

## Analysis of the implementation of the federal incentive for Physical Activity in primary care: Equity in focus

*Análise da implementação do incentivo federal à Atividade Física na atenção primária: a equidade em foco*

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**ABSTRACT** This study aimed to present a national overview of the first year of implementation of the financial incentive for Physical Activity in Primary Health Care (PHC) of the Unified Health System and analyze whether the municipal prioritization score was an adequate criterion for more significant equity in the distribution of resources. This ecological study analyzed the number of municipalities and health units approved for the Physical Activity Incentive in PHC and the amounts paid between May 2022 and September 2023. Absolute and relative inequalities measures were calculated between health units and grouped into quartiles per the municipal prioritization score to assess equity. The percentage of health units funded did not exceed 37.6%, and the establishment of goals reduced the number of health units that received resources from the Physical Activity Incentive in PHC by 68.9% and the amount of resources paid by 44%. Significant inequalities were observed in the allocation of resources, with a higher percentage of health units located in municipalities with lower priority. Thus, the criteria adopted were insufficient to ensure equity in the distribution of resources.

**KEYWORDS** Health equity. Financing, government. Body practices. Health promotion.

**RESUMO** O trabalho teve como objetivos apresentar o panorama nacional do primeiro ano de implementação do incentivo financeiro à Atividade Física na Atenção Primária à Saúde (APS) do Sistema Único de Saúde e analisar se a nota de priorização municipal foi um critério efetivo para maior equidade na distribuição dos recursos. Trata-se de um estudo ecológico com análises sobre o número de municípios e unidades de saúde homologadas ao Incentivo de Atividade Física na APS e dos valores pagos no período entre maio de 2022 e setembro de 2023. Para avaliar a equidade, foram calculadas as medidas de desigualdades absolutas e relativas entre as unidades de saúde, agrupadas em quartis conforme a nota de priorização municipal. O percentual de unidades de saúde custeadas não passou de 37,6%, e o estabelecimento de metas reduziu em 68,9% o número de unidades de saúde que receberam recursos do Incentivo de Atividade Física na APS e em 44% o montante de recursos pagos. Foram observadas importantes desigualdades na alocação de recursos, com maior percentual de unidades de saúde localizadas em municípios com menor prioridade. Assim, os critérios adotados foram insuficientes para garantir equidade na distribuição de recursos.

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**PALAVRAS-CHAVE** Equidade em saúde. Financiamento governamental. Práticas corporais. Promoção da saúde.



## Introduction

Public policies aim to ensure health as a fundamental right, outlining the role of the State in providing the conditions for its full exercise<sup>1</sup>. In the Unified Health System (SUS), a universal system responsible for improvements in population health indicators<sup>2,3</sup>, the challenges in implementing these policies range from (in) sufficient resources to regional inequalities in the distribution of health units and workforce, professional training, and the management capacity of the different government levels – especially at the municipal level – to operationalize them, among others<sup>4-6</sup>.

Considering that Brazil has significant social inequalities and health inequities and that equity is one of SUS doctrinal principles, programs and actions should seek criteria to implement it. Equity is intrinsically linked to social justice, making it a means of ensuring the right to health through the provision of care that addresses the needs of several population groups by considering the social determinants of health<sup>7-9</sup> – just as there is also recognition of the challenge of operationalizing equity, given the high demand for health actions and limited resources<sup>7-9</sup>.

Offered in the SUS since the mid-2000s, Physical Activity (PA) is associated with individual and collective benefits, encompassing health, social, environmental, economic, and other perspectives<sup>10-15</sup>. In this regard, in 2022, the federal funding incentive (Physical Activity Incentive – IAF) was launched to implement actions in Primary Health Care (PHC) and improve the care of individuals with Non-Communicable Diseases (NCDs) by recruiting Physical Education Professionals (PEPs), acquiring consumables, and qualifying environments<sup>16</sup>. Considering the available budget for the accreditation of health units to the IAF, a municipal prioritization score was established to distribute financial resources equitably based on health and sociodemographic indicators.

At the time of the launch, it was announced that the projected investment in the IAF would be BRL 99 million in 2022 and BRL 170 million in 2023<sup>17</sup>. In June 2022, thousands of health units were accredited in most Brazilian municipalities, with a monthly budget forecast ranging from BRL 7.9 million to BRL 16.1 million<sup>18</sup>.

There is a significant increase in studies on the implementation of public policies<sup>19</sup> and research that analyze this process in the literature, including equity criteria that are relevant for outlining pathways for its effective implementation in the SUS. However, research on the strategies adopted to promote equity in allocating financial resources and implementing PA promotion policies remains scarce. Thus, this article aimed to (a) present the national overview of the first year of IAF implementation and (b) analyze whether the municipal prioritization score was an adequate criterion for more significant equity in resource distribution.

This research falls within the policy, planning, and management domain in physical education and public health<sup>20</sup>. It aims to discuss the promotion of PA as a public health policy by analyzing funding, planning agendas, and activity provision, among other aspects<sup>17,21</sup>. The novelty lies in analyzing the first year of implementing a financial incentive that incorporated criteria to promote equity.

## Materials and methods

### Study design and analysis period

This ecological study was based on secondary data from federal government platform databases. It analyzed the implementation of the IAF from May 2022 to September 2023, which allowed for the analysis of 12 payment periods (months) of IAF resources, as the first payment period was October 2022.

The analysis was divided into two periods to assess the behavior of different implementing stages regarding the regulatory condition that establishes goal achievement, as follows: without targets – the first six months after the publication of the accreditation ordinance (October 2022 to February 2023); and with targets – from the seventh month onward (March to September 2023). Recording PA actions (collective activity forms) in the designated health information system was sufficient during the without-target period. In contrast, during the with-target period, it became necessary to reach a monthly quota of these forms based on the type of health unit: Health Center/PHC Unit = 30; Health Post = 10; River Mobile Unit = 5, regardless of the modality<sup>16</sup>. Additionally, the IAF consists of three modalities: 1 – without a PEP, 2 – with a 20-hour PEP, and 3 – with a 40-hour PEP.

## Data source

Information about the IAF was consulted in the 'e-Gestor Atenção Básica (e-Gestor AB)', which provides access to several PHC information systems<sup>22</sup>. We employed the information available in public reports from the PHC Financing information system.

Data were extracted and reviewed blindly in October 2023 by two authors with experience in SUS management based on a previous agreement. For the selection of Geographic Units, all Federal Units (UF) and municipalities were considered, with data extraction performed for the shares from May 2022 to September 2023, using filters available in e-Gestor AB. The IAF-related data related were retrieved from the spreadsheet 'Ações Estratégicas – Incentivo de Atividade Física', generated by downloading the files. Then, the data were exported and tabulated into a Microsoft Excel® spreadsheet. The data extraction and tabulation were reviewed by an author different from the one who initially performed them, and any discrepancies were resolved through consensus.

The information provided in the regulation was considered<sup>23</sup> for identifying the municipal IAF prioritization score. This score considered hospitalizations due to primary care conditions sensitive (ICSAP), registrations in the 'Cadastro Único' (CadÚnico), coverage of the Family Health Strategy (ESF), and the existence of PEP in SUS. It ranged from 0, low priority, to 1, high priority, based on the equation: (ICSAP Score50%) + (CadÚnico Score30%) + (ESF Score15%) + (PEP Score5%). In other words, municipalities with higher ICSAP rates, CadÚnico registrations, lower ESF coverage, and no PEP were considered more prioritized and, thus, more vulnerable under this prioritization criterion.

Additionally, the municipalities were grouped by size to be ranked among each other. Furthermore, four rounds of analysis included the health units that requested accreditation based on cutoff points established by the Ministry of Health. The first round was a strategy to include at least one health unit from all municipalities that requested accreditation to the IAF<sup>23</sup>, regardless of their prioritization score. Even so, these municipalities still had a prioritization score.

For the present research, the municipal prioritization scores were grouped into quartiles (Q1 = 0.650 to 1; Q2 = 0.475 to 0.649; Q3 = 0.300 to 0.474; Q4 = 0 to 0.299), in descending order, where Q1 represents the municipalities and, consequently, the health units with the highest priority for the approval and allocation of IAF resources.

## Variables analyzed

The following variables were analyzed – number and percentage of (a) municipalities with accredited health units; (b) accredited health units (eligible to receive resources); (c) health units that received resources (funded); and (d) the total amount of resources received. The distinction between accredited and funded health units is due to previously mentioned regulatory conditions.

### Analysis

We employed descriptive statistics, analyzing the absolute and relative number of municipalities and accredited PHC health units to present a national overview of the first year of IAF implementation, funded health units, and the total amount paid over 12 months.

The magnitude of inequality in the implementation of the IAF between health units located in municipalities in Q1 (highest priority) and Q4 (lowest priority) was analyzed to evaluate whether the prioritization score for the accreditation of PHC health units, created based on the previously presented set of criteria, achieved the goal of being equitable. For this purpose, absolute inequality measures (calculated from the difference between the extreme quartiles and expressed in Percentage Points – PP) and relative inequality measures (calculated by the ratio between Q4 and Q1) were used<sup>24-26</sup>. We should underscore that, as stated, although the first round did not consider the municipal prioritization score, all

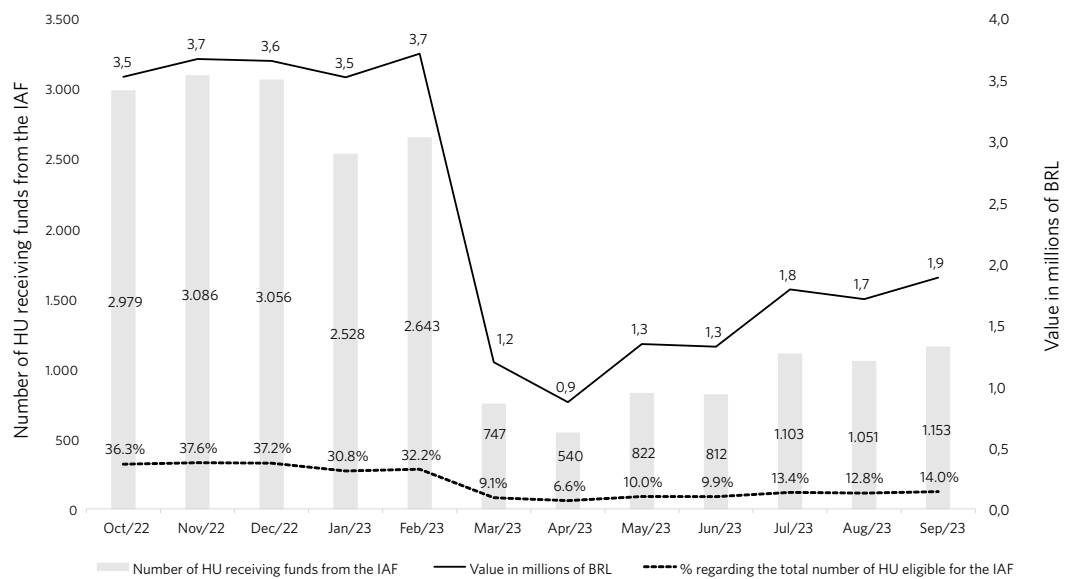
municipalities had such a score. Therefore, its analysis allowed identifying whether equity was achieved.

### Results

Regarding the overview of the first year of IAF implementation, 8,214 PHC health units were accredited in 4,128 municipalities for funding<sup>18</sup>, representing 74% of Brazilian municipalities and 16.7% of the health units eligible for IAF in Brazil<sup>28</sup>.

During the period without targets (Oct/22 to Feb/23), the number of funded health units ranged from 2,528 (Jan/23) to 3,086 (Nov/22), corresponding to 30.8% and 37.6%, respectively, of the total accredited health units. In the period with targets (Mar-Sept/23), the number of funded health units ranged from 540 (Apr/23) to 1,153 (Sept/23), corresponding to 6.6% and 14%, respectively, of the total accredited health units (*graph 1*).

Graph 1. Number of funded health units, percentage regarding the total number of accredited health units, and amount of resources (in BRL millions) by competency, Brazil, from October 2022 to September 2023



Source: Prepared by the authors based on eGestor data<sup>22</sup>.

HU: Health Units.

The evolution of the IAF resource amount by competency in Brazil allowed identifying the variation in the total value of resources paid in the analyzed periods. In the period without targets (Oct/22 to Feb/23), the total amount of resources paid in one competency reached BRL 3.7 million (Feb/23). Starting from the competency in which meeting targets became a condition for the transfer of IAF, there was a significant drop in resources, with the amount of BRL 1.2 million (Mar/23), representing a 67.8% reduction. In total, BRL 18 million were paid in the period without targets (5 competencies) and BRL 10.1 million in the period with targets (7 competencies), reflecting a 44% reduction in the amount of resources paid with the establishment of targets (*graph 1*).

Regarding the municipal prioritization score, as a strategy for more significant equity in the distribution of resources for the promotion of PA in PHC, 35.4% of the total 8,214

accredited health units were located in municipalities in Q1 (n = 2,905 in 1,122 municipalities), 27.9% in Q2 (n = 2,292 in 1,017 municipalities), 23% in Q3 (n = 1,890 in 1,004 municipalities), and 13.7% in Q4 (n = 1,127 in 985 municipalities). Therefore, approximately 2 out of every 3 accredited Brazilian health units were located in priority municipalities (Q1 and Q2) (*table 1*).

Regarding the total number of health units that received IAF resources in each competency, Q1 and Q2 also showed a higher percentage of funded health units compared to Q3 and Q4 throughout the analyzed period (*table 1*). To give a sense of this difference, the mean percentage of health units in Q1 and Q2 that received IAF resources (Oct/22 to Sept/23) was 30.1% and 28.8%, respectively, while it was 25.3% and 15.7% in Q3 and Q4. The percentage of funded health units decreased after the establishment of targets, regardless of the quartile classification of the municipal prioritization score (*table 1*).

Table 1. Absolute and relative number of health units funded by the federal funding incentive for Physical Activity promotion, Brazil, between October 2022 and September 2023, by quartile

Q	Approved HU	HU that received IAF funds												Mean (SD)	
		oct/22	nov/22	dec/22	jan/23	feb/23	mar/23	apr/23	may/23	jun/23	jul/23	aug/23	sep/23		
Q1*	n	2,905	757	783	769	750	800	224	184	258	258	355	335	397	489.2 (256.1)
	%	35.4	25.4	25.4	25.2	29.7	30.3	30.0	34.1	31.4	31.8	32.2	31.9	34.4	30.1
Q2	n	2,292	940	977	985	766	802	238	154	222	212	289	273	281	511.6 (345.0)
	%	27.9	31.6	31.7	32.2	30.3	30.3	31.9	28.5	27.0	26.1	26.2	26.0	24.4	28.8
Q3	n	1,890	698	726	707	634	659	175	127	224	218	300	292	313	422.8 (238.1)
	%	23.0	23.4	23.5	23.1	25.1	24.9	23.4	23.5	27.3	26.8	27.2	27.8	27.1	25.3
Q4	n	1,127	584	600	595	378	382	110	75	118	124	159	151	162	286.5 (208.9)
	%	13.7	19.6	19.4	19.5	15.0	14.5	14.7	13.9	14.4	15.3	14.4	14.4	14.1	15.7
Total	n	8,214	2,979	3,086	3,056	2,528	2,643	747	540	822	812	1,103	1,051	1,153	1,710 (1038.3)
	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

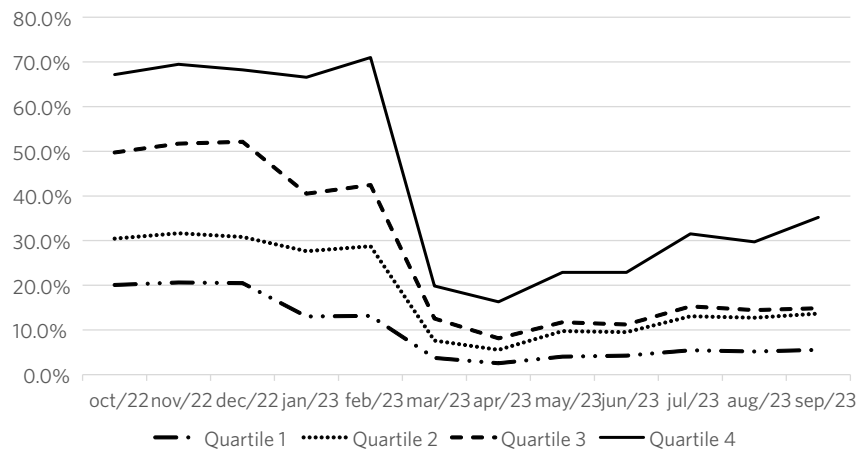
Source: Prepared by the authors based on eGestor data<sup>22</sup>.

Q: Quartile; \* highest priority; Approved HU: Approved health units; IAF: Physical Activity Incentive; SD: Standard deviation.

However, when analyzing the percentage of health units funded by the IAF concerning the total accredited health units in each quartile, the highest percentage in Q1 (highest priority) was 20.7% (Nov/22) in the period without targets and 5.6% (Sept/23) in the period with targets, making it the quartile with

the lowest percentage of funded health units throughout the analyzed period. Conversely, the highest percentage of funded health units in Q4 (lowest priority) was 71% (Feb/23) in the period without targets and 35.2% (Sept/23) in the period with targets (*graph 2*).

Graph 2. Percentage of funded health units regarding the total number of accredited health units in each quartile, by competency, Brazil, from October 2022 to September 2023



Source: Prepared by the authors.

In Brazil, there was a reduction of 68.9% and 24 percentage points (PP) in the health units funded by the IAF between the different analyzed periods, decreasing from 34.8% in the period without targets to 10.8% in the period with targets. Regarding the quartiles, on average, 17.5% of health units in Q1 (highest priority) received resources in the without-target period and 4.4% in the with-target period, representing a reduction of 74.7% and 13.1 PP. On the other hand, Q4 (lowest priority) had

68.5% of health units funded in the period without targets and 25.5% in the period with targets, showing a decline of 62.8% and 43 PP. Regarding the magnitude of absolute and relative inequalities in the implementation of the IAF, significant percentage differences between Q4 and Q1 were observed, with 3.9 percentage points in the period without targets (51 PP) and 5.8 percentage points in the period with targets (21.1 PP) (*table 2*).

Table 2. Percentage of health units funded during the period with and without targets, reduction, and variation in percentage points between the periods

Quartiles / Periods	P1	SD	P2	SD	Reduction (%)	Reduction (PP)
Q1 *	17.5%	1.9	4.4%	1.5	74.7%	13.1
Q2	29.9%	3.1	10.3%	0.9	65.6%	19.6
Q3	47.3%	1.1	12.6%	1.2	73.3%	34.7
Q4	68.5%	0.2	25.5%	0.4	62.8%	43
Brazil	34.8%	2	10.8%	1.1	68.9%	24
Relative inequality	3.9	-	5.8	-	-	-
Absolute inequality	51	-	21.1	-	-	-

Source: Prepared by the authors based on data from eGestor<sup>22</sup>.

Q: Quartiles; \* Most prioritized; P1: Period without targets; P2: Period with targets; SD: Standard deviation; PP: Percentage points; Relative inequality: Q4/Q1; Absolute inequality: Q4-Q1.

## Discussion

The analysis showed low implementation in the first year of the IAF, as no more than 37.6% of health units were funded, which reveals that developing PA promotion actions in PHC within SUS is a challenge, even with the availability of federal funding resources to incentivize the expansion of these practices.

Establishing targets in the first year of IAF implementation, while an aspect related to the efficiency of public policies, significantly reduced funding for PA initiatives in PHC across Brazilian municipalities. This situation raises questions about the appropriateness of the target-setting process, particularly since the targets remain the same regardless of the IAF modality—that is, they do not change whether health units lack a PEP or have a 20-hour or 40-hour PEP. Additionally, concerns arise regarding the six-month implementation timeframe as a requirement for fund transfers and the existence and effectiveness of support for municipal managers to achieve these targets, given that the IAF is a recent and unprecedented initiative within SUS.

The impact of the targets can also be observed in the allocated resources. Although

a gradual increase in the total amount of resources was observed during the target period, the highest monthly transfer in this period – BRL 1.8 million (Sept/2023) – was almost half of the highest monthly transfer in the period without targets (BRL 3.7 million in Feb/2023). Thus, in the first year of implementation, the monthly amounts transferred by the Ministry of Health were far below the initially projected values (BRL 7.9 million to BRL 16.1 million<sup>18</sup>).

Some hypotheses for the low degree of implementation include the monthly funding amount (a maximum of BRL 2,000 per health unit with a 40-hour PEP) compared to the actual cost of hiring a PEP; the limited capacity of municipal management to conduct selection processes and new recruitments, especially when the position of PEP does not exist within the health department; the short timeframe for enrollment and planning to meet the regulatory conditions set by municipal management (20 days from the publication date of the launching ordinance, extended by an additional 7 days<sup>16,29</sup>); the difficulty in achieving the targets, particularly in modality 1 (without a PEP) in Health Centers/Basic Units (n = 30); among others.

Furthermore, although PEPs play a vital role in the SUS workforce providing PA initiatives

in PHC<sup>30</sup>, challenges remain in integrating these professionals, such as geographical disparities and other factors<sup>31</sup> that result in gaps in service provision. This situation is further exacerbated by the limited participation of state health secretariats in co-financing PA promotion initiatives and the lack of a dedicated area within the organizational structure of state and municipal SUS management, which potentially hinders the implementation of PA actions in PHC<sup>32</sup>.

Based on the analysis of SUS planning, we identified that the IAF did not originate from health planning, as it was absent from management instruments. This fact suggests that the incentive was created as an opportunistic measure to fulfill a government proposal (2019–2022)<sup>21</sup>. As a result, important gaps may have emerged, such as establishing targets when the initiative was still in its early stages of implementation.

Brazil has a historical and persistent pattern of social and health inequalities, including those related to PA<sup>33,34</sup>. This justifies the pursuit of equity in policies, programs, and actions related to this practice. This is especially relevant considering that municipalities with worse socioeconomic and NCD indicators showed lower adherence to the Health Academy Program, one of the main initiatives for promoting PA within SUS<sup>35</sup>.

Regarding the municipal prioritization score as a criterion for equitable resource distribution, the observed scenario indicates that most health units are located in higher-priority municipalities, which was expected. However, this pattern was not reflected in the allocation of resources, as Q1 (the most prioritized group) had the lowest percentage of health units receiving funding when compared within the same quartile throughout the analyzed period. One possible explanation for this is that the most prioritized municipalities faced more significant challenges in implementing the IAF, as they had less infrastructure (lower ESF coverage and no PEP) and a more socially and health-vulnerable

population (higher enrollment in CadÚnico and more ICSAP cases).

The magnitude of the absolute and relative inequalities found between Q4 and Q1 – 51 percentage points (PP) and 3.9 in the period without targets, and 21.1 PP and 5.8 in the period with targets – illustrates the scale of the challenge and the complexity of implementing equitable health policies. Thus, although a strategy for more significant equity in the distribution of financial resources for promoting PA in PHC was proposed at the time of accreditation, it was shown that there are difficulties in meeting the requirements for funding health units in municipalities in the most prioritized quartile. Some studies have also identified inequalities in the implementation of SUS health policies and services related to PA, such as in the case of multiprofessional teams in municipalities in the South<sup>26</sup> or the units of a PA promotion program within SUS, the Exercise Orientation Service (SOE) in Vitória, ES<sup>36</sup>.

Thus, sociodemographic and health indicators – such as CadÚnico, municipality size, ESF, ICSAP, and PEP – are important elements for guiding the implementation of health policies, such as those for promoting PA, with a focus on equity. However, other factors must also be considered, such as the targets set in planning and management instruments; the proposals approved in health conferences; available resources, including materials, infrastructure, workforce, and funding; the potential for intersectoral coordination; and the capacity for community mobilization.

Based on the Inverse Equity Hypothesis and the Law of Inverse Care theories, two reflections on access inequalities in PA initiatives<sup>26,37</sup> were presented. The first seeks to understand how inequalities tend to be established in health indicators, stemming from the expected increase in these inequalities when health innovations emerge, initially benefiting those socially and economically privileged. The second emphasizes that the availability of adequate healthcare tends to



vary inversely to the population's needs. In the case of IAF, these theories were confirmed in the first year of implementation, as health units in the least prioritized quartile received the most resources compared to the amount accredited per quartile. As a result, equity was potentially not achieved as an essential element of social justice and a means of ensuring the right to health, reaffirming the challenges in its operationalization.

Moreover, it is important to address the challenge of overcoming a potential paradox related to the pursuit of equity in health policies, as these aim to prioritize more socially and health-vulnerable municipalities. Due to this, these municipalities potentially have fewer structural and organizational resources to implement health policies effectively. One is the IAF, a finding confirmed by this research's results.

In international literature, few studies have analyzed the implementation of PA promotion programs in universal health systems like SUS, particularly from an equity perspective. However, promoting PA is part of the health actions of the National Health Service (NHS) in the United Kingdom<sup>13,38</sup>. Regarding the integration of PA promotion into primary and secondary care settings within the NHS, the importance of the following has been emphasized: ensuring resources for the development of actions; involving key stakeholders in planning to ensure that all aspects of the actions are supported and acceptable; ensuring that processes and pathways are transparent and that governance is in place; and creating mechanisms for both the teams involved in the actions and the participants to contribute to improvements in the actions, allowing for the anticipation of barriers and potential solutions<sup>13,38</sup>.

We can outline some strategies to enhance the implementation of the IAF, such as (a) a tripartite renegotiation of the targets and deadlines for initiating compliance; (b) technical support for planning actions for municipal managers; (c) periodic monitoring

conducted in collaboration with municipal managers and health team professionals, to identify key barriers and facilitators; (d) training for primary healthcare professionals on the topic of PA, including content from guiding documents<sup>39,40</sup>. Additionally, an assessment of the appropriateness of differentiated funding, for example, with higher values allocated to more vulnerable municipalities, as is already the case with the construction resources for different health units (by country's region)<sup>41</sup>.

Data from several studies over time (2009-2021) highlight the challenge of expanding access to PA for the Brazilian population. The best scenario identified during this period showed that just over one-third of the adult Brazilian population (18 years or older) was physically active during leisure time, with more than half being physically inactive, particularly emphasizing significant inequalities<sup>33,42-44</sup>. This underscores that being physically active is related to social gradients, with socioeconomically disadvantaged groups facing more barriers to accessing PA<sup>45,46</sup>.

Thus, considering the evolution of research, communication, and public policies in PA and health, a troubling situation remains with the persistent gap between scientific literature and the practical implementation of PA promotion actions<sup>47-50</sup>. However, it can be stated that PHC of the SUS has expanded the availability of PA for the Brazilian population<sup>30</sup> and reduced access inequalities<sup>51</sup>, even though it is important to emphasize that these are intersectoral challenges and not solely the responsibility of SUS. We should also reaffirm the potential of the IAF in increasing access to PA within PHC<sup>52</sup>, so addressing the issues raised is crucial for the incentive to expand opportunities for a physically active life.

The findings presented should be interpreted considering their limitations and potential. We highlight the following study limitations: (i) the observed period was relatively short (17 months in total and 12 months of funding), which is justified by the aim of analyzing the first year of IAF implementation, requiring

the expansion of this series in future analyses, and (ii) the lack of presentation of the actual amounts transferred due to the use of e-Gestor AB as a source for analyzing financial resources, as it serves to monitor the achievement of normative criteria for PHC programs like the IAF, but the transfer of resources to municipal management is conducted through the National Health Fund.

The main potential of the study lies in the analysis of equity criteria in public health policies, including social criteria such as CadÚnico, sanitary criteria such as the coverage of ESF and ICSAP, and demographic criteria such as the population size of municipalities. However, these criteria do not guarantee the equitable distribution of resources. Thus, while it is essential for policies and programs to prioritize more vulnerable municipalities and health units, they often face more significant challenges due to having less infrastructure for implementation. Therefore, differentiated measures must be planned for such cases.

Besides considering the municipal prioritization score based on equity criteria, we should underscore that the implementation of the IAF aimed to include all municipalities that requested the incentive in the initial round of analysis. This criterion can be considered an important strategy in the implementation of health policies, as the prioritization of the agenda by municipal managers and the establishment of targets in the planning instruments of SUS focused on promoting PA in PHC should also be considered.

We should underscore that, at the time of the manuscript's preparation, the IAF was expanded with the approval of more than 17,000 health units<sup>53</sup> without using the municipal prioritization criterion. Even in the context of a change in federal management in 2023, this expansion signified the strengthening of the IAF, which can be confirmed by the budget ceiling of approximately BRL 397 million<sup>53</sup> and its inclusion in the new federal co-financing model for PHC in 2024<sup>54</sup>, emphasizing the relevance of the present analysis and pointing

to the need for further research on the implementation of the IAF.

Additionally, as a research agenda, we suggest to simulate municipal prioritization using other criteria, such as the Human Development Index and/or Social Vulnerability Index, as used in the multiprofessional teams initiative<sup>55</sup>, and verify whether the distribution of resources would be more equitable as a legacy for the formulation of other PA promotion programs or more general ones. Furthermore, by allowing for greater depth, qualitative research can help understand the challenges of implementing the IAF from the perspective of professionals and municipal managers.

## Final considerations

We conclude by stating that the degree of implementation of the IAF in its first year was low, as only about one in five accredited health units received funding. Regarding the pursuit of equity, the criteria adopted for prioritizing health units were insufficient since, proportionally, when compared within the same quartile, more health units in Q4 municipalities (less prioritized) received funding, especially during the period without targets. Consequently, according to the prioritization criteria, health units in more vulnerable municipalities were less likely to meet the normative conditions for funding, highlighting a possible paradox. Therefore, a more specific approach to these contexts is essential to ensure that the pursuit of equity – focusing on the most vulnerable – does not lead to lower effectiveness of public policies.

## Collaborators

Carvalho FFB (0000-0003-2979-6359)\* and Vieira LA (0000-0003-4382-9719)\* contributed to the conception, design, analysis, and interpretation of data, drafting and critically

revising the content for important intellectual input, and final approval of the manuscript version. Malhão TA (0000-0002-5644-1089)\* and Loch MR (0000-0002-2680-4686)\* contributed to the analysis and interpretation of data, drafting and critically revising the

content for important intellectual input, and final approval of the manuscript version. All authors are responsible for all aspects of the work, ensuring the accuracy and integrity of any part of the study. ■

## References

1. Presidência da República (BR). Lei nº 8.080, de 19 de setembro de 1990. Dispõe sobre as condições para a promoção, proteção e recuperação da saúde, a organização e o funcionamento dos serviços correspondentes e dá outras providências. Diário Oficial [da] República Federativa do Brasil [Internet], Brasília, DF. 1990 set 20 [acesso em 2023 dez 13]; Edição 182; Seção I:18055-18059. Disponível em: [https://www.planalto.gov.br/ccivil\\_03/leis/l8080.htm](https://www.planalto.gov.br/ccivil_03/leis/l8080.htm)
2. Macinko J, Mendonça CS. Estratégia Saúde da Família, um forte modelo de Atenção Primária à Saúde que traz resultados. *Saúde debate*. 2018;42(esp1):18-37. DOI: <https://doi.org/10.1590/0103-11042018S102>
3. Castro MC, Massuda A, Almeida G, et al. Brazil's unified health system: the first 30 years and prospects for the future. *Lancet*. 2019;394(10195):345-356. DOI: [https://doi.org/10.1016/S0140-6736\(19\)31243-7](https://doi.org/10.1016/S0140-6736(19)31243-7)
4. Viacava F, Oliveira RAD, Carvalho CC, et al. SUS: oferta, acesso e utilização de serviços de saúde nos últimos 30 anos. *Ciênc saúde coletiva*. 2018;23(6):1751-1762. DOI: <https://doi.org/10.1590/1413-81232018236.06022018>
5. Funcia FR. Subfinanciamento e orçamento federal do SUS: referências preliminares para a alocação adicional de recursos. *Ciênc saúde coletiva*. 2019;24(12):4405-4414. DOI: <https://doi.org/10.1590/1413-812320182412.25892019>
6. Paim JS. SUS aos 30 anos. *Ciênc saúde coletiva*. 2018;23(6):1723-1728. DOI: <https://doi.org/10.1590/1413-81232018236.09172018>
7. Barros FPC, Sousa MF. Equidade: seus conceitos, significações e implicações para o SUS. *Saude Soc*. 2016;25(1):9-18. DOI: <https://doi.org/10.1590/S0104-12902016146195>
8. Carvalho AMP, Silva GA, Rabello ET. A equidade no SUS: representações sociais de profissionais da Atenção Primária à Saúde. *Cad Saúde Colet*. 2020;28(4):590-598. DOI: <https://doi.org/10.1590/1414-462X202028040151>
9. Albrecht CAM, Rosa RS, Bordin R. O conceito de equidade na produção científica em saúde: uma revisão. *Saude Soc*. 2017;26(1):115-128. DOI: <https://doi.org/10.1590/S0104-12902017162684>
10. Salvo D, Garcia L, Reis RS, et al. Physical Activity Promotion and the UN Sustainable Development Goals: Building Synergies to Maximize Impact. *J Phys Act Health*. 2021;13;18(10):1163-1180. DOI: <https://doi.org/10.1123/jpah.2021-0413>
11. Reis R, Hunter RH, Garcia L, et al. What the Physical Activity Community Can Do for Climate Action and Planetary Health? *J Phys Act Health*. 2022;1;19(1):2-3. DOI: <https://doi.org/10.1123/jpah.2021-0719>

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12. Garcia L, Pearce M, Abbas A, et al. Non-occupational physical activity and risk of cardiovascular disease, cancer and mortality outcomes: a dose-response meta-analysis of large prospective studies. *Br J Sports Med.* 2023;57(15):979-989. DOI: <https://doi.org/10.1136/bjsports-2022-105669>
13. Speake H, Copeland RJ, Till SH, et al. Embedding Physical Activity in the Heart of the NHS: The Need for a Whole-System Approach. *Sports Med.* 2016;46(7):939-946. DOI: <https://doi.org/10.1007/s40279-016-0488-y>
14. Santos AC, Willumsen J, Meheus F, et al. The cost of inaction on physical inactivity to public health-care systems: a population-attributable fraction analysis. *Lancet Glob Health.* 2023;11(1):e32-e39. DOI: [https://doi.org/10.1016/S2214-109X\(22\)00464-8](https://doi.org/10.1016/S2214-109X(22)00464-8)
15. Amorim T, Knuth A, Cruz D, et al. Descrição dos programas municipais de promoção da atividade física financiados pelo Ministério da Saúde. *Rev Bras Ativ Fís Saúde.* 2013;18(1):63-74. DOI: <http://dx.doi.org/10.12820/2317-1634.2013v18n1p63>
16. Ministério da Saúde (BR), Gabinete do Ministro. Portaria GM nº 1.105, de 15 de maio de 2022. Altera a Portaria de Consolidação GM/MS nº 6, de 28 de setembro de 2017, para instituir o incentivo financeiro federal de custeio, destinado à implementação de ações de atividade física na Atenção Primária à Saúde (APS). *Diário Oficial da União [Internet]*, Brasília, DF. 2022 maio 17 [acesso em 2023 dez 13]; Edição 92; Seção I:120-121. Disponível em: [https://bvsms.saude.gov.br/bvs/saudelegis/gm/2022/prt1105\\_17\\_05\\_2022.html](https://bvsms.saude.gov.br/bvs/saudelegis/gm/2022/prt1105_17_05_2022.html)
17. Carvalho FFB, Loch MR, Sposito LAC, et al. Recursos da União para as práticas corporais e atividades físicas no SUS: análise de 2019-2022. *Ciênc saúde coletiva.* 2024;29(1):e19352022. DOI: <https://doi.org/10.1590/1413-81232024291.19352022>
18. Ministério da Saúde (BR), Gabinete do Ministro. Portaria GM nº 3.872, de 26 de outubro de 2022. Define e homologa os códigos referentes ao Cadastro Nacional de Estabelecimentos de Saúde (CNES) dos serviços de Atenção Primária à Saúde (APS) credenciados, por meio da Portaria GM/MS nº 2.103, de 30 de junho de 2022, e cadastrados no Sistema de Cadastro Nacional de Estabelecimentos de Saúde (SCNES) para fins da transferência do Incentivo financeiro federal de custeio, destinado à implementação de ações de Atividade Física (IAF) na APS, instituído por meio da Portaria GM/MS nº 1.105, de 15 de maio de 2022. *Diário Oficial da União [Internet]*, Brasília, DF. 2022 out 31 [acesso em 2023 dez 13]; Edição 206; Seção I:90. Disponível em: [https://bvsms.saude.gov.br/bvs/saudelegis/gm/2022/prt3872\\_31\\_10\\_2022.html](https://bvsms.saude.gov.br/bvs/saudelegis/gm/2022/prt3872_31_10_2022.html)
19. Lotta G. Teoria e análises sobre implantação de políticas públicas no Brasil. Brasília, DF: Enap; 2019. 324 p.
20. Nogueira JAD, Bosi MLM. Saúde Coletiva e Educação Física: distanciamentos e interfaces. *Ciênc saúde coletiva.* 2017;22(6):1913-1922. DOI: <https://doi.org/10.1590/1413-81232017226.23882015>
21. Vieira LA, Carvalho FFB. Planejamento no SUS: análise da agenda das práticas corporais e atividades físicas no âmbito federal no período de 2004 a 2023. *Saúde debate.* 2024;48(141):e8865. DOI: <https://doi.org/10.1590/2358-289820241418865P>
22. Ministério da Saúde (BR). e-Gestor AB [Internet]. [local desconhecido]: Ministério da Saúde; 2023 [acesso em 2023 out 20]. Disponível em: <https://egestorab.saude.gov.br/>
23. Ministério da Saúde (BR), Gabinete do Ministro. Credencia os municípios e o Distrito Federal, e seus respectivos estabelecimentos de saúde da Atenção Primária à Saúde, ao Incentivo financeiro federal de custeio, destinado à implementação de ações de Atividade Física na Atenção Primária à Saúde, instituído por meio da Portaria GM/MS nº 1.105, de 15 de maio de 2022. *Diário Oficial da União [Internet]*, Brasília, DF. 2022 jul 4 [acesso em 2023 out 20]; Edição 124; Seção I:54. Disponível em: [https://bvsms.saude.gov.br/bvs/saudelegis/gm/2022/prt2103\\_04\\_07\\_2022.html](https://bvsms.saude.gov.br/bvs/saudelegis/gm/2022/prt2103_04_07_2022.html)

24. World Health Organization. Handbook on health inequality monitoring: with a special focus on low-and middle-income countries [Internet]. Geneva: WHO; 2013 [acesso em 2023 dez 13]. Disponível em: <https://www.who.int/docs/default-source/gho-documents/health-equity/handbook-on-health-inequality-monitoring/handbook-on-health-inequality-monitoring.pdf>
25. Silva ICM, Restrepo-Mendez MC, Costa JC, et al. Mensuração de desigualdades sociais em saúde: conceitos e abordagens metodológicas no contexto brasileiro. *Epidemiol Serv Saúde*. 2018;27(1):1-12. DOI: <https://doi.org/10.5123/S1679-49742018000100017>
26. Augusto NA, Fernandes BO, Silva ICM, et al. A hipótese da equidade inversa na implementação do NASF-AB no Sul do Brasil. *Ciênc saúde coletiva*. 2023;28(7):2099-2108. DOI: <https://doi.org/10.1590/1413-8123202328704952022>
27. Instituto Brasileiro de Geografia e Estatística (BR). IBGE divulga relação da população dos municípios. Agência IBGE [Internet], 2023 ago 31 [acesso em 2023 nov 15]. Disponível em: <https://agenciadenoticias.ibge.gov.br/agencia-sala-de-imprensa/2013-agencia-de-noticias/releases/37758-ibge-divulga-relacao-da-populacao-dos-municipios>
28. Ministério da Saúde (BR). Datasus. Tabnet [Internet]. [Brasília, DF]: Ministério da Saúde, 2023 [acesso em 2023 nov 20]. Disponível em: <https://datasus.saude.gov.br/informacoes-de-saude-tabnet/>
29. Confederação Nacional dos Municípios (BR). Saúde Prorrogado prazo para credenciar ações de atividade física no SUS e receber verba. CNM [Internet], [local desconhecido], 2022 jun 6 [acesso em 2023 nov 23]. Disponível em: <https://cnm.org.br/comunicacao-noticias/prorrogado-prazo-para-credenciar-acoes-de-atividade-fisica-no-sus-e-receber-verba>
30. Carvalho FFB, Guerra PH, Silva DB, et al. Oferta e participação nas práticas corporais e atividades físicas na APS no Brasil: análise de 2014 a 2022. *Ciênc saúde coletiva*. 2025;30:e09492023. DOI: <https://doi.org/10.1590/1413-81232025301.09492023>
31. Dutra RP, Viero VSE, Knuth AG. Inserção de profissionais de educação física no SUS: análise temporal (2007-2021). *Rev Bras Ativ Fís Saúde*. 2023;28:1-9. DOI: <https://doi.org/10.12820/rbafs.28e0296>
32. Carvalho FFB, Almeida ER, Loch MR, et al. As práticas corporais e atividades físicas na gestão tripartite do SUS: estrutura organizacional, financiamento e oferta. *Ciênc saúde coletiva*. 2022;27(6):2163-2174. DOI: <https://doi.org/10.1590/1413-81232022276.15242021>
33. Mielke GI, Stopa SR, Gomes CS, et al. Leisure time physical activity among Brazilian adults: National Health Survey 2013 and 2019. *Rev Bras Epidemiol*. 2021;24:e210008. DOI: <https://doi.org/10.1590/1980-549720210008.supl.2>
34. Mielke GI, Malta DC, Nunes BP, et al. All are equal, but some are more equal than others: social determinants of leisure time physical activity through the lens of intersectionality. *BMC Public Health*. 2022;22(1):36. DOI: <https://doi.org/10.1186/s12889-021-12428-7>
35. Tusset D, Santos L, Merchan-Hamann E, et al. Programa Academia da Saúde: correlação entre internações por DCNT e adesão nos municípios brasileiros, 2011-2017. *Epidemiol Serv Saúde*. 2020;29(5):e2019453. DOI: <https://doi.org/10.1590/S1679-49742020000500013>
36. Bagrichevsky M, Santos Júnior VJ, Estevão A, et al. Desigualdades sociais em saúde e práticas corporais: um exercício singular de análise. *Saúde Soc*. 2013;22(2):497-510. DOI: <https://doi.org/10.1590/S0104-12902013000200019>
37. Crochemore-Silva I, Knuth AG, Mielke GI, et al. Promoção de atividade física e as políticas públicas no combate às desigualdades: reflexões a partir da Lei dos Cuidados Inversos e Hipótese da Equidade Inversa. *Cad Saúde Pública*. 2020;36(6):e00155119. DOI: <https://doi.org/10.1590/0102-311X00155119>
38. Rennie K, Ahern A, King B, et al. Integration of Physical Activity Promotion within Primary and Secondary Care Settings: Rapid Evidence Review and

- Lessons from Practice Case Studies. London: Public Health England; 2020. DOI: <https://doi.org/10.17863/CAM.64187>
39. Ministério da Saúde (BR). Guia de Atividade Física para a População Brasileira [Internet]. Brasília, DF: Ministério da Saúde; 2021 [acesso em 2023 nov 23]. 54 p.: il. Disponível em: [https://bvsm.sau.gov.br/bvs/publicacoes/guia\\_atividade\\_fisica\\_populacao\\_brasileira.pdf](https://bvsm.sau.gov.br/bvs/publicacoes/guia_atividade_fisica_populacao_brasileira.pdf)
  40. Ministério da Saúde (BR). Guia de orientação para o aconselhamento breve sobre atividade física na APS do SUS: Material de apoio [Internet]. Versão para Consulta Pública. Brasília, DF: Ministério da Saúde; 2022 [acesso em 2023 nov 23]. Disponível em: [https://www.gov.br/sau.gov.br/sau/pt-br/acesso-a-informacao/participacao-social/consultas-publicas/2022/consulta-publica-guia-de-orientacao-para-o-aconselhamento-breve-sobre-atividade-fisica-na-atencao-primaria-a-sau-do-sistema-unico-de-sau/anexo-2-guia-de-orientacao-para-o-aconselhamento-breve-sobre-atividade-fisica-na-aps-do-sus\\_material-de-apoio.pdf](https://www.gov.br/sau.gov.br/sau/pt-br/acesso-a-informacao/participacao-social/consultas-publicas/2022/consulta-publica-guia-de-orientacao-para-o-aconselhamento-breve-sobre-atividade-fisica-na-atencao-primaria-a-sau-do-sistema-unico-de-sau/anexo-2-guia-de-orientacao-para-o-aconselhamento-breve-sobre-atividade-fisica-na-aps-do-sus_material-de-apoio.pdf)
  41. Ministério da Saúde (BR). Cartilha de Emendas Parlamentares PLOA 2024 [Internet]. Brasília, DF: Ministério da Saúde; 2023 [acesso em 2023 nov 23]. 148 p.: il. Disponível em: <https://portalfns.sau.gov.br/cartilha-de-emendas-parlamentares-ploa-2024/>
  42. Ministério da Saúde (BR). Vigitel Brasil 2006-2021: vigilância de fatores de risco e proteção para doenças crônicas por inquérito telefônico: prática de atividade física nas capitais entre 2006 e 2021 [Internet]. Brasília, DF: Ministério da Saúde; 2022 [acesso em 2023 nov 23]. Disponível em: <https://www.gov.br/sau.gov.br/sau/pt-br/centrais-de-conteudo/publicacoes/svsa/vigitel/vigitel-brasil-2006-2021-pratica-de-atividade-fisica/view>
  43. Ministério da Saúde (BR); Instituto Brasileiro de Geografia e Estatística. Pesquisa Nacional de Saúde 2019: percepção do estado de saúde, estilos de vida, doenças crônicas e saúde bucal: Brasil e grandes regiões [Internet]. Rio de Janeiro: IBGE; 2020 [acesso em 2023 nov 23]. Disponível em: <https://biblioteca.ibge.gov.br/visualizacao/livros/liv101764.pdf>
  44. Ministério da Saúde (BR); Ministério do Planejamento, Gestão e Orçamento; Instituto Brasileiro de Geografia e Estatística. Pesquisa Nacional de Saúde 2013: percepção do estado de saúde, estilos de vida e doenças crônicas: Brasil, grandes regiões e Unidades da Federação [Internet]. Rio de Janeiro: IBGE; 2014 [acesso em 2023 nov 23]. Disponível em: <https://biblioteca.ibge.gov.br/visualizacao/livros/liv91110.pdf>
  45. Kohler S, Dippon L, Helsper N, et al. Population-based physical activity promotion with a focus on health equity: a review of reviews. *Int J Equity Health*. 2023;22(1):18. DOI: <https://doi.org/10.1186/s12939-023-01834-5>
  46. Jerome GJ, Boyer WR, Bustamante EE, et al. Increasing equity of physical activity promotion for optimal cardiovascular health in adults: A scientific statement from the AHA. *Circulation*. 2023;147(25):1951-1962. DOI: <https://doi.org/10.1161/CIR.0000000000001148>
  47. Wendt A, Knuth AG, Nunes BP, et al. Leisure-Time physical activity in a southern Brazilian City (2004-2021): Applying an equity lens to time-trend analyses. *J Phys Act Health*. 2023;31(1):1-9. DOI: <https://doi.org/10.1123/jpah.2023-0259>
  48. Varela AR, Hallal PC, Grueso JM, et al. Status and trends of physical activity surveillance, policy, and research in 164 countries: Findings from the GoPA! 2015 and 2020 surveys. *J Phys Act Health*. 2022;20(2):112-128. DOI: <https://doi.org/10.1123/jpah.2022-0464>
  49. Katzmarzyk PT. Expanding our understanding of the global impact of physical inactivity. *Lancet Glob Health*. 2023;11(1):e2-e3. DOI: [https://doi.org/10.1016/S2214-109X\(22\)00482-X](https://doi.org/10.1016/S2214-109X(22)00482-X)
  50. Pratt M, Varela AR, Bauman A. The Physical Activity Policy to Practice Disconnect. *J Phys Act Health*. 2023;16;20(6):461-464. DOI: <https://doi.org/10.1123/jpah.2023-0071>
  51. Faria TMT, Brenner S, Deckert A, et al. Health Academy Program and physical activity levels in Brazilian State capitals. *Rev Bras Atividade Física Saúde*. 2020;25:1-8. DOI: <https://doi.org/10.12820/rbafs.25e0133>

52. Carvalho FFB, Sposito LAC, Rodrigues PAF, et al. Promoção das práticas corporais e atividades físicas no SUS: mudanças à vista, mas em qual direção? *Cad Saúde Pública*. 2022;38(8):e00095722. DOI: <https://doi.org/10.1590/0102-311XPT095722>
53. Ministério da Saúde (BR), Gabinete da Ministra. Portaria GM nº 1.733, de 3 de novembro de 2023. Credencia os municípios e o Distrito Federal, e seus respectivos estabelecimentos de saúde da Atenção Primária à Saúde, ao incentivo financeiro federal de custeio, destinado à implementação de ações de Atividade Física na Atenção Primária à Saúde, instituído por meio da Portaria MS/GM nº 1.105, de 15 de maio de 2022. *Diário Oficial da União* [Internet], Brasília, DF. 2023 nov 7 [acesso em 2023 nov 23]; Edição 211; Seção I:53. Disponível em: <https://www.in.gov.br/en/web/dou/-/portaria-gm/ms-n-1.733-de-3-de-novembro-de-2023-521119735>
54. Ministério da Saúde (BR), Gabinete da Ministra. Portaria GM nº 3.493, de 10 de abril de 2024. Altera a Portaria de Consolidação GM/MS nº 6, de 28 de setembro de 2017, para instituir nova metodologia de cofinanciamento federal do Piso de Atenção Primária à Saúde no âmbito do Sistema Único de Saúde (SUS). *Diário Oficial da União* [Internet], Brasília, DF. 2024 abr 11 [acesso em 15 set 2024]; Edição 70; Seção I:100-102. Disponível em: [https://bvsmms.saude.gov.br/bvs/saudelegis/gm/2024/prt3493\\_11\\_04\\_2024.html](https://bvsmms.saude.gov.br/bvs/saudelegis/gm/2024/prt3493_11_04_2024.html)
55. Ministério da Saúde (BR), Gabinete da Ministra. Portaria GM nº 635, de 22 de maio de 2023. Institui, define e cria incentivo financeiro federal de implantação, custeio e desempenho para as modalidades de equipes Multiprofissionais na Atenção Primária à Saúde. *Diário Oficial da União* [Internet], Brasília, DF. 2023 maio 26 [acesso em 2023 nov 23]; Edição 96-B; Seção I Extra-B:11. Disponível em: [https://bvsmms.saude.gov.br/bvs/saudelegis/gm/2023/prt0635\\_22\\_05\\_2023.html](https://bvsmms.saude.gov.br/bvs/saudelegis/gm/2023/prt0635_22_05_2023.html)

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