas with more favorable conditions. Another point of OSS selectivity is that most of them are in the state of São Paulo, where this type of management is more consolidated. The state of São Paulo has, for the most part, cities with a high population density, a large volume of human resources, and a good service network to be hired.

Although the survey is essential for an in-depth discussion on OSS in Brazil, this census has some limitations. The first limitation refers to the data collected: even though a thorough search was done in all existing information sources, it is impossible to affirm that all existing OSS in Brazil and their contracts have been exhausted. Some municipalities did not respond to the request; others did not complete the item regarding OSS in the IBGE survey. The information provided by municipalities is significantly heterogeneous; there is no knowledge of training to fill in this IBGE database, which may have led to significant temporal and inter-municipal variation. It was observed, in some cases, municipalities that claimed to have the presence of OSS when it was a matter of partnerships with philanthropic organizations to help with services or health care providers. Such information error is due to a lack of knowledge of whom provided information in the municipality and the difficulty in using this database to measure the presence of OSS in Brazil. There were also problems with consistency in the information provided by cities. In some cases, although confirming in the IBGE survey that they had contracts with OSS, they reported that they no longer had them in response to the request via e-SIC in one of this study stages. Finally, it is noteworthy that the contractual clauses are not uniform, varying according to the municipality. Budget-financial information, as it is available in different websites and databases, in addition to not having a standard for all contracts, represents yet another limitation.

Differences were seen between establishments administered by OSS and those under DA regarding their location, management, and types of services provided. The survey and the analysis show that there is still much to be investigated, discussed, and improved about OSS. The carried-out OSS listing is a tool for future study. However, an administrative database that allows temporal monitoring of establishments is still required since these data are not static. Some contracts can be started, and others can be closed over time.

The results support the debate on administrative reform in the public health area since the management autonomy of OSS seems to be the reason for their better performance (La Forgia and Couttolenc, 2008). It is essential to draw attention to how contracts are executed. It can contribute to greater efficiency and transparency if the public manager monitors and inspects the reports published by the OSS – which does not always occur, generating a lack of consensus on the theme. While the relative ease of OSS administration quickly expanding their services was a decisive aspect for the state and municipality of São Paulo in dealing with Covid-19 (Public Call No. 002/2020 – Municipal Health Department of São Paulo), the inadequacies observed in the state of Rio de Janeiro determined to withdraw their OSS sanctioned by Law No. 8,986/2020.

Conclusion

The study contributes to an exhaustive survey of OSS. It showed relevant results regarding distribution and the importance level in managing the public hospital network in the country. More than 1,000 establishments managed by OSS were identified throughout Brazil, mainly located in the Southeast and South regions, and 114 OSS manage them. They are concentrated on 23 health services, focusing on day hospitals, health centers/basic health units, and hospitals. States and municipalities seem to have an increasing trend towards this type of management, directly linked to the public area financing contingency that started in the 1990s, with a peak in contracts from 2014 to 2016.

The study also carried out a comparative analysis between OSS and those under DA based on hospital sector indicators. The results showed that differences in terms of management decrease as hospital size increases. It is interesting to point out that small and medium-sized hospitals managed by Social Organizations, in general, showed better indicators compared to those under DA. Still, in all of them, there is room for improvement.

The listing of OSS is an essential tool for future studies. The results found in the OSS demonstrate the need for an administrative database that allows the temporal monitoring of establishments.

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Appendix 1A

	State																					
Service type	**RO**	**AM**	**PA**	**AP**	**MA**	**CE**	**PB**	**PE**	**AL**	**BA**	**MG**	**ES**	**RJ**	**SP**	**PR**	**SC**	**RS**	**MS**	**MT**	**GO**	**DF**	**Total**
Health Center	0	0	0	0	0	0	0	0	0	0	0	0	4	8	0	0	0	0	0	0	0	12
Health Center/Basic Health Unit	0	0	0	0	1	0	0	0	0	0	19	4	65	307	0	23	0	0	0	0	0	419
Clinic/Specialty Center, Polyclinic and Care Center Hemotherapy and Hematology	0	0	2	0	7	0	1	8	0	2	2	0	0	81	0	1	0	0	0	1	0	105
Hospital	0	1	13	1	20	5	6	13	2	23	4	5	24	76	5	9	7	2	8	13	1	238
Day Hospital – Isolated	0	0	0	0	0	0	0	3	0	0	0	0	0	16	0	0	0	0	0	0	0	19
Public Health Laboratory, Telehealth, Medical office and Pharmacy	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6
Diagnosis and Therapy Support Unit	0	0	0	0	0	0	0	0	0	0	2	0	0	5	0	0	0	0	0	0	0	7
Mixed Unit	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	4
Mobile Unit	0	0	0	0	0	0	0	0	0	1	0	0	3	14	0	0	1	0	0	0	0	19
Emergency Room, General and Specialized Emergency Room	0	1	1	1	7	9	3	15	2	6	10	3	36	40	3	3	4	0	0	2	0	146
Indigenous Health Care Unit	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
Psychosocial Care Center – CAPS	0	0	0	0	0	0	0	0	0	0	0	0	3	32	0	0	0	0	0	0	0	35
Access Regulation and Emergency Medical Center and Surveillance Unit	1	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	1	0	9