Primary health care for 21st century: first results of the new financing model

Abstract Since 1994, Brazil has been offering Primary Health Care (PHC) services based on the Family Health Strategy. The ESF has achieved important results. During this period, the PHC financing model did not undergo major methodological changes. In this article, the results of the new financing model for PHC approved in a tripartite manner in 2019, Previne Brasil, are laid out, which is composed of (i) weighted capitation, (ii) incentives for specific and strategic actions and, (iii) payment for performance. These first results reveal the increase of more than 50 million people with qualified and unique registration, associated with the record number of more than 52 thousand FH / eAP teams financed by the Ministry of Health, with more than 35 thousand of which (67%) using electronic medical records. In addition, the registration of people and professionals of the Brazilian PHC, together with SISAB, is the largest set of demographic and clinical health data in the world. These advances favor the overcoming of difficulties to achieve greater access, longitudinality and coordination of care, qualifying the Brazilian PHC in search of better health outcomes.

Key words Electronic health records, Primary care, Health evaluation, Healthcare financing

Erno Harzheim (http://orcid.org/0000-0002-8919-7916) 1
Otávio Pereira D’Avila (http://orcid.org/0000-0003-1852-7858) 2
Lucas Alexandre Pedebo (http://orcid.org/0000-0001-6663-352X) 3
Lucas Wollmann (http://orcid.org/0000-0002-3543-0794) 4
Luís Gustavo Mello Costa (http://orcid.org/0000-0002-9678-0173) 5
Carlo Roberto Hackmann da Cunha (http://orcid.org/0000-0002-3545-5801) 6
Luana Nunes de Moura (http://orcid.org/0000-0002-2021-1759) 7
Tales Minei (http://orcid.org/0000-0003-4380-428X) 8
Livia de Almeida Faller (http://orcid.org/0000-0001-9905-0507) 9

1 Programa de Pós-Graduação em Epidemiologia, Faculdade de Medicina, Universidade Federal do Rio Grande do Sul, R. Ramiro Barcelos 2400, 2 andar, 90035-003 Porto Alegre RS Brasil. erharzheim@hcpa.edu.br
2 Programa de Pós-Graduação em Odontologia, Faculdade de Odontologia, Universidade Federal de Pelotas, Porto Alegre RS Brasil.
3 Secretaria Municipal de Saúde de Florianópolis, Florianópolis SC Brasil.
4 Grupo Hospitalar Conceição, Porto Alegre RS Brasil.
5 Ministério das Comunicações, Brasília DF Brasil.
6 Médico de família e comunidade, Florianópolis SC Brasil.
7 Clínica Saúde, Porto Alegre RS Brasil.
8 Médico clínico geral, Porto Alegre RS Brasil.
9 Amil Assistência Médica Internacional, São Paulo SP Brasil.
Introduction

Brazil, since 1994\(^1\), has been offering Primary Health Care (PHC) services to the population based on the Family Health Strategy (FHS). Over its 27 years, the FHS has achieved important results: reduction of infant mortality and preventable deaths in adults\(^1\,3\). Despite the advances, it can be observed, especially in the last decade, the difficulty in achieving good indicators in fundamental actions: care provision to frequent clinical conditions\(^4\); immunization\(^5\,8\); control of chronic conditions\(^5\), such as diabetes, hypertension, dyslipidemia, respiratory diseases; cancer screening\(^8\); mental health\(^9\); decrease in hospitalizations for sensitive conditions and decrease in the search for emergency services for reasons not characterized as urgent\(^10\,11\). Added to this scenario is a history of fragility in ensuring access\(^12\,17\) and a limited capacity to incorporate technologies, in addition to the low productivity represented by the reduced number of consultations per doctor/year (1,470 vs. 2,294 in the OECD countries)\(^12\).

During this period, the financing model for PHC did not change, being based on criteria of municipal population size, structure and service provision with little focus on achieving results in health or equity, with no guarantee of real monitoring of people enrolled in PHC. There was an evident effort to assess and monitor health outcomes in the National Program for Improving Access and Quality (PMAQ, Programa Nacional de Melhoria do Acesso e da Qualidade) but the observed results indicate that the program helped to improve the physical facilities of the units and brought about a discussion about planning and organization services but did not overcome the difficulties in achieving better health indicators\(^18\).

The aim of this article is to describe and comment on the results of the new financing model for PHC, Prevent Brasil (Preve\~{n}e Brasil) approved in a tripartite manner in 2019\(^19\,20\). Data related to the PHC federal budget, the immediate effects of adopting Weighted Capitation, Incentives for Specific and Strategic Actions and Payment for Performance are presented.

Primary health care budget

Graph 1 shows the evolution of the federal budget for PHC related to the budgetary actions of the new financing model in the period between 2018 and 2021\(^21\) and Graph 2 shows the proportion of the variation in the transferred amounts.

It can be observed that the budget resources of budgetary actions 219A and 217U followed the loss of power of the Brazilian currency for the years 2018 and 2019 and in 2020 it exceeded this inflationary loss, that is, it obtained real gains in its budget composition. According to data from the Extended Consumer Price Index (IPCA – Índice de Preços ao Consumidor Amplo)\(^22\), inflation for the fiscal year 2019 was 4.3%, while the growth of budget resources of the new financing was 8.4%.

On the other hand, in the 2021 budget year to date, the PHC budget loses relevance. Despite the fact that the 2021 budget execution is still in progress, in the Annual Budget Law Project (Projeto de Lei Orçamentária Anual) related to the 2022 fiscal year, the budget resources do not replace the inflation for the period. Expectations regarding the inflation projection for the year 2021 are around 8.5\(^%\), while the budget increase has been 3.2\(^%\) so far. In relation to fiscal year 2022, the inflationary expectation of the financial market predicts a restitution of 4.1\(^%\), while the budget proposal indicates an increase of 6.1\(^%\).

Weighted capitation – accountability for people and expanded access

One of the aims of Prevent Brazil is to put people at the center of the system. The new model encouraged municipalities to identify the citizens served through better qualified registers, providing the structural conditions for greater accountability of the FHS teams in relation to the people. This, together with an informatization strategy, allowed a rapid growth of the base of adequately identified citizens and with effective assistance by the Family Health teams (FHT).

In November 2019, at the launch of Prevent Brazil, data from the previous four-month period (2019 Q2) showed that by August of that year, 98.2 million people were duly registered in the PHC database (SISAB – Primary Care Information System)\(^24\). To verify growth, compared to the two previous quarters of 2019, with the discussion of Prevent Brazil already taking place in all states of the federation, the average growth of the registration base was between 6.4\(^%\) and 6.7\(^%\) per four-month period. The latest available data, for August 2021 (2021 Q2) shows 151.8 million people duly registered, without duplicates, representing an increase of 55% compared to the time of launch of the new financing model, a proportion of four-month growth of more of 9\(^%\).

The capitation model also allowed people to have the freedom to enroll in any team without the need to be bound exclusively by geographic
criteria. If the citizen is registered by an FHT, but is not effectively assisted, the FHT that actually assisted them ends up with the effective registration at the federal government, even in cases where this effectuation involves FHT from different municipalities. This approach corrects distortions caused by the per capita payment model of the total population since this criterion did not allocate resources to where the citizen was effectively served.

In recent decades, the paradigm of person-centered care has been consolidated as a funda-

Graph 1. Proposed allocation of resources for Budgetary Actions 219A and 217U (Prevent Brazil), according to the Bill of Law and with the correction of the estimated inflation, Brazil, 2021.

Source: Brazil, Integrated Planning and Budget System (Sistema Integrado de Planejamento e Orçamento) – https://www.siop.planejamento.gov.br/modulo/login/index.html#.

Graph 2. Proportion of annual budget variation of Budgetary Actions 219A and 217U, Brazil, 2021.

Source: Brazil, Integrated Planning and Budget System (Sistema Integrado de Planejamento e Orçamento) – https://www.siop.planejamento.gov.br/modulo/login/index.html#.
mental element of quality in health, both from a structural perspective of health systems and in the development of professional skills in clinical care. Longitudinality is one of the main strategies to achieve the Triple Aim of health care, as it promotes better health outcomes, with greater satisfaction, at a lower cost. The longitudinal effect is mediated by the relationship of trust between people and professionals, established over time. How is it possible to build a relationship of trust from a vertical designation of care reference, based on territory and not on the autonomy of choice?

Community guidance, an attribute derived from PHC, does not mean care allocation by territories, but rather “a PHC approach that uses epidemiological and clinical skills in a complementary way to adjust programs to meet the specific health needs of a defined population.” The supposed benefit of territory-oriented care is the synergy between assistance and surveillance actions. However, there is a fragmentation in SUS (Brazilian Unified Health System) between these two actions. The integration between care and surveillance depends on the quality of people’s clinical information management, rather than on territorial orientation. It is the strengthening of informatization and the integration of clinical and epidemiological information on the population that will allow the teams to work together on assistance and surveillance, incorporating contextual information into individual care. The need to overcome territory-oriented ascription has already been pointed out by different PHC specialists in Brazil and even by ABRASCO. If care is to be people-centered, offered through trust relationships over time, the bond must necessarily be made with people, freely, and not with their homes.

In the same sense, the need for continuous expansion in the number of PHC services led to the inclusion of teams with flexible hours in a work model based on the development of PHC attributes. The financing of Primary Health Care Teams (PHCT) with workloads of 20h and 30h resulted in a growth of financed teams, increasing the number of registered people and access to health services. In December 2018, 43,026 PHC teams were financed, in December 2019 there were 43,755 and for the September 2021 period, 52,829 teams were identified, being 48,611 FHT and 4,218 PHCT (National Register of Health Establishments CNES – Cadastro Nacional de Estabelecimentos de Saúde – September/2021 reference).

**Informatiza APS – the valorization of health records**

The informatization of PHC services is also part of Prevent Brazil strategy. In 2019, the SAPS (Primary Health Care Secretariat – Secretaria de Atenção Primária à Saúde) of the Ministry of Health launched the Informatiza APS, a program to encourage municipalities to informatize their units. Resources were transferred directly to the municipalities, with the clear and specific objective of qualification of the data sent to the Ministry of Health, with the consequent promotion of the development of companies in the sector through free competition. Through this incentive, municipalities started to choose the solution that was best adapted to their own local reality.

This element is intrinsic and fundamental for Prevent Brazil, since both the population payment per capitation (per capita) and the payment for performance based on indicators calculated directly in the federal database (SISAB), require quality data to be correctly collected, processed and sent. Specifically regarding the calculation of indicators for payment for performance, they no longer have a quantitative basis (population aggregate) and are now based on an individual basis for each citizen for calculation. This change allowed the adoption of several clinical management tools, such as active search, case monitoring and outcome measurement.

At the time of the implementation of the Informatiza APS, the MH more conservatively adopted a standard to define whether teams were informatized and included all teams that sent any data collected through an informatized solution, whether eSUS PEC (Prontuário Eletrônico do Cidadão – Citizen’s Electronic Record) or a proprietary/outsourced solution. In this scenario, there were 27,514 (62.40%) teams with some degree of informatization of the 44,072 FHTs in operation at that time. Currently, according to data from Informatiza APS, 41,117 (78.25%) teams have some degree of informatization, being able to request the program’s incentive. When disregarding teams with a more irregular pattern of data sending, there are still 35,365 (69.20%) teams that have already been approved or accepted, which represent an increase of 24% in the number of fully informatized teams in a period of less than two years.
Payment for performance

Prevent Brazil also proposed seven performance indicators for the year 2020\textsuperscript{21,22}. It was planned to increase seven more indicators for the year 2021, and another seven indicators for the year 2022, including PHC global quality indicators such as Net Promoter Score, the PCA-Tool-Brasil\textsuperscript{15} scores and PDRQ\textsuperscript{9} scores. However, due to the COVID-19 pandemic, payment for performance has not been considering the actual results obtained. This situation delayed the advance of PHC in Brazil, accumulating for the next few years the need to measure and pay according to the result of a broad care agenda, especially for chronic conditions in health and maternal and child health. However, it is possible to observe a positive impact of the use of performance indicators for the monitoring of PHC based on the initial results (Table 1).

Unfortunately, the indicator “inactivated poliomyelitis and pentavalent vaccination coverage” does not have updated public data for the observed period. It is important to highlight that the worsening or improvement of these indicators can be easily identified from the availability of information in an easy and simple way through the SAPS, which allows the individual evaluation of the indicator up to the level of the FHT. This four-month feedback on the quality of care will allow teams to improve the service offered based on information from their own work, in addition to ensuring transparency with the population, two important advances in relation to the PMAQ.

Encouragement to specific and strategic actions of Prevent Brazil

Health on Time (Saúde na Hora)

The Health on Time program, launched in 2019, aimed to finance teams with extended opening hours\textsuperscript{37}. Currently, there are 2,600 Basic Health Units working with extended hours (until 8 PM or 10 PM), distributed in 595 Brazilian municipalities, involving 8,238 FHT, 217 PHCT and 2,397 Oral Health Teams (OHT)\textsuperscript{33}.

Oral health

Among the actions of Prevent Brazil that strengthened oral health in PHC, we can mention the expansion of oral health teams, the prioritization of strategic audiences to achieve universal access to oral health in PHC (e.g., pregnant women) and the qualification of care, in addition to the expansion of the amount of resources that finance oral health in PHC. In order to bring about the expansion of oral health teams, Prevent Brazil predicted for 2020 the adjustment of the federal financing resources of oral health teams, increasing it by 10%\textsuperscript{38} which, added to the payment for performance, resulted in an increase in the financing of 32% for the oral health teams\textsuperscript{21,39}. In addition to this action, the oral health teams that work with different monthly workloads were also recognized. The measure sought to recognize the oral health teams that were already in operation and that did not benefit from federal resources because they worked 30 or 20 hours a week\textsuperscript{40}. Currently, there are 30,117 oral health teams with a workload of 40 hours a week and 1,060 with a workload of 30/20 hours a week, approved and financed by the MH\textsuperscript{24}.

Table 1. Comparison of the results obtained by the Performance Indicators for the period of 2018 to 2021.

<table>
<thead>
<tr>
<th>Performance indicators</th>
<th>Goal</th>
<th>1st four-month period of 2018</th>
<th>2nd four-month period of 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion of pregnant women with at least six prenatal consultations performed, with the first one up to the 20th week of pregnancy</td>
<td>60%</td>
<td>16%</td>
<td>40%</td>
</tr>
<tr>
<td>Proportion of pregnant women submitted to tests for syphilis and HIV</td>
<td>60%</td>
<td>17%</td>
<td>50%</td>
</tr>
<tr>
<td>Proportion of pregnant women with dental care</td>
<td>60%</td>
<td>13%</td>
<td>34%</td>
</tr>
<tr>
<td>Cytopathological examination coverage</td>
<td>40%</td>
<td>10%</td>
<td>14%</td>
</tr>
<tr>
<td>Percentage of diabetic patients with request for glycated hemoglobin exam</td>
<td>50%</td>
<td>7%</td>
<td>17%</td>
</tr>
<tr>
<td>Percentage of hypertensive people with blood pressure measured each semester</td>
<td>50%</td>
<td>2%</td>
<td>8%</td>
</tr>
</tbody>
</table>

Create teams based on local health needs

Another relevant aspect was the end of specific financing for the Family Health Support Centers (FHSC, Núcleos de Apoio à Saúde da Família). In September 2019, there were 96,525 higher education health professionals eligible to join the FHSC teams working in the PHC. Of this total, only 35% were linked to specific FHSC financing. With the flexibilization of the financing, allowing the municipality to establish the most appropriate multidisciplinary team according to local health needs, there was an increase in the presence of these professionals in PHC. According to CNES data from September 2021, there are currently 111,813 higher education health professionals of the same type that was mentioned above working in PHC, an increase of 16% in the number of higher education professionals who comprise the work teams in PHC with the advent of Prevent Brazil.

Incentive to qualified training

The encouragement of professional training in PHC aims to qualify the care of people by supporting specialized professional training for Primary Care, through financial transfer to municipalities that have professionals in Medicine, Nursing or Dentistry performing professional residency in Family Health teams (FHT) or Oral Health teams (OHT). The incentive is already being transferred to 2,151 vacancies in residency programs, of which 1,331 vacancies in Medicine, 571 vacancies in Nursing and 249 vacancies in Dentistry, distributed in 120 municipalities. This corresponds to an annual transfer of R$ 86,634,000.00 to municipalities that have been authorized to receive support for consolidation of residency in PHC.

Final considerations

The description of the first results of Prevent Brazil demonstrates the benefit to the population produced by the reform of the PHC financing. The increase of more than 50 million people with qualified and single registration, associated with the record number of more than 52,000 HFS/PHCT teams financed by the MH, with more than 35,000 of these with constant use of electronic medical records, greatly favors the overcoming of difficulties in achieving a greater presence of first-contact access, longitudinality and coordination of care, both very dependent on the continuity of clinical information. Moreover, the registration of people and professionals of the Brazilian PHC in the SISAB, has shown to be the largest set of demographic and clinical health data in the world. If the actions started in 2019/2020 for the qualification of the eSUS-PEC are maintained, with the inclusion of reliable and measurable clinical variables, in addition to the control of duplicates of the records and the incorporation of contact information such as cell phones and addresses through the crossing-over of federal databases, the possibility of conducting large interventions through information technology will be unprecedented. It will be possible to have a list of patients/people per team or health unit, produce active search reports – as already performed in the measles vaccination at the end of 2019, monitor patients with chronic diseases, engage people with chronic diseases in actions that increase adherence to instituted therapies, among other very relevant clinical actions considering the epidemiological scenario of triple disease burden.

In addition to the benefits perceived through the capitation component, the incentive component produced a considerable increase in the number of Units and teams that work until 8 pm or 10 pm at night, expanding people’s access to PHC. There was also a strong expansion of the oral health teams, the presence of health professionals and residency vacancies for doctors, nurses and dentists.

These benefits, together with the definition of the PHC Service Portfolio and the ongoing project to define lines of care, open up great possibilities for qualifying clinical practice in PHC, creating the structural conditions to face the challenges mentioned at the beginning of the text, mainly the qualification of care for chronic conditions, aging and mental health.

It should be noted that the increase in the number of people under the actual responsibility of the PHC, the number of FH/PHCT teams, the use of electronic medical records, oral health teams, the multidisciplinary composition of Health Units, and residency vacancies have occurred within 20 months, 18 of which were under the pressure and challenge of facing the COVID-19 pandemic.

The changes and achievements described herein were much more the result of the change in the financing method than from the also significant increase in the value of federal transfers in the period. And, without a doubt, its protagonists are the municipal health managers of the 5,570
Brazilian municipalities, who, with the support of CONASEMS and CONASS, actively participated in the construction of Prevent Brazil and its successful implementation. Even in the shadow of the pandemic, the use of management methods based on evidence and supported by successful experiences in an international context, representing innovation for the SUS, brought new light to the Brazilian PHC. This light can be a hope that the tripartite management, by privileging scientifically based methods and techniques, can bring to SUS increased access and quality, with financial sustainability, which the Brazilian population needs.

Collaborations

O D'Avila and E Harzheim contributed to the study design, performance, development and final review of the study. LA Pedebos, L Wollmann and LGM Costa were responsible for the performance, description and review of the obtained results. CRH Cunha, LA Faller, LN Moura and T Minei contributed to the final review of the manuscript, text adjustments and improvement of the data discussion.
References

1. Kringsos DS, Boerma W, Van der Zee J, Groenewegen P. Europe’s strong primary care systems are linked to better population health but also to higher health spending. *Health Affairs* 2013; 32(4):686-694.


