

## Comparison of work models in primary health care through analysis of performance indicators\*

### *Comparação dos modelos de trabalho na atenção primária em saúde por meio da análise de indicadores de desempenho*

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**ABSTRACT:** This study aims to compare two working models in health care developed in Primary Health Care (PHC), through the evaluation of the results of performance indicators postulated by the *Previne Brasil Program* to compare the performance of two PHC units in Ribeirão Preto-SP – Brazil, with similar enrolled populations: the first with a conventional work model (Family Health Strategy – ESF), called Unit A, and the second, with a “parametrized” composition (Primary Care Team – EAB), called Unit B. The data were obtained through the Hygia system, e-Gestor AB and statistical data from B.I. (Business Intelligence), between January and December 2021. Unit A achieved a Final Synthetic Indicator (ISF), represented by the average of the Weighted Scores of the Indicators of each unit, equivalent to the value of 6 for the year 2021, while the Unit B recorded an ISF of 3.4 over the same period, verifying that the Family Health Strategy (ESF) model demonstrated superior performance to the parameterized Primary Care Team (EAB), with a percentage discrepancy of 76.47%. According to the indicators of the *Previne Brasil Program* for the year 2021, the performance in managing the work process of the assistance model called conventional ESF was greater than that of the model called parameterized EAB, with a difference of more than 75%.

**KEY WORDS:** Primary health care; Health assessment; Quality management; Low-cost technology.

**RESUMO:** Este estudo tem como objetivo comparar dois modelos de trabalho assistencial desenvolvidos na Atenção Primária em Saúde (APS), por meio da avaliação dos resultados de indicadores de desempenho postulados pelo Programa *Previne Brasil* para comparação de *performance* de duas unidades de APS de Ribeirão Preto-SP, com populações adscritas semelhantes: a primeira com um modelo de trabalho convencional (Estratégia Saúde da Família – ESF), denominada Unidade A, e a segunda, de composição “parametrizada” (Equipe de Atenção Básica – EAB), denominada Unidade B. Os dados foram obtidos por meio do sistema Hygia, do e-Gestor AB e de dados estatísticos de B.I. (*Business Intelligence*), entre janeiro e dezembro de 2021. A unidade A alcançou um Indicador Sintético Final (ISF), representado pela média das notas ponderadas dos indicadores de cada unidade, equivalente ao valor de 6 para o ano de 2021, enquanto a Unidade B registrou um ISF de 3,4 no mesmo período, verificando-se que o modelo de Estratégia Saúde da Família (ESF) demonstrou um desempenho superior à Equipe de Atenção Básica (EAB) parametrizada, com uma discrepância percentual de 76,47%. De acordo com os indicadores do Programa *Previne Brasil* para o ano de 2021, o desempenho na gestão do processo de trabalho do modelo de assistência denominado ESF convencional foi maior que o do modelo denominado EAB parametrizada, com uma diferença superior a 75%.

**PALAVRAS-CHAVE:** Atenção primária em saúde; Avaliação em saúde; Gestão da qualidade; Tecnologia de baixo custo.

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## INTRODUCTION

The role of health indicators has become essential for objectively measuring the results associated with the actions and programs of the health systems in which they are applied. Internationally, the National Health Service Executive, in collaboration with the UK Department of Health<sup>1</sup> - pioneers in this area -, proposed a series of indicators in 1998, many of which would apply to primary health care groups. The data was obtained through the Business Intelligence (B.I.), e-Gestor AB and Hygia® systems, during the period from January to December 2021. The units involved in this study differ in terms of work methodology: the first is a conventional Family Health Strategy unit and the second is a unit with a parameterized Primary Care Team, equivalent to the organization modality proposed by Brazilian National Program for Improving Primary Care Access and Quality (in Portuguese, Programa Nacional de Melhoria do Acesso e da Qualidade da Atenção Básica – PMAQ-AB), both with a similar registered population.

In Brazil, since the last few decades, there have been several initiatives by the Ministry of Health to institutionalize the evaluation of Primary Care (PC). One the most recent is the Brazilian National Program for Improving Primary Care Access and Quality (PMAQ-AB), implemented in 2011 under the National Primary Care Policy (in Portuguese, Política Nacional de Atenção Básica – PNAB)<sup>2</sup>. As a way of improving this concept and also looking at an alternative to modify the Primary Health Care financing model, the federal government created the “Previnde Brasil” Program through Ordinance No. 2,979 GM/MS/2019, of November 12, 2019. This program recommends, for the following three years, process indicators and intermediate results of the teams, health results indicators and global PHC indicators and their respective targets, which aim to optimize the recruitment of users registered by Primary Care and become the care provided more qualified, safe and effective. The United Kingdom’s National Health System, also known as NHS (National Health Service), was cited as a reference for drawing up the new PHC funding policy. However, there is a key difference between Brazil and NHS: instead of using capitation and performance evaluation to pay for services, these instruments have become criteria for calculating intergovernmental transfers, which are intended to subsidize the financing of local health systems - given that the SUS is decentralized and it is the municipalities that pay for PHC services<sup>3</sup>.

“Previnde Brasil” Program, established in 2019 by Ministerial Order No. 2,979 of the Ministry of Health, which decided on this new funding model for Primary Health Care at Brazil’s Unified Public Health System (SUS, in Portuguese)<sup>4,5,6</sup>, is divided into three components:

- I - weighted capitation;
- II - payment for performance;
- III - incentive for strategic actions.

Weighted capitation is a remuneration model calculated on the basis of the number of people registered under the responsibility of the Family Health teams or Primary Care teams. This component takes into account adjustment factors such as:

- I - the population registered in the Primary Care Health Information System (SISAB, in Portuguese);
- II - the socio-economic vulnerability of the registered population;
- III - the demographic profile by age group of the registered population;
- IV - the geographical classification defined by the Brazilian Institute of Geography and Statistics<sup>7</sup>.

The financial transfers related to each of the strategic actions provided for in the new financing model follow the rules established in the current regulations governing the organization, operation and funding of specific programs, strategies and actions, including the Community Health Agents (CHA) strategy, the “Saúde na Hora” Program (Health on the Spot Program), the Oral Health Team (eSB, in Portuguese), the “Saúde na Escola” Program (Health at School Program) and programs to support the informatization of PHC.

In order to analyze Primary Health Care performance indicators according to the new funding model recommended by the “Previnde Brasil” Program, Technical Note 5/2020-DESF/SAPS/MS was published, which presents the qualification forms for the set of indicators that make up the respective financial incentive for 2020 (extended to 2021) and details the method for measuring and evaluating them. In this process, Ordinance 3.222, of December 10, 2019, established 07 (seven) indicators, effectively used for the year 2022:

- I - proportion of pregnant women with at least 6 (six) prenatal consultations carried out, the first of which by the 20th week of pregnancy (PN);
- II - proportion of pregnant women tested for syphilis and HIV (EX);
- III - proportion of pregnant women with dental care (OD);
- IV - cytopathology test coverage (CIT);
- V - inactivated polio and pentavalent vaccination coverage (VAC);
- VI - percentage of hypertensive people with blood pressure measured in each semester (SAH);
- VII - percentage of diabetics with a glycated hemoglobin test (DM).

For the adjustment of each performance indicator, the value of the respective target established by Ordinance 3.222 will be taken into account. The targets set for the selected indicators represent reference values, the result of agreements reached at the Tripartite Inter-Management Commission, and are considered the starting point for measuring PHC quality.

The variable described as “parameter” represents the reference value used to indicate the ideal performance expected to be achieved for each indicator. The weight will be the benchmark for calculating the Weighted Indicator Score (WIS), demonstrating the clinical and epidemiological relevance of the related health conditions, as well as the level of difficulty in achieving the targets, which reflect the efforts of management and teams to carry out actions, programs and strategies. Weights of 1 or 2 were assigned to each of the seven indicators, the total sum of which is equal to 10<sup>4,5,6</sup>.

However, there are concerns that this financing model may have a more restricted focus, producing financial disparities, channeling SUS services into Primary Health Care (PHC) and perpetuating inequalities in public health<sup>8</sup>. From an ideological point of view, this requires an extensive discussion. As far as the technical-scientific aspects are concerned, there are still no practical grounds to support the hypothesis that this proposal would be unfeasible or divergent from the reality in which it is inserted without detailed monitoring of its consolidation and in-depth analysis of its impact, effectiveness, efficiency and efficacy.

For conceptual purposes and to differentiate between the two working models discussed in this study, the regulations of the 3rd cycle of PMAQ-AB<sup>9</sup> on the composition and organization of parameterized Primary Care Teams was used, when compared to conventional Family Health Strategy teams. The equivalence between them takes into account criteria such as: the minimum workload of doctors, nurses and dental surgeons (the latter for those units that have an Oral Health Team) and the reference population groups (by number of inhabitants).

In accordance with this approach and using the performance indicators established by the “Previne Brasil” Program, this study aims to compare the results of these indicators for two Primary Health Care units in Ribeirão Preto-SP.

## MATERIALS AND METHODS

This is a cross-sectional, analytical study based on data from the populations assigned to two health units in different, non-contiguous neighborhoods in the municipality of Ribeirão Preto-SP, in the northeastern region of the state of São Paulo, with 9,104 and 9,550 inhabitants, respectively, with a predominance of young, white women, with Systemic Arterial Hypertension (SAH) as the prevalent chronic health condition.

The data collection period was from January to December 2021, when the new deadline for calculating the value of the financial incentive recommended by the “Previne Brasil” Program would become effective (extension provided for by Ordinance No. 172/GM/MS, of January 31, 2020, due to the covid-19 pandemic).

The sample, determined by convenience and organizational representativeness, consisted of two health units, called “A” and “B”, with similar profiles. Unit A was represented by the conventional Family Health Strategy model and unit B contains a parameterized Primary Care Team, equivalent to the organizational modality postulated by the National Program for Improving Primary Care Access and Quality (PMAQ-AB).

The institutions studied correspond to allocation units<sup>10</sup>, according to the familiarity of one of the researchers with the structure of Unit A and also according to the recommendation of the Municipal Health Department of Ribeirão Preto, which indicated Unit B as similar, considering its interest in evaluating the results.

To justify the representativeness of this sample in relation to the general population of Ribeirão Preto, the predominance of characteristics such as gender (female), age group (20-29

years), level of education (of those informed, completed high school) and situation in the labor market (of those informed, employed with a signed labor card) were taken into account. It is also important to mention that the number of people registered at the units studied represents 2.59% of the municipality’s total population of 720,116 inhabitants<sup>7</sup>.

The data was obtained by accessing the Hygia® system (Electronic Citizen Record), which supplies the e-SUS (Health Information System that aims to replace the Primary Care Information System – SIAB, in Portuguese), the e-Gestor AB (WEB platform that centralizes access and profiles of Primary Care information systems) and the B.I. (Business Intelligence) statistical data on the Ribeirão Preto-SP City Hall intranet.

These data were interpreted using the same methodology applied to the analysis of indicators recommended by the “Previne Brasil” Program: in order to calculate the proportion of each unit’s performance in relation to the recommended targets, individual scores were assigned to each indicator in a linear fashion, ranging from zero to ten, considering the result obtained between the lowest possible value (usually zero) and the target assigned to that indicator.

Subsequently, a comparative analysis was carried out between the two units, considering the individual score for each indicator, over the four-month periods of 2021, scoring factors that could interfere with the performance of each one. Multiplying the score with the weight resulted in the final score for that indicator, called the Weighted Indicator Score (WIS). The last stage consisted of aggregating the results, in which the weighted results of the indicators were condensed into a single final indicator, called the Final Synthetic Indicator (FSI). The aggregation was done by adding up the WISs of all the indicators and dividing them by 10 (the sum of all the weights). This result is the FSI, the final score that brings together the weighted result of all the indicators, making it easier to interpret the performance of each unit for each four-month period. The final performance result for each unit was obtained from the arithmetic mean of the FSIs for the three four-month periods of the year. It was expected that the FSI of the unit with the FHS (Family Health Strategy) would be higher than the FSI of the unit with the parameterized Primary Care Team (PCT).

The FSIs of the units were compared by simply analyzing the proportional difference between the indicators, indicating that one unit was superior to the other. The work models of the two units were compared based on data obtained from the National Register of Health Establishments (CNES, in Portuguese) website, regarding the working hours of the professionals who make up the units under study (only those directly involved in health care), as well as an analysis of the population covered and the number of teams.

Based on information abstracted from the Business Intelligence database of Ribeirão Preto Municipal Health Department, which compiles individual registration data from the e-SUS system, a situational health diagnosis was drawn up for the units involved in this study, taking into account the geographical, demographic, educational, work and pathological profile of the respective populations.

The performance indicators used in the study were

proposed by the “Previne Brasil” Program<sup>4:5:6</sup> for the year 2021 and represent the proportion of individuals with regular health follow-up in the areas of women’s health (proportion of pregnant women with at least 6 (six) prenatal consultations carried out, with the first up to the 20th week of pregnancy (PN); proportion of pregnant women tested for syphilis and HIV (EX); proportion of pregnant women with dental care performed (OD); coverage of cytopathological examination (CIT)), child health (inactivated polio and pentavalent vaccination coverage (VAC)) and chronic non-communicable diseases (percentage of hypertensive people with blood pressure measured in each semester (SAH); percentage of diabetics with a request for glycated hemoglobin (DM)) in relation to the total number of individuals with the respective health condition.

The project was approved by the HCFMRP-USP Research Ethics Committee under CAAE No. 44708721.0.0000.5440-1 and by the Research Project Evaluation Committee of the Ribeirão Preto Municipal Health Department. The privacy and confidentiality of the data obtained were guaranteed. The use of a Free and Informed Consent Form (FICF) is not applicable, as there was no direct participation of individuals, and a request to waive this term was sent to the Committee. Therefore, from an ethical point of view, there was no occurrence of discomfort, intimidation, subordination, prediction of benefits or potential risks involving human beings.

## RESULTS

Based on information abstracted from Business

**Table 1** - Percentage results of unit A’s performance indicators in 2021

	PN	GOAL	EX	GOAL	OD	GOAL	CIT	GOAL	VAC	GOAL	SAH	GOAL	DM	GOAL
Q1	65	60	81	60	52	60	6	40	22,58	95	11	50	38	50
Q2	64	60	70	60	72	60	7	40	26,39	95	16	50	37	50
Q3	80	60	78	60	83	60	9	40	36,65	95	15	50	36	50

Source: Own elaboration.

Key: Q1= 1st four-month period of 2021; Q2= 2nd four-month period of 2021; Q3= 3rd four-month period of 2021

**Table 2** - Percentage results of unit B’s performance indicators in 2021

	PN	GOAL	EX	GOAL	OD	GOAL	CIT	GOAL	VAC	GOAL	SAH	GOAL	DM	GOAL
Q1	70	60	16	60	48	60	4	40	35,03	95	4	50	13	50
Q2	42	60	4	60	22	60	6	40	25,51	95	7	50	18	50
Q3	62	60	10	60	20	60	9	40	24,15	95	8	50	25	50

Source: Own elaboration.

Key: Q1= 1st four-month period of 2021; Q2= 2nd four-month period of 2021; Q3= 3rd four-month period of 2021

With regard to the VAC indicator, the data could not be obtained directly from e-Gestor AB, like the others. Therefore, it was necessary to apply the following formula, recommended by the 2021 Instruction Manual for Primary Health Care Financing:

No. of 3rd doses of Polio and Penta given to children under 1 y/o \_\_\_\_\_

$$\frac{\text{(Registration Parameter x SINASC or No. of children registered)*}}{\text{IBGE Population}}$$

\*The denominator will be the one with the highest value

Intelligence (B.I.), which compiles individual registration data from the e-SUS System, a situational health diagnosis was drawn up for the selected units, considering the geographic, demographic, educational, work and pathological profile of the respective populations. In Unit A, located 6.6 km from the reference UBDS (Southern Health District of Ribeirão Preto), with a population of 9,550 inhabitants (October/2021), there was a predominance of women (52.31%), mostly aged 20-29 (19.49%), white (48.99%) and with Systemic Arterial Hypertension as the most prevalent chronic health condition (12.65%).

In Unit B, located 5 km from the reference UBDS (West Health District of Ribeirão Preto), with a population of 9,104 inhabitants (October/2021), there was a predominance of women (53.32%), mostly aged 20-29 (18.56%), white (50.33%) and with Systemic Arterial Hypertension as the most prevalent chronic health condition (11.98%).

The following formula was used to calculate the Final Synthetic Indicator for each four-month period for the health units evaluated, taking into account the recommended weights:

$$FSI\ Q = \frac{(PN \times 1) + (EX \times 1) + (OD \times 2) + (CIT \times 1) + (VAC \times 2) + (SAH \times 2) + (DM \times 1)}{10}$$

Summarizing the data obtained from e-Gestor AB in relation to “Previne Brasil” Program’s performance indicators for units A and B in 2021, with the respective financial division into four-month periods, it is possible to observe the results shown in Tables 1 and 2.

The number of doses of inactivated and pentavalent polio vaccine administered could be abstracted from the Hygia® system, individually, for each unit, with a time interval determined for the respective four-month periods (January 1 to April 30, 2021, May 1 to August 31, 2021 and September 1 to December 31, 2021). The number of children under the age of 1 registered in each unit could be obtained from e-SUS. Thus, the calculation is based on the formula described above.



## 1. Individualized assessment of performance indicators

In this article, the following performance indicators were evaluated:

1.1 Proportion of pregnant women with at least 6 (six) prenatal consultations, with the first visit until the 20th week of pregnancy (PN)

Looking at the evolution of this indicator over the three four-month periods of 2021, it can be seen that the arithmetic mean of the results obtained for each health unit shows that Unit A outperforms Unit B (69.66% x 58%), with a percentage difference of 11.66%, while Unit B is below the recommended target (60%).

1.2 Proportion of pregnant women tested for syphilis and HIV (EX)

Looking at the evolution of this indicator over the three four-month periods of 2021, it can be seen that the arithmetic mean of the results obtained for each health unit shows that Unit A outperforms Unit B (76.33% x 10%), with a percentage difference of 66.33%, while Unit B is below the recommended target (60%).

1.3 Proportion of pregnant women with dental care provided (OD)

Looking at the evolution of this indicator over the three four-month periods of 2021, it can be seen that the arithmetic mean of the results obtained for each health unit shows that Unit A outperforms Unit B (69% x 30%), with a percentage difference of 39%, while Unit B is below the recommended target (60%).

1.4 Cytopathology test coverage (CIT)

Looking at the evolution of this indicator over the three four-month periods of 2021, it can be seen that the arithmetic average of the results obtained for each health unit shows that Unit A outperforms Unit B (7.33% x 6.33%), with a percentage difference of 1.00%, both below the recommended target of 40%.

1.5 Inactivated and pentavalent polio vaccination coverage (VAC)

Looking at the evolution of this indicator over the three four-month periods of 2021, it can be seen that the arithmetic mean of the results obtained for each health unit shows that Unit A outperforms Unit B (28.54% x 28.23%), with a percentage difference of 0.31%, both below the recommended target of 95%.

1.6 Percentage of hypertensive people with blood pressure measured every six months (SAH)

Looking at the evolution of this indicator over the three four-month periods of 2021, it can be seen that the arithmetic mean of the results obtained for each health unit shows that Unit A outperforms Unit B (14% x 6.33%), with a percentage difference of 7.67%, both below the recommended target of 50%.

1.7 Percentage of diabetics with a glycated hemoglobin test (DM)

Looking at the evolution of this indicator over the three four-month periods of 2021, it can be seen that the arithmetic average of the results obtained for each health unit shows that Unit A outperforms Unit B (37% x 18.66%), with a percentage difference of 18.34%, both below the recommended target of 50%.

1.8 Calculation of the Weighted Indicator Score (WIS) and Final Synthetic Indicator (FSI) for each four-month period

The scores were assigned individually to each indicator in a linear way and ranged from zero to ten, considering the result obtained between the lowest possible value (usually zero) and the established target for that indicator.

If the result of a given indicator for that unit is 30% and the target is 60%, the final score for that indicator will be 5.0 (50% of the maximum possible score, since the result was 50% of the proposed target). Also, if the value assigned is higher than the parameter, the final score for the indicator will be 10.0.

Once the score has been assigned to the indicator, it will be weighted according to the related weight (OD, VAC and SAH with weight 2 and other indicators with weight 1). The multiplication of the score with the weight will result in the final assignment of the score for that indicator, called the Weighted Indicator Score (WIS).

The last stage consists of aggregating the results, in which the weighted results of the indicators are condensed into a single final indicator, called the Final Synthetic Indicator (FSI). Aggregation is done by adding up the WISs of all the indicators and dividing them by 10 (the sum of all the weights). This result is the FSI for each four-month period, a final score that brings together the weighted result of all the indicators, making it easier to interpret the performance of each unit for that four-month period.

The results of the Final Synthetic Indicator (FSI) for the first four months for Units A and B were 5.57 and 4.13, respectively, with a difference of 1.44 points (A>B), as shown in Table 3.

**Table 3** - Final score for each indicator in the 1st four-month period of 2021

	PN	EX	OD	CIT	VAC	SAH	DM
UNIT A	10	10	8,7	1,5	2,4	2,2	7,6
UNIT B	10	2,7	8	1	3,7	0,8	2,6

Source: Own elaboration.

The results of the Final Synthetic Indicator (FSI) for the 2nd four-month period for Units A and B were 6.1 and 2.8 respectively, with a difference of 3.3 points (A>B), as shown in Table 4.

**Table 4** - Final score for each indicator in the 2nd four-month period of 2021

	PN	EX	OD	CIT	VAC	SAH	DM
UNIT A	10	10	10	1,7	2,8	3,2	7,4
UNIT B	7	0,7	3,7	1,5	2,7	1,4	3,6

Source: Own elaboration.

**Table 5** - Final score for each indicator in the 3rd four-month period of 2021

	PN	EX	OD	CIT	VAC	SAH	DM
UNIT A	10	10	10	2,2	3,8	3	7,2
UNIT B	10	1,7	3,3	2,2	2,5	1,6	5

Source: Own elaboration.

In the 3rd four-month period of the year, as shown in Table 5, Unit A obtained a Final Synthetic Indicator (FSI) of 6.3 and Unit B got 3.4, with a difference of 2.9 points between them (A>B). Over the period studied, there was a progressive increase in Unit A's FSI (5.57; 6.1; 6.3). This was not observed in Unit B (4.13; 2.8; 3.4), which presented a lower performance in the 2nd four-month period of 2021. In the 1st four-month period of 2021, there was a more noticeable differential in favor of Unit A for the EX (73%), CIT (50%) and DM (192%) indicators, to the detriment of the VAC indicator, which was 54.2% higher for Unit B compared to Unit A.

In the 2nd four-month period of 2021, Unit A showed a greater percentage difference in the EX (1328%), OD (170%), SAH (128%) and DM (105%) indicators compared to Unit B.

In the 3rd four-month period of 2021, the EX (488%), OD (203%), VAC (52%) and SAH (87.5%) indicators showed a greater percentage difference for Unit A compared to Unit B. Therefore, the conclusion is that Unit B showed a significant difference in performance compared to Unit A in the comparative evolution of the EX indicator, with a massive deficit in the 2nd four-month period of 2021.

There is a temporal coincidence with the recrudescence of new confirmed cases of covid-19 in the municipality of Ribeirão Preto (May to July/2021). However, there was no proportional interference between the PN and EX indicators, which may demonstrate the influence of operational issues in prenatal care and non-compliance in monitoring and evaluating the quality and consistency of the data reported by the team<sup>11</sup> to the detriment of the loss of access to the health unit during the course of the pandemic. Regarding the OD indicator, there was a good result in both health units in the 1st four-month period of 2021, with a progressive and significant drop in Unit B during the last two four-month periods of that year, which may be associated with influencing factors similar to those mentioned for the EX indicator.

The results for cervical cancer screening and early detection through cytopathology collection (CIT indicator) were substantially below target for both units in all three four-

month periods of that year, with a significant difference between them in the 1st four-month period of 2021 (A>B) and a slight improvement and equalization of results in the 3rd four-month period of 2021.

With regard to the monitoring of chronic non-communicable diseases (CNCDS), especially SAH and DM, which are the focus of Primary Health Care, Unit A showed better results than Unit B in all four-month periods of the year, although there was a considerable difference between the units. This may be associated with the experience, ability or specific competence of each team in diagnosing, registering and periodically monitoring people with these health conditions, as well as their ability to actively seek out absentees and people with risk factors for these diseases in the community (obesity, family history, suggestive symptoms of the disease and its complications, etc.), both through campaigns and regular screening<sup>11</sup>.

#### 1.9 Calculation of the Final Synthetic Indicator (FSI) for 2021

The FSI for the year 2021, which is the outcome initially proposed for this study, comprises the arithmetic mean of the FSI for each four-month period for each unit. Unit A obtained a FSI of 6 for the year 2021, while Unit B obtained a FSI of 3.4 for the same year, comprising a difference of 2.6 points (76.47%).

### DISCUSSION

Firstly, it is important to note that, despite the efforts to mitigate selection and information bias in this study, it is necessary to consider that the user profile favorable to adherence to health monitoring is intrinsically linked to the team's operational model<sup>13</sup>. This aspect becomes more relevant when the context evaluation emphasizes the distinctive particularities between the conventional Family Health Strategy (FHS) and the parameterized Primary Care Team (PCT). As can be inferred from the work of Baratieri et al.<sup>12</sup>, Castanheira et al.<sup>13</sup>, Chazan et al.<sup>14</sup> and Ferreira<sup>15</sup>, both models have potential and challenges.

However, the FHS is notable for offering comprehensive and family-centered care, as well as being associated with better health indicators. In line with these assertions, this article shows results with a considerable percentage difference in favor of FHS when the indicators of the “Previne Brasil” Program are taken as a parameter.

Although there is evidence in the literature of the effect of the FHS on the health of the community<sup>16, 17, 18,19</sup> and also in other countries<sup>20</sup>, it is important to assess the actions carried out at this point in the health network in relation to a broader set of indicators. An illustrative case refers to the criteria adopted by the Organization for Economic Cooperation and Development, which cover elements such as service delivery capacity and global health indicators (such as life expectancy at birth, infant mortality, immunization rates, prevalence of risk factors for cardiovascular diseases, screening for the most common neoplasms and hospitalizations for chronic pathologies with high morbidity and mortality).

Furthermore, it is important to note that the use of the evaluation tool in this context may inadvertently result in health teams focusing less on health issues that are not covered by the evaluation metrics. Consequently, by adopting performance evaluation as a criterion for financing Primary Health Care (PHC) in the Unified Health System (SUS), there is a possibility that municipalities will direct their attention to the indicators that will be monitored, thus altering the working approach of PHC teams, which should prioritize the health demands presented by the community<sup>3</sup>.

In addition, the methodological approach, which consists of comparing the results obtained by each health unit with the targets set by the “Previne Brasil” program, can result in shortcomings and, consequently, in a reduction in the funding allocated to the evaluated institution. This aspect emphasizes a distinction in relation to the original concept of “Pay for performance” of English model.

Other PHC evaluation methodologies that are worth mentioning are the Primary Care Assessment Tool (PCA-Tool), the rate of Hospitalizations for Conditions Sensitive to PHC (ICSAP, in Portuguese), the Evaluation and Monitoring of Primary Care Services (Quali-AB, in Portuguese) and the Net Promoter Score (NPS). They differ in terms of scope, instruments, validity, usefulness and applicability. While the PCA-Tool<sup>21</sup> is an instrument for assessing and monitoring quality, applied to patients, professionals and PHC managers, measuring the presence and extent of its essential and derived attributes, the Quali-AB<sup>22</sup> is an online questionnaire, aimed at PHC managers and health professionals, which focuses on the organization of work and proposes quality indicators in line with technical and scientific protocols and the ethical and organizational guidelines of SUS. On the other hand, the ICSAP<sup>23</sup> is equivalent to an indicator of hospital activity used as an indirect way of assessing PHC performance. Finally, the NPS<sup>24</sup> is a simplified metric for evaluating user satisfaction with the service provided.

Comparing the “Previne Brasil” Program to the methodologies mentioned above, it can be observed that the first one, which has been compulsorily adopted throughout the country, provides a standardized structure that uses technologies

with bearable costs and good reproducibility (indicators). PCA-Tool and Quali-AB, on the other hand, are based on the perceptions of different stakeholders, and their execution is dependent on the training of interviewers (in the case of PCA-Tool) and the ability and availability of internet access (in the case of Quali-AB), which may require more resources. The ICSAP, instead, is easy to carry out and data is widely available through the SUS Hospital Information System (SIH-SUS, in Portuguese). However, this rate does not allow the individualization of results by PHC team. Finally, the NPS is widely accessible and inexpensive, but its effectiveness may be limited, since it is a subjective evaluation measure, directed exclusively by the patient’s perception.

A brief search of the literature reveals some studies describing the first results of the “Previne Brasil” Program<sup>25,26,27</sup>. The studies of Harzheim et al.<sup>25</sup> and Soares et al.<sup>27</sup> converge in indicating significant improvements resulting from the implementation of the Program, including an increase in population registration in PHC, expansion of funding for health teams and advances in clinical practice. Both emphasize the active participation of municipal health managers and the importance of changes in funding for these achievements. However, Costa et al.<sup>26</sup> diverge in pointing out the obstacles and challenges faced during the implementation of the program, emphasizing the complexity of public management and the political instability that has affected its continuity. These perspectives emphasize the duality of results and the challenges in implementing the “Previne Brasil” Program, which may influence future public health policies in the country.

Despite the controversies that have arisen around the Primary Health Care (PHC) evaluation strategy implemented by macro-management and its consequences, the results of this study use the methodology employed by the “Previne Brasil” Program to evidence the quantitative disparity in performance between the operational models identified as the conventional Family Health Strategy and the parameterized Primary Health Care Team. Some limitations inherent to the Program’s proposal are evident, such as the lack of health performance data prior to 2019, the use of previously calculated indicator results and the insufficient time to incorporate changes that generate a significant impact.

## CONCLUSION

Using the “Previne Brasil” Program indicators for 2021 as a parameter, it is possible to state that the work process management performance of the care model known as conventional FHS is higher than the model known as parameterized PCT, with a percentage difference of 76.47%. This result is consistent with what is observed in the current literature<sup>3,12,13,14,15</sup>.

The applicability of performance indicators as a method to analyze the performance of health units is related to a health technology with bearable costs and good reproducibility<sup>28</sup>, and can also be used to plan actions and redirect strategies in Primary Health Care in the municipal public system, such as the implementation and dissemination of technical guidelines and

continuing education, in accordance with best health practices and with a focus on quality and humanization of care.

Despite questions that this financing model appears to be restrictive and may induce the direction of PHC actions at SUS<sup>8</sup> and also because of the disagreement with the results achieved so far, there are still no practical grounds to support the hypothesis that this proposal is unfeasible without detailed

monitoring of its consolidation and an in-depth analysis of its impact, effectiveness, efficiency and efficacy.

Future prospects could include analyzing “Previner Brasil’s” assertiveness in relation to quantifying and costing resources, improving the patient’s experience of the care provided, its ability to prevent staff work overload and its ability to provide equity in health.

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