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Research Article

Contribution of Federal Resources to the Tuberculosis Control Program in 59 Priority Municipalities in the State of São Paulo - Brazil

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Abstract

Objective: Analyzing the Union's financial contributions to the municipalities in 59 priority municipalities for the control of TB in the State of São Paulo.

Method: Through a descriptive and retrospective study, with data from EPI-TB, IBGE, National Health Fund and websites of the municipalities, for the Primary Care and Health Surveillance blocks were found for the Primary Care block.

Results: 35 municipalities (59.3%) with an increase in resources, 23 (38.9%) with a decrease and 01 (1.8%) that remained. For the Health Surveillance block, 56 municipalities (94.9%) decreased and 3 (5.10%) increased. Only 21 municipalities (35.6%) with actions, annual goals and resources for Tuberculosis for 2010 and 2013.

Final Considerations: It is concluded that there is no coherence of financial contributions, with a sharp decrease in resources for Health Surveillance and a fragile political commitment regarding the control of Tuberculosis.

Keywords: *Tuberculosis; Government Financing; Primary Health Care; Public Health; Financial Management*

Abbreviations

AIDS: Acquired Immunodeficiency Syndrome; COAP: Public Health Action Organizational Contract; DOTS: Directly Observed Treatment; FNS: National Health Fund; HIV: Human Immunodeficiency Virus; PCT: Program of Control of the Tuberculosis; PMAQ-AB: National Program for Improving Access and Quality in Primary Care; PNCT: National Tuberculosis Control Program; PQA-VS: Program of Quality and Access to Health Surveillance Actions; Prog-VS: Program of Health Surveillance Actions; SIM: Mortality Information System; SINAN: Notifiable Diseases Information System; SUS: Health Unic System; TB: Tuberculosis; USD: United States Dollar; WHO: World Health Organization

Introduction

When analyzing the Brazilian public budget model, the so-called Program-Budget and considering the actions of the Federal Government for the control of Tuberculosis (TB), which considers it a priority since 2003; the Federal Government inserted specific indicators on TB in the Program of Health Surveillance Actions (Prog-VS) [1] and in the Program of Quality and Access to Health Surveillance Actions

(PQA-VS) [2], as well as issues that contemplate the TB in the National Program for Improving Access and Quality in Primary Care (PMAQ-AB) [3]. Among the programs integrated in the Health Services network that include well-defined technical and assistance standards for combating TB; the National Tuberculosis Control Program (PNCT) is institutionalized, which establishes actions and services, based on pre-established and unified policies, instituting the dimensioning and application of physical, human and financial resources, carried out jointly by the spheres of the Union to achieve objectives and goals in a certain period of time [4].

Therefore, for this gear to work properly, since its launch in 1996 (Emergency Plan for TB Control), the Ministry of Health recommends the implementation of Directly Observed Treatment (DOTS), formally made official in 1999 through the PNCT and that since so it has been showing difficulties in the decentralization process for the Brazilian municipalities, because this organization and integration are carried out through collaboration agreements, organizing and integrating the health actions and services of the federal entities (Federal District, States, "Regional Health" and Municipalities) by the indicators in the Public Health Action Organizational Contract (COAP) [5]. In addition, it is also up to the municipalities to regularly feed information through the Notifiable Diseases Information System (SINAN) and the Mortality Information System (SIM), for the purpose of maintaining the transfer of resources from the Surveillance and Promotion Component of Health of the Health Surveillance Block (Portaria GM/MS Nº 201, de 3 de Novembro de 2010) [6].

Parallel to these legislative acts, the federal government through Ordinance No. 3,110 in 2013, authorized the financial transfer of USD 3.1 million from the National Health Fund (FNS) to the Health Funds of municipalities with a high disease burden for implantation/implementation of contingent TB surveillance, prevention and control actions[6]. Therefore, there is a need to consolidate such actions of the Federal government, focused primarily on the commitment of the municipalities, with a directed action independent of political intentions and other intercurrent actions, through the formalization of the Draft Laws that contemplate the Program of Control of the Tuberculosis (PCT) [7].

In Brazil, through the Notifiable Diseases Information System (SINAN), the data for 2013 registered 71,123 new cases of TB, which puts the country in 16th place in the number of cases among the 22 high-burden countries; 22nd place among these countries when assessing incidence, prevalence and mortality rates and 111th place in incidence rate among countries in the world; being the 4th leading cause of deaths from chronic infectious disease in the country (4,406 people) and the 1st leading cause of death among the defined infectious diseases of patients with Acquired Immunodeficiency Syndrome - AIDS/HIV seropositive [8].

Materials and Methods

The State of São Paulo and TB

In the State of São Paulo, the Program-Budget model is also present, with an institutional classification that presents in its organization chart the Organs, their budgetary units and respective expenditure units (Decree-Law nº 233/70), which are the subordinate departments directly or indirectly to the officers responsible for the budget units. Among the Institutionalized Programs by the Regional Planning and Development Secretariat of the State of São Paulo through the Pluriannual Plan (2012 - 2015), which could include TB, there are the two programs of the Health Department: Program 932 - Health Surveillance and Program 943 - Strengthening of Priority Actions and a program at the Secretariat of the Civil House, Program 2822 - Social Network of Solidarity and Citizenship, and in none of the programs is TB mentioned, that is, for the Pluriannual Plan (2012 - 2015) in the State of São Paulo, TB was not prioritized [9].

Objectives

Analyze the correlations between the federal financial contribution; TB Incidence Rates and the existence or not of TB-related Programs in the PMS and respective PAS for 59 priority municipalities in the State of São Paulo, with a population above 100,000 inhabitants, for the years 2010 and 2013.

Study area

The State of São Paulo is the state with the largest contingent of TB cases in the country, so the control of the disease should be seen as a priority. The incidence rate was 37.7 cases per 100,000 inhabitants in 2012, with 16,477 new cases and with a mortality rate of 2.0 per 100,000 inhabitants [10].

To be able to control this disease, it is estimated that it is necessary to achieve at least 85.0% cure of diagnosed cases, with a maximum of 5.0% of treatment abandonments. The difficulty lies in the large differences in incidence between the regions of the State and thus, in each municipality. While, in the interior of the State, some regions have rates lower than 20 cases per 100,000 inhabitants, others are above the goal recommended by WHO [9].

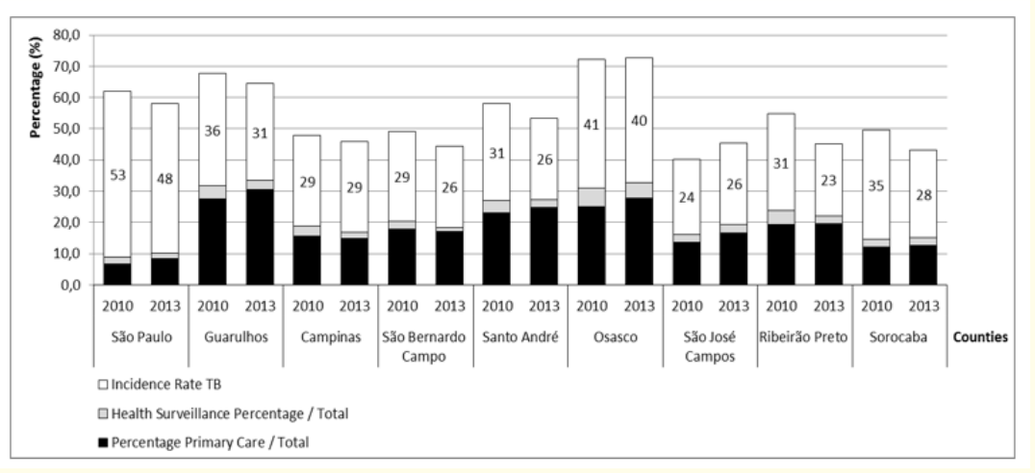
With the institutionalization of priority criteria for the operationalization of PNCT actions, the Ministry of Health contemplated 315 municipalities throughout Brazil as priorities, and in the State of São Paulo there are 73 municipalities indicated as priorities. In this article, 59 priority municipalities in the State of São Paulo (80.8%) will be analyzed, with the inclusion criteria: receiving financial resources from the federal government; having made available in electronic media the information on the budgetary and financial execution of the Health area for the years 2010 and 2013 generating the RGF, having made available the PMS and respective PAS and having more than 100,000 inhabitants in 2010 (IBGE, 2010) [11].

Data analysis

It is a quantitative, epidemiological, descriptive and retrospective study, based on secondary data from EPI-TB, IBGE and the National Health Fund (FNS). After data collection for the years 2010 and 2013, they were arranged in spreadsheets in the Excel program using the double checking and typing technique to minimize possible errors in the transcription of information. They were subsequently imported into Statasoft® software Statistica, version 7.0, to calculate the percentages of resources contributed to primary care and health surveillance according to the total resources received by the municipality, the incidence of TB and the frequency of PMS and respective PAS and thus the construction of the graphs and descriptive analysis of the results was carried out. For the collection of information referring to the contents of the PMS and PAS, the information available on the official websites of the priority municipalities studied was used in compliance with Complementary Law 141, of January 13, 2012 (Chapter IV, section I - Article 31) [12].

Results and Discussion

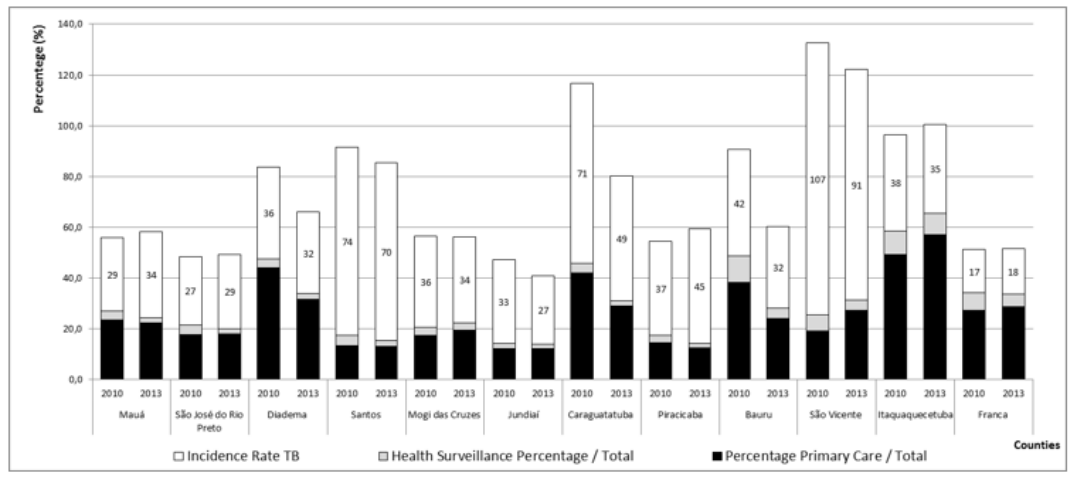
As a result, analyzes of budget allocations were made based on the percentages for the Primary Care and Health Surveillance blocks, in the years 2010 and 2013 for the 59 priority cities for TB, the Incidence Rates and the analysis of the PMS in relation to the existence or not of the PCT to serve the purpose of its connection and applied in accordance with the programming prepared based on the budgetary legal instruments. Thus, it was found.



Graph 1: *Incidence rate TB, budget allocation (%) for the two blocks of priority municipalities in TB for municipalities with a population above 501 thousand inhabitants (2010 and 2014).*

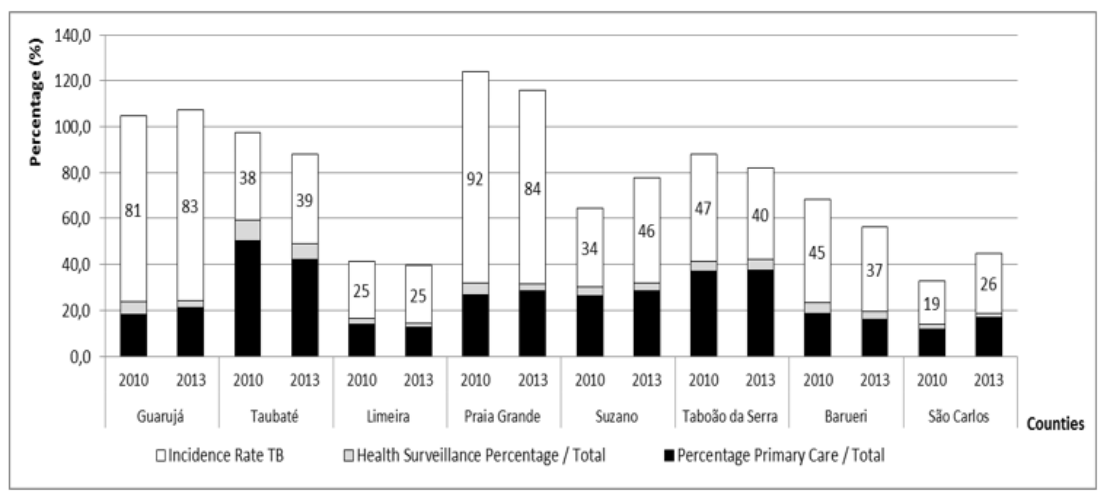
When analyzing the municipalities with a population above 501,000 inhabitants, it was found that the federal government increased the financial contribution to the Primary Care block for all municipalities, comparing the values from 2010 to 2013. Proportionally the smallest contribution was to the city of São Paulo (8.55%) and the largest to Guarulhos (30.8%). The financed amounts were, on average, 17.9% (2010) and 19.6% (2013) of the total budget allocation. Regarding Health Surveillance, 3 municipalities had a greater financial contribution (São Paulo from 2.18% to 2.19%; São José dos Campos from 2.60% to 3.26% and Sorocaba from 2.48% to 2.73%), for the other 6 municipalities the financial contribution was lower, when comparing the percentages of the years 2010 and 2013 (Guarulhos from 4.18% to 3.50%; Campinas from 3.26% to 2.24%; São Bernardo do Campo from 2.43% to 1.52%; Santo André from 3.94% to 2.99%; Osasco from 6.04% to 5.70% and Ribeirão Preto from 4.37 % to 3.04%). The financed amounts were, on average, from 3.50% (2010) to 3.02% (2013) of the total budget allocation.

Regarding the 12 priority municipalities with a population between 301,000 and 500,000 inhabitants, it was obtained, for the primary care block, that in 8 municipalities (66.7%) the contribution increased, while for 4 municipalities (33.3%) it decreased. The average was 26.3% ± 12.9 (2010) to 25.8% ± 12.2 (2013). The municipality of São Vicente had the largest increase (19.2% in 2010 to 27.7% in 2013); whereas the municipality of Bauru had the largest decrease (38.4% in 2010 to 24.2% in 2013). When analyzing the Health Surveillance block, it was found that 11 municipalities (91.7%) had a reduction in the financial contribution from 2010 to 2013. Only the municipality of Jundiaí increased (from 1.87% in 2010 to 2.13% in 2013). The average contribution in 2010 was 5.40% ± 2.90, falling to 4.20% ± 2.40 in 2013. A drop in absolute receipts in this group of municipalities from USD 557.334,2 between 2010 and 2013.



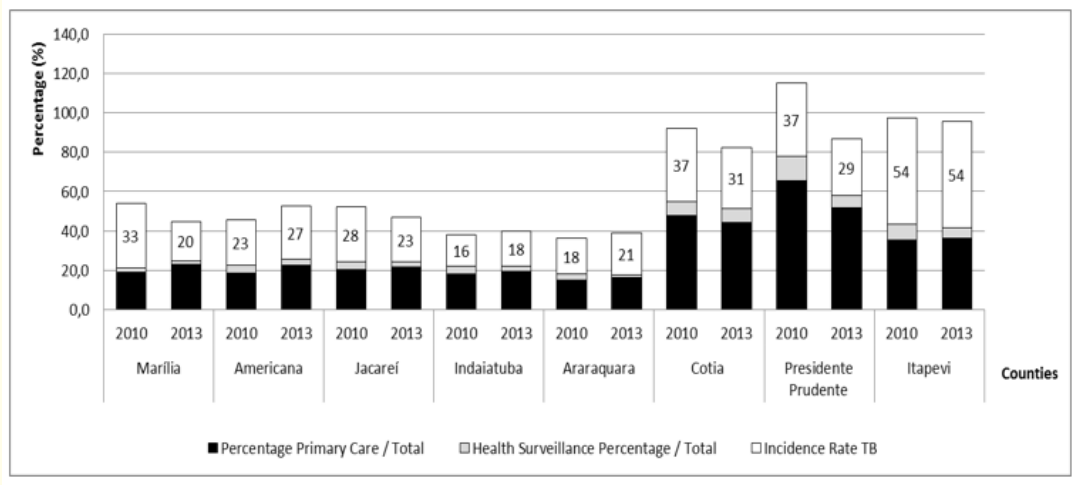
Graph 2: *Incidence rate TB, budget allocation (%) for the two blocks of priority municipalities in TB for municipalities with a population between 301 and 500 thousand inhabitants (2010 and 2014).*

For the group of 16 priority municipalities with a population between 201,000 and 300,000 inhabitants, it was obtained for the group of the Primary Care block that in 11 municipalities (68.8%) the financial contribution increased, and the municipality of São Carlos went from 11.74% (2010) to 17.66% (2013), with an increase in financial support, for this group, of USD 11.355.157,75. Regarding the Health Surveillance block, it was found that the federal government decreased the financial contribution to 14 municipalities (87.5%), only for the municipalities of Taboão da Serra from 4.33% (2010) to 5.15% (2013) and Cotia 7.29% (2010) to 8.34% (2013) there were increases. In general, the decrease in financial support for this group of municipalities was USD 734.917.

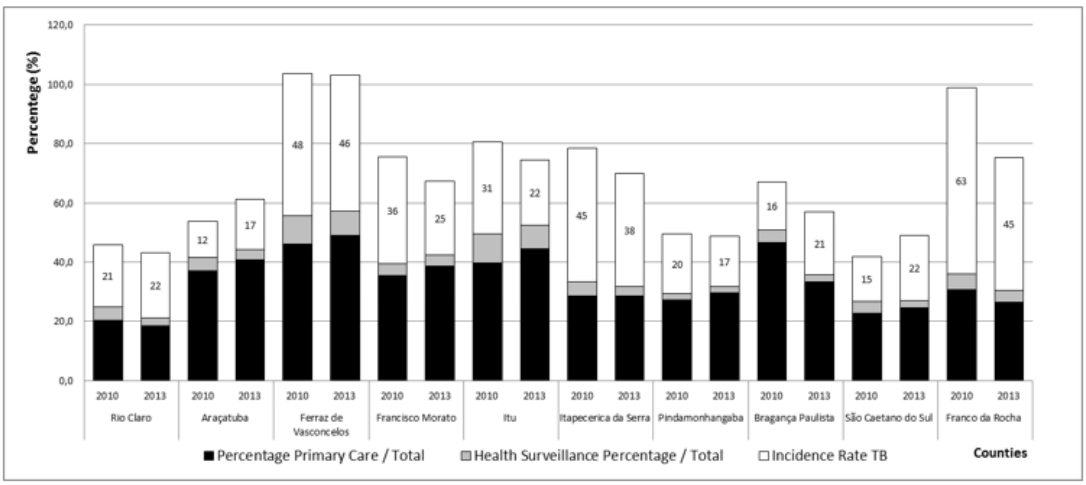


Graph 3: *Incidence rate TB, budget allocation (%) for the two blocks of priority municipalities in TB for municipalities with a population between 201 and 300 thousand inhabitants (2010 and 2014) - To be continued graph 4.*

The results obtained for the group of 10 municipalities with a population between 131,000 and 200,000 inhabitants (2010 and 2013), for the Primary Care block was that in 7 municipalities (70.0%) the financial contribution increased and thus in 3 municipalities (30%) decreased resources. Overall, the increase was USD 2.789.593,12 between the amounts contributed in 2010 and in 2013. For the Health Surveillance block it was found that the contribution decreased in 7 municipalities (70%) and with an increase in 3 municipalities (30%). The overall decrease was USD 340.191,12 for these 10 municipalities.

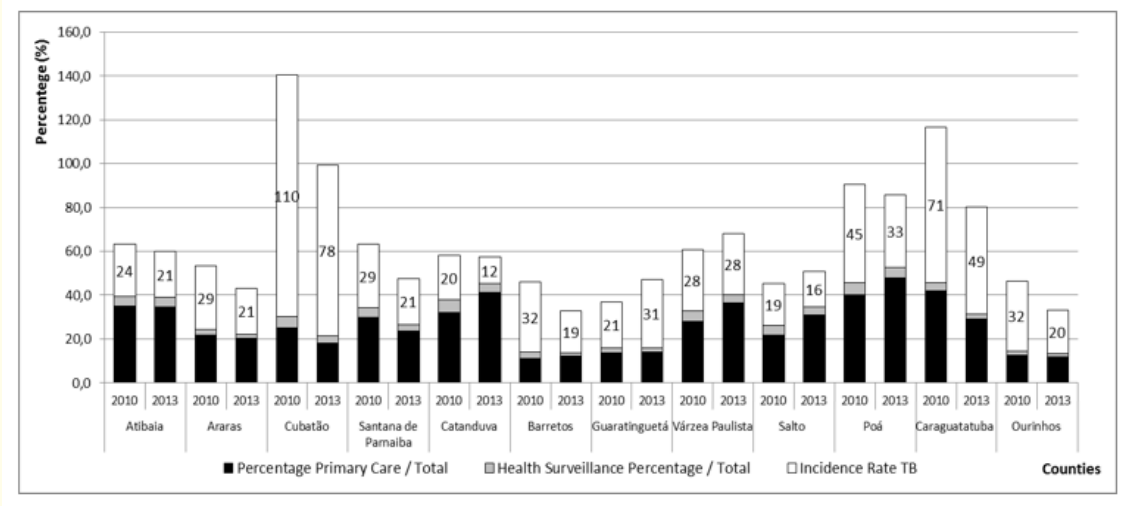


Graph 4: *Incidence rate TB, budget allocation (%) for the two blocks of priority municipalities in TB for municipalities with a population between 201 and 300 thousand inhabitants (2010 and 2014).*



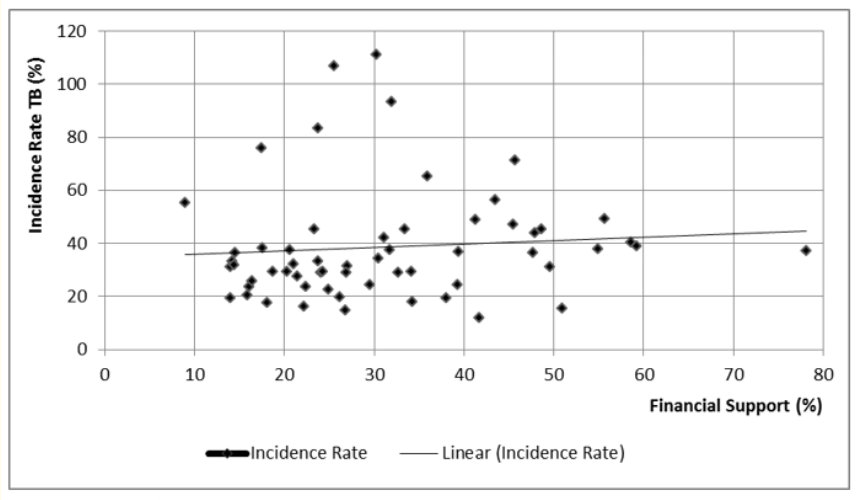
Graph 5: *Incidence rate TB, budget allocation (%) for the two blocks of priority municipalities in TB for municipalities with a population between 131 and 200 thousand inhabitants (2010 and 2014).*

For the group of 12 priority municipalities with a population between 100,000 and 130,000 inhabitants it was found that, for the Primary Care block, in 7 municipalities (58.3%) the financial contribution increased and in the remaining 5 municipalities (41.7%) the contribution decreased, and the financial amount received by the 12 municipalities increased from 2010 to 2013 by USD 3.902.325,54. Regarding the contribution of the Health Surveillance block, there was an increase for 3 priority municipalities (25.0%) and for 9 municipalities (75.0%) a reduction in resources. In this block, the reduction was USD 278.233,88 between 2010 and 2013.

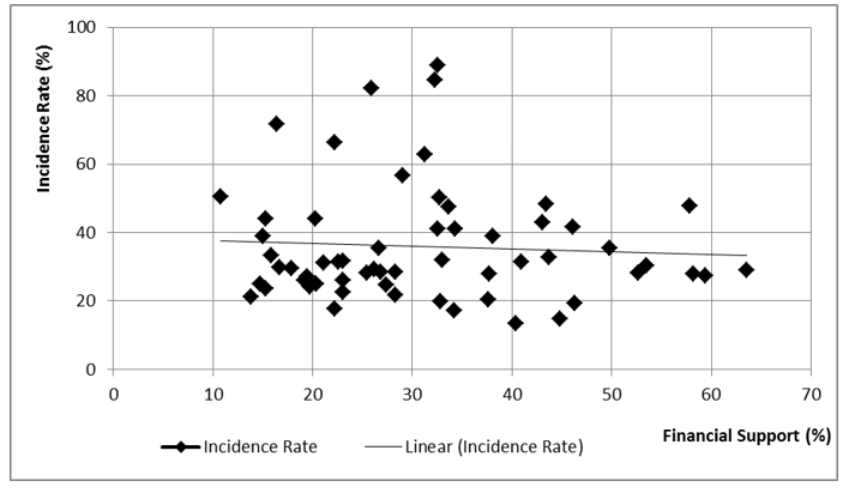


Graph 6: *Incidence rate TB, budget allocation (%) for the two blocks of priority municipalities in TB for municipalities with a population between 100 thousand and 130 thousand inhabitants (2010 and 2014).*

Regarding the contribution received (for the two financing blocks) and the incidence of TB for the 59 municipalities studied, a weak correlation was found (0.087). for the year 2010. When looking at the graph below and the Pearson Correlation (r), for the 2013 data a negative coefficient (-0.065) was obtained, showing not only a negative direction of relationships, but also correlation between the financial contribution and the TB incidence rate for priority municipalities. Please see Chart below.



Graph 7: *Dispersion diagram between the financial contribution and the TB incidence rate for priority municipalities (2010).*



Graph 8: *Dispersion diagram between the financial contribution and the TB incidence rate for priority municipalities (2013).*

Regarding PMS, they were analyzed in the years 2010 and 2013 e only 21 (35.6%) mentioned TB specifically.

In none of the municipalities were citations about TB found in the Primary Care Block and in 38 municipalities (64.4%) was found the TB citation in the Health Surveillance block, as described below.

Financial support*	TB incidence	No. municipalities
↑	↑	13 (22,1%)
↑	↓	21 (35,6%)
↑	↔	01 (1,6%)
↓	↑	07 (11,9%)
↓	↓	17 (28,8%)

↑ Increased financial contribution and / or TB Incidence
↓ Decrease in TB funding and / or incidence
↔ Same TB Incidence
* Sum of the two financing blocks

Table 1: *Correlation between the financial contribution and the incidence of TB for the 59 priority municipalities in the State of São Paulo (2010 - 2013).*

We opted for these years, as the implementation of SUS (1999) had already taken place and in these selected years we would already be at the moment of the sustainability of actions in the health system, in the period following the political will, involvement and the integration of those responsible for health policies, at the local level, representing determinant aspects for their effectiveness [13].

The official records made available are important instruments for monitoring information relevant to the health area, but when described individually, by municipality, they do not demonstrate the trends and the macro situation for the State of São Paulo with regard to PMS and regarding the Federal Financial contribution of blocks directed to Primary Care and Health Surveillance [14].

Recurring text in the PMS of the evaluated municipalities, which by Law (EC 29) must invest at least 15.0% of their net tax revenues and constitutional and legal transfers, but which, in practice, have applied higher percentages in recent years on account of the growing need of the population for health services, judging by the repeated exposures of the mayors about not having enough resources transferred by the Union and/or by the State.

When the PMS present the percentages of the budgetary and financial resources made available, there is a historical series of linear distribution among the federated entities, that is, around 65.0% is a municipality resource, 34.0% is a federal resource and 1,00% is a state resource.

In this article for 35 municipalities (59.3%) there was an increase in the Federal financial contribution to Primary Care, 23 municipalities (38.9%) had the percentage of resources decreased and in one municipality the financial contribution was maintained (1.8%).

When analyzing for the Health Surveillance Block, it was found that 56 municipalities (94.9%) lost revenue from the Union and only 3 municipalities (5.10%) had a greater investment, when comparing the years 2010 and 2013.

There is no logic as to why the decrease in financial contributions to some municipalities and the increase to others in the Primary Care Block, but there is a strong trend towards a general decrease in resources for Health Surveillance [15].

Another characteristic of PMS is usually declarations of intent instead of describing the processes that show the way to achieve the expected results.

In most of the municipalities analyzed, the Municipal Health Fund is under the management of a Municipal Health Secretary, who has only the linked resources, coming from the Federal and State Government, either through agreements or fund-to-fund transfers, with no municipal resources available in current account, according to the budget forecast, following a release according to the execution of the expense. The transfer of financial resources from the municipal public coffers to the municipal health fund, according to the forecast, as a counterpart to the costing legally provided for in Law No. 8080/1990, would be an advance in terms of resource management, since it would give the municipal health manager a greater control over their expenditure, perhaps avoiding the generation of unpaid remnants generated in budget execution without the proper supply of funds, a fact resulting from a non-financial management of the available resources in view of the need presented in the application of health resources [16].

The WHO argues that financing gaps should be filled both with the investment of more domestic resources and with international donations, mainly in middle and low-income countries, which concentrate most of the burden of tuberculosis in the world. In June last year, the Ministry launched the National Plan for the End of TB as a public health problem. The policy ratifies Brazil's commitment to WHO to reduce the incidence of the disease in the population. The strategy to achieve the goal involves reducing the percentage of treatment abandonment and improving the percentage of cure for people diagnosed with tuberculosis and monitoring the control of the disease [9].

The organization cites the Brazilian investment policy for controlling the disease as a global example without knowing the administrative transfer details. In 2017, the budget for the strategic plan against tuberculosis was $ 67 million. One of the actions planned for the second half of 2018 was a campaign for people deprived of their liberty, considered one of the most vulnerable populations to the disease, to report the symptoms of tuberculosis. For this, the Ministry of Justice and Public Security transferred more than R $ 27 million to the Oswaldo Cruz Foundation (Fiocruz).

Therefore, in order to direct the federal government's financial actions towards TB, the municipalities should elaborate through the PMS the actions that contemplate the PCT; however, what has been observed is a deficiency in the maintenance of control actions and a fragility of political commitment, knowing that currently there are no more financing blocks and TB control programs are more vulnerable to the use of targeted resources [17,18].

Final Considerations

It is concluded that there is no coherence of financial contributions, with a sharp decrease in resources for Health Surveillance and a fragile political commitment regarding the control of Tuberculosis.

Conflict of Interest

There is not any type of financial interest or conflict of interest.

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