

# Efficiency and sustainability of public health spending in Brazil

*Eficiência e sustentabilidade do gasto público em saúde no Brasil*

Edson C. Araujo<sup>1</sup>, Maria Stella C. Lobo<sup>2</sup>, André C. Medici<sup>3</sup>

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## Keywords:

health care financing, health systems efficiency, SUS financing, SUS reforms

## ABSTRACT

**Objective:** This paper discusses issues related to the efficiency and sustainability of public spending on health in Brazil. Despite the achievements of recent decades, the Unified Health System (SUS) faces structural challenges with consequences on the access to public health services and on the financial protection of the population. **Methods:** The paper provides a brief overview of the public healthcare financing in Brazil over the last ten years and presents an efficiency analysis of the SUS public health spending, using data envelopment analysis (DEA) models for the years of 2013 and 2017. **Results:** In terms of public spending, the paradox that Brazil spends little but poorly on health still persists. Public expenditures on health are relatively lower than those observed in countries with health systems with similar characteristics, but public expenditures per capita grow at rates higher than the growth of gross domestic product (GDP) *per capita*. In terms of efficiency of public health spending, the analysis shows that there is potential to increase the efficiency of the SUS. In 2017, these inefficiencies amounted R\$ 35.8 billion. In general, SUS primary healthcare (APS) is more efficient (63% and 68% in 2013 and 2017) than high and medium complexity care (MAC) (29% and 34% in the same years, respectively). **Conclusion:** Improving the efficiency of public spending on health is particularly important in the current context of low economic growth and strong fiscal constraints in the post-pandemic environment. Efficiency gains can be achieved with: (i) scale gains in the structure and operation of hospitals, (ii) integration of care in health care networks, (iii) increased density and better distribution of the health workforce, (iv) change in mechanisms and incentives to link payments to providers and professionals to health outcomes, with the PHC as the organizer of the system, (v) innovations in the management of health service providers, with an emphasis on public partnership models and private companies (PPPs). The consolidation of the SUS depends on public policies to improve the efficiency and quality of services provided to the population.

## Palavras-chave:

financiamento da saúde, eficiência dos sistemas de saúde, financiamento do SUS, reformas do SUS

## RESUMO

**Objetivo:** Este artigo discute questões relativas à eficiência e à sustentabilidade do gasto público com saúde no Brasil. Apesar das conquistas das últimas décadas, o Sistema Único de Saúde (SUS) enfrenta desafios estruturais com consequências no acesso aos serviços públicos de saúde e na proteção financeira da população. **Métodos:** O artigo traça um breve panorama do financiamento da saúde no Brasil nos últimos 10 anos e apresenta análise da eficiência do gasto público em saúde utilizando modelos de análise envoltória de dados (*data envelopment analysis* – DEA) para os gastos com o SUS nos de 2013 e 2017. **Resultados:** Do ponto de vista do financiamento do sistema público de saúde, persiste o paradoxo de que o Brasil gasta pouco, mas gasta mal. Os gastos públicos com saúde são relativamente menores que os observados em países com sistemas de saúde com características semelhantes, porém os gastos públicos *per capita* crescem a taxas maiores do que o crescimento do Produto Interno Bruto (PIB) *per capita*. Do ponto de vista da eficiência, a análise demonstra que há potencial de aumentar a eficiência do SUS. Apenas em 2017 essas ineficiências somavam R\$ 35,8 bilhões. De forma geral, a atenção primária à saúde (APS) do

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1. Ph.D., Senior Economist, World Bank.

2. Ph.D., Epidemiologist, Institute for Studies in Public Health, Universidade Federal do Rio de Janeiro (IESC/UFRJ).

3. Ph.D, International Consultant in Health Economics and Development.

**Corresponding author:** Edson C. Araujo. 1818 H Street, NW Washington, DC 20433 USA. E-mail: earaujo@worldbank.org

SUS tem eficiência maior (63% e 68% em 2013 e 2017) do que a atenção de alta e média complexidade (MAC) (29% e 34% nos mesmos anos, respectivamente). **Conclusão:** Melhorar a eficiência do gasto público com saúde é particularmente importante no contexto atual de baixo crescimento econômico e fortes restrições fiscais no ambiente pós-pandemia. Ganhos de eficiência podem ser alcançados com: (i) ganhos de escala na estrutura e operação dos hospitais, (ii) integração do cuidado em redes de atenção à saúde, (iii) aumento da densidade e melhor distribuição da força de trabalho em saúde, (iv) mudança nos mecanismos e incentivos para vincular os pagamentos aos provedores e profissionais aos resultados de saúde, tendo a APS como organizadora do sistema, (v) inovações na gestão dos provedores de serviços de saúde, com ênfase em modelos de parcerias público-privadas (PPPs). A consolidação do SUS depende de políticas públicas que melhorem a eficiência e a qualidade dos serviços prestados à população.

## Introduction

Brazil built and consolidated one of the largest public health systems in the world in the last three decades. The Brazilian Unified Health System (SUS) provided advancement in the country's social policies, allowing millions of Brazilians previously without coverage to access health services. Creating the SUS, there was a considerable expansion of the public health service delivery network, with great coverage and access to health services and improved health indicators for the Brazilian population (Gragnotati *et al.*, 2013). Thus, in 2017, Brazil achieved the highest coverage of essential health services among the ten most populous countries in Latin America, with 79% of its population (Table 1).<sup>1</sup> Primary Health Care (PHC), through the Family Health Strategy (FHS), is one of the expansion pillars of health services coverage. From 1998 to 2020, the family health (FH) teams increased from 4.0 thousand to 43.3 thousand.<sup>2</sup> The increased number of teams, accompanied by increased FHS coverage, reached 63.6% of the total Brazilian population in 2020. More recently, with the registration incentives implemented by the Prevent Brazil Program, the number of people enrolled in the FHS teams reached over 145 million in 2020.

The coverage and access increase were, to some extent, followed by the increased production of services. Considering the SUS outpatient care services, which include

a considerable volume of PHC actions between 2008 and 2016, there was a growth of 32% in the *per capita* volume of services produced. However, there was a reduction of 26.2% between 2016 and 2020, with production returning to levels before 2008 (Graph 1). This trend, particularly in the year 2020, should have been affected by the pandemic crisis, which resulted in a reduction in demand (and supply) for regular health services.<sup>3</sup>

However, expanding health services had not achieved a proportional effect on reducing family health expenditures. Recent evidence indicates that, on average, health spending accounts for 13.0% of total household consumption, ranging from 12.1% for the lowest consumption decile to 14.0% for the highest income decile. Health corresponds to the fourth-largest expense in the family budget, after housing (36.6%), transport (18.1%), and food (17.5%). Araujo and Coelho (2021) used data from the 2017-2018 Household Budget Survey (HBS) of the Brazilian Institute of Geography and Statistics (IBGE) for estimating that 33.4% of Brazilian families incur catastrophic health expenditures (37% between the poorest). More than 10 million Brazilians fall into poverty annually due to direct spending on health. It corresponds to 4.7% of the Brazilian population, i.e., representing a higher percentage than that seen globally (2.5%) or among Latin America and the Caribbean (1.8%). These data reflect that there are still difficulties accessing health services (Graph 2).

1 The Universal Health Coverage (UHC) - Service Coverage Index (SCI) has been calculated by the World Health Organization (WHO) for all countries, based on their national statistics, as one of the indicators that monitor the universal health coverage target of the Sustainable Development Goals (Indicator 3.8.1). The Index comprises an extensive set of indicators grouped into four components of service coverage: (i) reproductive, maternal, newborn, and child health; (ii) infectious or communicable diseases; (iii) non-communicable or chronic diseases and (iv) service capacity and access.

2 See <https://sisaps.saude.gov.br/painelsaps/saude-familia>. According to this portal, the number of FHS in December 2020 was 43,286. However, an additional number of traditional primary care teams are equivalent to 8,639, which would give a total of 51,325 primary care units (FHS + traditional primary care teams)

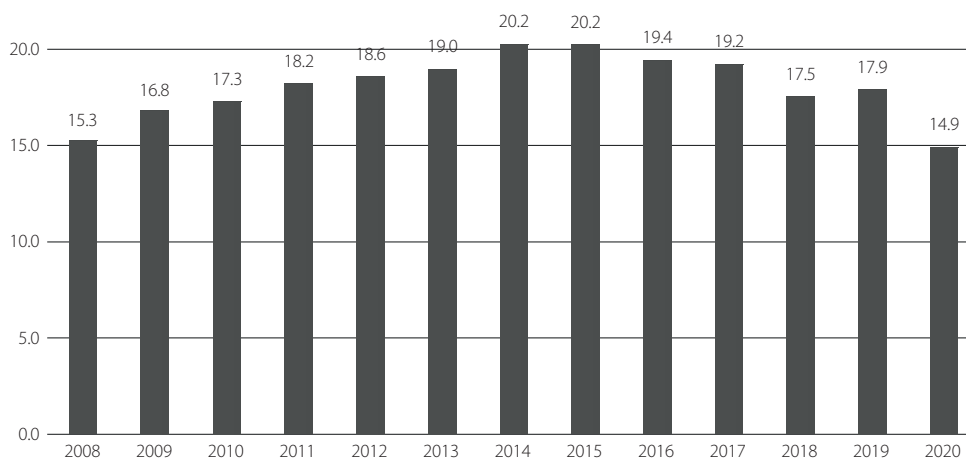
3 It is worth mentioning that outpatient services are more significant than the medical appointments *per se*, as it includes a series of services, such as various tests, vaccination, therapies, drug delivery, and others that are not associated with the visit to a doctor. Between 2008 and 2020, SUS outpatient procedures *per capita*, as shown in Graph 3, went down from 15.3 to 20.2, but it started to decrease until reaching 14.7 in 2020. The reduction in outpatient procedures cannot always be seen as a negative factor, and it can also be associated with a reduction in waste and increased efficiency. Much of the value-based health care strategy (VBHC) seeks to transform health systems oriented towards producing a volume of services to health systems oriented towards achieving good clinical outcomes and care outcomes for the patient.

**Table 1.** Universal Health Coverage Service Index (UHC-SCI), Selected Latin American and the Caribbean States

Country	Pop (Millions in 2021)	UHC-SCI		SCI-1		SCI-2		SCI-3		SCI-4		DA (%)
		2015	2017	2015	2017	2015	2017	2015	2017	2015	2017	
Brazil	214.0	78.0	79.0	78.6	77.2	66.4	70.4	70.6	71.2	98.8	98.7	43.0
Mexico	130.4	76.0	76.0	83.7	83.3	68.0	71.0	71.1	71.7	80.3	79.7	54.0
Colombia	51.3	76.0	76.0	81.9	82.2	62.7	61.0	77.0	77.4	83.3	85.5	54.0
Argentina	45.7	76.0	76.0	89.7	87.9	60.0	64.3	65.7	66.9	93.8	88.9	34.0
Peru	33.4	77.0	77.0	76.4	75.3	63.4	68.9	82.2	83.3	88.9	81.1	70.0
Venezuela	28.7	73.0	74.0	82.8	75.7	63.3	67.3	78.8	79.2	69.6	75.0	41.0
Chile	19.2	66.0	70.0	92.0	91.6	64.1	74.0	35.6	38.0	90.8	94.2	43.0
Guatemala	18.3	57.0	55.0	68.6	70.7	53.6	44.6	71.8	72.1	41.1	32.0	46.0
Ecuador	17.9	76.0	77.0	78.8	80.6	59.1	63.7	77.6	77.9	91.9	85.6	39.0
Bolivia	11.8	64.0	68.0	70.0	69.0	42.0	48.6	78.5	78.8	74.5	81.5	50.0

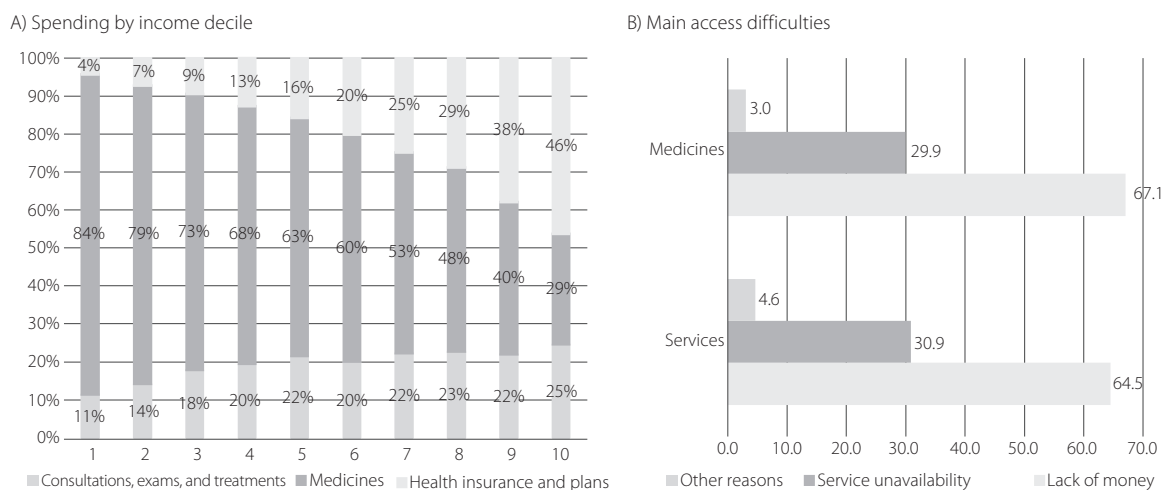
The UHC-SCI ranges from 0 to 100, with 0 representing no coverage and 100 full population coverage. SC-1: reproductive, maternal, newborn, and child health; SC-2: infectious diseases; SC-3: non-communicable (chronic) diseases; SC-4: capacity of health services; DA: data availability for calculating the UHC-SCI.

Source: World Health Organization (WHO). Available at: <https://www.who.int/data/gho/indicator-metadata-registry/imr-details/4834>.



Source: Ministry of Health Siasus. Available at: <http://sia.datasus.gov.br/principal/index.php>.

**Graph 1.** Production of Outpatient Services per capita, Brazil 2008-2020



Source: Authors' calculation based on POF/IBGE 2017/2018.

**Graph 2.** Health expenses and difficulties in accessing services

The SUS consolidation has been based on a debate on the appropriate public health spending and the efficiency of using these resources. Brazil's total health expenditure is comparable to the average spending among the Organization for Economic Cooperation and Development (OECD) countries. Brazil allocated the equivalent of 9.2% of its Gross Domestic Product (GDP) to health in 2018, while OECD countries allocated, on average, 8.8% (OECD, 2019). However, in 2017, public sources accounted for 71%, on average, of health expenditure in OECD countries, while in Brazil, public sources accounted for only 43% of health expenditure. Private spending, direct payments, and spending through plans and health insurance accounted for 57% of total health financing sources in the country. According to the IBGE Health Satellite Accounts, in 2017, the *per capita* expenditure of families and private institutions (including the portion dedicated to health insurance) was 40% higher than the *per capita* expenditure of the government. Such difference between public and private *per capita* expenditures has increased in recent years, indicating the trend of health expenditures in Brazil being supported by resources that come directly from family budgets and non-governmental institutions.

Although relatively lower, the public spending *per capita* has continued to rise in recent years, with rates above GDP growth rates *per capita*. Graph 3 shows in the series 2011-2020, the growth of total public health expenditure *per capita* (including the three spheres of government) was systematically higher than the GDP growth *per capita*, except in 2018. It means that the expansion of public health spending over the past few years has been more significant than the Brazilian economy expansion.

Despite efforts to consolidate a global public health system, Brazil still faces enormous challenges to strike a balance between an adequate level of (public) expenditures and better results from resources invested in the public health system. In the context of fiscal restrictions, the discussion on improving the quality of public health spending is essential to consolidate gains achieved in recent decades. This discussion should consider mechanisms that avoid resource wastage and increase efficiency, improving the sector management and work processes and creating underlying incentives for patients, managers, professionals, and providers.

This article discusses the efficiency agenda importance to ensure the sustainability of public health spending in Brazil. Challenges will be even more significant due to the possible trend of increasing health spending due to the incorporation of technology in the sector and changes in the demographic and epidemiological profile, which create an increased spending trend. This article

firstly presents a brief overview of health financing in the country, emphasizing the composition and trajectory of public health spending in the last ten years. Then, the article presents and discusses an analysis of the efficiency of public health expenditure in Brazil. Finally, it discusses health policies that could improve the efficiency of using public health resources in Brazil.

## Overview of health financing in Brazil

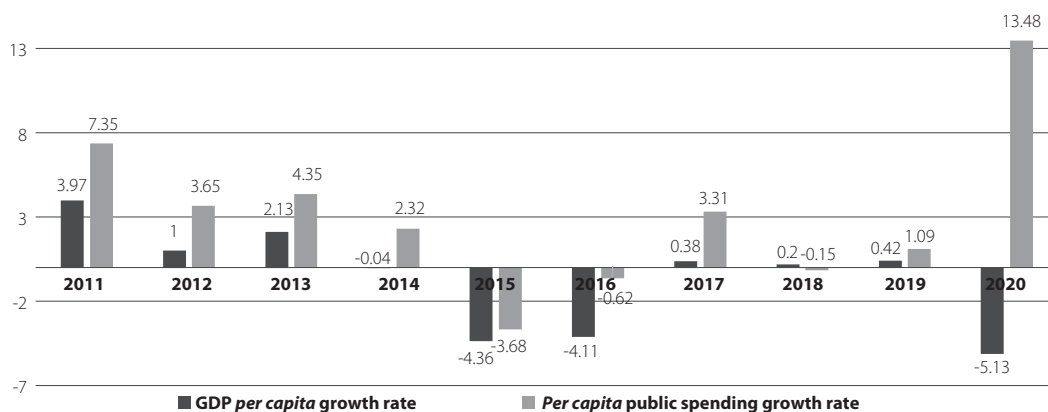
Based on data from the Information System on Public Health Budgets (SIOPS) from the Ministry of Health, it is estimated that expenditure on Public Health Actions and Services (ASPS) within the three government spheres reached 4.83% of GDP in 2020.<sup>4</sup> Graph 4 shows that, in 2020, health spending amounted to BRL 358 billion, an increase of 44.3% compared to 2011 total expenditure (BRL 241 billion), in constant values of December 2020. However, 2020 was atypical due to the COVID-19 pandemic, when extraordinary resources were allocated in response to the pandemic. Compared with the pre-pandemic period, 2019 (BRL 304 billion), the growth reaches 26.2%, a real annual geometric growth of public health spending of 2.6% per year throughout the period.

The federal health expenditure share was reduced by 3% from 2010 to 2019. This reduction was reversed in 2020 with the increased federal resources to respond to the pandemic, surpassing the participation percentage observed in 2010 (46% in 2020), due to the federal government's role in assisting states and municipalities in setting up infrastructure, purchasing equipment, supplies, and vaccines to fight the pandemic. When considering the entire pre-pandemic period, a participation increase of local levels of government, states, and municipalities is seen, highlighting the latter, which, in 2020, contributed 29% of total public spending in the sector, compared to the 26% from state spheres.

A more detailed analysis of federal health expenditures, using the ASPS [Public Health Actions and Services] criterion, allows us to demonstrate some changes in the composition of main expenditure groups in the last ten years.<sup>5</sup>

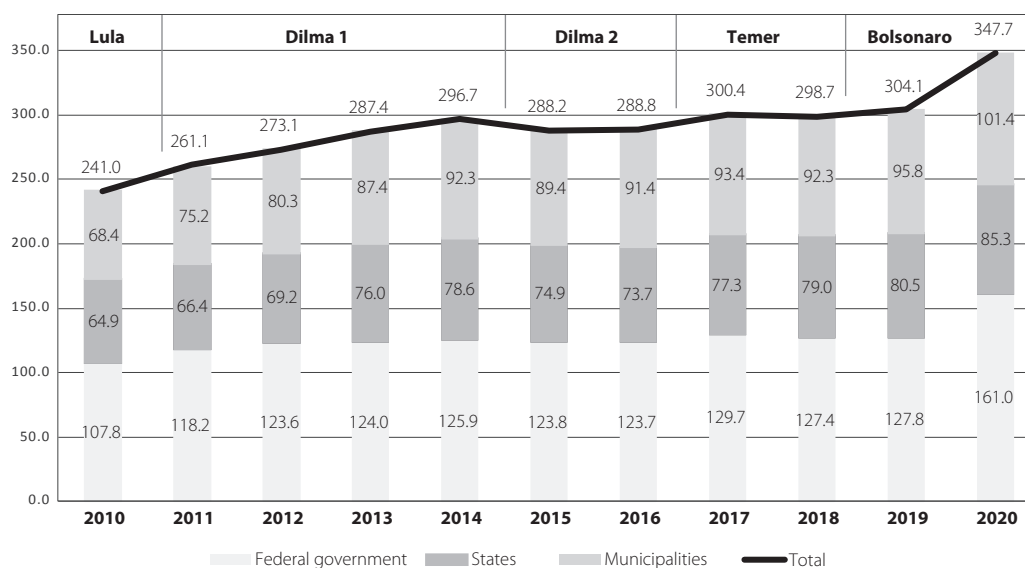
4 It was the highest share of public health spending in Brazil. This data corresponds to the year in which the COVID-19 pandemic started. It led to a drop in GDP of 4.1% and a growth in public health spending of 17.6% for facing extraordinary expenses to contain the pandemic and treat critically ill patients. It required expenditure on equipment, emergency beds, and medical products, such as personal protective equipment, medicinal gases, and medicines, which had high prices due to international demand.

5 Other expenses include various lesser representativeness groups, such as general administration, internal control, regulation and inspection, social communication, special assistance to population groups (children and adolescents, elderly, indigenous people, people with disabilities), food and nutrition, early childhood education, higher education, basic urban sanitation, training on human resources, technological development and engineering, among others.



Source: SIOPS. Available at <http://antigo.saude.gov.br/repasses-financeiros/siops>.

**Graph 3.** GDP per capita growth and public health spending: Brazil, 2011-2020.



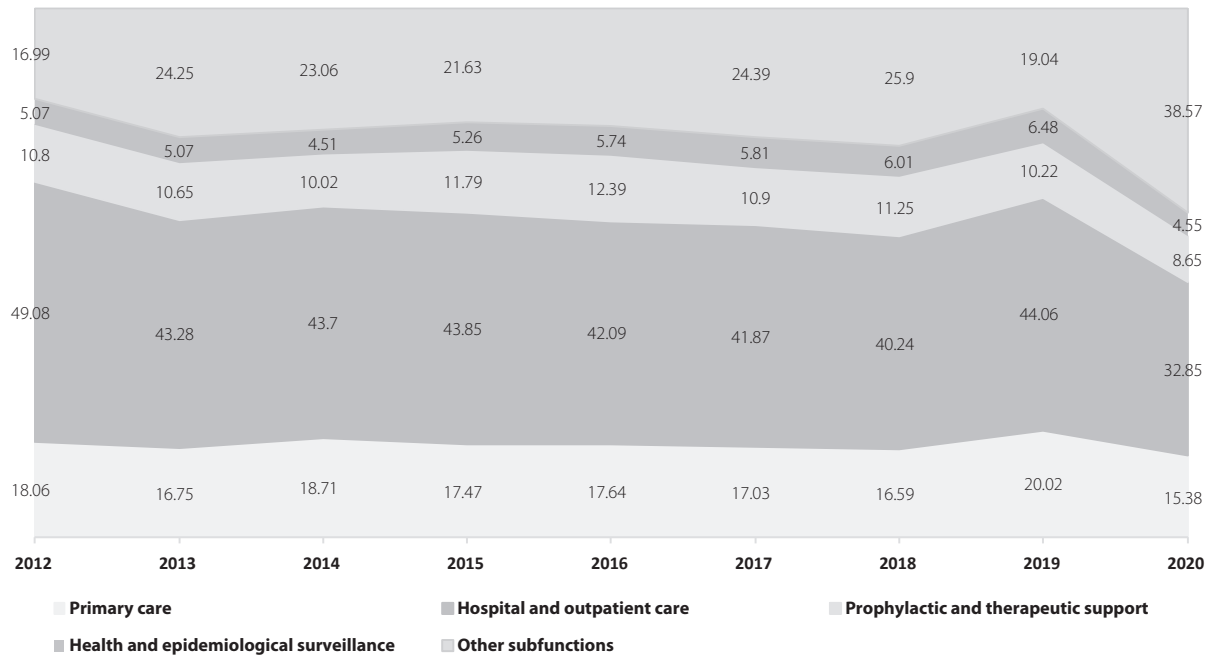
Source: Authors' calculation from SIOPS/MS data. Available at: <http://antigo.saude.gov.br/repasses-financeiros/siops>. \*In BRL billion from Dec. 2020 deflated by the Extended National Consumer Price Index (IPCA).

**Graph 4.** Public health spending in Brazil by the government sphere, 2010-2020\*

Expenditure on primary health care, for example, increased marginally from 18% to 20% of SUS federal spending between 2012 and 2019 (despite the drop in 2020, probably due to the pandemic). Spending on hospital and outpatient care decreased from 49% to 44% between 2012 and 2019, reaching its lowest participation in the series in 2020 (33%).<sup>6</sup>

Expenditure on prophylactic and therapeutic support (including medications) ranged between 9% and 12% over the period, with no defined trend. Health spending and epidemiological surveillance, on the other hand, ranged between 4.5% and 6.5% throughout the series, also not showing a defined trend (Graph 5).

<sup>6</sup> This drop is due to the reduction in hospital admissions in the public sector, mainly due to the cancellation of elective surgeries during the COVID-19 pandemic (Medici AC, 2021).



Source: Authors' calculation from SIOPS/MS data. Available at: <http://antigo.saude.gov.br/repasses-financeiros/siops>

**Graph 4.** Percentage distribution of SUS federal expenditures according to expenditure components: 2012-2020

### The efficiency of public health spending in Brazil

Studies that usually seek to measure health efficiency apply production frontier techniques, such as data envelopment analysis (DEA) and stochastic frontier analysis (SFA). These techniques aim to estimate a boundary representing the maximum level of outputs (health services produced or health outcomes) that may achieve given the number of inputs (financial and human resources, for example) and technology available. DEA is a non-parametric technique based on linear programming to build a production frontier, with the advantage of considering multiple inputs and outputs simultaneously in the efficiency estimate. In Brazil, the DEA methodology has been widely used to measure health efficiency, such as to analyze the efficiency of the Brazilian Health System (Pires & Marujo, 2008), hospitals (Lins *et al.*, 2007), and public health programs (Afonso & Perobelli, 2018).

This article presents an efficiency analysis of public health spending in Brazil using DEA. It was designed to reflect SUS organization and financing: (i) It uses municipalities as a decision-making unit (DMU). The choice of municipalities as DMUs follows the SUS's decentralized institutional arrangement, defining health care as a tripartite responsibility. Municipalities provide health services and implement essential health policies; (ii) Two DEA models were estimated.

The first analyzes efficiency within the PHC scope, considering inputs and outputs related to services provided within the health care context. The second model analyzes efficiency in medium and high complexity (MHC) care, following the efficiency estimate from inputs and results related to services provided at this care level. These models show these care levels are funded separately and allow us to examine how the efficiency at one level influences the other; (iii) Both models are product- (or result-) oriented. The product-oriented model was chosen since the ultimate goal is to maximize results, i.e., for achieving maximum results (of health indicators and health service delivery) with the available resources; (iv) The models assume variable returns to scale (VRS). The VRS model is justified because DMUs used (municipalities) are quite different in scale (population size), reflecting the variables used. Two non-discretionary variables were also included in the models, not specific to the health sector, to control by sociodemographic heterogeneity among DMUs; (v) The models were estimated for 2013 and 2017 to measure the performance variation in the period.

Table 2 presents the variables, inputs, and outputs used to estimate the PHC and MHC models. Inputs are public health expenditure at each care level: PHC (subfunction 301) and MHC (subfunction 302). These two care levels correspond to approximately 59% of the total consolidated

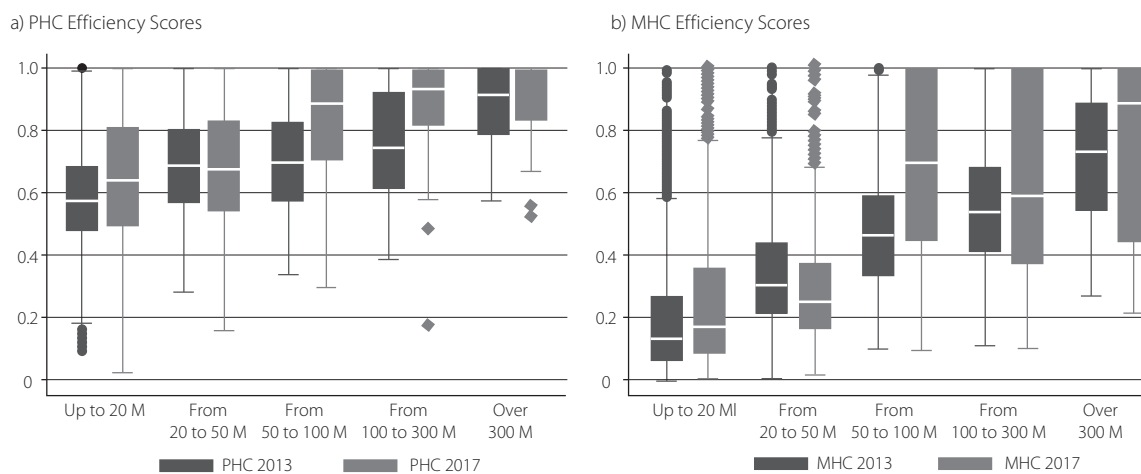
health public spending in 2017 (Graph 5). Outcomes are divided into intermediate products (or health service delivery indicators, such as outpatient procedures and FHS coverage) and end products (or health outcomes, such as preventable mortality for different age groups).

The World Bank's analysis shows significant scope for making health spending more efficient. Municipalities are consistently more efficient in providing PHC services than MHC services, a pattern observed across all regions and municipality sizes. In regional terms, the North and Northeast

are the most efficient regions in the PHC and MHC (due to the inputs' lower relative consumption). Locally, the average efficiency score for PHC was 63% and 68% in 2013 and 2017, respectively. The average efficiency score for MHC was 29% and 34% in 2013 and 2017, respectively. Efficiency is highly correlated with the municipality's population at both care levels, demonstrating a scale effect. The effect of population size is more evident for MHC when the highest average efficiency scores (above 60% in 2017) are only found in municipalities with more than 50,000 inhabitants (Graph 6).

**Table 2.** Variables (inputs and outputs) DEA, PHC, and MHC models

Level	Variables	Sources
PHC	Inputs	Total PHC spending ( <i>subfunction 301</i> )
	Outputs	Primary Care Medical Appointments
		Primary Care Appointments (other healthcare professionals)
		Administered Doses of Tetravalent
		Primary Care Coverage
		Preventable Deaths, aged 0-4 years
		Preventable Deaths, aged 5-75 years
	Non-discretionary	<i>Per capita</i> GDP
Literacy rate		
MHC	Inputs	Total MHC spending ( <i>subfunction 302</i> )
	Outputs	Adjusted Admissions (by complexity)
		Adjusted Outpatient Procedures (by complexity)
		Preventable Deaths, aged 0-4 years
		Preventable Deaths, aged 5-75 years
	Non-discretionary	<i>Per capita</i> GDP
		Literacy rate



Source: Prepared by the authors.

**Graph 6.** PHC and MHC efficiency by Municipalities Size, Brazil 2013-2017



The main determining factor observed for PHC efficiency is the number of FHS teams (World Bank, 2017). It has been considered the most effective mechanism for inducing PHC coverage expansion in Brazil, leading to increased access, reduction of unnecessary hospitalizations, and a drop in mortality (Macinko & Mendonça, 2018). The *Programa Mais Médicos* [More Doctors Program], established in 2013, was able to increase the number of “family and community” doctors by 7,000 starting in 2014, with an annual increase of 1,000 doctors in subsequent years (reaching 30,181 in 2017). When the program ended in 2018, these numbers were again equal to 2014 (around 27,000) (Gomes *et al.*, 2020).

Concerning human resources, a recent medical demography study in Brazil showed that the number of doctors in Brazil has practically doubled in the last 20 years, reaching 2.4 doctors per 1,000 inhabitants. However, the large concentration of these professionals remains in large urban centers and the private market (while the proportion of family doctors remained at 5.0%) (Scheffer *et al.*, 2018).

The MHC performance is linked directly to the primary care efficiency score and the organization and functioning of the SUS hospital network. Brazilian hospitals operate on a small scale since 55% of hospitals have fewer than 50 beds and approximately 80% have fewer than 100 beds – compared to an estimated ideal size of 150 and 250 beds to achieve economies of scale (La Forgia & Coutollenc, 2008). Diseconomies of scale associated with the high number of small and medium-sized hospitals lose BRL 7.3 billion annually to SUS. A World Bank study (2016)<sup>7</sup> that used DEA to analyze the specific efficiency of SUS general hospitals estimated the average efficiency score at 28%, i.e., there would be scope for a mean increase in production at 72% to achieve better parameter practices with the same resources. Other factors that influenced the efficiency of general hospitals were: public nature, the relationship between doctors and nurses/bed (up to 6.5), positively associated; average stay and density of beds per 1,000 inhabitants in the surroundings, negatively associated. This last aspect indicates that the hospital care quality also depends on the organization of the surrounding network by promoting the articulation between demand and supply of services at different care levels and the structuring of health regions. It is worth noticing that the integration between primary care and other care levels would imply gains of 7.7 billion or 0.12% of the Brazilian GDP (World Bank, 2017). Currently, the biggest bottleneck is the entry of secondary care – medium complexity (Lobo & Araújo, 2017).

Improving the efficiency of the public health system means that scarce resources could be saved and, above all, could be allocated to other services provided. Allocative efficiency distortions result from the pressure suffered by managers to take decisions in a constrained resources’ environment, among other reasons. In 2017, 66% and 77% of the municipalities conducted PHC and MHC activities, respectively, in scenarios where increased funding could enhance efficiency. The analysis pointed out that BRL 35.8 billion (32% of the federal government expenditure settled in PHC and MHC) was wasted due to inefficiencies in providing services (BRL 9.5 billion in PHC and BRL 26.3 billion in MHC). For example, if all municipalities reached the best practices in PHC in 2017, there would be scope for expanding the FHS coverage by 61%, increasing the number of medical consultations by 58% and, with other healthcare professionals, by 86%, in addition to the 58% expansion in vaccination coverage in the first year of life. If better practices were achieved at MHC in 2017, there would be scope to increase outpatient procedures by 176% and hospitalizations by 163%. Furthermore, this increase in providing services would imply an estimated drop in preventable mortality of 3.6% in the age group 0-4 years and 7.3% in the age group 5-74 years.

### Discussion: an efficiency agenda for the SUS

These results corroborate previous evidence demonstrating inefficiencies in Brazil’s public health system. Although resource constraints resulting from low public spending are one of the reasons for the SUS limited consolidation, the system operates with relatively high levels of inefficiency. If these inefficiencies were remedied, the SUS could obtain better health outcomes even without more resources, particularly in the Brazilian fiscal crisis.

In summary, the main challenges related to efficiency faced by SUS are: (i) Institutional arrangements that, by municipal level, decentralizing resulted in fragmentation and diseconomies of scale; (ii) Organization of provision of services addressed to curing acute pathologies, with limited coordination between providers and care levels (primary, secondary and tertiary). Hospital and diagnostic services are unevenly distributed and are often too small to operate efficiently and ensure quality; (iii) Inefficient payment mechanisms to health care providers (hospitals, clinics, etc.). Current payment methods are not based on the actual costs of providing services; they are almost unrelated to clinical diagnoses or adjusted to cases’ severity. The Hospital Admission Authorization (AIH in Portuguese), a mechanism used to pay hospitals based on a SUS contract, pays a pre-established amount linked to the procedures. The AIH contributes modestly to cost control because the amounts paid are strongly

<sup>7</sup> Not published yet.



skewed. Hospitals are often paid through line-item budgets based on historical spending patterns, which do not reward quality or cost containment. In PHC, providers are mainly salaried; (iv) Inadequate supply and sub-optimal use of essential elements of health systems. For example, there are situations where population density is less than one PHC doctor per thousand inhabitants. New technologies are often incorporated to meet specific cases, such as lawsuits, without assessing economic efficiency.

Proposing an efficiency agenda to the SUS is essential to consolidate and expand the advances of the last 30 years. Achieving better health spending outcomes is a global challenge, and most countries face such challenges in providing efficient and sustainable health services for their population. The experience of countries that have consolidated their health systems with periodic reforms shows that the consolidation of the SUS depends on the ability to adopt measures of modernization and structural reforms, considering the qualification of managers, science, and dialogue between the multiple perspectives of the agents involved in the system improvement.

The progressive control of the COVID-19 pandemic, with the adopted health measures and the advance of vaccination, represents a unique opportunity for an inclusive debate on the achievements and challenges of the Brazilian public health system and options for its improvement. This debate is essential to improve health care, ensure services that meet the needs and expectations of the Brazilian population, and balance public accounts. Health has one of the most significant budgets in the Brazilian government (BRL 304 billion for the three levels of government in 2019, BRL 128 billion just for the Federal Government in 2019). If the current patterns of nominal growth expenditures are maintained, the SUS's account will reach more than BRL 700 billion by 2030.

An efficiency agenda for the SUS has to face structural challenges, many of them exacerbated during the COVID-19 pandemic, e.g.: (i) Rationalize the supply and management of outpatient and hospital services to maximize scale, quality, and efficiency and encourage access to the system and the PHC ordering power; (ii) Improve care integration and coordination within the SUS through the implementation of integrated health care networks (IHN); and (iii) Increase the performance of health services and workforce by expanding and better distributing professionals, systematic qualification, changes in contractual labor relations and introduction of technologies and incentives to increase the productivity of professionals. These reforms aim to increase SUS services' efficiency, effectiveness, and quality to ensure sustainability in the medium and long term.

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