

## Weighted capitation incentive (Previne Brasil Program): impacts on the evolution of the population register in PHC

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**Abstract** *In Brazil, consistent advances occurred towards universal coverage after the creation of the Family Health Program (FHP), the main strategy for expanding first contact access and changing the care model in Brazil, strengthened from the creation of The Primary Care Floor (PAB), with resources exclusively for Primary Care, transferred to the municipalities on a regular and automatic basis. The registration of the population is one of the fundamentals of work in the Family Health Strategy (ESF), aiming to know the families enrolled in the teams. The institution of the Previne Brasil Program in November 2019 established a new funding model for PHC, with weighted capitation as one of its components, whose remuneration model is calculated based on the number of people registered. The aim of this study was to analyze the evolution of the population registered in PHC after the weighted capitation incentive creation, considering the registration in the municipalities and their behavior in the different rural-urban municipal typologies and the population size. The study showed that in 76.1% of the municipalities there was an increase in registrations in the analyzed period, regardless of the rural-urban typology and population size of the municipalities.*

**Key words** *Primary health care, Family Health Strategy, Health care models*

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## Introduction

Primary health care (PHC) is the main and most appropriate way to access the health system and is directly associated with a more equitable distribution of health in populations<sup>1</sup>.

The idea of primary care as the *modus operandi* of health systems was first proposed in the Dawson Report in 1920. Commissioned by the UK government, the document proposed the restructuring of the care model in England into services organized according to level of complexity and treatment costs. The report recommended that primary health centers and domiciliary services should be organized at a regional level and that most health problems should be solved by general practitioners. It also suggested that for cases in which this level of care does not have the conditions or resources necessary to treat a given problem, patients should be referred to secondary health centers with specialists in a range of areas, and when admission or surgery is recommended, patients should be referred to a hospital<sup>2</sup>.

The report's recommendations provided the basis for the creation of the National Health Service, ushering in a set of dimensions that remain central to this day to discussions surrounding the organization of health systems with emphasis on PHC, characterized by first-contact care, the division of health care into levels, and regionalization<sup>3</sup>. This concept formed by the UK government has influenced the organization of health systems around the world. In developed countries, health authorities were concerned with health funding, especially considering the growing complexity of medical care, the indiscriminate use of high-cost medical technology and the limited effectiveness of health care. In contrast, in developing countries, the primary concern was health inequities arising from poor social and economic conditions and sanitation, including lack of access to basic care and high rates of infant mortality<sup>4</sup>.

During the process of creating health systems around the world, several proposals emerged that included technical and management measures incorporating innovative actions and the streamlining of practices. These actions included community-based health, division of health care into levels, coordination and integration of care. Other actions included participatory initiatives with innovations in political relations, promoting the democratization of services, such as: changes in the knowledge/power division through the expansion of health teams, incorporation of community agents into health teams, guaranteeing access and participation popular<sup>5</sup>.

In 1978, the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) held the first International Conference on Primary Health Care in Alma-Ata, Kazakhstan, in the former Soviet Union. The conference resulted in an agreement between member countries and the establishment of the goal of an acceptable level of health for all by the year 2000, identifying primary health care as the key to the attainment of this goal<sup>5</sup>.

The Alma-Ata conference took place in the wake of a series of conferences promoted by the United Nations during the 1970s. These meetings debated a broad agenda for a new international economic order aimed at reducing disparities between central countries and so-called third-world countries<sup>6</sup>.

In Latin America in the 1980s and 1990s, structural adjustment programs and constraints imposed by the World Bank were accompanied by minimum packages of primary care services targeting specific groups, such as mothers and children and the population living in extreme poverty. These measures led Mario Testa to question what was really intended: primary or primitive health care?<sup>7-9</sup> This question prompts reflection on how PHC has been described by scholars. On many occasions it has been described as a selective health care strategy focused on the poor that uses simple and limited technology. Conversely, others have advocated a broader, systemic and integrated approach to PHC, promoting intersectoral collaboration geared towards social, human and economic development<sup>10</sup>.

In the 2000s, in the wake of redemocratization and the rise of governments committed to social justice, Latin America witnessed the revitalization of PHC, with the adoption of a broad approach and reaffirmation of the principles of the Alma-Ata Declaration<sup>9</sup>. Pressured by governments from the region, the Pan American Health Organization (PAHO) has promoted a process of renovation of PHC, emphasizing social inclusion, equity and comprehensiveness<sup>11</sup>.

In Brazil, since the creation of the country's public health system, *o Sistema Único de Saúde* (SUS) or Unified Health System, which enshrines the principles of universality, comprehensiveness and equity established by the 1988 Federal Constitution, consistent progress has been made towards achieving universal health coverage; especially after the creation of the Family Health Strategy (FHS) as a national policy for the implementation of PHC<sup>12</sup>.

Since its creation in 1994, the Family Health Program (FHP) has gradually become the pri-

mary strategy to expand first contact access and drive change in the care model<sup>13</sup>. The family-centered approach to health care is a way to shift away from the hegemonic disease-oriented care model, which fragments individuals and detaches them from their context and sociocultural values<sup>14</sup>.

The National Primary Health Care Policy (PNAB), enacted in 2006 and reformed in 2011 and 2017, provided the legal framework that established the mission of PHC in Brazil. In the PNAB, primary care is considered equivalent to basic care and defined as set of individual, family and collective actions involving health promotion, disease prevention, protection, diagnosis, treatment, rehabilitation, harm reduction, palliative care and health surveillance. Care is delivered by means of integrated care practices and good management performed by a multiprofessional team and targeting the population of a defined area<sup>15</sup>.

The PNAB states that the FHS is the key to promoting the expansion, improvement and consolidation of primary care services. The aim of the strategy is to reorganize care practices in accordance with new guidelines and criteria, with care being centered on the family approach, where the family is understood and perceived according to the physical and social environment in which it is embedded. This approach aims to promote a broad understanding of the health-disease process and interventions. The latter are not restricted to curative practices, but rather seek to promote quality of life and address risk factors. Health care is organized geographically into "territories". The population covered by health services is divided into specific areas assigned to health teams or micro-areas<sup>16</sup>.

The effectiveness of health care depends on the understanding of the interplay between economic, social and cultural conditions in a given territory. The approach also considers how people live, social actors and the intimate relationship between the community and its surrounding area<sup>16</sup>. The simple quantification of the population to define health territories without any attempt to classify or identify the actions and health problems in these areas limits the effectiveness of FHS teams<sup>17</sup>.

The registration of the population is one of the cornerstones of the FHS. Registration aims to understand the main characteristics of the families covered by each FHS team, providing information for situational health diagnoses and strengthening patient-health provider relation-

ships and health team-patient accountability. Registration therefore aims to promote the continuity of care and longitudinality<sup>18</sup>.

Considering the dynamic changes that take place in territories and families, it is important to constantly update patient registration<sup>19</sup>. Various sources of data besides patient registration information can be used to carry out situational health diagnoses in order to obtain a better understanding of the area covered by the FHS, such as data on demographic and environmental characteristics and living conditions, among other information made available by the Brazilian Institute of Geography and Statistics (IBGE)<sup>20</sup>.

The PNAB states that the common duties and responsibilities of the professionals who make up the primary care teams include keeping the patient and family registry up to date in the health information system used by the local health authority. In addition, data should be used on a systematic basis to perform health status analyses, considering local social, economic, cultural, demographic and epidemiological characteristics in order to define priorities for local health planning<sup>15</sup>.

The implementation of health programs across different levels of government (municipal, state and federal) has permitted both the development of projects that promote local development and the adoption of concepts and tools inherent to geography. The proposal is to plan the territoriality of public policies, facilities and actions<sup>21</sup>.

Created on 12 November 2019 by Ministerial Order 2979/GM/MS<sup>22</sup>, o *Programa Previne Brasil* (Prevent Brazil Program) established a new funding model for primary health care in the realm of the SUS consisting of three core components: I) weighted capitation; II) performance-based payment; III) incentives for strategic actions.

Ministerial Order 2254/GM/MS, which came into effect on 3 September 2021 modified Title II of the Consolidation Order GM/MS No. 6 (28 September 2017) and established a new component of primary health care funding: population-based financial incentive. The incentive is provided to municipalities in which the number of registered patients is less than the potential number based on the municipality's population size<sup>23</sup>.

The changes to the funding model that had been used up to 2019 and their impact on PHC have attracted the attention of both researchers and health managers. According to some researchers, the switch from per capita to capi-

tation-based funding creates a hitherto non-existent constraint on the transfer of resources to PHC services, having direct and indirect consequences for the health system. One of the direct effects is that funding ceases to be universal because it becomes restricted to the number of people registered in municipal health services<sup>24</sup>.

## Methodology

We conducted a quantitative descriptive study using secondary data on the population registered in the Primary Health Care Health Information System (SISAB)<sup>25</sup>.

We compared the populations registered in the 3rd quarter of 2019 and 3rd quarter of 2021.

Municipalities were organized into two groups according to the IBGE classification system:

- Group 1 – rural-urban typology<sup>26,27</sup>: urban; adjacent intermediary; remote intermediary; adjacent rural; and remote rural.
- Group 2 – population size: small: up to 50,000 inhabitants; medium: between 50,001 and 100,000 inhabitants; large: between 100,001 and 900,000 inhabitants; and metropolis: more than 900,000 inhabitants.

The evolution of registrations in each municipality was analyzed by calculating the number of registrations informed by the SISAB as a proportion of the potential number of registrations based on the population of the municipality. Based on these proportions, the municipalities were classified as follows in each of the two groups:

- Municipalities that showed an increase;
- Municipalities that were stable;
- Municipalities that showed a decrease.

## Results

The findings show that the registered population rose from 98,922,662 in 2019 (Q3 2019) to 154,187,618 in 2021 (Q3 2021), which is equivalent to an increase of 56%.

All regions showed an increase in the registered population over the study period. Northeast – increase of 46% (from 32,477,849 to 47,336,231); Southeast – increase of 68% (from 34,216,891 to 57,458,302); Midwest – increase of 54% (from 7,597,242 to 11,691,902); North – increase of 67% (from 7,648,890 to 12,760,559);

South – increase of 47% (from 16,981,790 to 24,940,62).

There was an increase in the total number of people registered across most (76.1%) municipalities (Table 1).

There was an increase in the proportion of people registered across all rural-urban typologies between Q3 2019 and Q3 2021 (Figure 1).

The increase in the number of people registered as a proportion of the total population was highest in Remote Intermediary and Remote Rural municipalities (63.3% and 40%, respectively) (Figure 2).

There was an increase in the number of people registered as a proportion of the total population across all population size categories between Q3 2019 and Q3 2021 (Figure 3). This increase was highest in small-sized municipalities. The increase in the number of people registered as a proportion of total population over the study period was highest in metropolises (41.9%) (Figure 4).

The results show that weighted capitation incentive has led to an increase in the population registered in PHC services regardless of the demographic profile of municipalities.

## Final considerations

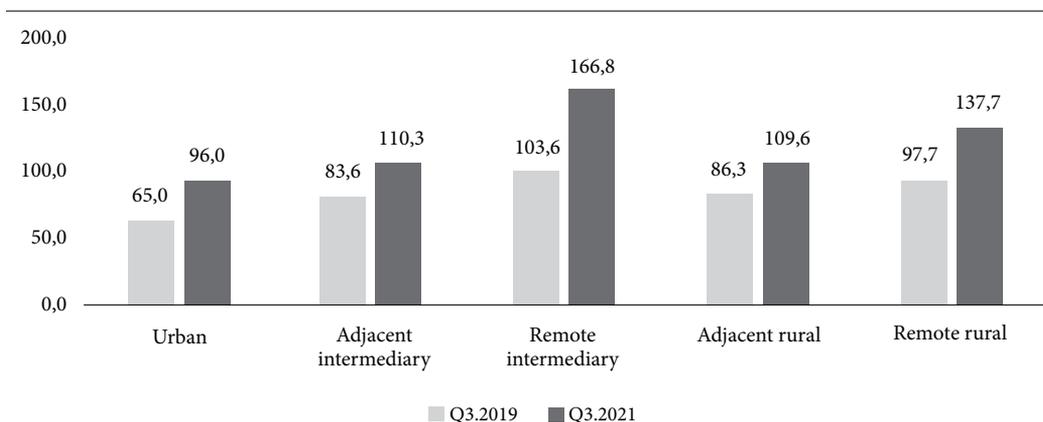
The study was limited to the analysis of the evolution of registrations after the creation of the weighted capitation incentive. It is worth highlighting that larger increases in the proportion of people registered does not necessarily mean effective access to primary care.

Access is one of the key factors influencing the effectiveness of PHC and is intimately linked to the first-contact attribute of primary care. It

**Table 1.** Number and percentage of municipalities that showed an increase and decrease in number of people registered.

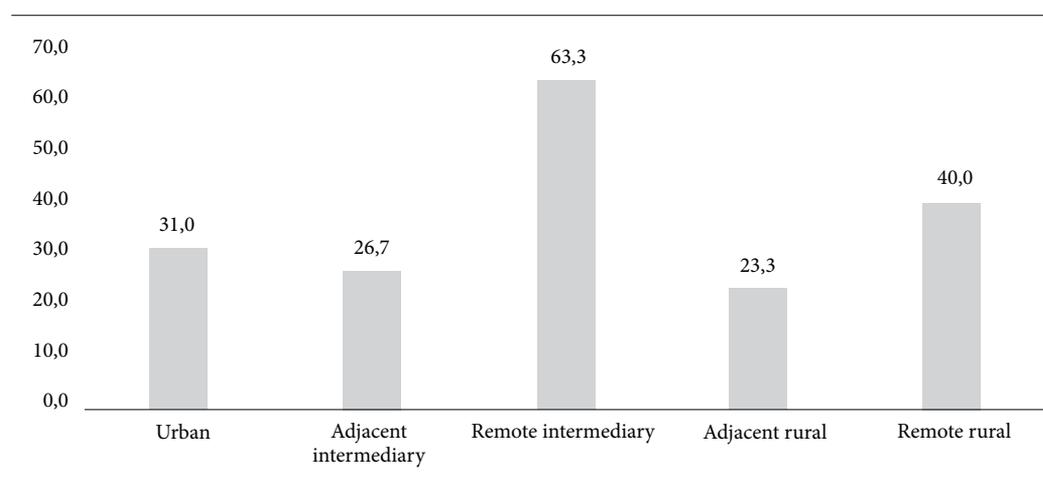
Brazil	N° of municipalities	Municipalities (%)	People registered
Reduction	23	0,4	-19,335
Stable	1,308	23,5	-
Increase	4,237	76,1	53,230,208

Source: Authors.



**Figure 1.** Number of people registered as a proportion of the population according to rural-urban typology.

Source: Authors.



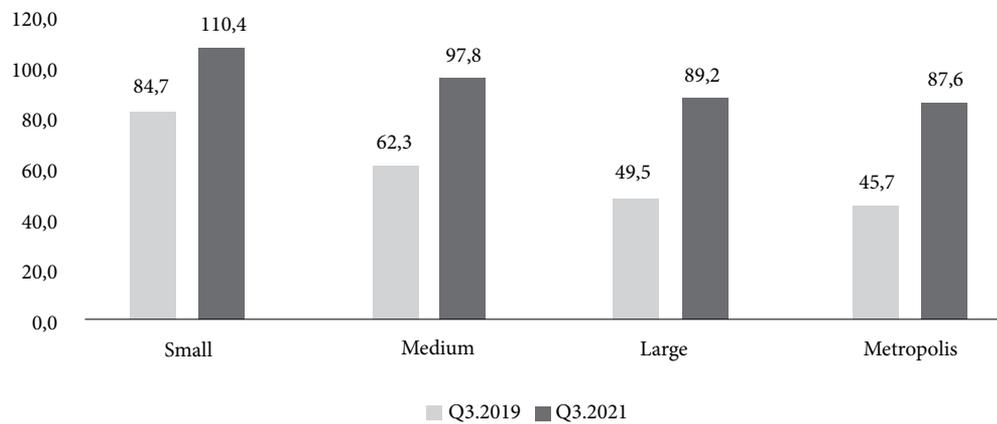
**Figure 2.** Difference in percentages between Q3 2021 and Q3 2019 according to rural-urban typology.

Source: Authors.

can be measured as the proportion of the population in need of care who actually receive effective care<sup>28,29</sup>.

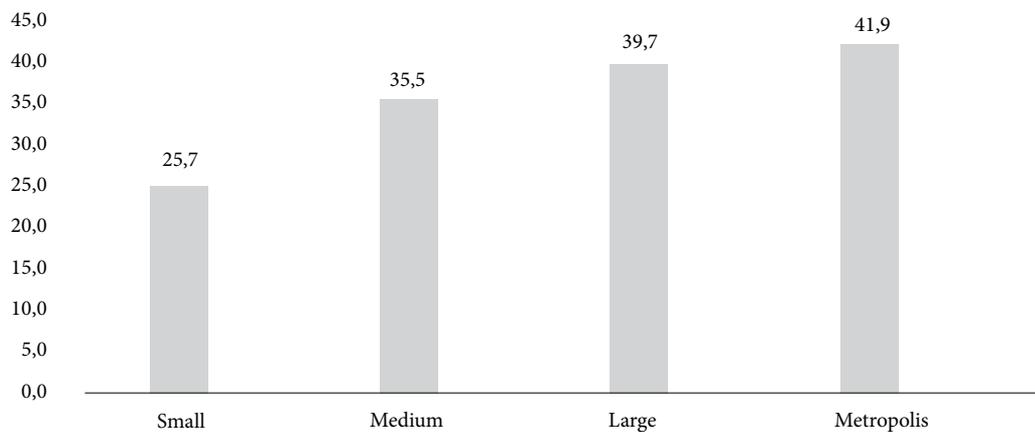
While most municipalities, regardless of rural-urban typology and population size, showed an increase in the number of people registered, publicly available data from the SISAB reveal that the majority did not meet the targets of the 7 in-

dicators used for performance-based payments made under the *Programa Previner Brasil* in the third quarter of 2021. For example, 61.8% of the 5,337 municipalities (95.8% of the municipalities in Brazil) that did not meet the target for “Percentage of people with hypertension who had their blood pressure measured each semester” has registered  $\geq 100\%$  of the population.



**Figure 3.** Proportion of people registered according to municipality population size.

Source: Authors.



**Figure 4.** Difference in percentages between Q3 2021 and Q3 2019 according to population size.

Source: Authors.

The importance of registration to better understand the characteristics of the population covered by the territory and assigned to the health teams is undeniable. However, it appears that high numbers of registrations as a percentage of the population does not have a direct relationship with meeting the targets set for the performance indicators.

It is therefore important, in addition to registration, understand the wide-ranging health needs of patients and their families, strengthening community-health provider relationships and valuing the multiprofessional work of health teams.

## Collaborations

All authors participated equally in all stages of data analysis, drafting this manuscript and revising the final version.

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